COVINFORM

CORONAVIRUS VULNERABILITIES AND INFORMATION DYNAMICS RESEARCH AND MODELLING

D4.5 Baseline report: Governmental responses – update M22

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Consortium

SYNYO GmbH (SYNYO), Austria
Magen David Adom in Israel (MDA), Israel
Samur Proteccion Civil (SAMUR), Spain
Università Cattolica del Sacro Cuore (UCSC), Italy
SINUS Markt- und Sozialforschung GmbH (SINUS), Germany
Trilateral Research LTD (TRI UK), UK
Trilateral Research LTD (TRI IE), Ireland
Kentro Meleton Asfaleias – Center for Security Studies (KEMEA), Greece
Factor Social Consultoria em Psicossociologia e Ambiente LDA (FS), Portugal
Austrian Red Cross (AUTRC), Austria
Media Diversity Institute (MDI), UK
Societatea Națională de Cruce Rosie Din România – Romanian Red Cross (SNCRR), Romania
University of Antwerp (UANTWERPEN), Belgium
Sapienza University of Rome (SAPIENZA), Italy
University Rey Juan Carlos (URJC), Spain
Swansea University (SU), UK
Gotenborg University (UGOT), Sweden

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Authors

Ioannis Bagkazounis, KEMEA
Anna Tsekoura, KEMEA
Marva Arabatzi, KEMEA
Effrosyni Dima, KEMEA
Madalena Ricoca Peixoto, FS
Dalila Antunes, FS
José Manuel Palma Oliveira, FS
Arianna Furegon, SAPIENZA
Elena Ambrosetti, SAPIENZA
Carla Ventre, SAPIENZA
James Rhys Edwards, SINUS
Sergei Shubin, SU
Diana Beljaard, SU
Vanessa Moser, SYNYO
Viktoria Adler, SYNYO
Diotima Bertel, SYNYO
Niamh Aspell, TRI
Zainab Mehdi, TRI
Leanne Cochrane, TRI
Manuel Tamayo, URJC
Isabel Bazaga Fernández, URJC
Irene Sánchez Vitores, URJC
Roraima Tibizay Estaba Amaiz, URJC
Diego Castellanos, URJC
Javier Lorente, URJC
Jil Molenaar, UANTWERPEN
Lore Van Praag, UANTWERPEN
Hannah Robinson, UANTWERPEN
Bengt Johansson, UGOT
Marina Ghersetti, UGOT
Itamar Laist, MDA
Chaim Rafalowski, MDA

Contributors	**FS** **SAPIENZA** **SINUS** **SU** **SYNYO** **TRI** **UCSC** **URJC** **UANTWERPEN** **UGOT** **MDA**
Reviewers	**Patrick Love**, FS **Madalena Ricoca Peixoto**, FS

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Executive Summary

The COVINFORM project, a few months before reaching its two-year implementation provided various outputs, resulting from the COVID-19 pandemic's in-depth multidimensional research. More precisely and focusing on Work Package 4 (WP4: Government responses and impact assessment) previous and current research, multiple observations have been drawn both during the desktop and empirical research. The current Deliverable, D4.5, is an update of the Deliverable 4.1 Baseline report: Governmental responses, which contained the results of governmental structures and responses towards COVID-19 on national level in fourteen project target countries. As it was observed from D4.1 the vast majority of the targeted countries adopted quite similar approaches in regard to governmental structures, laws and regulations, measures for vulnerable groups, crisis communication responses etc. Hence, in this Deliverable the initial thought was to narrow down the research and after presenting and comparing updates on governmental responses, focus was put on risk perceptions and vaccination initiatives and assessment. Simultaneously, responses were quite similar in the respective targeted countries, especially about vaccination procedures and accessibility as well as on governmental responses in the fight to address the very contagious COVID-19 variants. It has also to be noted that the current Deliverable came across to a few limitations since sources were limited until this time. That resulted in including finally, fourteen countries than fifteen which was the target set in the D4.1. However, an in-depth analysis is presented with the contribution of project partners.

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Acronyms & Abbreviations

Term	Description
BMI	Federal Ministry of the Interior, Building and Community
BMG	Federal Ministry of Health
CSO	Civil Society Organisations
COVID	Corona Virus
CMO	Chief Medical Officer
CST	Covid Safe Ticket
D	Deliverable
ERMG	Economic Risk Management Group
FSP	Federal Public Service
GECKO	Governance principles and mEthods enabling deCision maKers to manage and regulate the changing mObility systems
GMLZ	German Joint Information and Situation Centre
GEES	Expert Strategy Exit Group
IHR	International Health Regulations
KfW	Kreditanstalt für Wiederaufbau
NCCN	The National Crisis Centre
NVR	National Security Council
NFP	National Focal Point
NPIs	non-pharmaceutical public health interventions
OSR	Oberster Sanitätsrat
OECD	Organisation for Economic Co-operation and Development
ÖVP	Österreichische Volkspartei
PCR	Polymerase chain reaction
PM	Prime Minister
PLF	Passenger Locator Form
RMG	Risk Management Group
RKI	Robert Koch Institute
RAG	Risk assessment Group
SPD	Social Democratic Party
STIKO	Standing Commission on Vaccines
SEN	Institut Pasteur de Dakar
WHO	World Health Organization
WP	Work Package

1 Introduction

As we are experiencing COVID-19 the last two and a half years, multiple dimensions of our everyday life have been substantially impacted. Alterations in the way we live and work, on how we are getting educated and even to our social activities and freedoms that we took as granted were questioned and even transformed totally during these twenty-nine months into the pandemic. The COVINFORM project is working towards its main objective, which is to extract and analyse data from the multidisciplinary expertise of the consortium partners evaluating the respective COVID-19 responses of the targeted countries on governmental, public health, community, and information and communication levels. In parallel risk assessment models based on available quantitative data at the European level will be developed ending up to the creation of an online portal and a visual toolkit for all involved stakeholders and the public as well in order to be utilized in future pandemics. The current Deliverable is an update on Deliverable 4.1 which contained various results of the analysis of governmental structures and responses on the national level in fourteen target countries and observations were drawn such as most countries adopted a central governmental approach issuing additional administrative powers to central points of authority such as Ministries instead of regional administrative entities. Additionally, most countries have identified vulnerabilities primarily based on health, economic, social factors, cultural, age as well as minority groups, single-parent families and business which were highly affected through the pandemic years. For communication again multiple channels were utilized and most countries adopted a quite similar approach. Hence, in this updated Deliverable focus will be put on vaccination initiatives and vaccination measures and procedures, risk perceptions as well as an overall update on governmental measures and structures.

After a short introduction in Section 1 where the aims and objectives of this deliverable as well as the correlation with the previous one (D4.1) are presented, Section 2 is dedicated to the research methodology which is quite similar to the research methodology followed in the first iteration of D4.1. However, different questions were utilized and distributed accordingly to consortium partners in order to gather all relevant information for the specific scope of this report. Section 3 reports the research outcomes per country in groups of questions and under categories as received by consortium partners. Following, Section 4 is a discussion and comparative analysis of the research findings in total performing an initial comparative analysis among countries and finally Section 5 is a short conclusion of this report.

2 Research Methodology

2.1 Research design and methodology

This chapter is dedicated to the methodology description that guided consortium partners to fulfil their research and collect all relevant data for the analysis of this report.

2.1.1 Aim and objectives of the desktop research

This deliverable contains an update of the analysis of governmental structures and responses on the national level in the fourteen project target countries. The main objective under the desktop research is to analyse and critique governmental responses as those were shaped and generated by the COVID-19 pandemic, risk perceptions as well as vaccination initiatives. Data were gathered from consortium partners whereas the outputs of the previous Deliverable 4.1 proved beneficial for shaping the empirical research under the same WP. Partners in this report gathered all relevant data in accordance with governmental structures and adaptations due to the pandemic as well as relevant measures and regulations while focusing also on risk perception and vaccination procedures. A comparative analysis is also an objective in order for observations and outputs to be generated.

2.1.2 Research questions

The desktop research conducted by the consortium partners was guided by the following research questions in order to narrow down the research and address efficiently all important aspects. The questions are presented in categories as in Research Outcomes section.

1. Governmental Structures per country and adaptations for COVID-19:

- Kindly indicate a summary on changes, if any, in relation to: Governmental structure, main actors in decision making and policy process, main social, economic, cultural, and legal factors, adaptations of the governmental responses towards vulnerable groups, means of communication as of April 1st, 2021 until late May 2022. What impact did the structural change had if any?
- In which cases have governmental responses differentiated their course of action from pre-COVID-19 crisis management mechanisms? What was the impact of these responses?
- How did the governmental responses were shaped during April 2021-May 2022, can you identify landmark events during this period of time (e.g., long lockdowns, strict measures etc)?
- Which indicators led governments adopt new measures to minimize the infection rates? Were they successful?

2. COVID-19 and Risk perception:

- What is believed to be the causational link between COVID-19 case rate and the prevailing risk perception? Has this perception changed over time?

3. Vaccination and Governmental initiatives:

- Which measures were implemented to motivate people to get vaccinated?
- What course of action did the governmental mechanism took for citizens who did not get or wanted to get vaccinated?
- Were there any measures related to vaccination which restrict citizens for participating in specific activities?

4. Governmental responses:

- Were any governmental support agencies created during the pandemic? And if so did they continue to operate?
- Who was the main target-population of the governmental responses? Were they diversified per target-population?
- What were the main (i) cultural, (ii) socio-economic, (iii) health (iv) educational effects from these governmental responses to the population of interest? Was the perception of vulnerability changed over the course of the pandemic?

2.2 Research Guidelines and clarifications

The main Deliverable author, KEMEA have distributed to all involved consortium partners a file which included all relevant information and guidelines for the efficient fulfilment of the desktop research ("COVINFORM Research Guidelines for D4.5" Annex A). More precisely, the file included in detail analytical guidance for the activities that needed to be performed, explaining the specific steps, requirements, deadlines as well as instructions for the data collection templates along with the general objectives and data collection procedures. Since this Deliverable is an update of D4.1, the research guidelines were quite similar. The initial though was that since all consortium partners are familiar with the procedures that were followed for the first Deliverable, a few alterations only should be made in order to avoid limitations and difficulties.

Along with the guide, they also received an excel template (Annex B) that had the following categories as was required in D4.1:

i. Name of Publishing Organisation/Institution/Entity
ii. Level of Publishing Organisation Organization/Institution/Entity
iii. Publication/Source Type
iv. Year of Publication
v. Author (s)
vi. Search terms used.
vii. Title of source/document/publication in the original language and an English translation
viii. Language of source/document
ix. Detailed English Description of main points
x. Timeframe of the specific response (before COVID-19, during the first wave, during the second wave)
xi. Population of interest which was affected by the specific response.
xii. Impact identified on relevant population.
xiii. Hyperlink/DOI
xiv. Other Comments

However, after internal discussions with consortium partners, it was decided not to include the data from the sources since they will not provide additional input to the specific report and focus more on the comparative analysis and discussions.

2.2.1 Timeline, language, and exclusion criteria

Since the entries in D4.1 covered the period from 24th of January 2020 (as January was the month when the first COVID-19 case was identified in Europe), till end of March 2021, in this report (D4.5) it was requested entries to cover the period from April 1st, 2021 till late May 2022, with clear distinction among the relevant waves of the pandemic and vaccination initiatives in each country for comparison purposes among governmental structure/decisions/responses and vaccination campaign.

The language that will be included in the research will be mainly English. However, due to the specific particularities of the research (governmental responses usually are issued in the national/regional language and there is not an English translation), all the entries will be accepted on the premise that the partners will provide a comprehensive and detailed English description of the main points of each entry and its relevance to the research.

Entries with no focus on the subject of research, with no available detailed abstract in English, with no available free text or not compliant with GDPR and/or research ethics standards, e.g., private social media profiles, data gathered in an unethical way were excluded.

2.2.2 Research sources and search terms

The main research sources for the desktop research could be:

- **Primary sources** including governmental policies and guidelines, official assessments and reports, produced directly by national governmental and policymaking bodies. Consortium partners could search inside their countries for this information (e.g. in parliament decisions, in legislation, in reports etc.) using probably official governmental websites etc.
- **Secondary sources**, where consortium partners could search for **specific studies focusing on economic/health/social impact of governmental policies**. These may include:
    1. *Academic resources* (peer-reviewed journals, academic books, conference proceedings and other academic studies), utilising Google Scholar, Web of Science, Scopus, IEEE Explore and/or other academic databases.
    2. *Grey literature*, e.g. policy briefs, reports and presentations produced by international and EU organizations, governmental and policymaking/legal bodies, NGOs and civil society organizations, think tanks, lobbies, Security Organisations, and the private sector.
    3. *Popular resources* (online articles, press stories, websites, publicly available social media accounts and wikis), using search engines (google, Bing), newspapers databases and archives (LexisNexis , ProQuest , other databases from their country), Social search engines (e.g. social searcher), public social media profiles of relevant bodies, organisations and companies.
    4. **Data from similar projects**, if any.
    5. **Findings from the first Deliverable 4.1 or empirical research under the same WP may be utilized but referenced accordingly.**

Search Terms

The following search terms were suggested to consortium partners to ensure relevance of results with D4.5. and could be used as a starting point. Please note that this was just an indicative sample, so Consortium partners were free to add more relevant terms.

Table 1. Search Terms for T4.5.

Main Search Term (s)	Secondary Search Terms *(Combined with AND/OR with the main search terms)*
Governmental (response, policy etc.) COVID-19 pandemic	Impact on - Economic, Societal (welfare, well-being etc.), Cultural, Educational, Health, Elderly Care, Employment Legal, Security and Criminal Justice System (Prisons-Courts-Police) Responses (April 2021 – May 2022) Legal factors/Law/Legislature Vulnerable groups Vaccination and Communication Campaigns Europe Global Countries (please use your Country name here to filter the specific responses/policies for your country e.g. Spain, Greece, Austria etc.)

2.2.3 Countries under the research

The countries covered by the research were: Austria, Belgium, Cyprus, Israel, Ireland, Italy, Germany, Greece, Portugal, Spain, Sweden, Switzerland, and the United Kingdom including Wales. Even though the target was to examine fifteen countries due to unforeseen limitations Romania and United States were not included.

3 Research Outcomes

3.1 Governmental Structures per country and adaptations for COVID-19

The following section outlines a short analysis of the governmental structure and the adaptations observed after and during the outbreak of COVID-19 crisis, of each of the participating countries.

3.1.1 Austria

The **political landscape** in Austria experienced some major changes, especially referring to the withdrawal and the exchange of several ministers between April 2021 and May 2022 (Weiner Zeitung, 2022)[1]. The Austrian government consists of two parties, which form a coalition: The Austrian People's Party (die Österreichische Volkspartei, ÖVP) and the Green Party (die Grünen). The Ministry of Social Affairs, Health, Care and Consumer Protection is under the leadership of the latter, which means that a crucial part of the pandemic management is planned and conducted by the Ministry of Health. In April 2021, the health minister resigned due to physical and mental health issues caused by stress and an overload of work. His replacement also faced major difficulties in handling the overwhelming situation and his withdrawal followed in March 2022. He and his family were frequently victims of threats, which was, among other things, one of the main reasons for his withdrawal from politics. Currently, the former member of the provincial government of Vorarlberg holds the position.

A lot more ministers withdrew from their positions during the last year, not only because of the extensive workload and the unforeseen challenges that the pandemic has brought with it, but also due to political reasons. The federal chancellor's position alone was filled by three different people during the last year. Additionally, there had also been changes of personnel in the Ministry of Education, the Ministry of Foreign Affairs, the Ministry of Interior and the Ministry of Finance**. In all these institutions, a ministerial change took place.**

In Austria, **the Ministry of Health is the main actor in pandemic management**. Already prior to the COVID-19 pandemic, it provided its own crisis team (Krisenstab), which oversees the coordination of strategic tasks not only on the national but also on the international level in the event of a pandemic (especially referring to the cooperation and communication between the health minister and international organisations/institutions like the WHO, the European Commission or the European Centre for Disease Prevention and Control). The frequency and intensity of activities depend on the specific national threat potential.

At the federal level, both the veterinary and the human medicine sectors are currently located in the Ministry of Health. This facilitates rapid and continuous coordination and cooperation between the two areas in the sense of a so-called "one health approach". Moreover, there exist two additional advisory boards, which are legally anchored, as there are the National Crisis and Disaster Management (Staatliches Krisen- und Katastrophenschutzmanagement, SKKM) and the Supreme Sanitary Council (Oberster Sanitätsrat, OSR). As already stated above, they are purely involved in advising the responsible people in relation to pandemic-related issues, and therefore not included in decision-making processes. Additionally, own bodies have been established, specialised in advising the responsible actors on COVID-19 issues.

[1] https://www.wienerzeitung.at/nachrichten/politik/oesterreich/2146807-Der-13.-Wechsel-in-Tuerkis-Gruen.html.

Regarding major social changes in Austria since the outbreak of the COVID-19 pandemic, the Ministry of Social Services, Health, Care and Consumer Protection published a paper which analysed the overall social situation in Austria. A cooperative paper generated from multiple institutes, outlined specific groups which were affected by COVID-19 and the related measures taken to prevent its spread (Bundesministerium für Soziales, Gesundheit, Pflege und Konsumentenschutz, 2020)[2]. This paper focuses, among other things, especially on groups of people which are victims of poverty and exclusion, such as:

- People who suffer from a lack of opportunities for gainful activity: part-time employees, working less than 12 hours a week, employees with a temporary contract and long-term unemployed;
- People who neither have the Austrian citizenship not the citizenship of a member state of the European Union or the European Economic Area;
- People who live in specific household structures: single mothers (often part-time employees, who work in stereotypical 'female' sectors, where salaries are low), families with a higher number of children.

While naming these groups, the paper does not provide concrete recommendations on how to address their vulnerabilities.

A paper published by the Austrian National Bank confirms the above stated points, or at least the latter (Albacete et al. 2021). According to this study, households with a higher number of children (by implication, households with little space per family member), households with single parents, and households which are living in more crowded places like Vienna (or other metropolitan areas in Austria) are more likely to suffer from the disruptions caused by the pandemic.

In order to combat poverty, the Ministry of Social Affairs, Health, Care and Consumer Protection established a guideline with the aim of fostering projects which mitigate social consequences caused by the COVID-19 pandemic[3]. The guideline came into force in May 2022 and addresses those target groups at risk of poverty and exclusion which were already defined by the "Europe 2020-Strategy", namely:

- "Risk of poverty": people living in households with less than 60% of the median equivalised income of the total population;
- "Significant material deprivation": people who are economically so burdened that they are unable to make expenses for a reasonable standard of living (e.g., durable consumer goods, like a washing machine);
- "People, living in households with no or very low employment intensity": persons of working age who have been employed less than 20% of their total acquisition potential in the last twelve months.

In concrete terms, this means that the groups most at risk of poverty and exclusion include single parents, families with several children, children and young people, people living alone, people living with disabilities or health impairments, and people who are not able to pursue gainful employment.

[2] Bundesministerium für Soziales, Gesundheit, Pflege und Konsumentenschutz (2020). Analyse der sozialen Lage in Österreich.

[3] Bundesministerium für Soziales, Gesundheit, Pflege und Konsumentenschutz (2022). Sonderrichtlinie "COVID-19 Armutsbekämpfung": Sonderrichtlinie "COVID-19 Armutsbekämpfung" zur Gewährung einer Förderung für Projekte zur Milderung der sozialen Folgen der COVID-19 Pandemie.

Therefore, the Austrian Ministry of Social Affairs, Health, Care and Consumer Protection offers financial support for projects, which are specifically aimed at helping vulnerable groups to cope with the consequences of the pandemic. For this reason, a special directive was established. Projects are being supported especially in these areas:

- Combating the social consequences of poverty caused by the COVID-19 pandemic on children and young adults,
- Uncertainty regarding food and commodity supply in the context of the COVID-19 pandemic,
- Basic medical and mental health care for (not further specified) vulnerable groups in the context of the COVID-19 pandemic,
- Domestic violence prevention and protection in the context of the COVID-19 pandemic,
- Support for debt relief programs in the COVID-19 context,
- Combating COVID-19 related energy poverty, and
- Assistance with COVID-19 related or threatened homelessness.

A study by the Austrian Corona Panel Project (Schiestl, 2022)[4] found that young persons without work and living alone were, as well as those living with older relatives, were reporting to suffer from loneliness the most. Also affected from loneliness are women and persons with migrant backgrounds. The study also found a correlation between the perception of social norms and behavioural recommendations (e.g., physical distancing, wearing masks in public spaces) and loneliness: those who are more affected by loneliness also show less variations in their norm perceptions. This could be caused by their social environment.

The main economic changes which the Austrian population has been facing were differentiated during the pandemic waves since those affected people differently (OECD, 2021)[5]. At the beginning of the pandemic, national economic policymakers reacted rapidly and established support packages in the form of direct fiscal transfers whereas the use of public loans and guarantees was reduced. Through these measures, many companies were saved from debt and their capacity to invest was strengthened. Furthermore, the adapted short-time working scheme was able to preserve approximately 1.2 million jobs.

However, the country also faced some difficulties, especially regarding the deployment of immigrant workers in some specific sectors. During the observed timeframe of the pandemic, i.e. March 2020 until December 2021, or at least when infection numbers increased and ICU beds got more occupied by COVID-19 patients, borders were closed and complicated the entry of immigrants. As a consequence, some sectors were lacking workforce, which counted especially for the area of health care. Therefore, new programmes were created to mobilise Austria's large but inactive labour reserves, including female part-time or non-workers and workers of a higher age. Companies and institutions in sectors which were particularly affected by the pandemic and the related restrictions (such as tourism and hospitality sectors), were additionally supported through upskill and employment initiatives.

[4] Schiestl, D.W. (2022). Einsamkeit und die Wahrnehmung sozialer Normen zum Verhalten in der Corona-Krise . Austrian Corona Panel Project, Blog 149. Available at https://viecer.univie.ac.at/en/projects-and-cooperations/austrian-corona-panel-project/corona-blog/corona-blog-beitraege/blog-149-einsamkeit-und-die-wahrnehmung-sozialer-normen-zum-verhalten-in-der-corona-krise/

[5] OECD (2021). OECD Economic Surveys: Austria - Executive Summary.

Studies conducted during the COVID-19 pandemic **outlined women as vulnerable**. Women have been affected due to two main reasons: part-time work and care responsibilities. That means, women working from home had more troubles in coping with the difficulties of the pandemic than men. Moreover, the sectors which were most affected by the pandemic are to a large extent branches where women make up the majority of the workforce (e.g., health and child care, social work), which resulted in reductions in income as well as working hours. Therefore, the OECD formulated the following recommendations:

- The further improvement of child care services which allow mothers to work full-time;
- Parental leaves which are equally balanced between men and women;
- Gender reforms in the private sector, strengthened through measures, which were already taken in the public sector.

The employment contract could also be a factor that leads to vulnerability, since people, who are self-employed or working as free-lancers faced reductions in income.

Austria since 2006 already had in place a National Influenza Pandemic Strategic Plan (Influenza Pandemieplan – Strategie für Österreich / Austrian Influenza pandemic plan) providing the most important legal fundamentals and all necessary measures to be taken in case of a worldwide Influenza pandemic, (eg allocation of responsibilities of relevant actors, specification of diagnostics, hospital care and hospital hygiene measures, the role of media and communication etc). Although the plan has stayed in force until today, did not entail any non-pharmaceutical public health interventions (NPIs), which were extensively implemented during the COVID-19 pandemic. In this context, a series of legal changes took place between April 2021 and May 2022, where several laws, ordinances and announcements were introduced following the outbreak of the pandemic. Even though some of them had already existed before the occurrence of COVID-19 (e.g., the Epidemic Act 1950) amendments were made in order to regularly modify and adapt federal acts and ordinances due to the rapidly changing circumstances caused by the pandemic. The most relevant ones address the general public, which not only include the average population in this sense, but also vulnerable groups. Therefore, amendments were implemented regarding the pre-existing Epidemic Act 1950 and a series of Acts relevant to the implementation of basic and emergency protective measures and compulsory vaccination[6], against COVID 19.

In order to protect vulnerable groups, the following federal acts and ordinances came into force and have also been changed and adapted to the situation:

- The COVID-19 Poverty Act,
- the Unemployment Insurance Act 1977,
- the Citizenship Act 1985,
- the Settlement and Residence Act,
- the BFA Procedures Act,
- the Asylum Act,
- The Ordinance on the Determination of the Parameter for the Variable Area of the Statutory Unemployment Insurance,

[6] The mandatory vaccination in Austria was suspended in June 2022.

- the Ordinance concerning the determination of the period for leaves of absence pursuant to section 735(3) of the General Social Insurance Act and section 258(3) of the Civil Servants' Health and Accident Insurance Act,
- the Ordinance concerning the extension of absence due to membership of the COVID-19 risk group pursuant to § 12k Salary Act 1956 and § 29p Contract Staff Act 1948,
- the COVID-19 Register Ordinance, and
- the Announcement by the President of the Austrian Court of Auditors concerning the Women's advancement plan of the ACA 2022/2023.

One of the probably most profound changes in people's lives, regarding cultural aspects alterations during the pandemic, was the reduction of social contacts to prevent the spread of the virus. Due to governmental arrangements, numerous activities have been transferred into a digital arena. A lot of conversation, discussion and debating was done via social media. A very popular way of communicating with each other was the sharing of opinions by sending memes (Waechter et al. 2021). However, the overall manner and purpose of sharing memes changed during the course of the pandemic and the implemented restrictions. This means that memes, which were originally created with the intention of being entertaining, were rather used for critical statements towards actions conducted by the government and day-to-day practices like online shopping. Additionally, protest movements were shifted directly from the streets into the virtual world. The most famous example in Austria affected by the restrictions would probably be "Fridays for Future"7 from the relevant charity organization which call people to react in climate change issues etc.

What is more is that the Austrian government eased restrictions, during public holidays like Easter or Christmas. During this time, people were allowed to leave their houses and visit relatives or friends to celebrate together. However, some restrictions stayed in force, e.g., limitations on numbers of people, certain curfews, closed gastronomy, and no events. Shortly before Christmas, even commerce outlets were allowed to open (to support the economic situation of the commercial sector) but closed immediately after the holidays. This applied also to family celebrations, as restrictions came into force again shortly after the public holidays were over.

The Austrian government used a lot of different canals **to communicate with the population.** The types of channels were used to reach out to people were:

- Press conferences
- Campaigns
- Websites
- Hotline 1450
- COVID-19 bodies

About governmental responses and modifications through April 2021 to May 2022, during March 2021, there was already a sharp increase in COVID-19 case numbers. This increase was also termed as the "third wave" in Austria and occurred right after the end of the third lockdown in February 2021. However, not in every federal province of the country, the cases were that high, as there were regional differences between the East of the country and the West. Therefore, the overall strategy was slightly changed by putting the provincial governors in charge of the pandemic management and responses in their federal provinces (Pollak et al. 2021). As a consequence, the provincial governors of Vienna,

[7] https://fridaysforfuture.at/

Lower Austria and Burgenland imposed a so-called "Easter Break" by the end of March, which started on the 1st of April and lasted at least six days. This was a "hard" lockdown, that included all-day curfews and the total closure of commercial outlets and schools. These lockdowns were extended twice by Vienna and Lower Austria, and ultimately lasted until the beginning of May. The provincial governor of Burgenland refused to follow these measures by ending the "hard lockdown" in mid-April. In general, gastronomy and cultural services were closed in every federal province, except Vorarlberg, which registered steady low numbers compared to the rest of the country.

Finally, at the **beginning of May**, the lockdown in the east of Austria completely eased. Vienna and Lower Austria thus returned to a partial lockdown, which means that nightly curfew restrictions and the closure of gastronomy, as well as tourism, remained in force. However, schools, museums and commerce remained open. Due to the decreasing infection rates nationwide, the federal government then announced nationwide opening steps for the mid of May 2021.

The period from **May to July** was marked by widespread openings in different areas of life, declining COVID-19 cases, and an expansion of the vaccination campaign (Pollak et al. 2021). As immunisation coverage increased, the access to different areas of life became more and more linked to the immunisation status and testing, labelled as 3G ("geimpft, getestet, genesen", i.e. either vaccinated, recovered, or tested), 2.5G (either vaccinated, recovered or PCR-tested) and 2G (either vaccinated or recovered).

Between **August and October**, the fourth wave began to emerge in Austria. The infections, mainly caused by the Delta variant, reached a steady level of daily reported cases, lasting from mid-September to mid-October. The federal government and some provincial governments (especially Vienna) reacted with measures which were in particular aimed at restrictions for unvaccinated people because this group made up a majority of infections within the Austrian population.

In **November**, the fourth wave, with Delta as the dominating variant, reached its peak. This led to overcrowding of intensive care units and the implementation of a triage system in some federal provinces. After the announcement of a 2G rule and a lockdown for unvaccinated people, the federal government imposed a nationwide lockdown by the end of November, which also affected vaccinated people. Simultaneously, the federal government announced a general vaccination obligation, which had been planned to come into force on the 1st of February 2022. This announcement generated nationwide protests and attracted a lot of public attention, especially in neighbouring countries. The mandatory vaccination mandate was eventually suspended8.

The delta wave reached its peak in November 2021. After the case numbers decreased again, the measures were relaxed in the mid of December 2022 (Walcherberger et al. 2022). The general lockdown ended, and the gastronomy, the hotel business and commercial outlets were allowed to re-open, respecting the 2G rule. For unvaccinated people, the lockdown continued until the end of January 2022. Until then, they were only allowed to leave their homes for certain reasons (employment, important errands). The restrictions on unvaccinated were seen as controversial by the public but were later declared constitutional by the Austrian Constitutional Court.

As the delta wave weakened, the first warnings regarding the Omicron wave were already emerging. This caused the establishment of the new **GECKO commission**. Its main tasks included the development of recommendations regarding the management of the new variant. Despite a high

8 https://www.bbc.com/news/world-europe-60681288.

degree of infectivity, Omicron demonstrated milder courses of disease, so intensive care units were less occupied. However, new challenges resulted from the absences of staff due to illness.

The highly debated law on mandatory vaccination was ratified by the National Council at the end of January 2022. After initial concerns about the enforceability of the law, also due to technical difficulties, the perception of risk changed in the context of the Omicron wave. Therefore, the Vaccination Commission recommended a temporary postponement of the mandatory vaccination law. Despite high infection numbers, there were extensive relaxations of COVID-19 protection measures in March 2022. Moreover, quarantine regulations were significantly eased, also to balance the shortage of staff in health institutions, caused by COVID infections.

At the **beginning of April 2022**, the number of PCR and antigen tests available, which have always been free of charge, were significantly reduced, after a slow decrease in infection numbers. Therefore, also the number of newly reported infections sank rapidly. That has moreover caused a discussion about the relation of costs and effectiveness of Corona tests since the tests have regularly been used by a major part of the Austrian population and are still seen as very effective measures against the spread of the virus. That counts not only for vaccinated but also for unvaccinated people. Statements, arguing that tests should not be free of charge anymore or that just unvaccinated people have to pay for them were perceived as negative since many people would as a consequence refuse to test themselves regularly.

However, the increasing infection numbers made further relaxations possible, among other things a break in the requirement of wearing a facemask, which came into force in June 2022. However, new virus variants are already spreading and have been detected in Austria.

In general, there have always been two key factors, which got the responsible policymakers to set relevant actions, namely:

- Steadily increasing infection numbers, and
- the number of occupied beds in normal wards as well as in intensive care units.

After a more or less carefree summer, new restrictions were imposed, as the Delta variant was causing more infections as well as a sharp increase in occupied intensive care units. Therefore, the following measures were implemented in November 2021:

- The 2G rule,
- the lockdown for unvaccinated people, and
- ultimately a nationwide lockdown which was also valid for unvaccinated people.

One of the last, and probably most discussed measures, which was planned to be imposed by the government was the legally determined vaccination obligation. The obligation should have come into force by the 1st of February 2022, but after several postponements, it was finally dropped.

Until now, there has not been any official evaluation as to whether the imposed measures have been successful or not. However, in February 2022, the Vienna Centre for Electoral Research published a study about the effectiveness of the lockdown for unvaccinated people (Kalleitner/Partheymüller 2022). The study concluded that the implemented lockdown for unvaccinated people has been a highly controversial measure in regard to its efficiency since it actually seems that both unvaccinated and vaccinated people increased their number of social contacts by December 2021, although the lockdown for the unvaccinated population was still in force until January 2022. On the other hand, it is assumed that vaccinated individuals who were not as strongly affected by the restrictions may have

even reduced their social contacts more than unvaccinated individuals did, during the same period. Furthermore, the results generally highlight in the importance of public participation in pandemic response, because without the help and adequate behaviour of the population, government measures and laws have only a limited effect.

3.1.2 Belgium

In **Belgium** as the Wilmès administration was awarded special powers in order to deal with the impact of the coronavirus in March 2020, intended to last for three months, they were renewed for another three months (Rankin, 2020; TVL, 2020). Similarly to other countries, Belgium utilized non-pharmaceutical interventions such as curfew measures, which were criticized by some citizens as unconstitutional (De Groote & Verelst, 2020). According to the 2007 Civil Security Act only allows for the limitation of people's mobility in a precisely defined area during a very limited period of time, therefore imposing a curfew arguably went beyond this (ibid.) whereas Fundamental rights specialists emphasized that the guidelines drawn up by the National Crisis Centre impose even more restrictive rules than the ministerial decrees themselves, for example in the field of physical activity (Verbergt, 2020a). Two years into the pandemic, the 'federal phase' of governance of the COVID-19 pandemic in Belgium finished in March 2022, which meant that on a structural reform basis that the regional authorities, governors and local administrations would currently be legally in charge again of managing the pandemic (Nationaal Crisiscentrum, 2022). Similarly, to other target countries, no significant change is the modus operandi in pandemic management was observed.

Prior to the COVID-19 pandemic, **Belgium** already had a crisis management structure for potential pandemics. In line with the International Health Regulations (IHR) of the World Health Organisation (WHO), Belgium had set up a National Focal Point (NFP) over the course of 2007 and 2008, which is responsible for coordinating the analysis of national public health events, as well as for communication with the WHO IHR contact points. Besides the NFP, the Belgian monitoring and risk management system has two other main actors: The Risk Assessment Group (RAG) and the Risk Management Group (RMG). The RAG analyses the risk to the population based on epidemiological and scientific data, and consists of the health authorities of the federal government and the federated entities; epidemiologists from Sciensano (the national public health institute), and other experts with specific knowledge about health risks (Desson et al., 2020). The RAG provides advice to the RMG, and the RMG then uses this advice to decide on public health measures. The RMG is chaired by the Belgian NFP and consists of representatives of the health administrations and all ministers of health. In case of a severe crisis, the RMG meets frequently to manage all health-related aspects of decision making (KCE, 2020). Another key actor in pandemic surveillance and monitoring is Sciensano, Belgium's national public health institute. Prior to the COVID-19 pandemic, Sciensano's epidemiological department met once a week to discuss signal detection of a series of epidemiological indicators, where they could decide whether to not to send an alert in case signals were detected somewhere in Belgium. In the case of an epidemic, the epidemiological department supports the authorities in decision-making by providing an epidemiological description. It is noteworthy that prior to the COVID-19 pandemic, Sciensano was largely unknown both among the general Belgian population and healthcare professionals (Macq, 2022). When the COVID-19 pandemic broke out, these key organizations and management mechanisms indeed played an important role. Instead, federal decisions taken throughout the COVID-19 crisis were decided upon through various consultation structures. Initially, this consultation structure consisted of the two medical advisory groups RAG (Risk assessment Group) and RMG (Risk Management Group); the economic authorities (Economic Risk Management Group or ERMG); and an

Expert Strategy Exit Group (GEES). These groups together provided information and advice to the National Security Council (NVR). From the beginning of the pandemic, Sciensano played a key role in terms of data collection, and set up an online dashboard reporting progressively more detailed case information over the course of the pandemic (Desson et al., 2020). Based on the advice of the RAG, the RMG decides which measures are needed to protect public health (FPS Health, 2018). As previously noted, the RAG and RMG already existed prior to the COVID-19 pandemic, while the ERMG and GEES were founded in March and April 2020 in response to the pandemic (De Standaard, 2020a; NBB, 2020). In August 2020, the GEES was replaced by the evaluation unit Celeval, based at the Crisis centre of the Federal Public Service (FPS) Internal Affairs (HLN, 2020). In October 2020, when a new federal government came to power, the Consultation Committee (Overlegcomité) took over federal responsibility for the COVID-19 response. Not long after that, Celeval became paralysed by disagreements between its members, and in November 2020 it was decided that recommendations would henceforth be submitted by the RAG (Lefevere, 2020). In mid-December 2020, a new advisory group called GEMS (Expert Committee on Management Strategy) consisting of 24 medical experts was established. In order to coordinate the different groups and committees involved in the COVID-19 government responses, a special Corona Commissariat was also established in September 2020. It was led by "Corona Commissioner" Pedro Facon, the director-general of FPS Public Health. Towards the end of 2021, the Corona Commissariat started to transfer its coordination tasks back to the traditional administrations, namely FPS Health and the National Crisis Centre. The final task of the Corona Commissariat was to submit a comprehensive report to the Consultation Committee, describing how the crisis coordination between the crisis centre and Public Health should take place after the end of the federal phase and the disappearance of the commissariat. The Corona Commissariat was formally rescinded in April 2022 (Gavray and De Hert, 2022). Federal measures agreed upon within the National Security council (before October 2020) and the Consultation Committee (after October 2020) are executed through ministerial orders. These orders were issued by the Minister of Security and Internal Affairs Pieter De Crem, succeeded on the 1st of October 2020 by Annelies Verlinden. The National Crisis Centre (NCCN) is in charge of drawing up guidelines describing the application of the ministerial decrees. Crisis communication strategies are coordinated by the Information Unit, which is jointly chaired by the FPS Public Health and the NCCN (FPS Health, 2020). Although the federal government designed and issued the COVID-19 measures – up until the end of the federal phase in March 2022 – the regional and local governments had the power to enact (stricter) measures at the regional and local level. For example, the communities are responsible for health education and preventive health care (with the exception of compulsory vaccinations), including measures aimed at infection control (Reybrouck, 2020). The Flemish Department of Welfare, Public Health and Family is responsible for elderly care, youth welfare, and various other health and welfare services (Departement WVG, 2016). Education, culture and care for the elderly are also the responsibilities of the federated entities, which means the communities are in charge of developing protocols to regulate access to schools, theatres and sports activities as well (Reybrouck, 2020).

Similarly, to Greece and Cyprus, during this period, the vaccination campaign was at full steam, and measures in **Belgium** were relaxed considerably. By August 2021, most adults in Belgium had an opportunity to get their first COVID-19 vaccine. On the 14th April 2021 the Consultation Committee decided on gradual relaxations which included restarting of education (partly remote), lifting travel ban (albeit with an obligation to test and quarantine on return from a red zone). As of 26 April, outdoor meetings were held with ten instead of four people, non-medical contact professions reopened, and the obligation to make an appointment in shops was lifted. From 8 May, theme parks and hospitality

reopened; the curfew was replaced by a ban on gathering; and outdoor events participation increase to a maximum of 50 participants. On May 2021, the Consultation Committee agreed on a summer plan, consisting of several steps. Step 1 was activated from 9 June 2021, which included several relaxations: families could accommodate 4 people, mandatory teleworking with the possibility of 1 return trip per week, hospitality sector and recreation centers reopened indoors, cultural and sporting events occurring with a maximum of 200 masked people. On 4 June, the rules for the relaxations were partly expanded, and rules were determined for summer travel in 2021, which included the European digital corona certificate, as well as a scheme for people to get two PCR tests reimbursed if they could not yet be vaccinated. The second step of the summer plan was activated, which included the ability to host up to 8 people at home, restriction lifting at tourist accommodations and larger group participation in events. Further general relaxations for the summer plan were announced due to high vaccination rates on August 20, 2021. In September, all restrictions were lifted in the hospitality sector, family gatherings and for events up to 200 persons (400 outside), and at larger events the Covid Safe Ticket applied, with the exception of Brussels due to worse COVID-19 infection statistics. The Consultation Committee also announced the introduction of a vaccination obligation for health care personnel. As of October 2021, at a federal level, citizens were obligated to wear a mask only in public transport, care institutions, contact professions and events with more than 500 people inside. However, the Regions were allowed to impose stricter obligations if the epidemiological situation so required. In practice, the mask obligation disappeared in the hospitality and retail sectors in Flanders, but remained largely unchanged in Brussels and Wallonia. Furthermore, as of October discotheques, dance halls and nightclubs could reopen, provided that they had a Covid Safe Ticket and appropriate ventilation. During the winter period, COVID-19 case rates were on the rise again, and far-reaching measures were gradually introduced once more in Belgium. On the 17th of November, due to the rapidly rising figures, additional measures were decided which included, wearing masks from the age of 10 in publicly accessible indoor spaces; compulsory teleworking with the possibility of organizing return visits; and vaccination from the age of 12. Additional measures were introduced nine days later including, roll-out of booster vaccination on an accelerated basis, ban on indoor private gatherings except for weddings and funerals, and a self-testing recommendation for gatherings in private homes. In hospitality, the number of people per table was limited to 6, discos and dance halls were closed, and indoor public events were only allowed take place while seated, with Covid Safe Ticket (CST) and mouth mask. On December, more measures were implemented such as lowering the age for mouth mask requirements to 6 years, restricting indoor activities, however kept sports centers open and lifted measures on the cultural sector as were deemed “disproportionate” by the Council of State. This reversal included seated participants with a mask, use of CST from 50 visitors, and a maximum of 200 visitors.

On 2022, a general gradual relaxation was observed once more in Belgium. On January, the Consultation Committee adopted of the ‘corona barometer’, a 3 color code system based on the risk and pressure of the system. In specific: code yellow, orange and red which correspond to the epidemiological situation and pressure on hospitals is under control, intervention is required and overburdening of the healthcare system with a ratio of new hospitalisations/day: less than 65, less than 300 intensive care beds, 65-149, 300-500 intensive care beds and more than 150, more than 500 intensive care beds respectively. In February, the Corona barometer switched from code red to code orange, introducing relaxations such as hospitality sector closing hour lifter, reopening of nightlife, public events were available both indoors and outdoors, teleworking and masks for children up to 12 years old was made optional. The following month, Belgium had a code yellow, which meant that Covid Safe Ticket in the hospitality sector and at events was lifted, mask wearing was compulsory only in the

care sector and public transportation, lifting of testing, quarantine obligations with COVID certificate and use of PLF. On May, most travel restrictions and mask obligation on public transport were lifted.

The **Belgian** crisis mechanism, similarly to other countries, already early on in the pandemic there were plans to set up a warning system based on COVID-19 reproduction numbers/infection rates and to use colour codes to indicate the level of risk and associated policy measures (Shendruk & Quito, 2021).

The first similar Belgian initiative was developed by Sciensano in April 2020, as public health agency concluded that utilizing only hospital figures as a parameter did not provide a sufficiently fine-grained overview of the situation. In early October 2020, during the second COVID-19 wave in Belgium, the Evaluation Unit Celeval suggested that the Corona barometer will consist of four alarm levels with four corresponding colour codes. These levels would be decided based on a number of key indicators: the number of new infections, the positivity rate of tests, and the number of new hospital admissions, however it was rejected by the Consultation Committee and requested a simplified version. The Corona Commissariat then developed a new proposal: the 'corona switch'. This had only two levels: an ascending and a descending phase, and no fixed set of measures was linked to these phases. In November 2020, the corona switch was rejected by the Consultation Committee (Sanen, 2022). At that point, there was still no fixed set of indicators used to inform COVID-19 government responses in Belgium whilst due to the successful vaccination campaign in 2021, decision makers also considered that the barometer was no longer necessary. In November and December 2021, the highly infectious omicron variant caused a new surge of infections. At the Consultation Committee on 6 January 2022, Prime Minister Alexander De Croo announced that the corona barometer would be re-activated. On 21 January 2022, the Consultation Committee adopted the corona barometer, which went into effect on 28 January with code red. Taking into account both the epidemiological situation and the pressure on the hospitals, the barometer is subdivided into three levels that each have their own set of associated measures. It is noteworthy that in the formal description of the barometer, it is written that the Consultative Committee will also "pay specific attention to mental health" in determining the colour code (Belgium.be, 2022).

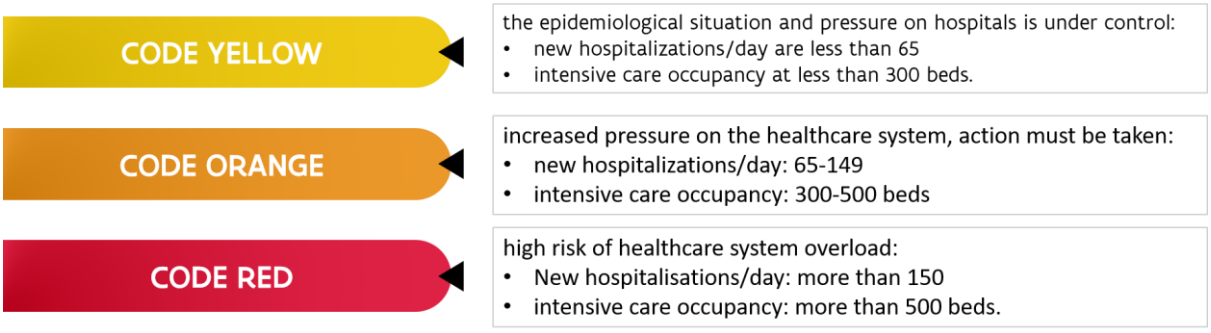

Figure 1. Corona barometer with three levels (Visit Flanders, 2022).

As described in a newspaper analysis (Sanen, 2022), there were several reasons why it took so long to implement the barometer system with fixed indicators. One key issue that kept coming back regarded the definition of the threshold levels and the selection of indicators. Among the indicators that were considered for inclusion in the barometer were numbers of GP consultations, infection rates, hospital admissions, and occupation of intensive care units. In addition, many people were optimistic in thinking that a barometer would no longer be needed once the vaccination campaign was rolled out.

3.1.3 Cyprus

In **Cyprus** the governmental structure changed radical, particularly in late June 2021 (Protothema, 2021)[9]. The Cypriot governmental mechanism encouraged the participation of several female decision makers in Key position ministries. The main changes include Michalis Chatzipantelas (CancerWeek, 2022)[10] who is appointed as the new Minister of Health, Steffi Drakou is the new Minister of Justice and Public Order and undersecretary of social welfare Anastasia Anthousi, with an educational background in pharmacy, experience as a senior health worker and senior officer in the office of the Minister of Health since 2013 (Skai, 2021)[11]. Cyprus, structural change has not been observed to have a significant impact in the modus operandi of the Government and towards the society in relation to the pandemic management as the new measures implemented In December 2021 in response towards the Omicron variant adhered to non-pharmaceutical interventions, teleworking and social distancing (Euronews, 2022)[12], including on participants in public events (Protothema, 2022)[13], visitors in elderly care facilities, mandatory quarantine for citizens that arrive from specific African countries (South Africa, Namibia, Lesotho, Eswatini, Zimbabwe, Mozambique, Malawi, Botswana) (Euronews, 2022)[14] while encourage vaccination efforts (Ethnos, 2021)[15].

The national disaster management system in **Cyprus** was based on the Civil Defence Law of 1964, mainly aimed at implementing measures revolving around preparedness, prevention and response towards natural and man-made disasters which could potentially cause severe negative consequences, which could impact the life and welfare of citizens and/or the extensive damage to the environment (Fraunhofer INT, 2018[16]). The implementation of the Civil Defence Law is the responsibility of the central government and more particularly, the Minister of Interior is responsible with the overall supervision, nevertheless, strictly in cooperation with the different ministries such as the Ministry of Health. Once a major disaster or incident occurs, the relevant department is in charge over the intervention efforts. In Cyprus, due to the central-authority nature of crisis management (Ministry of Foreign Affairs, n.d.)[17] the Council of Ministers have approved a general framework titled 'ZENON' which encompasses 24 coping plans from different ministries, according to which duties, roles and responsibilities ought to elaborate how it will address contingencies that result from disasters (Fraunhofer INT, 2018)[18]. These plans pertain preparedness, response and recovery. Beyond the Civil Defence Law which with an entry into force in 1996, Cyprus does not have a united national disaster risk reduction strategy (Fraunhofer INT, 2018)[19].

COVID-19 in Cyprus from the start of the pandemic was perceived as a national threat similarly to other European target countries. The President of Cyprus Nikos Anastasiades declared to be in close

[9] https://www.protothema.gr/politics/article/1136044/kupros-oi-allages-stin-kuvernisi-anastasiadi-emfasi-sti-summetohi-gunaikon/.
[10] https://www.cancerconference.gr/speakers/mixalis-xatzipantelas/.
[11] https://www.skai.gr/news/world/anasximatismos-stin-kypro-ta-nea-prosopa-stin-kyvernisi-anastasiadi.
[12] https://gr.euronews.com/2022/01/10/kypros-covid-19-se-isxy-nea-metra-gia-thn-pandhmia-apo-shmera-10-1.
[13] https://www.protothema.gr/world/article/1198152/nea-metra-stin-kupro-gia-tin-anahaitisi-tis-metallaxis-omicron/.
[14] https://gr.euronews.com/2022/01/06/kypros-covid-19-analytika-ta-nea-metra-poy-isxyoyn-apo-6-1.
[15] https://www.ethnos.gr/World/article/166375/kyproskoronoiosaysthropoihshtonmetrongiatonkoronoio.
[16] https://civil-protection-humanitarian-aid.ec.europa.eu/system/files/2019-04/peer_review_-_report_cyprus_2018_v5.pdf.
[17] http://www.oikade.gov.cy/mfa/OIKADE/register.nsf/page02_en/page02_en?opendocument.
[18] Ibid.
[19] Ibid.

communication with China and the Chinese embassy, continuously receiving information on the effectiveness of the implemented measures in China, whilst firmly supporting international and bi-lateral cooperation (Chinese Ministry of Foreign Affairs, 2021)[20]. The aim of the response was to maximize public health via tailored interventions and simultaneously minimizing the economic negative consequences. To contain the spread of the virus, Cyprus proceeded with several movement restriction measures, restrictions on people that arrived from China and closed mainland border crossings (Petridou, 2020)[21]. Moreover, Cyprus cancelled public events, closed schools and implemented curfew, thus, restricting citizen mobility for essential purposes and only via acquisition of permissions via text message whereas non-compliant citizens would be fined (Papageorgiou et al, 2021)[22]. The Cypriot case underlined the importance of science advisory teams during crisis manageent. During the pandemic, the country continued to implement movement containment policies and is not observed to differentiate the course of action in comparison to the early pandemic phases.

Cyrpus, pursued COVID-19 containment measures particularly during period of high human mobility such summer, Easter and Christmas which were gradually lifted as the COVID-19 vaccination campaign initiated. A lockdown was implemented in Cyprus as of April 26 until May 9, during which citizens could only leave their house once a day for non-essential reasons and ought to register with the authorities. Non-essential businesses were closed and a night-time curfew of 9pm to 5am was imposed (Ethnos, 2021)[23]. In May 2021 a security pass system was set to confirm that citizens were vaccinated or a negative PCR test was presented so that citizens could be admitted to catering facilities, whereas outdoor restaurants and shops reopened. The curfew and movement restrictions were abolished in June 10, 2021 (Kathimerini, 2021)[24]. In addition, as of June 1st, more than 20 people were allowed to gather in private premises and restaurants (interior spaces) as well as nightclubs reopened in June 10. In July, vaccinated citizens (Johnson & Johnson) could enter Cyprus without restrictions, 14 days after their vaccination whereas all positive tested travelers would be placed in a 14-day quarantine, nevertheless dually vaccinated citizens would not need to present a PCR test on arrival or departure (Republic of Cyprus, 2021)[25]. In November, Cyprus imposed an entry ban to travelers that spent time on one or more of the following states the last 14 days in order to contain the COVID-19 variants. These states were: South Africa, Namibia, Lesotho, Eswatini, Zimbabwe, Mozambique, Malawi and Botswana (Reuters, 2021)[26]. In mid-December, only fully vaccinated citizens could access recreational facilities such as catering and sporting event establishments using the "Safe Pass" (digital vaccination certificate). To do so, the latest vaccination should have been conducted within the last seven months. According to the EU Commission on December 21, 2021, the COVID-19 certificates would no longer be valid if the primary vaccination was administered more than 9 months and citizens have not yet received a booster dose (Guarascio, 2021)[27]. This decision would come in force in February 2022. Travelers that met these criteria would be exempt from pre-departure tests when travelling to Cyprus as of Monday, February 21, 2022. In April 2022, Cyprus abolished the Flight Pass and lifted the outdoor

[20] https://www.fmprc.gov.cn/mfa_eng/zxxx_662805/202112/t20211201_10460514.html.
[21] https://onlinelibrary.wiley.com/doi/full/10.1002/epa2.1090.
[22] https://psycnet.apa.org/fulltext/2022-27221-006.pdf.
[23] https://www.ethnos.gr/World/article/154877/sklhrolockdownsthnkypromexritis9maioy.
[24] https://www.kathimerini.gr/world/561425308/kypros-safepass-se-esoterikoys-kai-exoterikoys-choroys/.
[25] https://www.pio.gov.cy/coronavirus/uploads/30072021_Decree32_EN.pdf.
[26] https://www.reuters.com/article/health-coronavirus-cyprus-idAFL8N2SH4T7.
[27] https://www.reuters.com/world/europe/eu-sets-binding-9-month-validity-vaccinations-covid-19-travel-pass-2021-12-21/.

mask mandate (Theodoulou, 2022)[28]. The remaining test-related requirements would be abolished for fully vaccinated travelers as of March 1st, 2022, however unvaccinated visitors would still have to present negative tests upon entry. In May 2022, citizens would no longer be required to present COVID-19 relevant proof and masks would only be worn in public transport and medical facilities (Kathimerini, 2022)[29].

Parallel to other European countries, **Cyprus** adhered to a similar modus operandi and continued to implement common policies and practices such as non-pharmaceutical interventions such as curfews and lockdowns in order to contain COVID-19 the omicron and delta variants (Georgiou, 2022)[30], (Kathimerini, 2021)[31]. The main indicators that have contributed in guiding governmental decisions are the expert advice from the scientific community, the epidemiological data presented by the Ministry of Health (n.d.)[32] and the mutually shared information and support from international organizations, in order to mitigate negative impact of COVID-19, as well as lessons learned and best practices among Cyprus and other States both within the European Union and beyond (European Investment Bank, 2021)[33], (Tuladhar et al, 2021)[34]. In face of new challenges such as the new COVID-19 variants (omicron, delta), Cypriot decision makers implemented strict measures such as hard lockdowns, nevertheless new measures were not observed in the case of Cyprus (Ethnos, 2021)[35]. Lockdowns are observed to have negative physiological outcomes as these measures reduce socialization, activity and pleasurable experiences, impacting education, childcare and employment which may lead to increased levels of anxiety, psychological distress, post-traumatic stress and depressive symptoms (Papageorgiou et al, 2021)[36], however non-pharmaceutical interventions are observed to significantly lower infection and fatality rates during a pandemic (Kleczkowski, 2022)[37], (Arnold et al, 2022)[38]. Overall, according to Kakoullis et al (2021)[39], during the high human mobility periods spikes in COVID-19 cases may be inevitable and despite lift of travel (testing) and gathering restrictions, decision makers are advised to opt for a gradual lift of measures. The policy of testing passengers that arrived from low-transmission states, according to Kakoullis et al (2021)[40], could have severe negative consequences due to the highly volatile transition rate of each country during 2021 and early 2022. Concluding, according to the implemented measures, capabilities, capacity and the vaccination campaign, Cyprus is observed to have a successful pandemic management and response (Zevedeou, 2022)[41].

[28] https://cyprus-mail.com/2022/04/07/coronavirus-no-more-mask-outdoors-flight-pass-scrapped/.
[29] https://www.ekathimerini.com/economy/1182709/cyprus-eases-its-covid-restrictions/.
[30] https://www.bloomberg.com/news/articles/2022-01-08/cyprus-finds-covid-19-infections-that-combine-delta-and-omicron.
[31] https://www.ekathimerini.com/news/1174615/cyprus-sees-record-high-covid-cases-on-omicron-variant/.
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[34] https://www.imf.org/en/News/Articles/2021/06/15/na061521-a-three-point-plan-to-tackle-the-pandemic-in-cyprus.
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[38] https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0263432.
[39] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7883066/.
[40] Ibid.
[41] https://www.irglobal.com/article/success-and-resilience-of-businesses-in-cyprus-due-to-covid-19-response-2/.

3.1.4 Germany

The overall governmental structure in Germany has not changed. However, a federal parliamentary election was held on 26 September 2021, which led to a change in government. The Social Democratic Party of Germany (SPD) received the most votes, at 25.7%, followed by the formerly dominant CDU/CSU (24.1%), the Alliance 90/The Greens (14.8%), and the Free Democratic Party (FDP; 11.5%). After two months of talks, the SPD, Greens, and FDP formed a novel coalition government on 23 November 2021. Olaf Scholz of the SPD was selected as Chancellor on 8 December 2021.

On 11 February 2022, Chancellor Scholz gave his inaugural address to the Bundesrat (Parliament). COVID-19 was a central focal point of the address: Chancellor Scholz indicated that initial steps to ease Delta Wave restrictions were being considered, but that above all, the state "must continue to be vigilant and protect those who are most vulnerable".[42] In the wake of the 24 February 2022 Russian invasion of Ukraine, however, COVID-19 was quickly displaced on the new government's list of communications priorities. On 11 July 2022, Chancellor Olaf Scholz held a "Chancellor's Dialogue" in the town of Lübeck, during which he emphasised the ongoing war in Ukraine; rising costs of living and measures to mitigate their impact; infrastructure gaps; pensions and inflation; and social tolerance.[43] This shift in focus mirrors public concerns, which are dominated by the war and its economic impacts (e.g., rising costs and resource scarcity).[44]

It is plausible to predict that in the near future, while COVID-19 management will remain a critical challenge for the new government, issues related to security and economics will continue to dominate public discourse.

In brief, the assemblage of actors that are directly involved in COVID-19 policymaking has not significantly changed. As indicated in the first iteration of this report, the Federal Ministry of Health (BMG) and the Federal Ministry of the Interior, Building and Community (BMI) are the key actor in the COVID-19 response. A joint BMI/BMG crisis task force (Krisenstab BMI/BMG) was called to deal with the COVID-19 pandemic in February 2020, and judging from publicly available documents, appears to still be active as of July 2022. Every ministry is represented by liaison officers to the joint BMI/BMG task force. The key scientific advisory institution in COVID-19 governance in Germany is the Robert Koch Institute (RKI); with regard to vaccines, the key actor is the RKI Standing Commission on Vaccines (Ständige Impfkommission, STIKO). The National Focal Point (NFP) for the IHR is the German Joint Information and Situation Centre (Gemeinsame Melde- und Lagezentrum des Bundes und der Länder, GMLZ)[45].

On 14 December 2021, the Federal Government and state governments, having determined that a more comprehensive and interdisciplinary continual review of COVID-19 measures and pandemic preparedness was needed, convened a Coronavirus Expert Council (Corona ExpertInnenrat der Bundesregierung). The purpose of the Expert Council is not to make policy, but to assess response measures to date, as well as to contribute recommendations for measures going forward, from a multidisciplinary rather than a purely epidemiological perspective; it does not impact the mandate of other responsible scientific bodies, namely the Standing Committee on Vaccination (Ständigen

[42] https://www.bundesregierung.de/breg-en/news/federal-chancellor-scholz-speech-bundesrat-2004658
[43] https://www.bundesregierung.de/breg-en/news/chancellor-dialogue-luebeck-2061398
[44] https://www.sinus-institut.de/media-center/presse/umfrage-corona-krisen-und-konflikte
[45] https://www.bbk.bund.de/DE/Themen/GMLZ/gmlz_node.html

Impfkommission, STIKO), the German Ethics Council (Deutscher Ethikrat), the Robert Koch-Institut, and the Paul-Ehrlich-Institut.

In the states and city-states, Minister Presidents (or equivalent) appoint cabinet ministers, who set the policy agendas for their respective state ministries, including ministries of health, which have generally taken the lead in state-level COVID-19 responses. As indicated in D6.1-D6.4, civil society organisations (CSOs) have also played a critical role in the multi-level governance of the pandemic, especially on a local level. They have filled gaps in governmental services, assisted vulnerable groups in accessing governmental services, and acted as "bridging organisations" connecting actors in different sectors and on different levels with residents and one another. Finally, residents themselves have participated in the response, both as active individuals (e.g., informally helping family, friends, and neighbours) and in self-organised groups and initiatives. D6.5 will shed more light on such initiatives.

The Covid-19 pandemic brought along some paramount legal and social changes through the four Acts on the Protection of the Population in the Event of an Epidemic Situation of National Importance as well as further ordinances and vaccination regulations. However, the initial fundament for the German governments pandemic response was the infection protection law (IfSG) issued in 2000, hence 20 years prior to Covid-19. Accordingly, it was designed to prevent local and temporary outbreaks of disease and not ideal for managing a nation-wide health crisis (Balthasar et al. 2022: 103). In order to fulfil the protection function of the state the Covid-19 pandemic demanded more restricting nation-wide measures so far unique in the history of the Garman federal republic. Due to continuous changes and extensions the IfSG it has become structurally non-transparent and unnecessarily complicated (Balthasar 2022 et al.: 22).

Acc. §§ 28-32 and 36 IfSG original and additional protective measures against infectious disease can be sorted as follows (Balthasar et al. 2022: 108).

• Sections 28, 29-32 IfSG essentially contain the pre-pandemic norms. They therefore not only authorize protective measures against the corona virus, but in general against all communicable diseases in accordance with IfSG. Until November 2020, they formed the legal basis for the protective measures taken up to that point, especially in Lockdown I.

• Sections 28a, 28b and 28c IfSG, on the other hand, contain provisions that apply specifically to the coronavirus legal bases. Authorization bases addressed to the federal states during § 28a IfSG contains, § 28b IfSG regulates nationwide uniform protective measures; § 28c IfSG authorized the federal government to issue statutory ordinances that include special regulations for vaccinated, tested and comparable persons. All provisions are as of November 2020 changed at regular intervals.

• § 36 IfSG contains regulations on infection protection in certain facilities, Companies and individuals as well as several partly to the states, partly to the federal government directed statutory orders.

Thus it can be stated that based on their original conception, state measures presupposed a concrete danger that an individual administrative act is to be averted (e.g. quarantine order, professional ban, commandment not to visit an infected person). In contrast to that in the Covid-19 pandemic crisis management was characterized by measures that address the entire population or at least a large group of people (customers, visitors to restaurants and events, etc.). In that case the state only knows that there some sources of infection exist, but not where they are located (Balthasar et al. 2022: 109). In conclusion state crisis management prior to the Covid-19 pandemic was mainly carried out on a

regional and individual level. Due to the severity of the disease and rising infection rates however so far unknowingly strict regulations were issued on a nation-wide basis and without specific addressees.

Social

On the social front, the German government has been dedicating its resources to protecting the health and the well-being of vulnerable groups during the pandemic. Like in many countries across the globe the German response to the outbreak of COVID-19 was composed of protective restrictions, vaccination and hospital readiness. Whereas the response in 2020 was dominated by non-pharmaceutical interventions, the response in 2021 focused on vaccination. A brief vaccination timeline follows:

- 09.11.2020: Recommendations for vaccination prioritization
- 12/21/2020: First Covid 19 vaccine approved
- 27.12.2020: Start of vaccination campaign
- 26.07.2021: 62% of Germans have been vaccinated 1x, 50% have received a 2nd vaccination
- 16.08.2021: STIKO recommends vaccination for 12-17 year olds
- 18.11.2021: STIKO recommends booster vaccination for all 18 years and older
- 20.12.2021: 75% of Germans have been vaccinated 1x, 70% have received a 2nd vaccination
- 13.01.2022: STIKO recommends booster also for 12-17 year olds
- 03.02.2022: STIKO recommends second booster for risk groups
- 16.03.2022: Facility-based mandatory vaccination comes into force
- 24.05.2022: STIKO recommends vaccination for healthy 5-11 year olds

As soon as vaccines became accessible, a national vaccination campaign began, with the government assuring safety and promising to investigate side effects. The elderly and vulnerable groups were prioritized for vaccination alongside healthcare workers. However, during the second quarter of 2021, it became available to anyone living in Germany. During the third quarter of the same year, Germany announced it would provide more than 30 million vaccine doses for developing countries. In Spring 2021, many contact restrictions and some mandatory hygiene restrictions were lifted; however, rules such as masking indoors remained in place to protect vulnerable groups and institutions. In the Summer of 2021, responses to rising incidence rates were discussed for schools and for vulnerable groups, such as the elderly and pregnant women. The collateral effects of the pandemic on children and youth were a matter of particular concern, and were discussed by the newly-formed Coronavirus Expert Council, as well as by the governing authorities. Further concern was raised regarding the high number of unvaccinated elderly. To enable better protection against infection in schools, mobile air purification devices were purchased. In Autumn 2021, some more restrictive measures were reintroduced again in response to changing incidence and vaccination rates. The multilingual communication aid app “aidminutes.rescue” added a vaccination mode to reach those not speaking German. In the second quarter of 2021, exemption from The COVID-19 Protective Restrictions was granted to vaccinated and recovered persons. From September 2021, booster vaccines were offered to priority groups, and toward the end of the year to all citizens. During the same timeframe, vaccination for children became available. A second booster was offered to priority groups at the beginning of 2022. In March 2022, the new health minister Karl Lauterbach announced that a fourth wave was underway, and presented three measures in order to mitigate it: 1. consistent implementation of current protection measures, 2. compulsory testing for nursing homes, and 3. increasing the pace of secondary booster vaccination. However, the secondary booster vaccination rate of vulnerable groups has remained low. Most recently, the refugee crisis resulting from the war

in Ukraine has posed a new challenge to the fight against the pandemic. The Federal Centre for Health Education (BZgA) provided information materials in Ukrainian in response to the influx of refugees.

Economic

During the Coronavirus outbreak, the German Government had to deal mostly with two economic aspects of the pandemic; namely, the regulation of workplaces and the strengthening of the economy in the face of economic crisis. Weekly COVID-19 Tests became mandatory in workplaces. Free Corona "citizen tests" were reintroduced as incidents rose in autumn 2021. Corona supplements continued to be paid to those entitled to government social protection, and short-time allowances (Kurzarbeitergeld) were extended into 2022. Other economic support measures include hardship assistance for especially precarious individuals, simplified access to basic income support for individuals, liquidity assistance for small businesses through the Kreditanstalt für Wiederaufbau (KfW), tax relief measures for businesses and individuals, and a strengthening of the negotiating position of commercial tenants to address vocational training disruptions during the pandemic, summer vocational training was offered. A new medical research, innovation, and production programme was furthermore announced and cooperation on vaccine production with African countries was promoted: in Berlin on 27 August 2021, BioNTech, the Institut Pasteur de Dakar (SEN) and the Rwanda Biomedical Centre, as well as EU Commission President Ursula von der Leyen, signed a communiqué on "Vaccine Equity for Africa". It is hoped that these measures will benefit both the target countries and the German health and pharmaceutical industries.

Cultural

Many cultural institutions and workers have lost income from their artistic work in the Corona pandemic. Accordingly, targeted support has been provided for the cultural sector in the form of the BMK's NEUSTART KULTUR program; the Federal Government's special fund of up to 2.5 billion euros for cultural events. Cultural institutions and workers were furthermore encouraged to take advantage of the general economic support measures outlined above: for instance, measures taken to improve the negotiating position of commercial tenants took specific account of cultural institutions. A modification of the artists' social insurance scheme was also introduced that permits artists to earn additional income through non-artistic activities. Further, the government provided a total of up to 105,000,000 EUR in funding for live music events and national music festivals in 2022.

Legal

Between March 2020 and April 2021, the core governmental legal responses to the COVID-19 pandemic in Germany were the first, second, third, and fourth Acts on the Protection of the Population in the Event of an Epidemic Situation of National Importance (Gesetz zum Schutz der Bevölkerung bei einer epidemischen Lage von nationaler Tragweite), implemented on 27 March 2020, 19 May 2020, 18 November 2020, and 22 April 2021, respectively. Between April 2021 and May 2022, several significant laws and regulations were passed:

COVID-19 Protective Measures Exemption Ordinance (COVID-19-Schutzmaßnahmen-Ausnahmenverordnung, 8 May 2021): The "COVID-19-Schutzmaßnahmen-Ausnahmenverordnung" from the 8th of May 2021 is an ordinance regulating simplifications and exceptions to protective measures meant to prevent the spread of COVID-19. It has been created to alleviate some of the restrictions imposed against infection concerning (symptom-free) persons with proof of vaccination, recovery or persons who tested negative for the virus. The ordinance did not concern the previous

regulations calling for the wearing of face masks, keeping physical distance in public places and the specification of hygiene concepts.

Specifically, the ordinance contains the following changes to previous regulations:

- § 3 The equalising of vaccinated persons and recovered persons with tested persons regarding restrictions against infection and participation in classroom learning.
- § 4 Exceptions to the restriction of private gatherings - persons with proof of vaccination or recovery will not be counted in the sum of gathered persons, which was at the time restricted by previous regulations.
- § 5 Exceptions to the restriction of stay outside the place of residence will be granted to vaccinated and recovered persons.
- § 6 Exemptions to the restriction on the practice of sports for vaccinated and recovered persons.
- § 10 Exemption to the obligations of quarantine upon arrival from abroad to recovered and vaccinated persons.
- § 11 Authorization of the state governments to grant exemptions and exceptions to amend all of the above.

First Ordinance Amending the COVID-19 Protective Measures Exemption Ordinance (Erste Verordnung zur Änderung der COVID-19-Schutzmaßnahmen-Ausnahmenverordnung, 10 Dezember 2021): The ordinance from the 10th of December 2021 is an amendment to the "COVID-19-Schutzmaßnahmen-Ausnahmenverordnung" from the 8th of May of the same year. It has been released in face of rising infection rates in the autumn and winter of 2021. Both amendments are made to article § 4 of the ordinance from May. The first amendment states that the limitation on the number of participants shall apply once more to private gatherings and similar social contacts, even if only vaccinated or recovered persons participate. The second amendment states that vaccinated or recovered persons will again be counted towards participation in a private or public gathering when a limitation on participation is to be considered.

Act to strengthen vaccination prevention against COVID-19 and to amend other provisions related to the COVID-19 pandemic (10 December 2021): The law at hand is a legal act to strengthen vaccination prevention against COVID-19 and to amend previous provisions related to the pandemic. It amends article § 5 of the Infection Protection Act (Infektionsschutzgesetz) in the following ways:

- The Federal Ministry of Health is authorised to issue a statutory order to declare an epidemic state of national significance (previously only determined by the Bundestag).
- The epidemic state of national significance is prolonged.
- The authorization to legally vaccinate against the coronavirus SARS-CoV-2 is granted to dentists, veterinarians, and pharmacists.
- Additional reimbursements are granted to hospitals.

The law furthermore foresees mandatory vaccinations for medical and care workers beginning from Spring 2022, though this has been seen as a matter of controversy.

In addition to this legislation, much additional legal and regulatory action was taken on vaccination certificates and entry laws. Quarantine upon entry to Germany (for the unvaccinated) was in place until Autumn 2021. Towards the end of 2021, the 2G rules were introduced exempting vaccinated persons from many restrictions. Multiple certifications became accessible on a single phone, to include

family members' vaccination permits. In the second quarter of 2021, new entry rules depending on the country of origin were introduced, along with entry registration from certain countries. Mandatory testing in hospitals and nursing homes remained in place throughout the pandemic. Mandatory proof of vaccination also was planned to become obligatory for medical and nursing workers in March 2022. To combat misinformation, the Network Enforcement Act came into force, mandating digital platforms to delete false information regarding the pandemic.

As of Summer 2022, legislators from different parties in government and opposition were actively debating the proper path forward through the lingering pandemic. Draft legislation introduced on 7 July 2022 includes:

- Introduced by the governing coalition parties SPD, Greens, and FDP: "To strengthen the protection of the population and especially vulnerable groups against COVID-19 (zur Stärkung des Schutzes der Bevölkerung und insbesondere vulnerabler Personengruppen gegen COVID-19"[46]).
- Introduced by the CDU/CSU: "Well prepared for the fall - to improve pandemic management" (Gut vorbereitet für den Herbst – Pandemiemanagement verbessern[47]).
- Introduced by the Left: "Prepare for changing pandemic - a present action plan" (Auf sich verändernden Pandemieverlauf vorbereiten – Maßnahmenplan vorlegen[48]).
- Introduced by the AfD: "Against COVID-19 vaccination requirements for soldiers" (Covid 19-Impfpflicht für Soldaten[49]).

An analysis of the impacts of resolutions that pass will be provided in future deliverables.

In relation to Governmental responses on vulnerable groups, as mentioned in the first iteration of this report, physical/health vulnerabilities are addressed explicitly through the definition of at-risk groups (*Risikogruppen*). German vaccination strategy furthermore explicitly accounts for both physical/health vulnerabilities and certain social vulnerabilities through the definition of priority groups. Over the course of the pandemic, a range of restrictions and recommendations have been issued to minimise the risk of SARS-CoV-2 exposure among these groups and within the population as a whole. German policy has also acknowledged a wider range of vulnerabilities on an implicit level via targeted social and economic support policies, for instance, short-time work programmes for employers, stimuli and loans for MSMEs, housing assistance programmes for the homeless, and the "Neustart Kultur" funding programme for culture workers and institutions.

The following sections provide an overview of changes in response measures in Q1-Q4 2021 and Q1-Q2 2022.

In brief, the main goal in spring 2021 was to restore personal freedom through lifting all Covid-19 restrictions. Apart from that preparation for the coming autumn was prioritized as case numbers were scientifically predicted to rise again. The vaccine rollout continued and the aim was to get the general public vaccinated before the start of autumn. Further the federal government increased promotion for vocational training in the summer of 2021 to tackle educational disparities that solidified throughout the pandemic. Additionally, as Germany and the Global North showed much higher vaccine rates than

[46] https://dserver.bundestag.de/btd/20/025/2002573.pdf
[47] https://dserver.bundestag.de/btd/20/025/2002564.pdf
[48] https://dserver.bundestag.de/btd/20/025/2002581.pdf
[49] https://dserver.bundestag.de/btd/20/026/2002600.pdf

the Global South, the issue of this inequality in vaccine distribution had to be addressed in consultation with other European countries. The period from autumn 2021 to spring 2022 was characterised by the implementation of 2G- (vaccinated and recovered) and 3G-rules (vaccinated, recovered, tested) as there was less vaccination willingness than initially expected and new variants like Omicron surfaced. In addition to that the Network Enforcement Act came into force in the hopes of combating hate speech and fake news which was also particularly relevant for misinformation and conspiracy theories spread about Covid-19 pandemic and state measures on social media. In spring 2022 all 2G and 3G rules were lifted and focus was laid on preparation for yet undetected variants and an increase in infection rates in autumn and winter.

Q2 2021 (April to June)

From April to June 2021 the vaccination campaign worked at its full capacity as Corona vaccination became available to anyone living in Germany both in dedicated vaccination centers and in medical clinics. The Standing Committee on Vaccination (STIKO) approved the use of AstraZeneca for people over 60 years of age. The health minister assured the safety monitoring of COVID-19 vaccines and the chancellor promised to investigate each side-effect in reaction to the vaccine. A virtual conference of the health ministers (GMK) of Länder discussed the health of children and young people in the context of the Corona pandemic and its long-term effects. Along with vaccines, new medical research programme was announced to develop medicine against the virus. Multilingual communication aid “aidminutes.rescue” app added a vaccination mode to support medical staff during the process in different languages.

The German government made efforts to restore personal freedoms lost due to previous responses to the virus. Exemption from The COVID-19 Protective restrictions (for example in gatherings) (COVID-19-Schutzmaßnahmen-Ausnahmenverordnung) was granted to vaccinated and recovered persons. At the same time, clear regulations were formulated to prepare for a possible surge in infections in the future. For example, new regulations of entry to Germany came into force and a country classification for infection risk was introduced. In the area of education, no face-to-face teaching was to take place in schools and daycare centres should the incidence rates rise over 200. To prepare for possible school closures the development of a National Digital Education Platform was announced.

To enable an opening of workplaces employers were obliged to offer their employees who cannot work in a home office a Corona test once a week. In the program "Summer of Vocational Training", the «Alliance for Initial and Continuing Vocational Training" promoted dual training for young people and companies - under the hashtag #AusbildungSTARTEN. To tackle social disparities exacerbated by the pandemic Corona supplement for people who receive basic security - or social benefits 150 Euros were announced alongside a one-time bonus payment of 150 Euro for each child. Targeted support was provided also for the cultural sector in the form of the Federal Government's special fund of up to 2.5 billion euros for cultural events.

Q3 2021 (July to September)

During the period July to September 2021, the German government did not introduce many policy innovations on COVID-19. However, it concentrated its efforts on consolidating policies that were already in place and addressing responses for societal groups which were not sufficiently included in the response to the pandemic and its consequences so far. The Conference of Health Ministers has decided that from September 2021, a booster vaccination will be offered in nursing homes, institutions for integration assistance and other institutions with vulnerable groups. Further, Germany had to address

the gap in vaccines between its residents and those in the global south. At the Global Health Summit in Rome, Germany announced it would provide at least 30 million vaccine doses, especially for developing countries, by the end of the year. To straighten the response on the digital front it became possible to present proof of vaccination of family members on smartphones alongside the personal certificate. Moreover, a digital entry registration form to Germany from risk areas was introduced and the Federal Cabinet has decided to extend the regulation on quarantine upon entry up to 10 November 2021.

Many efforts were directed toward families and education. The Standing Committee on Vaccination (STIKO) released its recommendations for a Corona vaccination of pregnant and breastfeeding women. A working group of the Federal Ministry of Family Affairs and the Federal Ministry of Health with other experts wrote a report and discussed the promotion of healthy nutrition and exercise for children and adolescents. This response was needed as physical training in schools was not always possible during the pandemic. To prepare for school opening in the following year, the Federal Government has provided a total of 200 million Euros for the purchase of mobile air purification devices to reduce infection risks for school and day-care children. Many cultural workers have lost income from their artistic work in the Corona pandemic. Until the end of 2021, they were able to earn up to an additional 1,300 euros per month from non-artistic self-employed activities through the "Corona Special Regulation".

Q4 2021 (October to December)

In the last quarter of 2021, the Robert Koch Institute (RKI) has recorded a clear trend since the end of September: new infections with the coronavirus were on the rise again. This was evident the President of RKI reported on “more than 4,000 covid patients are receiving intensive care” and rising numbers of infections and of hospitalized and ventilated patients. In order to break the fourth wave, the health minister presented three measures: 1. consistent implementation of current protection measures 2. compulsory testing for nursing homes 3. increasing the pace of booster vaccination. The new Infection Protection act prolonged the mandatory testing in hospitals and nursing homes and free Corona citizen tests will be reintroduced. The 2G rules were introduced nationwide. Unvaccinated people were only allowed to enter grocery shops, pharmacies and drugstores. Compulsory face masks were introduced in schools. Mandatory proof of vaccination was intended to be obligatory for employees of clinics, nursing homes and similar institutions. The decision was planned to come into effect by March 2022. With the advance of vaccine authorization, children could be vaccinated against COVID-19. Thus the age limit for the obligation to provide proof of vaccination was lowered to six years.

To combat misinformation about the pandemic the Network Enforcement Act came into force. Platforms such as Facebook and Twitter were obliged to delete criminally relevant statements and in the future report them to the authorities (especially in relation to COVID-19 regulation). Further, the government continued the alleviation of the economically disadvantaged, who were harmed by the economic recession during pandemic times. The cabinet extended the simplified access requirements for short-time allowances into 2022. Temporary workers received access to short-time allowances and the accumulation of minus hours was waived.

Q1 2022 (January to March)

The first quarter of 2022 started as the federal government was still grappling with the fourth wave and its consequences and ended in a major lifting of long-term restrictions on personal freedom. Health minister Lauterbach stated that a high number of unvaccinated elderly constitute a problem. As only 10% of all the persons to whom the fourth vaccination was recommended were vaccinated,

Lauterbach called for a more aggressive approach to the implementation of this guideline. The Standing Committee on Vaccination (STIKO) also recommended a second mRNA booster vaccine for vulnerable groups and medical care workers. Children between six and twelve years of age were to end quarantine directly by a negative test upon arrival from abroad. As many restrictions were lifted towards spring, basic protection for vulnerable groups, obligatory masks on local public transport and schools and hospitals remained in place.

Beyond the internal response to the pandemic, the federal government has encountered several additional challenges during this quarter. Kanzler Olaf Scholz emphasized the importance of cooperation on vaccine production with African countries. The Federal Government Commissioner for Culture and the Media provided a total of up to 105 million euros for live music events and national music festivals in 2022. The Russian incursion in Ukraine presented a new set of challenges and priorities. In order to inform refugees from Ukraine about protection against infection and the Corona vaccination, the Federal Centre for Health Education (BZgA) provided information materials in Ukrainian.

Q2 2022 (April to June)

As briefly stated above, the second quarter of 2022 started with a nation-wide lifting of almost all corona restrictions on personal freedom. Reason for this was not a decrease in newly reported infections as they still continued to rise due to the Omicron variant but rather the implementation of a new legal framework which only allows for a few general protective measures like the obligation to wear masks in hospitals or on public transport. This alternation was justified by the fact that there was no immediate danger of a nationwide overburdening of the health care system and emergency restrictions could always be installed regionally. 3G-rules (tested, vaccinated, recovered) as entry requirements continued to be enforced till the end of Mai and were then suspended for the summer season.

However, to prepare for autumn and winter 2022/23 the German government is aiming at providing vaccines for all that protect against Delta and Omicron as well as variants which have not been yet detected as Health Minister Karl Lauterbach announced.

On an international level Germany among others implored Heads of Governments, the private sector and civil society to take on responsibilities in order to achieve a high vaccination rate globally. Additionally, G7 states agreed upon a pandemic pact installing further and more sensitive early-warning mechanisms for future pandemics using the World Health Organization's early warning centre in Berlin as central junction. In relation to changes in means of communication, the BMG "Evaluation of the Legal Foundation and Measures of Pandemic Policies" provides significant insight into German communications strategies over the course of the pandemic. The key takeaway of the evaluation is that despite evidence that communications strategies were not performing optimally in changing circumstances, they were not adapted accordingly. Going forward, this is a shortcoming that the German government is determined to address. In order for crisis management to be successful risk communication needs to be transparent, participatory and target-oriented (BMG 2022: 49). At the beginning of the Covid-19 pandemic, studies show that all prerequisites for a successful communication were fulfilled as there was high trust in state institutions and willingness to comply with the restrictions set in place. However, the lack of a stringent and participatory communication strategy in particular with regard to differences on the federal and regional level led to the general perception that communication was in-transparent, uncoordinated and incomprehensible. (BMG

2022: 50). According to the evaluation report of the committee of experts of the ministry of health, the communication strategy should have been alternated and adapted in various ways as the pandemic progressed and data and expert knowledge were acquired.

First, crisis management responsibilities on a federal level were mixed between BMG, RKI, PEI and BZgA, even though responsibilities are divided in theory. Therefore, the BZgA was not able to use its full potential for public campaigns like it did for AIDS prevention. Instead, its focus lay on dissemination of factual information online which did not reach large parts of the population (BMG 2022: 51). Further, expert knowledge about appropriate forms of risk communication were not fully utilized and scientific uncertainties were not addressed openly. Additionally, absolute numbers were not always put in relation to the reference population. Meaningful comparisons and visualization using graphics or tables would have helped to convey information and make it more comprehensible. Several campaigns have been initiated by the federal government during the Covid-19 pandemic, including 'Deutschland krempelt die Ärme hoch' and 'Impfen hilft'. Nonetheless, both campaigns were only partly successful as they failed to reach important target groups. (BMG 2022: 52-53; 54-55). Last but not least, if democratic participative communication strategies had been strengthened, different possibilities for pandemic control could have opened up. Participatory processes send a clear signal that co-creation of civic society in planning processes is desired and allow for a dialogue with the population. Central messages can be conveyed more efficiently under such circumstances (BMG 2022: 56-57).

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In conclusion, governmental risk communication in the first phase of the pandemic was linear and direct, a strategy justified by lack of data and knowledge. As the pandemic progressed, however, studies became accessible to the public, opinions started to vary and decisions were made based on scientific evidence. Communication, on the other hand, did not progress and adapt but instead remained top-down, failed to target essential population groups and did not allow for a democratic dialogue.

3.1.5 Greece

In **Greece**, the governmental structure and main actors involved in decision making in Greece remained the same until August 31, 2021 (Kathimerini, 2021)[50], nevertheless, Deputy Minister of Civil Protection Nikos Chardalias (Kokkaliari, 2021)[51], executive figure of the agency that is responsible to mitigate the impact and respond to natural and man-made disasters such as COVID-19 was one of the main key decision makers to be changed (CNN, 2021)[52] in late August, as the Government proceeded with

[50] https://www.kathimerini.gr/politics/561480091/anaschimatismos-ayti-einai-i-nea-synthesi-tis-kyvernisis/.
[51] https://www.ethnos.gr/Politics/article/169850/fotiaxardaliashparaithshstosyrtarihkaythkareklakaitaerothmatagiataenaeriamesa.
[52] https://www.cnn.gr/ellada/story/277428/xardalias-h-paraitisi-moy-einai-sto-syrtari-toy-prothypoyrgoy.

internal restructuring of the administrative composition (Kathimerini, 2021)[53], (In.gr, 2021)[54], (To Vima, 2021)[55], nevertheless, this structural change has not been observed to have a significant impact in the modus operandi of the Government and towards the society in relation to the pandemic management. Moreover, one of the main actors in the governmental response against COVID-19, epidemiologist professor Sotiris Tsiodras, withdraw from being the central figure engaged in communication activities regarding to COVID-19, in comparison to the frequency of previous public appearances as he currently focuses more on research and on-field work as well as due to personal attacks he received from multiple political or not parties. Concluding, while according to the governmental officials' efforts are being made to strengthen the healthcare system56, the responses to vulnerable groups did not radically change.

In **Greece**, the governmental structure opted for a gradual measure disengagement and to prepare the society for a phase of "co-existance". The pre-existing capacities of the healthcare system in addressing a health crisis (which involves contact tracing and testing, equipment, facilities, ICU beds, specialized staff) ranked in a medium position upon comparison to the rest of the European countries (Tubb, 2020, p.15). As the healthcare expenditure was reduced in recent years and although Greece is considered to be a limited capacity country (Tubb, 2020, p.16), the early implementation of measures and interventions proved effective to contain COVID-19 whereas demonstrated willingness to improve the capacity during the pandemic which was crucial in the management of the pandemic, introducing curfews and lockdowns, encouraged remote working and studying. Greece evaded criticism and was willing to learn from the lessons learned of other European countries, Greece invested in digitalization of public and healthcare services, enhanced the cooperation by offering an active, central and leading role to healthcare scientists as crisis managers/communicators in the decision-making process by establishing a national interministerial expert committee and strictly adhering in expert advice. The Greek government and the response to COVID-19 has been praised by experts and other European States as effective and timely (Tubb, 2020, p.20). Concluding, the centralized crisis management, the role of the scientific community and the immediate implementation of interventions were core elements of the Greek crisis response mechanism that would compensate over the weaknesses in terms of capacity and effectively mitigate the pandemic (Tubb, 2020, pp. 38 – 41). There is limited evidence that the Greek response differentiated the course of action in comparison to the crisis management mechanism which was set to mitigate the negative consequences of COVID-19, with the exception of the gradual disengagement from strict lockdowns towards a phase of "co-existance" with the virus. Even during challenging periods, characterized by a high inflow of tourists as well as during national and religious related holidays such as the Christmas period, the weaknesses in the governmental responses are mainly attributed to the level of capacity in the healthcare system. The operation "Freedom" (Kathimerini, n.d.)[57] had a pivotal role in the strict measure disengagement as vaccinations and new data on COVID-19 variants should allow the Greek response to adapt and tailor the implemented measures, allowing a controlled and organized disengagement as it has been

[53] https://www.kathimerini.gr/politics/561465277/allages-sto-kyvernitiko-schima-kyvernitikos-ekprosopos-o-ioannis-oikonomoy/.
[54] https://www.in.gr/2021/08/13/politics/kyvernisi/mini-anasximatismos-ti-allazei-sto-kyvernitiko-sxima/.
[55] https://www.tovima.gr/2021/08/13/politics/mini-anasximatismos-ti-allazei-sto-kyvernitiko-sxima/.
[56] https://www.taxheaven.gr/news/57370/dieykriniseis-gia-thn-ektakth-oikonomikh-enisxysh-proswpikoy-nosokomeiwn-kentrwn-ygeias-kai-allwn-domwn-toy-yp-ygeias.
[57] https://www.kathimerini.gr/tag/epicheirisi-eleytheria/.

suggested by the Greek Prime Minister, Kyrgiakos Mitsotakis (Hellenic Government, 2021)[58]. A prime example of this case was the willingness to implement a mandatory rapid test for all tourists who would visit Greek islands, nevertheless this was rather challenging due to the limited capacity and capabilities of the healthcare system in the aforementioned islands according to healthcare experts (Hardalias, Papaevaggelou & Magiorkinis, 2021)[59]. Moreover, despite the high infection rates, due to a satisfactory vaccination level, the profile of hospitalized infected cases would also change as it would be more likely that vaccinated citizens would stay at in-home supervision rather than in a hospital, thus, tension would be alleviated from the healthcare system in comparison to the earlier phases of the pandemic. The reaffirmation that the Greek response would continue to adhere to the gradual measure disengagement would also be observed in late 2021 by the Greek Prime Minister who reassured that a renewed lockdown would not be implemented (Ethnos, 2021)[60] whereas the government would not make the vaccination process stricter (Kathimerini, 2021)[61]. A similar modus operandi was pursued by the Minister of Health Thanos Plevris in 2022, who suggested that despite the increased infection cases due to the Omircon variant Greece would not implement additional measures (Naftemporiki, 2022) whereas in April the national expert committee would hold discussions on self-tests and masks (ProtoThema, 2022). The Minister of Health Thanos Plevris, in May 2022 announced that masks would no longer be required outdoors and indoors with several exceptions such as public transportation and healthcare facilities such as clinics and hospitals in which masks remained mandatory and unvaccinated employees ought to have two weekly rapid tests (Ant1, 2020)[62], (ToVima, 2022)[63].

The main landmark events for **Greece**, as of April 2021 until May 2022 include the implementation of measures and gradual disengagement of measures. More specifically in April 2021, an extension of the national lockdown until Monday, April 19 (Ta Nea, 2021)[64] was observed. In May 2021 similarly the duration of the national lockdown was extended until Monday, May 24 (Odigostoupoliti, 2021)[65], moreover, a relaxation on the COVID-19 restrictions, particularly on movement restrictions such as permissions to leave private properties and retail businesses operate without appointments (OSAC, 2021)[66] was observed. In June 2021, masks were obligatory to be worn indoors and in relation to outdoor spaces, only in human dense places, whereas the curfew would be lifted as of June 28 (Kontogianni, 2021)[67]. As of July 2021, vaccinated citizens would enjoy further relaxation on measures whereas businesses would be able to admit additional customers in their premises in designated places ("mixed rooms") places exclusively for vaccinated and recovered people. Unvaccinated citizens could also access these businesses with recent negative tests (ethnos, 2021)[68]. In October 2021, the Ministry

[58] https://primeminister.gr/2021/04/22/26355.
[59] https://www.civilprotection.gr/el/enimerosi-diapisteymenon-syntakton-apo-ton-yfypoyrgo-politikis-prostasias-diaheirisis-kriseon-n-1.
[60] https://www.ethnos.gr/Politics/article/170036/koronoiosmhtsotakhsdenpameseneolockdowntieipegiatoendexomenometrongiakleistoysxoroys.
[61] https://www.kathimerini.gr/politics/561464896/kyr-mitsotakis-den-einai-stis-protheseis-mas-na-epekteinoyme-ton-ypochreotiko-emvoliasmo/.
[62] https://www.ant1news.gr/eidiseis/article/636275/koronoios-pleyris-oi-anakoinoseis-gia-tis-maskes-apo-1i-ioynioy.
[63] https://www.tovima.gr/2022/04/29/society/koronoios-arsi-metron-ti-allazei-apo-tin-protomagia/.
[64] https://www.tanea.gr/2021/04/17/greece/pasxa-tria-empodia-ston-dromo-gia-to-xorio-pote-tha-lifthoun-oi-oristikes-apofaseis/.
[65] http://www.odigostoupoliti.eu/koronoios-ta-metra-pou-ischyoun-eos-tin-deftera-24-05-2021/.
[66] https://www.osac.gov/Content/Report/9de88c58-f1b8-464c-acdd-1b9dceb09e9c.
[67] https://greekreporter.com/2021/06/23/greece-drops-face-mask-requirement-outdoor-spaces/.
[68] https://www.ethnos.gr/greece/article/164437/neametraapodeytera5ioylioytiallazeihapofashtiisxyei.

of Health announced that the curfew and restrictions for areas classified as "red" would be lifted and as of October 9, 2021, bi-weekly evaluations would be conducted, therefore dancing would be permitted indoors, bars and restaurants would play music as well as public gatherings of more than 20 people would be now permitted (Paravantes, 2021)[69]. As of November, tightened access restrictions would apply, particularly for catering, leisure and sports businesses and facilities 2G rule (vaccination certificate or proof of convalescence), whereas unvaccinated citizens continue to access their workplace, outdoor areas of restaurants, retail stores and religious facilities with a recent (up to 48 hours) negative PCR test (OSAC, 2021)[70]. Access restrictions would not apply in public transportation and retail stores. In late December, citizens where obligated to wear masks in all outdoor and indoor spaces (FCDO, 2021)[71] whereas on December 21, it has been announced by the European Commission that COVID-19 certificates would be valid only for 9 months from the date of the primary or booster dose vaccination, which would enter into force as of February 2022 (EU Commission, 2021)[72].

Early in 2022, the Greek response continued to oblige citizens to wear a mask both indoors and outdoors (FCDO,2021)[73], whereas as of February 4, Greece announced that vaccinated and recovered citizens were no longer required to provide negative test to enter the country (Psylos, 2022). In March 2022, the obligatory nature of wearing a mask outdoors was lifted but was highly recommended to continue to wear masks while as of March 15 (KeepTalkingGreece, 2022)[74], citizens would no longer require to complete a Passenger Locator Form in order to enter the country (General Secretariat for Civil Protection, 2022)[75]. According to the Greek Minister of Health on April 12, certificates for vaccination, recovery or negative results are no longer required to enter Greece (as of May 2), whereas they are also not mandatory to visit events, restaurants, entertainment or cultural venues and other public places (Tornos News, 2022)[76]. Moreover, citizens at border crossings would no longer need to show their EU Digital COVID-19 certificate (Patramani, 2022)[77]. The course of implemented measures indicates and reaffirm the intention of the Greek Government, as observed above mainly by the Greek Prime Minister, Minister of Health and Heath care experts, to gradually disengage from the strict measure implementation which is mainly based on the vaccination rate of the citizens and due to the fact that COVID-19 begins to adopt the characteristics of an endemic rather than those of a pandemic. The availability of a vaccine and contemporary COVID-19 data has changed the threat perception of Greek decision-makers towards COVID-19, who suggest a phase of co-existance with COVID-19 (Kathimerini, 2022)[78], with an annual vaccination and implementation of proportional measures as of September 2022 in accordance to the dynamic of COVID-19 infection rate (Aftodioikisi, 2022)[79].

[69] https://news.gtp.gr/2021/10/06/greece-lifts-most-covid-restrictions-countrywide/.
[70] https://www.osac.gov/Content/Report/00f11d0a-80ab-4aaf-aa29-1d1e7c9a63ab.
[71] https://www.gov.uk/foreign-travel-advice/greece/coronavirus.
[72] https://ec.europa.eu/commission/presscorner/detail/en/ip_21_6837.
[73] https://www.gov.uk/foreign-travel-advice/greece/coronavirus.
[74] https://www.keeptalkinggreece.com/2022/03/02/greece-mandatory-use-masks-outdoors-lifted/.
[75] https://travel.gov.gr/#/.
[76] https://www.tornosnews.gr/en/greek-news/society/46930-greece-s-health-minister-covid-19-free-pass-to-be-suspended-on-may-1st.html.
[77] https://www.ertnews.gr/eidiseis/ellada/kinonia/telos-ta-pistopoiitika-emvoliasmoy-apo-tin-kyriaki-maska-eos-kai-tis-31-ma-oy/.
[78] https://www.kathimerini.gr/society/561821158/enimerosi-gia-pandimia-se-fasi-synyparxis-me-ton-io-ti-allazei-sta-scholeia-meta-to-pascha/.
[79] https://www.aftodioikisi.gr/ygeia/koronoios-ayta-ta-metra-epistrefoyn-apo-septemvrio-diloseis-pleyri/.

In specific, the **Greek** crisis management system continued to implement pandemic containment measures which include non-pharmaceutical interventions such as lockdowns, dissemination of good hygiene practices, movement restriction measures, hygiene related measures that influence how businesses operate during COVID-19 (Ministry of Health, 2021)[80]. Moreover, the Greek government continued to implement a series of socio-economic measures which would support and mitigate the negative consequences of COVID-19, such as economic benefits for citizens that were forced to cease their professional activities (Greek Government, n.d.)[81], (Ministry of Labour and Social Affairs, 2022)[82]. The main indicators that lead the Greek government adopt measures are data drawn from the Ministry of Health on the COVID-19 infection rates (EODY, n.d.)[83], particularly during periods of time that can be characterized as months of high human mobility and concentration such as during holidays (Christmas, Easter etc) and the summer season as observed above. Data on COVID-19 (Greek Government, n.d.)[84] are collected on-site in facilities operated by Hellenic National Public Health Organization in all geographic regions and by COVID-19 tracing mobile units (EODY, 2020)[85], (EODY, 2022)[86]. The Greek response towards COVID-19, despite the relative unpredictable nature of the COVID-19 and based on the prior-COVID-19 capabilities and capacity of the healthcare system, it has been evaluated as successful, particularly due to the decisive pre-emptive implementation of non-pharmaceutical interventions and successful vaccination campaign (Tubb, 2020, pp. 16 – 18, 38 – 41). Concluding, similarly to other European countries, Greece utilized a COVID-19 Risk epidemiological map, albeit utilizing five colour levels (dark red, red, orange, yellow and green) instead of three, whereas the transition from one color category to another was based on the infection rate of each area (Ministry of Civil Protection, n.d.)[87]. Thus, if a specific area suffered from high infection rates its color was dark red.

3.1.6 Ireland

Ireland, early in February 2022, exit the emergency response period of the COVID-19 pandemic and got into the transitory, public health advise-response. The amendments that allowed the Minister of Health to issue new measures and regulations ceased to apply. Late in February 2022, the government lifted measures regarding mandatory mask use and travel restrictions. However, the government alternatively provided public health advice recommendations to citizens including: isolation for confirmed cases, vaccination completion, mask use when needed, social distancing and maintenance of hygiene protocols in an effort called ''Be risk Aware''. More precisely, advice was focused on the continuation of mask wearing on public transport and healthcare facilities always in line with evolving national guidance as well as measures in regard to infection prevention and control in schools by respecting and following carefully the hygiene protocols. Testing efforts were also continued in schools. The minutes from the last National Public Health Emergency Team (NPHET) for the COVID-19 meeting in February 2022 describe the transition phase as *"a shift from the emergency type processes*

[80] https://www.moh.gov.gr/articles/health/dieythynsh-dhmosias-ygieinhs/metra-prolhpshs-enanti-koronoioy-sars-cov-2/8882-metra-prolhpshs-kata-ths-diasporas-toy-korwnoioy-sars-cov-2-stis-epixeirhseis-estiashs.
[81] https://covid19.gov.gr/category/oikonomia-ergasia/.
[82] https://ypergasias.gov.gr/epipleon-metra-stirixis-ergazomenon-kai-epicheiriseon-apo-tis-oikonomikes-epiptoseis-tis-pandimias-covid-19-gia-ton-ianouario-2022/.
[83] https://eody.gov.gr/epidimiologika-statistika-dedomena/imerisies-ektheseis-covid-19/.
[84] https://covid19.gov.gr/covid19-live-analytics/.
[85] https://eody.gov.gr/oi-komy-toy-eody-xepernoyn-tis-1-000-apostoles-kata-ton-proto-mina-leitoyrgias-toys/.
[86] https://eody.gov.gr/komy-testing-eody/.
[87] https://covid19.gov.gr/covid-map/.

and measures of the last two years, while also necessitating the maintenance of high levels of readiness for COVID-19 outbreaks and the emergence of new variants of concern, with significant strengthening of existing disease surveillance systems, along with continued close monitoring of the epidemiological profile of the disease" (Department of Health, 2020)[88].

In regard to government's structural changes to COVID-19 response, the most important is the conclusion of the NPHET on 17 February 2022 (Department of Health, 2020)[89]. The NPHET was established on 27 January 2020 (part of the Department of Health (DoH) and chaired by the Chief Medical Officer (CMO) to oversee and provide national direction on the COVID-19 strategy. The Chair decided that there is no need to continue the work of the NPHET due to the country's shift from the emergency phase of the pandemic to the transition phase (Ibid)[90]. During the new phase and in early April 2022, the Irish Health Ministers in order to assist this transition, established the COVID-19 Advisory Group with members of multi-disciplinary expertise (Department of Health, 2020)[91]. The purpose of the Group was to advise the Health Minister and Government about best practises to maximise the country's medium to long-term preparedness against COVID-19" (Department of Health, 2020)[92] and specifically, to monitor current data as well as new and emerging practises including new technologies for detection and control of COVID-19 providing also advices of best practises or lessons learned from other countries and finally, ''*advise the Minister and Government on medium and long-term responses that may become necessary as part of the response to COVID-19"* (Ibid)[93]. However, the new Advisory Group consisted of 20 members, some from the former NPHET and others from consultancy and academia (Breaking News, 2022)[94] the Irish Nurses and Midwives Organisation (INMO) criticised the group as it was lacking any representation from the nursing community (INMO, 2022)[95].

The Irish healthcare system was in a reforming period before COVID-19 known as 'Sláintecare'; an intention to create a universal and integrated healthcare system through a 10-year period (Department of Health, 2018)[96]. The primary intention was to ensure equal access to healthcare for all regardless economic criteria. In an article published in late 2021, Burke et al. argue that the Irish Government has effectively utilised the shock of the COVID-19 pandemic to "progress significantly" Sláintecare-related reforms (rather than allow the pandemic to further destabilise the system) (Burke et al, 2021)[97]. The authors suggested that the provision of COVID-19 related care and diagnostics, free of charge assisted in this transition as well as the introduction of Independent Health Identifiers, telemedicine practices, new contracts for consultants and GPS, and new recruitment into primary and community settings proved crucial also in the healthcare reform[98].

[88] https://www.gov.ie/en/collection/691330-national-public-health-emergency-team-covid-19-coronavirus/.
[89] Department of Health. (2020). *Minutes and Agendas from Meetings of the NPHET: COVID-19 – Meeting 17 February 2022.*
[90] Ibid.
[91] https://www.gov.ie/en/press-release/9ee67-ministers-for-health-establish-the-covid-19-advisory-group/.
[92] Department of Health. (8 April 2022). *Press release: Ministers for Health Establish the COVID-19 Advisory Group.*
[93] Ibid.
[94] https://www.breakingnews.ie/ireland/new-and-familiar-faces-as-new-group-to-replace-nphet-confirmed-1287683.html.
[95] https://www.inmo.ie/Home/Index/217/13942.
[96] https://www.gov.ie/en/campaigns/slaintecare-implementation-strategy/.
[97] https://doi.org/10.1016/j.lanepe.2021.100223.
[98] Burke, S. et al. (2021). Building health system resilience through policy development in response to COVID-19 in Ireland: From shock to reform. *The Lancet Regional Health – Europe.* (Vol. 9, October 2021), p7.

Regarding crisis management mechanisms, in Ireland, there is a conventional framework for major emergency management available which allows the 'principal response agencies' [An Garda Síochána, the Health Service Executive (HSE) and local authorities] prepare and develop an organised response to key emergencies (Shannon, L. & O' Leary, F., 2021)[99]. The framework is multi-level and can be implemented at local, regional and national levels (ibid) but is primary used at regional and/or local levels, since in 2017, a national plan/framework for Strategic Emergency Management was published, laying out national agreements for the provision of efficient emergency management using a 'whole of Government' method (ibid) which specifically focuses on responding to national-level emergencies (ibid). However, a 2021 report titled '*Leading the Local Response to COVID-19: the Role of Local Government*,' (ibid)[100] noted that the Emergency Management framework, in response to COVID-19, was not utilised at national level (ibid). Instead, the response followed a 'complex emergency' framework, whereby ad-hoc systems were put in place to govern the emergency at central level (ibid). As stated in the report, the COVID-19 pandemic can be "*categorised as a 'complex emergency' that may require a response beyond the established frameworks*" (ibid). Here, complex emergencies can be distinguished from routine (regular or daily emergencies) and non-routine emergencies that are foreseeable but have far bigger effects than routine emergencies (e.g., natural disasters) (ibid).

Nevertheless, the decision to adopt a 'complex emergency' framework received criticism. In a policy brief titled 'Towards a Concept and Framework for Governing Complex Emergencies,' (Rode, P., & Flynn, R., 2022)[101] complex emergencies are described as political in nature, which can consequently result in the dissolution of the cultural, civil, political, and economic stability of societies (ibid). In the context of the COVID-19 pandemic, the complex emergency framework adopted in some countries has resulted in divisions between national and subnational governments over emergency declarations and measures (ibid). Rode and Flynn stressed that these divisions can be attributed to the complex emergency framework's "lack of a clear framework of multilevel authority and coordination in an emergency" (ibid). They also observed that the local and regional emergency management structures adopted in response to COVID-19 were well established and proved to be useful (Shannon, L. & O' Leary, F., 2021)[102]. In their evaluation, interviewees stated that at local level, there was a benefit of having well founded relationships with the HSE and An Garda Síochána, via the major emergency management systems (ibid). Due to this pre-existing relationship, it was possible to react quickly and assist in applying the necessary public health measures (ibid). In sum, local authorities can be characterized well prepared to deal with the emergency situation that COVID-19 brought (ibid), (ibid).

The **Irish governmental responses to COVID-19, between April 2021-April 2022**, were predominantly focused on exiting the COVID-19 pandemic. From May 2021 onwards, COVID-19 restrictions were eased in phases. During the 1st phase, April-May 2021, the Prime Minister, following the advice from the NPHET, announced the lift of the most COVID-19 restrictions late in April 2021. Starting in May 2021, the reopening of services took place in stages and by the end of the month the government would evaluate if the reopening of services should continue in June. Restrictions to be lifted included travel, personal services, retail, outdoor socialising, and religious services. This was the initial plan, but the Health Minister on 30 of April 2021, declared that the NPHET could endorse an "emergency brake"

[99] https://www.ipa.ie/_fileUpload/Documents/IPA%20LGR%2020%20web.pdf.
[100] Ibid.
[101] https://www.metropolis.org/sites/default/files/resources/Emergency-Governance-Cities-Regions-%20Policy-Brief-2.pdf.
[102] https://www.ipa.ie/_fileUpload/Documents/IPA%20LGR%2020%20web.pdf.

on reopening but 'ultimately the pulling of any such brake is a decision by the Government' (WHO, COVID-19 Health System Response Monitor, 2021)[103]. In the following months until August 2021 more restrictions were eased[104]. The second phase, September-October 2021 was shaped from the 'Reframing the Challenge, Continuing Our Recovery and Reconnecting' plan, which was announced on 31 August 2021. The plan put emphasis on citizens' protection at a personal level shifting from protection through regulations and restrictions (Government of Ireland, 2021). Protection at a personal level included advise for self-isolation in case of COVID-19 symptoms, hygiene protocols and mask use in crowded areas. Primarily the plan focused on combating COVID-19 "mainstream" way rather than as "an exceptional threat requiring society-defining interventions and action which are increasingly burdensome and scarring" (ibid) on Ireland's economy, society, health, and well-being. This plan was utilized during September-October 2021 (Citizens Information, 2021)[105].

The following months and specifically early in December, the government re-introduced restrictions to supress the spread of the Omicron variant, which was first detected in Ireland in December 2021 (Dwyer, 2021)[106]. Additional restrictions were announced on 17 December 2021, such as an 8pm curfew for bars, restaurants, live events, cinemas, and theatres until 30 January 2022 (Citizens Information, 2021)[107]. On22 January 2022, the Government lifted most COVID-19 restrictions. However, face masks and protective methods in school stayed in place until 28 February 2022 (ibid). On March 31, 2022 the Health Preservation and Protection and Other Emergency Measures in the Public Interest Act 2020 ceased (ibid). The Act authorised the Health Minister to issue guidelines and introduce measures to eliminate the transmission of COVID-19 (ibid). It also permitted the detention of individuals who were potential source of infection and hazard to public health (ibid). Further, it was observed that during the pandemic, numerous guidelines gave *An Garda Síochána* further powers, such as arrests without warrant. Penalties included fines of up to €5,000, imprisonment up to six months, or a mixture of both (ibid).

Since **April 2022, all COVID-19 restrictions eased** (ibid). However, self-isolation following symptoms of COVID-19 and face mask use in public transport and healthcare facilities were still recommended. In terms of travel, no proof of vaccination or recovery were mandatory neither Passenger Locator Forms (ibid). **During 2021**, each COVID variant led the government to adopt new measures to minimise COVID-19 infection rates. The highly contagious COVID-19 variants, namely the Delta (Fahy, G., & Humphries, C. (2021)[108] and Omicron (Cipirska, 2021)[109], led to specific measures adoption. For the response to the Delta variant, which was first detected in Ireland in June 2021 (McGee, H., Leahy, P., & Kelly, O., 2021)[110], the country introduced a number of measures to slow down its spread. For instance, by mid-June 2021, Ireland changed the vaccine rollout and travel rules. With a primary focus on vaccine rollout, the Prime Minister and head of Government of Ireland, confirmed that the HSE

[103] https://eurohealthobservatory.who.int/monitors/hsrm/all-updates/hsrm/ireland/second-wave-measures-physical-distancing.
[104] https://www.citizensinformation.ie/en/health/covid19/public_health_measures_for_covid19.html.
[105] Ibid.
[106] https://www.thejournal.ie/first-omicron-case-ireland-5613966-Dec2021/.
[107] https://www.citizensinformation.ie/en/health/covid19/public_health_measures_for_covid19.html.
[108] https://www.reuters.com/world/europe/ireland-might-demand-vaccine-drink-inside-pubs-restaurants-2021-06-29/.
[109] https://inews.co.uk/news/world/ireland-announces-new-measures-to-curb-spread-of-omicron-variant-1359045.
[110] https://www.irishtimes.com/news/politics/rapid-rise-in-coronavirus-delta-variant-in-ireland-over-past-week-to-be-discussed-at-cabinet-1.4599743.

would shorten the gap between the first and second doses of the AstraZeneca vaccine from 12 to 8 weeks (Breaking News, 2021)[111]. The measure was introduced to ensure that more citizens got the COVID-19 vaccine before the Delta variant could spread any further across Ireland. Overall, the measure was beneficial because vaccination assisted to the elimination of COVID-19 hospitalisations, severe illness, and related deaths (Mangan, 2021)[112] . Hence, this measure could be characterized as successful in delaying the spread of the Delta variant. Analysing the Delta variant infection case rates, it was reported that cases remained low and that there was no escalation in confirmed cases for numerous weeks after the Delta-related measures were introduced (ibid).

To slow the spread of the **Omicron variant**, Ireland again introduced several measures. Towards the end of December 2021, the country announced an 8pm curfew for hospitality venues such as restaurants, bars, and cafes. In addition, no indoor events, including entertainment, cultural, community and sporting events, were allowed to take place after 8pm (Cullen, 2021)[113]. For events taking place before 8pm, venue organisers were advised to run them at reduced capacity. More specifically, for indoor venues capacity was 50%, or 1,000 people (whichever is lower). For outdoor venues, capacity was 50% or 5,000 people (whichever is lower) (ibid). Wedding receptions were able to take place after 8pm but with a capacity of maximum 100 guests (Baynes, 2021)[114].

Upon the emergence of the Omicron variant in Ireland, Chief Medical Officer Dr Tony Holohan, in December 2021, said: "*We have slowed transmission of this disease in the past using our basic measures and responding immediately if symptomatic – it is extremely important we do everything we can to flatten the curve of this wave now to prevent unnecessary deaths, risk to the vulnerable and to protect our health service*." (Cullen, 2021)[115].

The measures taken for the Omicron variant considered to be also quite successful. With the ease of most restrictions on 22 January 2022, the Prime Minister, announced that Ireland "weathered the Omicron storm." Furthermore, the Prime Minister stated that the assistance of the booster vaccines "utterly transformed" the COVID-19 situation in Ireland (Humphries & Halpin, 2022)[116].

3.1.7 Israel

In relation to the case of Israel during the period of early April 2021 and late May 2022, there is no data available that indicates that there have been changes in the governmental structure. No new support agencies were established during this time, but existing structures were reinforced, financially supported (Government of Israel, 2021)[117] and strengthened (Government of Israel, 2021)[118]. From April 2021 to May 2022 many governmental decisions, policies, regulations and updates were

[111] https://www.breakingnews.ie/ireland/astrazeneca-dose-gap-reduced-from-12-to-eight-weeks-under-new-advice-1136540.html.
[112] https://www.irishmirror.ie/news/irish-news/covid-19-ireland-changes-vaccine-24328525.
[113] https://www.irishmirror.ie/news/irish-news/covid-ireland-dr-tony-holohan-25739365.
[114] https://news.sky.com/story/covid-19-ireland-announces-8pm-curfew-for-hospitality-as-new-covid-rules-brought-in-to-halt-omicron-surge-12498469.
[115] https://www.irishmirror.ie/news/irish-news/covid-ireland-dr-tony-holohan-25739365.
[116] https://www.reuters.com/business/healthcare-pharmaceuticals/ireland-set-rapidly-drop-almost-all-covid-19-restrictions-2022-01-21/.
[117] https://www.gov.il/he/departments/policies/dec368_2021.
[118] https://www.gov.il/he/departments/policies/dec426_2021.

published (Israeli Administration of Courts, 2022)[119]. On the government website 362 entries were found in the respective time period. During this year, the main events and phases of the pandemic were the fourth (mainly Delta variant) and fifth (mainly Omicron variant) waves, the administration of the third dose of the vaccine to the entire population, and the administration of the fourth dose of the vaccine to people in risk groups (older than 60 years, those who suffer from immunocompromised conditions, residents in long term care facilities, or health care personnel). The government and the MoH used the "traffic light" model (Ministry of Health, n.d.)[120] to plan the responses and restrictions in the different cities and municipalities, resulting in differentiated restrictions over the country (Bachner, 2020)[121]. It was especially noticed in the movement and traffic restrictions, business places activity, tourist sites and hotels (Ministry of Tourism, 2021)[122], and on commercial activity. In the education system the "traffic light" defined in which schools there will be remote learning and where it will be frontal.

Despite no indications of governmental structural changes, the Israeli government and the Ministry of Health, invited Israel's research community which was organized in a multidisciplinary committee to cooperate with the governmental authorities in order to provide insights that are aimed in overcoming COVID-19 policy related challenges (Peleg et al, 2021)[123]. Based on up-to-date governmental datasets, researchers extract and test COVID-19 related data in order to define contemporary challenges within remote-access and secure research environments (Ibid). This event, titled as a "Datathon", included the participation of 18 multidisciplinary teams which were mentored by 20 data scientists, as well as 6 epidemiologists, 12 judges and 5 presentations mentors (Ibid). This event was open to all citizens, whereas the Ministry of Health would consider the three winning teams' insights as potential data methods that would be relevant to influence national policies, whereas according to the participant feedback, these activities would significantly improve the governmental responses to future health crises, demonstrated their trust in the Ministry of Health and willingness to cooperate further in relevant projects (ibid)[124].

3.1.8 Italy

Since the establishment of the new Draghi government on 13 February 2021, there have been no structural changes in the Italian government. In April 2021, the Prime Minister Mario Draghi and the Health Minister Roberto Speranza announced the country's new recovery strategy based on three pillars: a clear road map of re-openings, measures to support the economy and businesses, and the revival of growth through investment ("Sintesi della conferenza stampa del Presidente Draghi, www.governo.it"). This strategy was decided upon the improved health situation, with the slowdown

[119] https://www.gov.il/BlobFolder/policy/manager_of_courts_directives_10012022/he/%D7%94%D7%95%D7%93%D7%A2%D7%AA%20%D7%9E%D7%A0%D7%94%D7%9C%20%D7%91%D7%AA%D7%99%20%D7%94%D7%9E%D7%A9%D7%A4%D7%98%20%D7%91%D7%93%D7%91%D7%A8%20%D7%94%D7%AA%D7%90%D7%9E%D7%AA%20%D7%9E%D7%AA%D7%9B%D7%95%D7%A0%D7%AA%20%D7%94%D7%A4%D7%A2%D7%99%D7%9C%D7%95%D7%AA%20%D7%91%D7%91%D7%AA%D7%99%20%D7%94%D7%9E%D7%A9%D7%A4%D7%98%20%D7%95%D7%91%D7%91%D7%AA%D7%99%20%D7%94%D7%93%D7%99%D7%9F%20%D7%9C%D7%A2%D7%91%D7%95%D7%93%D7%94%20-%20%D7%9E%D7%94-10.01.22.pdf.

[120] https://www.gov.il/en/departments/guides/ramzor-cites-guidelines.

[121] https://www.timesofisrael.com/whats-the-traffic-light-plan-all-you-need-to-know-about-the-new-virus-rules/.

[122] https://www.gov.il/he/departments/policies/outline-for-the-entry-of-vaccinated-foreign-tourist-groups.

[123] https://www.mdpi.com/2199-8531/7/4/208#cite.

[124] https://www.mdpi.com/2199-8531/7/4/208#cite.

of the infection curve and the acceleration of the vaccination campaign. During the first phase of activities re-opening, in May 2021, the government allocated around EUR 40 million to enhance a number of interventions, divided into these main lines of action: support for businesses, the economy and the reduction of fixed costs; access to credit and business liquidity; health protection; labour and social policies; support for local and regional authorities; youth, schools and research; basic research and innovative drug development and sectoral measures ("Gazzetta Ufficiale"). Since April 2021 various legislative initiatives were approved further on "Urgent measures for the containment of the COVID-19 epidemic, SARS-CoV-2 vaccinations, justice and public competitions" (the Decree Law No.44 of the 1st April 2021, known as April Decree). In addition, the State of Emergency and the division of Italian regions by four different colours125, based on the evaluation of several indices were also extended. Measures concerning teaching activities such as restrictions in physical presence of students and establishment of virtual learning at all levels of education were implemented throughout the country depending on the respective zone of each region. Nonetheless, on 21st April 2021 the Council of Ministers approved the so-called "Decreto Riaperture" [Reopening Decree] which set out the framework of measures to be applied from 1st May to 31st July 2021 for the gradual resumption of economic and social activities, in the context of a positively evolving health situation following the slowdown of the infection curve and the acceleration of the vaccination campaign. From that time and onwards the restrictive measures mainly regarding entertainment and food service activities were gradually revoked. In addition, the Decree Law of 17th June 2021 approved the free circulation in national and European territories for all people with COVID-19 green certification. With the Decree Law No. 105 of 22nd July 2021, the state of emergency was extended until 31st December 2021 defining that the implementation of emergency measures on specific national areas could change in relation to a differentiated assessment of infection parameters and the occupancy rate of hospital and intensive care unit beds in the medical area. The Decree also established the permission of carrying out several activities only on possession of COVID-19 vaccination certificate. The COVID-19 Green Certification was not required for children (up to 12 years of age, excluded from vaccination campaign) and for people with specific medical certifications. From this point onwards, the Italian government focused on various measures relating to the extension of the vaccination obligation and the restriction of access to recreational areas, entertainment and catering activities for those who did not get vaccinated.

On 15th December 2021, the Council of Ministers approved the Decree Law No.221 of 24 December 2021 ("Gazzetta Ufficiale") by which the state of emergency was postponed until 31th March 2022, date on which it then ceased, and new arrangements are made for the management of positive cases of infection, such as in the event of close contact with a person confirmed positive for COVID-19 preventive quarantine does not apply to some people. The Degree also extended the competency of the Head of the Civil Protection Department and the structure of the Special Commissioner for the implementation and coordination of measures to contain and combat the emergency. Despite the serious increase in positive cases, the economy does not stand still but the Government reduces the duration of the Green Pass from nine to six months (bringing forward the second/third dose by two months); introduces the obligation to wear FFP2 type masks on all means of transport and at outdoor and indoor performances in theatres, concert halls, cinemas, entertainment and live music venues (and other assimilated venues) and for sports events and competitions that take place indoors and outdoors (in all these cases the consumption of food and drinks indoors is prohibited).

[125] https://www.eui.eu/ServicesAndAdmin/LogisticsService/EUI4U/COVID-19-Risk-areas-in-Italy.

On 21 January 2022, the Council of Ministers approved a series of new measures to support enterprises and economic operators, labour, health and territorial services, related to the COVID-19 emergency, as well as for the containment of the increases in the electricity sector. The Decree intervenes to support sectors that have been closed as a result of the pandemic, such as: theme parks, aquariums, geological parks and zoos; party and ceremony organisation, wedding, hotel, catering, café-bar and swimming pool management; activities trade in textiles, fashion, footwear and leather goods, clothing, footwear; tourism, tourist accommodation, agencies and tour operators, theme parks, spas, discotheques, billiard and bingo halls, funicular and chairlift stations entertainment and cinema and audio-visual sports ("Gazzetta Ufficiale").

In March 2022, the Council of Ministers dictated new measures to overcome the emergency phase ("Comunicato stampa del Consiglio dei Ministri n. 67 | www.governo.it") extending the obligation to wear FFP2 type masks in indoor environments, such as means of transport and crowded public places, until 30 April 2022, declaring the end of the "coloured" zone system (different restrictive measures based on the analysis of indicators), returning sports facilities capacities to 100% outdoor and indoor from 1st April 2022, declaring that any other necessary protocols and guidelines will be adopted by order of the Minister of Health and that the COVID-19 state of emergency will end on 31st March 2022. From March 2022 (Decree Law No.24 of 24 March 2022) certain provisions are defined to make the return to normality easier following the end of the state of health emergency. The Green pass is expected to be phased out; the vaccination obligation is maintained until 31st December 2022 for health care professionals and workers, also for people working in residential, social care and social-health facilities; for over 50 people the obligation remains until 15th June 2022. Since the declaration of the state of emergency in Italy, the Head of the Civil Protection Department issued an order (3 February 2020) on "First urgent civil protection interventions in relation to the emergency relating to the health risk associated with the outbreak of diseases caused by transmissible viral agents" which provides the establishment of a technical-scientific Committee, with broad involvement of government and state officials in order to overcome the prevailing emergency. The aforementioned committee was the first government support agency created during the pandemic and it had the mandate of advising and supporting the coordination activities to overcome the epidemiological emergency due to the spread of the Coronavirus. The technical-scientific Committee met for the last time on 30 March 2022 and was dissolved following the termination of the Covid-19 state of emergency (31 March 2022).

In addition to the creation of the Committee (pursuant to art. 122 of Decree law of 17th March 2020 n° 18, with Dpcm of 1 March 2021) the General of the Army Corps, Francesco Paolo Figliuolo was appointed as Extraordinary Commissioner for the implementation and coordination of measures to contain and combat the COVID-19 epidemiological emergency and for the execution of the national vaccination campaign. The Extraordinary Commissioner for the Covid-19 emergency managed every useful intervention to face the health emergency, planning and organising activities, identifying needs, directing human and instrumental resources and proceeding to the acquisition and distribution of medicines, equipment and medical and personal protective devices, in liaison with the Head of the Civil Protection Department. He collaborated with the regions and supported them in the exercise of their relative competences in health matters. As the Committee, the extraordinary commissioner for the Covid-19 emergency was dissolved on 31st March 2022, with the termination of the state of emergency. Despite the end of the emergency state, the Decree law of 24th March 2022 n°24 established the creation of the Vaccination Campaign Completion Unit: The Unit operates from 1st

April to 31rd December 2022 and will take over all active and passive relations from the Extraordinary Commissioner for the implementation and coordination of measures to contain and combat the COVID-19 epidemiological emergency. As of 1st April 2022, with the Decree of the President of the Council of Ministers of 29th March 2022 appointing the director and the first-line manager, with deputy functions, of the Vaccination Campaign Completion Unit and the adoption of other measures to combat the pandemic, the new director of the Unit is Major General Tommaso Petroni. Actually, the technical-scientific Committee and the Extraordinary Commissioner for COVID-19 are no longer operating but the Vaccination Campaign Completion Unit is still operating, guided by Tommaso Petroni.

3.1.9 Portugal

In regard to government's structural changes to COVID-19 response, during the COVID-19 pandemic, the following three elections were held in Portugal, between January 2021 and January 2022, which resulted in some changes to the Governmental structures across the country:

1) Presidential Election on January 24th 2021

The incumbent President, Marcelo Rebelo de Sousa (former leader of PSD[126]), was re-elected for a second term by a landslide, while Portugal was under a lockdown[127]. He won every district in the country and all 308 municipalities, a result which happened for the first time ever in Portuguese democracy[128].

2) Local Elections on September 26th 2021

An election for the Municipal Chamber (the executive branch of the municipality, whose winner is elected Mayor); an election for the Municipal Assembly (the deliberative branch of the municipality); and separate elections for the several Parishes Assemblies (the deliberative branch of the lower-level parish, whose winner is elected Parish President).

3) Legislative Elections on January 30th 2022

Elections of the Assembly of the Republic to the 15thLegislature of the Third Portuguese Republic were held beforehand (announced by the country's President) due the rejection of the budget proposed by the Socialist minority government on October 27th2021[129], mainly because of the Left Bloc (BE[130]) and the Portuguese Communist Party (PCP[131]), both of whom had previously supported the government, joined the centre-right to right-wing opposition parties and rejected the budget. The Socialist Party

[126] Social Democratic Party (PSD): One of the two major parties in Portuguese politics (liberal-conservative, centre-right). Its major rival being the Socialist Party (PS) on the centre-left.
[127] https://www.reuters.com/article/us-portugal-election-idUSKBN29S0BU
[128] https://observador.pt/2021/01/25/as-nove-freguesias-em-3-092/
[129] https://sicnoticias.pt/especiais/eleicoes-legislativas/2021-10-27-Parlamento-chumba-Orcamento-do-Estado-7b00c570
[130] BE is a left-wing populist, democratic socialist political party. In 2015, BE signed an agreement with the Socialist Party that is aimed at identifying convergence issues, while also recognizing their differences, and supported the minority Socialist Costa Government (2015–2019) with a confidence and supply agreement.
[131]Currently CDU – Unitary Democratic Coalition (PCP-PEV) is an electoral and political left-wing coalition between the Portuguese Communist Party (PCP) and the Ecologist Party "The Greens" (PEV). Each party has its own parliamentary group and counts as a separate party in official issues. Similarly, to BE, CDU supported the minority Socialist Costa Government (2015–2019) with a confidence and supply agreement.

(PS) of centre-left led by the current Prime Minister (PM) António Costa, won the elections and achieved an unexpected majority government for the second time (the first being in 2005)[132].

On January 7th 2022, the validity of Order nº 11888-A/2021, of November 29, which defines the terms and requirements of the system of **verification of standards for air traffic**, as well as the supervision of its operation was extended until 23h59 of February 9th2022[133]. The validity of Order nº 11820-B/2021, of November 29, defining the measures applicable at terrestrial borders during the validity of the special measures for testing was also extended until 23h59 of February 9th2022, without prejudice to changes in measures depending on the evolution of the epidemiological situation[134]. Around May 2022 there was an increase in the number of new daily cases and a mortality above the reference threshold, so it was considered prudent to renew the declaration of the **State of Alert** throughout mainland Portugal and maintain the set of measures still applicable in the context of combating the pandemic. Hence, on May 5th 2022, the declaration of the State of Alert in the context of the COVID-19 disease pandemic was extended until 23h59 of May 31st2022[135].

Regarding specific **changes to the people appointed to the Governmental structure at a Nacional level**[136] as of April 1st 2021, the Minister of Justice (Francisca Van Dunem) was appointed also Minister of Internal Administration on December 4th 2021, along with two new Secretaries of State: Antero Luís as Assistant Secretary of State and Home Affairs and Patrícia Gaspar as Secretary of State for Internal Administration. Moreover, before the Legislative Elections, the PM was also appointed Minister of Foreign Affairs on March 28th 2022, along with three new Secretaries of State: Ana Paula Zacarias as Secretary of State for European Affairs, Francisco André as Secretary of State for Foreign Affairs and Cooperation, and Berta Nunes as Secretary of State for Portuguese Communities.

Regarding vulnerable groups and especially to **guarantee the rights of all foreign citizens** with pending cases at the immigration and border service (SEF) and that they are in a situation of regular stay in national territory, by maintaining the effects of Orders No. 3863-B/2020, of 27 March, 5793-A/2020, of May 26, and 10944/2020, of November 8, it was determined the broadening of the scope of the aforementioned Orders intended to expand the scope of pending cases in the SEF, from the date of the declaration of the State of Emergency until April 30th 2021[137]. Moreover, in the case of foreign citizens who have made requests under Law no. 27/2008, of 30 June, in its current wording, which establishes the conditions and procedures for granting asylum or subsidiary protection and the statutes of asylum seekers, refugees and of subsidiary protection, their stay in national territory with pending cases at the SEF is considered to be regular, as of April 30th 2021[138].

In regard to vulnerable groups on June 11th 2021, the first amendment is made to the Ordinance nº 200/2020, of August 19, which creates and regulates the Accessibility Program for Public Services and Public Roads[139]. This program is part of the framework of the commitments assumed by the XXII Constitutional Government, in terms of the **inclusion of people with disabilities**, and is part of the Economic and Social Stabilization Program (PEES), approved by Council of Ministers Resolution no.

[132] https://www.bbc.com/news/entertainment-arts-60194375
[133] Despacho n.º 291-E/2022, 2022-01-07
[134] Despacho n.º 291-C/2022, 2022-01-07
[135] Resolução do Conselho de Ministros n.º 41-C/2022, 2022-05-06
[136] https://www.portugal.gov.pt/pt/gc22/governo/composicao
[137] Despacho n.º 4473-A/2021, 2021-04-30
[138] Despacho n.º 4473-A/2021, 2021-04-30
[139] Portaria n.º 122/2021, 2021-06-11

41/2020, of June 6, which established measures for the time period following the state of emergency and the situation of calamity experienced. The management of the Accessibility to Public Services and Public Spaces (PASPVP) was assigned to the Mission Structure for the Promotion of Accessibilities (EMPA), considering its development in two phases. There were also some amendments to the measures applicable to certain municipalities within the scope of the disaster situation throughout several time points during the fourth wave[140,141,142,143,144,145,146,147,148,149]. To all other municipalities in mainland Portugal, the rules of level 1, corresponding to the 4th phase of the overall Deconfinement Plan, applied after the **State of Calamity** was declared again on May 14th 2021[150] and extended on May 28th 2021 until 11h59 of June 13th 2021, throughout the mainland national territory[151]. On June 9th 2021, important amends were made regarding the measures applicable in a **State of Calamity** situation, in the context of the pandemic disease COVID-19[152], regarding Phase 1 of the Deconfinement Plan as presented above.

The **Portugal governmental responses to COVID-19, between April 2021-April 2022**, were the following: On 1th March 2021, the Government presented the **Deconfinement Plan** that provides for a gradual easing of the restriction measures, between March 15th 2021 and May 3rd 2021[153]. The Prime Minister, António Costa, said that the reopening of the country will be "cautious" and "drip", maintaining the duty of confinement until Easter. The deconfinement calendar was divided into four phases, with a period of 15 days between each one, to assess the impacts of the measures on the evolution of the pandemic. Some of the general rules are:

- Telework whenever possible;
- Closing of establishments: at 9 pm on weekdays for everyone, at 1 pm on weekends and holidays for non-food retail and at 7 pm for food retail;
- Ban on circulation between municipalities on weekend March 20th and 21th 2021 and during Easter (between March 26th 2021 and April 5th 2021).

On April 1st 2021, the Regional Regulatory Decree n.º 3/2021/A[154] regulated the application, in the Autonomous Region of the Azores, of Presidential Decree no. 31-A/2021, of 25 March, **providing for specific preventive measures for the Easter period**: Between 00h00 on April 2, 2021 and 23h59 on April 4, 2021, in addition to the measures associated with the level of risk in force, the following preventive measures: a) Closing of all food, beverage and similar establishments at 22h, with or without a show and with or without terrace service, including spaces for holding events, except for the purposes of take-away or home delivery services, as well as for the provision of meals to guests of

[140] Resolução do Conselho de Ministros n.º 46-C/2021, 2021-05-06
[141] Resolução do Conselho de Ministros n.º 62-A/2021, 2021-05-21
[142] Resolução do Conselho de Ministros n.º 70-A/2021, 2021-06-04
[143] Resolução do Conselho de Ministros n.º 76-A/2021, 2021-06-17
[144] Resolução do Conselho de Ministros n.º 77-A/2021, 2021-06-24
[145] Resolução do Conselho de Ministros n.º 86-A/2021, 2021-07-01
[146] Resolução do Conselho de Ministros n.º 91-A/2021, 2021-07-09
[147] Resolução do Conselho de Ministros n.º 92-A/2021, 2021-07-15
[148] Resolução do Conselho de Ministros n.º 96-A/2021, 2021-07-22
[149] Resolução do Conselho de Ministros n.º 101-A/2021, 2021-07-30
[150] Resolução do Conselho de Ministros n.º 59-B/2021, 2021-05-14
[151] Resolução do Conselho de Ministros n.º 64-A/2021, 2021-05-28
[152] Resolução do Conselho de Ministros n.º 74-A/2021, 2021-06-09
[153] https://eportugal.gov.pt/pt/noticias/governo-anuncia-plano-de-desconfinamento-ate-3-de-maio
[154] Decreto Regulamentar Regional n.º 3/2021/A, 2021-04-01

hotels or similar establishments by the respective catering services; b) Limitation, during the respective period of operation, of a maximum number of six people per table, in restaurants, beverages and similar establishments, unless belonging to the same household, respecting a maximum capacity of half the capacity of the establishment in question; c) Prohibition of circulation between municipalities; d) Prohibition of pedestrian, automobile, motorized or similar circulation on public roads, between 15h and 5h of the following day, except for certain situations regarding emergencies or vulnerable populations (not specified here); e) Prohibition of the sale of alcoholic beverages after 20h, without prejudice to the provisions of subparagraph a).

On April 5th 2021, were made changes to the exceptional and temporary measures in response to the pandemic of the COVID-19 disease in the **cultural and artistic sphere**, in particular regarding non-performed shows, in order to ensure the rescheduling or cancellation of shows not performed by legislative or administrative determination from a governmental source, as well as from the national health authority[155]. Moreover, it becomes imperative to allow spectators, artists and technicians, as well as all workers and service providers involved in the organization, realization and production of festivals and shows of a similar nature, to be subjected to SARS-CoV-2 diagnostic test. Moreover, the transitory imposition of the **obligation to wear masks** in public spaces was renewed, extending for the second time the validity of Law 62-A/2020, of October 27[156]. On April 6th 2021, a transitional regime for the **issuing of medical certificates of multi-purpose incapacity for cancer patients**, as well as the attribution of the corresponding social, economic and tax benefits provided for by law, in the context of the COVID-19 disease pandemic, was implemented[157].

On April 4th 2021, in line with the phasing of the Deconfinement Plan, the **declaration of a State of Emergency was renewed**, covering the entire national territory, based on the verification of a situation of public calamity[158,159]. For a period of 15 days, starting at 00:00 on April 16, 2021 and ending at 23:59 on April 30, 2021, the exercise of rights to freedom and movement was partially suspended (e.g., ban on driving on public roads, compulsive confinement).

On April 15th 2021, **authorized land border crossing points are updated**, for instance[160]: Citizens from Brazil, South Africa, Bulgaria, Czech, Cyprus, Croatia, Slovenia, Estonia, France, Hungary, Netherlands, Poland, and Sweden, who enter the national territory by land, must obey a period of prophylactic isolation of 14 days, at home or in a place indicated by the health authorities. Moreover, the SEF (Foreigners and Borders Service) reports identity data of citizens to health authorities in order to comply with the provisions of Decree no. 6/2021, of April 3, with citizens being responsible for filling in the form on SEF platform[161]. This order took effect from 00h00 on April 16th 2021until 23h59 on April 30th 2021.

Taking into account the then Union recommendations regarding the temporary restriction of non-essential travel to the EU and the possible lifting of such a restriction, the need to extend the restrictive measures on air traffic, duly aligned with public health concerns, resulted in **new measures applicable to air traffic** to and from mainland Portugal(e.g., suspend air traffic to and from mainland Portugal for

[155] Decreto-Lei n.º 26-A/2021, 2021-04-05
[156] Lei n.º 13-A/2021, 2021-04-05
[157] Lei n.º 14/2021, 2021-04-06
[158] Resolução da Assembleia da República n.º 114-A/2021, 2021-04-14;
[159] Decreto do Presidente da República n.º 41-A/2021, 2021-04-14
[160] Despacho n.º 3838-B/2021, 2021-04-15
[161] https://travel.sef.pt/Forms/Default.aspx

all flights, with the exception of some, for instance those belonging to the European Union and the Schengen Area)[162].

The state of emergency decreed by the President of the Republic is extended until April 18th 2021[163]. On April 17th 2021, the **list of countries and international sports competitions to which air traffic, airport and land border rules** apply were approved[164]. It was established that members of the Government responsible for the areas of foreign affairs, national defence, internal administration, health and civil aviation are the ones to define, by means of an Order, the lists of countries to which air traffic is restricted, the mandatory confinement for the respective passengers and citizens who enter the national territory by land and the countries and special administrative regions whose epidemiological situation is in accordance with Council Recommendation (EU) 2020/912 of 30 June 2020.These members of the Government could also determine the list of international professional sports competitions for the purpose of exempting them from complying with the mandatory confinement duty, regardless of the origin of the respective participants. This list was updated on May 14th 2021, during the 4th wave[165], as well as on May 20th 2021[166], May 28th 2021[167], June 14th[168] and 27th[169] 2021, July 9th[170] and 23rd[171] 2021 (where it is also determined the rules for the supervision of air traffic regulations[172]), August 2nd[173] and 31st[174]2021, September 17th 2021[175], September 30th 2021[176], October 29th 2021[177], November 30th 2021[178], February 18th 2022 (and defines the terms and requirements of its verification system and the supervision of its operation)[179].

On April 29th 2021, with a view to reinforcing the control of compliance with the rules on **safety and health at work**, the Government considered it necessary to establish rules to minimize risks within the scope of industrial relations with a view to preventing the transmission of SARS-CoV-2 infection, namely through the organization of a daily record of all workers, who work on an **agricultural holding or in temporary or mobile construction sites** with 10 or more workers, so an exceptional and temporary scheme for the daily registration of workers on farms and in the construction sector was created[180]. Given that international experience demonstrates the high risk arising from the disembarkation of passengers and crew from cruise ships, it was once again extended the prohibition of **disembarkation and shore licenses** for passengers and crew of cruise ships in national ports by members from the governmental areas of national defence, internal administration, health and

[162] Despacho n.º 3838-A/2021, 2021-04-15
[163] Decreto n.º 6-A/2021, 2021-04-15
[164] Despacho n.º 3894-A/2021, 2021-04-17
[165] Despacho n.º 4957-A/2021, 2021-05-14
[166] Despacho n.º 5187-A/2021, 2021-05-21
[167] Despacho n.º 5418-A/2021, 2021-05-28
[168] Despacho n.º 5848-B/2021, 2021-06-14
[169] Despacho n.º 6326-A/2021, 2021-06-27
[170] Despacho n.º 6794-A/2021, 2021-07-09
[171] Despacho n.º 7374-E/2021, 2021-07-23
[172] Despacho n.º 7374-G/2021, 2021-07-23
[173] Despacho n.º 7746-B/2021, 2021-08-06
[174] Despacho n.º 8652-C/2021, 2021-08-31
[175] Despacho n.º 9241-A/2021, 2021-09-17
[176] Despacho n.º 9573-A/2021, 2021-09-30
[177] Despacho n.º 10703-A/2021, 2021-10-29
[178] Despacho n.º 11888-C/2021, 2021-11-30
[179] Despacho n.º 2181-B/2022, 2022-02-18
[180] Decreto-Lei n.º 29-A/2021, 2021-04-29

infrastructure and housing[181]. This was later allowed during the 4th wave on May 14th 2021[182] and especially on May 28th 2021.

On April 30th 2021, the Government declared a **State of Calamity** in the context of the pandemic disease COVID-19[183], however, this time opted for a less intense list of restrictions, suspensions and closures than the one that was in place, without prejudice to the local degree of restrictions and the need to maintain scrupulous compliance by the Portuguese population with the protection measures essential to the infection containment. Thus, this Resolution provides for 5 rules regarding its territorial scope: 1) rules of national scope, applicable to all municipalities that affect, namely, in terms of flights, air traffic and land borders; 2) rules, corresponding to the 4th phase of deconfinement, applicable to most Portuguese municipalities; 3) rules corresponding to the maintenance in the 3rd phase of deconfinement, applicable to three municipalities in mainland Portugal; 4) rules, corresponding to the regression to the 2nd phase of deconfinement, applicable to three municipalities in mainland Portugal; and v) rules, corresponding to the regression to the 1st phase of deconfinement, applicable to two municipalities in mainland Portugal.

On May 12th 2021, the extraordinary support regime for the progressive **recovery of companies in a business crisis** situation with a temporary reduction of the **normal work period** was amended[184]. Given the current pandemic context and the epidemiological reality experienced in Portugal, and also in the pursuit of the strategy of progressive uplifting of confinement measures, with a gradual and phased resumption of economic activities, the Government decided to allow companies with invoicing equal to or greater than 75% can continue to reduce the normal work period (NWP) of their workers up to a maximum of 100%, during the months of May and June 2021. However, in June 2021, this reduction in the NWP was limited to up to 75 % of workers employed by the employer, unless their activity fell within the sectors of bars, nightclubs, recreational parks and the provision or assembly of events. Alternatively, the NWP reduction may, in June 2021, be a maximum of 75% when it covers up to all workers employed by the employer[59]. This Decree-Law is later extended on July 7th 2021[185] and again, on August 13th2021[186].

On February 18th 2022, a **State of Alert** in the context of the pandemic disease COVID-19 is declared again[187] and amends were made to the measures applicable in the context of the pandemic disease COVID-19[188]. Later, on March 7th 2022, the declaration of the State of Alert was extended until 23h59 of March 22nd2022, throughout mainland Portugal[189]. On March 21st 2022, it then extends again until the end of the month[190], on March 28th 2022 extends again until 23h59 of April 18th2022[191], and on April 14th 2022 extends until 23h59 of April 22th 2022[192]. On March 14th 2022, amends were made to the Order No. 2181-B/2022, of February 18, which determined the measures applicable to air traffic,

[181] Despacho n.º 4473-B/2021, 2021-04-30
[182] Despacho n.º 4957-B/2021, 2021-05-14
[183] Resolução do Conselho de Ministros n.º 45-C/2021, 2021-04-30
[184] Decreto-Lei n.º 32/2021, 2021-05-12,
[185] Decreto-Lei n.º 56-A/2021, 2021-07-06
[186] Decreto-Lei n.º 71-A/2021, 2021-08-13
[187] Resolução do Conselho de Ministros n.º 25-A/2022, 2022-02-18
[188] Decreto-Lei n.º 23-A/2022, 2022-02-18
[189] Resolução do Conselho de Ministros n.º 29-C/2022, 2022-03-07
[190] Resolução do Conselho de Ministros n.º 29-F/2022, 2022-03-21
[191] Resolução do Conselho de Ministros n.º 34-A/2022, 2022-03-28
[192] Resolução do Conselho de Ministros n.º 41/2022, 2022-04-14

airports, maritime and fluvial borders and defines the terms and requirements of the respective verification system, as well as the supervision of its operation[193] and again, on April 22nd 2022[194]. On April 21st 2022, the **State of Alert** was again declared in the context of the pandemic disease COVID-19[195] and exceptional and temporary measures within the scope of the pandemic disease COVID-19 are established (e.g., the obligation to wear a mask or visor under the terms of this article is only applicable to people over 10 years of age)[196].

There were also some amendments to the measures applicable to certain municipalities within the scope of the disaster situation throughout several time points during the fourth wave[197,198,199,200,201,202,203,204,205,206]. To all other municipalities in mainland Portugal, the rules of level 1, corresponding to the 4th phase of the overall Deconfinement Plan, applied after the **State of Calamity** was declared again on May 14th 2021[207] and extended on May 28th 2021 until 11h59 of June 13th 2021, throughout the mainland national territory[208]. On June 9th 2021, important amends were made regarding the measures applicable in a **State of Calamity** situation, in the context of the pandemic disease COVID-19[209], regarding Phase 1 of the Deconfinement Plan.

Regarding to the indicators which led governments adopt new measures to minimize the infection rates, on April 17th 2021, the **State of Emergency**, decreed by the President of the Republic was regulated according to criteria for assessing the epidemiological situation and the gradual strategy of uplifting containment measures[210]. However, according to the criteria for assessing the epidemiological situation, the situation is not the same for the whole country, given the particular epidemiological situation in 10municipalities. Thus, this Decree provides for 4 rules regarding its territorial scope: 1) rules of national scope, applicable to all municipalities, which focus, namely, on lifting the suspension of classroom teaching activities and classroom training activities or the establishment of rules on flights, air traffic and land and river borders; 2) rules, corresponding to the 3rd phase of deflation, applicable to most Portuguese municipalities; 3) rules, corresponding to the maintenance in the 2nd phase of deconfinement, applicable to six municipalities in mainland Portugal; and 4) rules, corresponding to the regression to the 1st phase of deconfinement, applicable to four municipalities in mainland Portugal.

[193] Despacho n.º 3143-C/2022, 2022-03-14
[194] Despacho n.º 4829-A/2022, 2022-04-22
[195] Resolução do Conselho de Ministros n.º 41-A/2022, 2022-04-21
[196] Decreto-Lei n.º 30-E/2022, 2022-04-21
[197] Resolução do Conselho de Ministros n.º 46-C/2021, 2021-05-06
[198] Resolução do Conselho de Ministros n.º 62-A/2021, 2021-05-21
[199] Resolução do Conselho de Ministros n.º 70-A/2021, 2021-06-04
[200] Resolução do Conselho de Ministros n.º 76-A/2021, 2021-06-17
[201] Resolução do Conselho de Ministros n.º 77-A/2021, 2021-06-24
[202] Resolução do Conselho de Ministros n.º 86-A/2021, 2021-07-01
[203] Resolução do Conselho de Ministros n.º 91-A/2021, 2021-07-09
[204] Resolução do Conselho de Ministros n.º 92-A/2021, 2021-07-15
[205] Resolução do Conselho de Ministros n.º 96-A/2021, 2021-07-22
[206] Resolução do Conselho de Ministros n.º 101-A/2021, 2021-07-30
[207] Resolução do Conselho de Ministros n.º 59-B/2021, 2021-05-14
[208] Resolução do Conselho de Ministros n.º 64-A/2021, 2021-05-28
[209] Resolução do Conselho de Ministros n.º 74-A/2021, 2021-06-09
[210] Decreto n.º 7/2021, 2021-04-17

Finally, on June 4th 2021, the Government approves a **calendar for the uplifting of containment measures** that will continue to take place until the end of August 2021[211]. Thus, periods of 15 days are defined between the two new phases of deconfinement to allow the impacts of the measures on the evolution of the pandemic to be evaluated. In addition, the epidemiological criteria that allow the evolution of the strategy to be monitored and adjusted are maintained, namely the cumulative incidence at 14 days per 100 000 inhabitants and the transmissibility index. An equally relevant factor is the progress in the vaccination process, whose impact in terms of containing contagions is also reflected in the incidence and transmissibility of the disease, being measured in this way. Finally, measures to apply at the **local level** are also established, taking into account the incidence, and it is determined that in the case of low-density territories, twice the values applied for the rest of the country are considered as reference values for the incidence. However, it should be noted that these measures do not prejudice the adoption of specific operating conditions (e.g., in some cases, rules for maximum capacity, use of personal protective equipment, regular hygiene of spaces, hands and respiratory etiquette, compliance with physical distancing).

Last but not least, in relation to the indicators which led governments adopt new measures to minimize the infection rates, on July 30th 2021, the Government defined the indicators for risk assessment and monitoring of the pandemic COVID-19[212] determining that DGS and INSA are the entities responsible for the monitoring and periodic disclosure, such as:

- Cumulative incidence of 14 days per 100,000 inhabitants (less than) or (greater than) 480/100,000;
- Transmissibility index (Rt) (less than) or (greater than) 1;
- Proportion of positive tests for SARS-CoV-2 (positivity rate);
- Cumulative incidence of 14 days per 100,000 inhabitants in individuals aged 65 or over;
- Proportion of confirmed cases notified more than 24 hours late;
- Proportion of cases of infection by SARS-CoV-2 and COVID-19 with an epidemiological survey carried out within 24 hours;
- Hospital occupation of patients with COVID-19 in intensive care units;
- Mortality from COVID-19 cumulative to 14 days per million inhabitants.

3.1.10 Spain

Since April 2021, Spain advanced towards a pre-pandemic context, regarding both the government structures, the restrictions to enforce social distance, and the deployment of economic measures to support people economically hit by the restrictions. The emergency state used to diminish the spreading of the Covid-19 in Spain, the State of Alarm, which conferred special powers to both the central and the regional governments to limit citizens' rights, ended in May 2022[213]. Since then, there has been no need neither to approve any other State of Alarm or any exceptional or emergency regulations. The main restrictions affecting citizens' fundamental rights, such as the freedom of

[211] Resolução do Conselho de Ministros n.º 70-B/2021, 2021-06-04

[212] Despacho n.º 7577-A/2021, 2021-07-30

[213] See Royal Decree 926/20020, which declares the State of Alarm from November 2020 to May 2021.

movement (lockdowns, curfews, or limits to move from one territory to another), were considered unnecessary. Regular legislation was enough to keep, approve and enforce limitations.

During this period, however, the Constitutional Court examined whether the State of Alarm declared by Royal Decree 463/2020 between March 2020 and June 2020 respected or not the Spanish Constitution of 1978. Although the Court declared some articles unconstitutional, this jurisprudence deserves clarification because will eventually impact future regulations in case of pandemic or other emergencies. According to the Constitutional Court, the Spanish Government and Parliament violated Spanish citizens' right of free movement[214]. For the Court, restrictions affecting movement were too severe. They did not only limit the freedom of movement but suspended it completely. According to the Constitutional Court, if Government and Parliament wanted to suspend mobility the appropriate state of emergency was the State of Exception (further information available in Sentence 183/2021). In Spain, going outside was only permitted to go to the hospital, attending the jobs, and buy food and some basic supplies (according to the Royal Decree 463/2020 that declared the first State of Alarm).

This decision has three different consequences that are relevant when facing similar crisis as shown in table 2. Firstly, the State of Exception can go further and suspend other fundamental rights. Under the legal structure of the State of Exception restrictions can be more severe and affect more deeply to more rights. Secondly, the role of the Parliament to approve a State of Exception is more salient: the declaration must be approved by the Parliament and not only ratified, by absolute majority after being proposed by the Government. This might be a problem if parliament has a high fragmentation, or polarization increases hindering the capacity of getting agreements. Thirdly, the State of Exception must have a maximum duration of six months, it cannot be extended under any circumstance.

Table 2. Differences between the State of Alarm and the State of Exception[215].

	State of Alarm	State of Exception
Object	Limiting rights	Suspending rights
Who approves	Government. Parliament ratifies.	Parliament. Government proposes.
Parliamentary support	Simple majority (more yes than noes)	Majority (176 yes/250 seats)
Duration	Government declares it for 15 days. Parliament can extend it for any time.	Until six months. No extension.

The Decision of the Constitutional Court paid attention only to the first State of Alarm declared on March 2020. However, the Court is currently studying the State of Alarm declared in October 2020 and ended in May 2021 and had a different structure and delegated powers to the Presidents of the

[214] As it can be seen in Table 2, the State of Alarm is approved by the Government for a period of 15 days, which must be ratified and, if necessary, prorogued by a simple majority of the members of the Spanish Parliament.
[215] Source: own elaboration from article 116 Spanish Constitution and Organic Law 4/1981.

Autonomous Communities. Whether this delegation fits or not the Spanish Constitution is something under debate.

3.1.11 Sweden

In **Sweden**, similarly to the majority of our target countries, utilized non-pharmaceutical measures which stemmed from the Pandemic Act which was still in place (until April 1st 2022) and provided the government with tools such as social-distancing measures, participant restriction in public gatherings (Parliament of Sweden, 2021)[216] and limitations of entry in the country. One major highlight in relation to governmental change was the election of the new Prime Minister, Magdalena Andersson (France24, 2021)[217] on late November 2021 while on December 8th on a press conference, she declared a plan for how Sweden should meet an increased spread of the virus. The Swedish plan, similarly to **Italy**, also relied on three steps but emphasized on containment of COVID-19: information dissemination on social distancing, introduction to mandatory demonstration of vaccination certificates for public gatherings, limitations on business operation and introduction of a set maximum rate in relation to costumers. The new Prime Minister Andersson, taking into account the criticism of the Corona Commission (2022)[218] aimed towards the previous Prime Minister Löfven for giving too much power to the Public Health Authorities (PHA), regions and municipalities, reorganized the government chancellery and moved responsibility for crisis management closer to the Cabinet office (Statsrådsberedningen). Another change of leadership was that the General Director of the PHA, Johan Carlsson, was replaced (retirement), by Karin TegmarkWisell. Since TegmarkWisell was co-director to Carlsson, this meant no significant change of strategy or leadership, even if there were signs of the new Director General being more visible compared to her predecessor, who more often let chief epidemiologist Anders Tegnell be the spokesperson for the PHA. A highlight to the structural change in Sweden was the change in the modus operandi in relation to the strictness of the measure implementation, as the new administration implemented a more central approach introducing firmer restrictions aiming at increasing virus containment and an increase in vaccination rates.

April 2021 can be seen as the last phase of the second wave of the pandemic. Infection levels and the number of people who needed intensive care were quite stable during the first months of 2021, even if there was a peak in hospitalization of serious COVID-19 cases in April. However, less people were dying from COVID-19 compared to the first wave (Spring 2020) and the beginning of the second wave (late Fall 2020). This was of course due to the vaccination program, which had been rolled out during the Spring of 2021. In April the same year only seven percent of the population (over 18 years) had been given two doses of the vaccine and 14 percent one dose. This since the vaccine program started with the elderly and other identified vulnerable groups (health care workers, people living in elderly care homes, people with underlying diseases etc.). As the vaccination program was broadened to all citizens over 18 years of age (May-June) 2021, death tolls, hospitalization and the spread of COVID-19 decreased rapidly. From July 2021 until December the same year, COVID-19 seemed almost to be over from a Swedish perspective.

[216] https://perma.cc/L4DH-BTRU.
[217] https://www.france24.com/en/europe/20211129-sweden-elects-andersson-as-first-female-pm-for-second-time-in-a-week.
[218] https://coronakommissionen.com/wp-content/uploads/2022/02/sverige-under-pandemin-volym-2_webb-slutbetankande.pdf.

The Pandemic Act was still in place (until April 1st 2022), which provided the government with tools to limit access to several public areas, including restraining constitutionally protected public gatherings by setting attendance limits, requiring social distancing, and restricting the time duration of events. The law further provided that similar restrictions may be placed on stores, cultural activity organizers, and public transportations. Under the rules, restrictions may also be placed on private gatherings (Parliament of Sweden, 2021)[219]. Sweden also had limitations in possibilities to enter the country. Restrictions for non-European travellers had been in place since 2020, who then needed a negative test to enter the country. In February 2021 a similar request was introduced for EU/EES countries including the Nordic countries (Government of Sweden, 2020) [220]. The PHA also recommended all travellers (even Swedish citizens) without symptoms to take a COVID test and isolate themselves after entering Sweden. These recommendations were removed June 1st and citizens from the Nordic countries did not even need to show a negative test anymore to enter the country. As the EU vaccine certificate was introduced, it replaced the requirement for a negative test result for EU/EES travellers from June 30th of 2021.

The measures related to public gatherings were lifted in the summer of 2021. Cultural and sports events started to allow audiences from June onwards. First, 500 persons were allowed on outdoor events (50 indoors) (Svensk Live, 2022)[221] , in July 3000 outdoors (300 indoors) and at the same time limitations of opening hours in restaurants were removed. From the end of September all restrictions for sports and cultural events and public gatherings were lifted. No vaccine certificates were mandatory, instead the PHA was given the task to produce recommendations for individuals and non-vaccinated citizens on how to act in crowded areas. At this point the PHA also removed regulations about keeping distance in restaurants and advised people to work from home (if possible). Despite this, the Pandemic Act was prolonged.

The spread of the virus was still low, few persons were hospitalized, and the number of casualties were limited to a few persons each day. The vaccination program rolled out as planned, and the shortage of vaccine availability and difficulties to book appointments for vaccination, which had been a problem in the summer, were solved. At the end of September, 78 percent of the adult population had received one dose and 69 percent two doses of the COVID-19 vaccine. At this time, decisions were already made to also include adolescents between 12 and 15 years in the vaccination program.

If we go back to the fall of 2021, there were not at the time any clear signs on rising infection rates, hospitalization or deaths related to COVID-19 in Sweden. However, due to a more alarming development in other parts of Europe the government and the PHA decided to prepare for a more difficult situation. Vaccine certificates were declared as being possible to use for concerts and other public events with more than 100 visitors from December 1st (Government of Sweden, 2021)[222].

On December 8th, the new Prime Minister, Magdalena Andersson[223] - who was more active in communicating the pandemic compared to her predecessor Stefan Löfven - gave a press conference

[219] https://perma.cc/L4DH-BTRU.
[220] https://www.regeringen.se/artiklar/2020/04/fragor-och-svar-om-inreseforbud-till-sverige/.
[221] http://www.svensklive.se/nyheter-2/.
[222] https://www.regeringen.se/pressmeddelanden/2021/11/vaccinationsbevis-kan-kravas-for-tilltrade-till-allmanna-sammankomster-och-offentliga-tillstallningar/.
[223] Stefan Löfven resigned from office and Magdalena Andersson became the first female Swedish Prime Minister. Both are Social Democratic politicians and the resignation of Stefan Löfven was not related to the pandemic, but to the general election 2022 where he would not candidate for a new term of office.

declaring a plan for how Sweden should meet an increased spread of the virus. The plan had three steps where Step 1 was implemented the same day as the press conference. It contained advice to adult residents to keep social distance in public places. If necessary two more steps could be implemented. Step 2: with significantly higher spread, vaccine certificates would be mandatory for public gatherings and more limited access to these would be imposed. Step 3: with high-level spread and a strained situation for health care, limited opening hours for restaurants and maximum number of visitors in shops and malls would be employed again.

3.1.12 Switzerland

As indicated in D4.1, Switzerland has a **federalist political system** consisting of a Federal Assembly (central government of the confederation), 26 cantons, and 2,250 communes[224]. Power is shared between the Confederation, the cantons, and the communes. All three levels have legislative and executive power. However, only the Confederation and the cantons have juridical power[225]. The 246 members of the Swiss parliament, or Federal Assembly, consists of two chambers: The National Council with 200 members, and the Council of States with 45 members. The National Council, or "lower chamber", represents the people. The Council of States, or "upper chamber", represents the cantons. Both chambers are elected directly by the people for a four-year term[226]. As also indicated in D4.1, the Swiss COVID-19 government response consists of both health measures and economic support packages, underpinned by the Epidemien Gesetz (epidemic law), and, since 25 September 2020, by the COVID-19 law. Normally, based on the Epidemien Gesetz, the Federal Assembly, in cooperation with the cantons, defines strategies to contain an infectious disease. However, in the case of COVID-19, a so-called "extraordinary situation" was announced on 16 March 2020, which gave the federal government extraordinary power to make decisions on a nationwide basis. Two COVID-19 crisis task forces were furthermore established:

- Taskforce Federal Office of Public Health (FOPH) COVID-19. The FOPH Task Force's main purpose is handling the crisis on a day-to-day basis on the federal level. The monthly meeting protocols beginning with November 2020 can be found on their website.
- Swiss National COVID-19 Science Task Force (SN-STF). The SN-STF is a federal governmental scientific advisory board, which supports the public authorities with scientific expertise, but does not have decision-making power. The SN-STF not only advises political institutions, but also plays a key role in formulating communications strategies for the general public. Their main means of communications are policy briefs, which are freely available through their homepage.

To summarize, between April 2021 and May 2022, the basic structure of the Swiss government did not change.

In relation to changes in the socio-economic, health, legal and educational domain in relation to the COVID-19 response, with regard to public health factors, as noted in D4.1, Switzerland has a higher percentage **of private actors in health**. Specifically, the Swiss health coverage system can be characterized as "almost entirely [accessed] through private actors under a system of regulated

[224] https://www.eda.admin.ch/aboutswitzerland/en/home/politik/uebersicht/bundesversammlung.html
[225] https://www.eda.admin.ch/aboutswitzerland/en/home/politik/uebersicht/foederalismus.html
[226] Ibid.

competition, with large differences in cost between cantons."[227] Accordingly, initial Swiss COVID-19 measures were designed to rely as much as possible on **individual responsibility and be proportional**[228]. Nevertheless, the Swiss response did mark a shift from normal public health practices, insofar as the 16 March 2020 National State of Emergency gave the central government authority to take a wider range of policy decisions on a nationwide basis. During the period between March 2020 and April 2021, this facilitated the faster introduction, modification, and repeal of containment measures, such as event restrictions and the temporary closure of schools, borders, shops and bars, construction sites, and factories. With regard to economic and social factors, the federal government took early initiative on 13 March 2020 by making CHF10 billion to support small businesses, freezing debts for the unemployed, and eventually making resources available to support larger businesses as well.

Between April 2021 and May 2022, the legal and policy reaction to the pandemic in Switzerland was in line with the incidence rates and the seasonal effects of the pandemic. In Spring 2021, most vaccinations still were given mostly to members of at-risk groups, however, this trend was reversed in the summer of the same year (BAG 2022). In Spring 2021, many contact restrictions were loosened. However, limitations on the number of people meeting privately and publicly were still not lifted completely. Restrictions were gradually relaxed in Spring 2021 at work, for events, private gatherings, establishments and institutions. Fewer restrictions applied to vaccinated or recovered persons (2G): for example, an exemption was granted from wearing a mask in certain circumstances. The mandatory home office was lifted and facilities like wellness centers, bars, and clubs were reopened.

In Spring 2021, the Federal Council (FC) increased its spending both on inland COVID-19 measures and on the global initiative "Access to COVID-19 Tools Accelerator" (International Monetary Fund 2022, BAG 2022). In case the pandemic will last longer than expected, the compensation for loss of earnings, support for team sports, and the maximum period of work allowances were extended. On the other hand, steps towards normalization, support for structural change, and revitalization were taken to prepare for a post-pandemic economy. During the same period, the Swiss National Bank (SNB) discontinued offering dollar liquidity (International Monetary Fund 2022). In the Summer, support measures for companies, apprentices and employees, as well as subsidies for print media, were extended.

By the end of June 2021, a majority of willing residents had been vaccinated at least once (Balthasar et al. 2022). Thus, COVID certification became central to the legal and regulatory strategy in Switzerland. Further restrictions were lifted from events with a 2G entry limitation (i.e., entrance for those certified as vaccinated or recovered). It is worth mentioning that in August 2021, the Federal Supreme Court upheld the right of affected parties to file appeals against restrictions or other decisions taken under the Act on COVID-19 Measures in the Cultural Sector (*Verordnung über die Massnahmen im Kulturbereich gemäss Covid-19-Gesetz*). In September, restaurants, bars, sports and other events indoors became open only to persons with COVID-19 certificates. An Immunization Week was launched in November to provide low-threshold access to vaccination. In Autumn 2021, legal changes to approve more vaccination suppliers in Switzerland were made, and European COVID certificates became valid in the country. Employers and educational institutions were allowed to control workers

[227] Desson, Z., Lambertz, L., Peters, J., Falkenback, M., & L. Kauer (2020). Europe's COVID-19 outliers: german, Austrian and Swiss policy responses during the early stages of the 2020 pandemic. Health Policy and Technology 9, pp. 405-418 (407).

[228] Lison A., Persson J., Banholzer N. and Stefan Feuerriegel. (2021, April 20). Estimating the effect of mobility on SARS-CoV-2 transmission during the first and second wave of the COVID-19 epidemic in Switzerland: a population-based study. MedRxiv, doi: https://doi.org/10.1101/2021.04.16.21255636.

and students for certificates from Autumn 2021. Cost coverage for tests for the virus was limited in Autumn, but reinstated in the Winter towards the end of 2021. In November 2021, a recommendation for booster vaccinations for the general population was released (BAG 2022).

As incidence rates rose in the Winter of 2021/22, a resurgence of some restrictions could be observed. The certificate obligation was extended to outdoor events above 300 persons, and recommended for private gatherings of above 10 persons. A mask obligation was reinstated unless the event or institution enacted the 2G rules. In restaurants, bars, and clubs, guests were once again required to sit down unless the establishment restricted access to 2G. In addition, operators were obliged to ensure effective ventilation. In December 2021, measures of support to the cultural sector were extended (BAK 2022). Contact information was to be collected again in events without masks, and the validity of an antigen test was shortened to 24 hours.

In Winter 2021/22, indoor events were limited to persons with the 2G certificates, while educational institutions allowed for tested persons as well. Home office became mandatory again, but the rule was changed to a recommendation by the end of the winter. Although the duration of a COVID certificate was shortened to 270 days, other restrictions were lifted. Contact tracing was no longer required in events. Quarantine was shortened to five days and eventually lifted completely. Finally, all COVID restrictions were lifted in March 2022. As the supply of vaccines was secured in the country, Switzerland committed to the delivery of up to 15 million vaccines to the COVAX framework programme (BAG 2022). In April 2022, the Federal Council decided to extend the payment of default compensation to cultural enterprises and cultural workers by two months until the end of June 2022. In April, the FC also launched a three-year, 14-million-franc national research program entitled “COVID-19 in Society”, intended to broadly examine the effects of COVID-19 on society, the economy, and politics (International Monetary Fund 2022).

Specific Federal Council decisions taken in Spring 2021 through Spring 2022 follow:

- In a Federal Council Decision on April 14, 2021, the following decisions were adopted: (re)Opening of restaurants.
    - Events up to 15 persons made possible again.
    - Up to 100 people outside and persons outside and 50 persons indoors in public events.
    - Opening of publicly accessible leisure and Entertainment businesses.
    - Sporting activities of individuals or groups up to 15 people incl. Competitions without an audience are possible again.
    - Cultural activities by individuals or groups of up to 15 people are possible again, but no audience is allowed.
    - Classroom teaching for education purposes is permitted for up to 50 participants is permitted.
    - Reduction in the obligatory wearing of masks for vaccinated persons.
    - Exemption from Contact quarantine in establishments where testing is commonly prevalent.
    - Private meetings indoors: max. 10 people.
- In a Federal Council Decision on May 26, 2021, the following decisions were adopted:
    - Up to 300 people outside and persons outside and 100 persons indoors in public events.
    - Public events in sports education and culture up to 50 Persons made possible again.
    - Private Events became possible for up to 30 persons indoor and 50 outdoors.

  - Restaurants can operate indoors.
  - Opening of Thermal baths and Wellness facilities.
  - Mandatory home office was lifted.
  - No quarantine for vaccinated and recovered.
- In a Federal Council Decision on June 23, 2021, the following decisions were adopted:
  - No limitation on events for persons with COVID-19 certificate (Vaccination or recovery).
  - Events without certificates for up to 1000 persons with current restrictions.
  - No masking obligation outdoors.
  - No restrictions on restaurants and bars in terms of visitor numbers.
  - Dance parties are allowed for persons with COVID-19 certificate.
  - Home office and masks at work remain only a recommendation.
  - Masks and limitation to ⅔ of the capacity in all educational institutions.
- In a Federal Council Decision on September 8, 2021, the following decisions were adopted:
  - Restaurants and bars, sports and other events indoors are open only to persons with COVID-19 certificate.
  - Organizer must obtain a cantonal permit for events above 1000 persons indoors.
  - Employers and universities are now allowed to check whether their employees and students have a COVID certificate.
- In a Federal Council Decision on September 17, 2021, the following decisions were adopted:
  - Negative test is required upon entry to Switzerland from those without vaccination or proof of recovery.
  - European COVID certificate became accepted upon entry to the country.
- In a Federal Council Decision on October 10, 2021, the following decisions were adopted:
  - Cost coverage for tests for COVID will be limited.
- In a Federal Council Decision on October 13, 2021, the following decisions were adopted:
  - An Immunization Week will be launched from November 8 to 14. Additional mobile counselling and vaccination centers will provide low-threshold access to vaccination.
- In a Federal Council Decision on October 27, 2021, the following decisions were adopted:
  - Legal changes to approve more vaccination suppliers in Switzerland.
- In a Federal Council Decision on November 3, 2021, the following decisions were adopted:
  - Longer COVID certificate validity for recovered persons.
- In a Federal Council Decision on December 3, 2021, the following decisions were adopted:
  - The certificate obligation is extended to outdoor events above 300 persons and recommended to private gatherings of above 10 persons.
  - Mask obligation is reinstated unless the event or institution enacts the 2G rules (Vaccinated or recovered).
  - In restaurants, bars and clubs, guests are once again required to sit down, unless the establishment restricts access to 2G restricted. In addition, operators must ensure effective ventilation.
  - Contact information must be collected in events without masks.
  - Urgent home office recommendation.
  - Antigen test validation is shortened to 24 hours.
- In a Federal Council Decision on December 17, 2021, the following decisions were adopted:

- Indoor restaurants bars and clubs as well as sport and culture events, are limited to 2G.
- Education facilities are open for tested vaccinated and recovered persons (3G).
- Home office becomes mandatory again.
- Antigen test can be used to end a quarantine or to upon entering Switzerland.
- Free antigen tests and free PCR test for symptomatic persons.
- No need for a second test upon entry for vaccinated and recovered persons.

- In a Federal Council Decision on January 12, 2022, the following decisions were adopted:
  - The duration of isolation and quarantine was reduced to five days.
- In a Federal Council Decision on January 19, 2022, the following decisions were adopted:
  - The duration of the certificate for vaccinated and convalescents is reduced from 365 days to 270 days.
  - No more contact tracing is required.
  - 3G instead of 2G applies for the Swiss Matura examination.
- In a Federal Council Decision on February 2, 2022, the following decisions were adopted:
  - Home office is reduced to a recommendation.
  - No more mandatory quarantine.

Changes in governmental responses towards vulnerable groups

Early in the pandemic, the following groups were defined as "besonders gefährdete Personen" (particularly vulnerable people) acc. Annex 7 of 'Verordnung 3 über Maßnahmen zur Bekämpfung des Coronavirus (COVID-19)' (Ordinance 3 on Measures to Combat the Coronavirus) from June 2020:

- Adults with Trisomy 21
- Adults with one of the following pre-existing health conditions: High blood pressure, cardiovascular disease, diabetes, chronic lung and respiratory disease, diseases/therapies that weaken the immune system, cancer, obesity, liver disease, kidney disease.

Apart from these legally defined groups, special focus has been laid from the beginning of the pandemic onwards on institutions for the elderly and those in need of special care as their inhabitants are especially vulnerable to a severe course of illness. Despite increased protection measures, this group could neither be protected sufficiently in the first wave nor in the second wave (Balthasar et al. 2022: 30-31). Further, the evaluation report of the BAG (Bundesamt für Gesundheit) recognizes that while the majority of the Swiss population can cope with COVID-19 measures there are some societal groups who are particularly affected by state or canton restrictions. As schools, restaurants and other social revenues were closed, social learning became impossible and hence educational inequality intensified. Moreover, it is stated in the BAG report that the unavoidable quality reduction in education during the pandemic might lead to medium or long-term difficulties for children and young people in the educational as well as the working system. Families had to face difficulties because of home-schooling and a lack of childcare services and even more so the number of domestic violence cases has risen dramatically, especially among those between 15 to 24 in which case it has in fact doubled. Additionally, migrants have been particularly vulnerable to isolation throughout the pandemic as they are more likely to lack access to social media and face language barriers. (Balthasar et al. 2022: 34). However, according to the BAG report, these societal consequences of the health crisis have been taken into consideration by the Swiss government from the outset of the pandemic. Examples of support services include accessible financial help by BAG in April 2020 and the instalment of a task force with a special focus on psychological, physical health and societal consequences as well as

vulnerable groups like migrants or those affected by poverty in August 2020. Nevertheless, efforts to tackle these issues have been rendered insufficient by the Swiss population (Balthasar et al. 2022: 36).

Changes in means of communication

As indicated in D4.1, early in the pandemic, Switzerland adopted **a centralized communication strategy** utilising factsheet, FAQs, technical articles, websites, media releases and conferences, hotlines, radio and/or TV commercials, social networks[229], flyers, press, advertisements, and posters to COVID-19 information to all citizens[230]. The FOPH led and coordinated the communication strategy, in collaboration with actors such as other federal agencies and the Cantonal medical services[231].

In Switzerland responsibilities for crisis communication have been allocated at the Federal Council (Bundesrat) for political communication and at the BAG for scientific communication. In February 2022, the BAG published a comprehensive evaluation of crisis management during the COVID-19 pandemic, up to the period of June 2021, based on both expert review and a general population survey of N=15,000 residents (Balthasar et al. 2022). In accordance with the BAG evaluation, the communication process throughout the pandemic can be divided into three phases:

Between March and June 2020: In this first phase communication was mainly centralized by Alain Berset, Switzerland's Health Minister, and former head of department for infectious disease Daniel Koch who got nicknamed 'Mr. Corona'. The aim was mainly to provide initial information and reassurance. This phase is characterized by a lot of direct communication between the Bundesrat and the general Swiss population (Balthasar et al. 2022: 62).

Between July and October 2020: The second phase can be described as the Cantonal phase as central institutions transferred communication responsibilities onto Cantons. As Cantons failed to communicate in a structured and transparent way, disinformation spread and feelings of uncertainty and discontent among the Swiss population increased (Balthasar et al. 2022: 62).

Between October 2020 and June 2021: As COVID-19 infection numbers began to increase in autumn 2020, centralized state institutions retook responsibilities for communication. Although crisis communication was again conducted in a clearer and more structured way, a sense of pandemic fatigue within the Swiss population made successful communication increasingly difficult (Balthasar et al. 2022: 63).

With regard to general population attitudes toward the governmental communications strategy, around 66% of survey respondents gave a generally positive and confident evaluation. Criticism was mostly directed at inconsistencies in management strategy between the federal government and cantonal governments; inconsistencies within the federal government's own communications approach; and general lack of preparedness for a health crisis of the duration and severity of the COVID-19 pandemic – issues that are in no way unique to Switzerland.

[229] Gilardi F., Gessler T., Kubli M. and Stefan Müller. (2021, March 24). *Social Media and Policy Responses to the COVID-19 Pandemic in Switzerland*. Retrieved May 26, 2021, from https://fabriziogilardi.org/resources/papers/Social-Media-COVID-19.pdf.

[230] Geraldine Wong Sak Hoi. (2020, May 24). How the Swiss have navigated crisis (mis)communication during COVID-19. Retrieved May 26, 2021, from https://www.swissinfo.ch/eng/government-response- how-the-swiss-have-navigated-crisis--mis-communication-during-COVID-19--/45773636.

[231] The Federal Council, The portal of the Swiss government. (n.d.). *Press Releases.* Retrieved May 26, 2021, from https://www.admin.ch/gov/en/start/documentation/media-releases.html?dyn_startDate=31.01.2019&dyn_endDate=26.05.2021&dyn_organization=1&dyn_topic=15.

While assessments and reviews to date only cover changes in communications strategy during the period until June 2021, the forthcoming FC research program "COVID-19 in Society" will most likely provide detailed perspective on communications measures during Autumn 2021 and Winter 2021/2022 (International Monetary Fund 2022).

The impact of Governmental response deviations from pre-COVID-19 crisis management standards/strategies

The Swiss influenza pandemic plan was published in 2004 and revised in 2009, after an influenza pandemic (FOPH 2018). The pandemic plan serves within the context of the Epidemic Law, to identify actors, areas of responsibility, preparedness measures, and a framework to develop and emergency response plan in the event of a pandemic, on federal, cantonal, and local levels. The plan identifies three situational levels, which call for different levels of centralisation of authority:

- Normal situation: focus on preventative measures; within this level, the cantons are responsible for most public health matters.
- Particular situation: preparatory measures are taken on a nationwide level, including setting up vaccination centres and defining social contact restriction plans, including quarantine plans.
- Extraordinary situation: emergency measures are quickly developed and taken on a nationwide level, with the federal authorities assuming significantly more responsibility than under normal circumstances.

Specific areas of measures covered in the plan include monitoring, including vaccination; contact tracing and management; individual, group-specific, and general social distancing measures; hygiene and personal protective equipment; hospital procedures, including the use of antiviral and other medications; and communications measures. The communication plan encompasses both coordination of communications and guidelines for preparing the content of informational materials and behavioural recommendations for the general population (FOPH 2018).

The February 2022 BAG evaluation report assessed the planning of pandemic responses in accordance with the Epidemic Law and pandemic plan as largely effective; however, several specific criticisms were made.

Main landmark events in relation to governmental responses during April 2021-May 2022

The primary indicators on which responses were based appear to have been incidence rates and vaccination rates. In Spring 2021, many restrictions were loosened as vaccination rates were on the rise and fewer COVID cases were reported. By the end of June 2021, as a majority of vaccinated persons formed, COVID certification became central to the legal strategy of Switzerland. This meant the enactment of the 2G rules in the summer and autumn of 2021 was a key turning point in the measures against the pandemic taken by the federal government. The intensification of the vaccination campaign in November 2021 brought about an additional surge in vaccination rates (BAG 2022) and enabled the eventual loosening of restrictions by the end of the winter of 2022. With higher incidence rates in the winter of 2021/2, a resurgence of some restrictions was commenced. By the end of winter 2022 and given the high vaccination rates, all restrictions were terminated.

With regard to the perceived successfulness of government responses, the BAG evaluation report of February 2022 noted the following key points:

- The Epidemic Law was mostly effective in redistributing competencies from the cantonal to the federal level in a manner appropriate to the situation, although there was some lack of

clarity regarding the classification of and responses appropriate to an "extraordinary situation" (more severe) as opposed to a "particular situation" (less severe).

- The FOPH was not sufficiently prepared for a pandemic of the duration or severity of COVID-19; this was in part due to the lack of clarity in existing pandemic plans as to the FOPH's leading role and the extensive demands that would be placed on it. The existing pandemic plan was overly optimised to influenza, which led to blind spots when it came to the risk of a fundamentally different kind of pandemic.
- Decision-making processes on federal and cantonal levels, and between authorities and scientific advisors, were occasionally unnecessarily complicated, with unclear distribution of tasks and channels of communication among responsible actors. A clearer identification of actors, areas of responsibility, and channels and procedures for communication and collaboration is required.
- Systemic weaknesses in the health sector included insufficient digitalisation and data collection, insufficient access to critical materials (i.e., tests), and insufficient workforce (Balthasar et al 2022). Separate, independent evaluations conducted in 2020 concluded that to an extent, these weaknesses could have been identified before the pandemic broke out (Wenger et al. 2020; Wüest-Rudin, Müller & Haldemann, 2020).

3.1.13 United Kingdom (England & Wales)

Regarding government structural adaptations in March 2021, England's Department of Health and Social Care (DHSC) set out a vision for transforming England's public health system by disbanding the agency of Public Health (PHE) and creating new bodies informed by the COVID-19 pandemic (Department of Health and Social Care, 2021)[232]. It set out the intention to establish the UK Health Security Agency (UKHSA) to lead on protection against "infectious diseases and external health threats" and to transfer public health promotion functions to an 'Office of Health Promotion' within the DHSC (ibid). In April 2021, the UKHSA was launched as an executive body sponsored by the DHSC. The UKHSA became fully operational on 1 October 2021 (UK Health Security Agency, 2021)[233]. It's role is to *"coordinate across the UK, building strong collaborations with public health agencies for Scotland, Wales and Northern Ireland and will operate internationally for the UK to help understand, prevent and respond to global threats to health"* (UK Health Security Agency, 2021)[234]*.* Furthermore, on 15 June 2022, it was announced that the Vaccine Taskforce (VTF) - which was established in 2020 to rapidly secure effective vaccines for the UK – will become a permanent part of Government structure by merging into the UKHSA as a new directorate (Department of Health and Social Care, 2022)[235] The onshoring programme (focused on building the UK's onshore capability in vaccine development) within the VTF will join the Office for Life Sciences (part of both the DHSC and the Department for Business, Energy & Industrial Strategy)[236] Both these VTF moves are set to occur in the Autumn 2022[237].

[232] https://www.gov.uk/government/publications/transforming-the-public-health-system/transforming-the-public-health-system-reforming-the-public-health-system-for-the-challenges-of-our-times
[233] https://www.gov.uk/government/news/uk-health-security-agency-launches-with-a-relentless-focus-on-keeping-the-nation-safe
[234] Ibid.
[235] https://www.gov.uk/government/news/vaccine-taskforce-to-merge-with-uk-health-security-agency-and-ols
[236] Ibid.
[237] Ibid.

In terms of more recent COVID communications in relation to government's changing approach legal and social, the UK Government has prioritised a focus on vaccine uptake and a learning to live with COVID strategy. In September 2021, the UK Government published its 'COVID-19 Response: Autumn and Winter Plan' noting that the link between COVID-19 cases, hospitalisations and deaths has been "weakened significantly" since the start of the pandemic, thanks to the success of the vaccine programme (HM Cabinet Office, 2021)[238]. The plan set out five objectives to see the UK and the National Health Service (NHS) through the challenging autumn/winter period: *"a. Building our defences through pharmaceutical interventions: vaccines, antivirals and disease modifying therapeutics. b. Identifying and isolating positive cases to limit transmission: Test, Trace and Isolate. c. Supporting the NHS and social care: managing pressures and recovering services. d. Advising people on how to protect themselves and others: clear guidance and communications. e. Pursuing an international approach: helping to vaccinate the world and managing risks at the border."*[239]

On 21 February 2022, the UK Government published the guidance 'COVID-19 Response: Living with COVID-19', subsequently updated on 6 May 2022, on how to manage COVID-19 moving forward (HM Cabinet Office, 2022)[240]. In England, all domestic legal restrictions ended on 24 February 2022, marking the beginning of treating COVID-19 like other infectious diseases such as the flu (HM Government, 2022)[241]. This included ending the legal requirement to self-isolate following a positive COVID-19 test and to inform employers of a positive test, replaced by guidance to stay at home for five full days[242]. In April 2022, the UK Government stopped provided universal free COVID-19 testing for the general public and removed the requirement for employers to explicitly consider COVID-19 in health and safety risk assessments (replaced by 'Working Safely' guidance) (HM Cabinet Office, 2022)[243]. On 18 March 2022, all remaining COVID-19 travel restrictions were removed for incoming international travellers to the UK, e.g. Passenger Locator Forms and testing (HM Government, 2022)[244].

Wales had a general election in May 2021 after which more key people changed, but the previous leading political party, Labour, remained in place as governing party. The new health Minister is Eluned Morgan and the old Health Minister Vaughan Gethin became the new Economics Minister. Specific COVID-related roles in the government remained largely the same. For instance, the Chief Medical Officer Sir Frank Atherton and Chair of the Vaccine Strategy Committee Dr Gillian Richardson stayed in place. Also, the main approaches to the pandemic remained the same. No replacement strategy plans were developed. Indeed, after the initial (26 March 2020) Health Protection (Coronavirus Restrictions) (Wales) Regulations 2020 four more replacement regulations sets were put in place (No. 2), (No. 3), (No. 4) and (No. 5). With every Summary Impact Assessment (SIA), the development and assessment of new pandemic measures are estimated on their impact on Human Rights and UN Conventions, the United Nations Convention on the Rights of the Child, and the Welsh language. Some new communication means were introduced besides the older campaigns. From 17 May 2021 onward when

[238] https://www.gov.uk/government/publications/covid-19-response-autumn-and-winter-plan-2021/covid-19-response-autumn-and-winter-plan-2021
[239] Ibid.
[240] https://www.gov.uk/government/publications/covid-19-response-living-with-covid-19/covid-19-response-living-with-covid-19
[241] https://www.gov.uk/government/news/prime-minister-sets-out-plan-for-living-with-covid
[242] The Health Protection (Coronavirus, Restrictions) (England) (No. 3) Regulations 2020 ("No.3 Regulations") and The Health Protection (Coronavirus, Restrictions) (Self-Isolation) (England) Regulations 2020 are revoked.
[243] Supra note, 229.
[244] https://www.gov.uk/government/news/all-covid-19-travel-restrictions-removed-in-the-uk

Wales moved to Alert level 2, and international travel restrictions were relaxed further, and a traffic-light system was introduced differentiating between different countries of origin. Aligned with England and Scotland, origin countries were categorised as green, amber and red, which indicates the more or less restricted reasons to enter the country, and need to quarantine upon arrival and upon return in Wales. International travel remained discouraged unless it was deemed as essential (CMO report 2021-2022).

Following the outbreak of a number of emergencies, such as the fuel protests and floods of 2000 and the foot and mouth disease outbreak of 2001 (British Red Cross, 2021)[245] the vast majority of government officials realised the necessity for a major renovation of UK civil contingencies legislation (ibid). A key consideration of the new legislation was that it had to be adaptable enough to manage a variety of emergencies, from power outages and trivial floods to disease outbreaks and terror incidents. After much discussion, the Civil Contingencies Act (CCA) obtained royal assent in 2004. To this day, the CCA remains the principal framework for responding to UK emergencies (ibid). In response to the COVID-19 pandemic, the UK government did not put forward the CCA (ibid). Instead, the government drafted the Coronavirus Bill and hurried it through parliament (Lent, 2020)[246]. When asked why the CCA was not being invoked, Minister for Brexit Opportunities and Government Efficiency of the United Kingdom Jacob Rees-Mogg said that the CCA is for "*emergencies of which the government has had no warning*" (ibid). Providing his views on CCA negligence, Chief Executive of New Local (an independent think tank) Adam Lent explained: "*What the government overlooked is that the CCA draws on decades – even centuries – of experience of dealing with crises. That oversight now looks deeply irresponsible when one considers some of the serious problems that have come to light during the pandemic response*"[247] With regard to responsibilities, the CCA clearly defines the responsibilities of the local and the central state. It says that "*decisions should be taken at the lowest appropriate level with coordination at the highest necessary level*" (ibid). With this in mind, "*local responders should be the building block of response for an emergency of any scale*." (Cabinet Office, 2010)[248]. The explanation for this notion is clear: in a complicated and swiftly altering crisis, local knowledge and fast action is crucial. As mentioned in D4.1 'Baseline report for government response to COVID-19', Local Resilience Forums (in England and Wales), which form a part of the CCA, are given the task of emergency planning. These groups are multi-agency coalitions comprising representatives from public services that have a regulatory responsibility to respond (e.g., the emergency services, local authorities, the Environment Agency and the NHS), as well as groups that do not have a regulatory role in emergency response (e.g., local voluntary and community sector organisations) (British Red Cross, 2021)[249]. Instead of allowing the afore-mentioned bodies to respond to the COVID-19 emergency, the COVID-19 pandemic response was categorised by central government clutching control of decision-making and "*doing its best to side-line other bodies, most notably local councils and public services*" (Lent, 2020)[250].

[245] https://www.redcross.org.uk/about-us/what-we-do/we-speak-up-for-change/ready-for-the-future-improving-emergency-structures.
[246] https://www.civilserviceworld.com/news/article/we-have-special-legislation-to-cope-with-crises-like-covid-so-why-didnt-the-government-use-it.
[247] Ibid.
[248] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/192425/CONOPs_incl_revised_chapter_24_Apr-13.pdf.
[249] https://www.redcross.org.uk/about-us/what-we-do/we-speak-up-for-change/ready-for-the-future-improving-emergency-structures.
[250] https://www.civilserviceworld.com/news/article/we-have-special-legislation-to-cope-with-crises-like-covid-so-why-didnt-the-government-use-it.

Unfortunately, the decision to not apply the guidelines of the CCA had devastating impacts. The first is that of the Test and Trace system, abandoned in March 2020 (ibid). This was the immediate result of the UK government attempting to run the scheme through Public Health England (a national body), which eventually discovered its limited capacity to do so (ibid). Responding to this, the government decided to involve local councils in the Test and Trace Scheme (ibid). In a 11 June 2020 UK government press release, it was reported that local authorities across England would receive funding to support the Test and Trace service (UK Government, 2020)[251]. The second impact concerns the 'Bellwin Scheme', which forms part of the CCA (Lent, 2020)[252]. When the CCA is invoked, the scheme normally comes into effect (ibid). The scheme enables the distribution of funds (to local areas) required to combat a crisis (ibid). Reassuringly, the scheme offers certainty to councils and other services that they will obtain assistance to respond to precarious circumstances (ibid). At the same time, the scheme also makes it clear how much councils and other services can expect to receive. By default, this level of certainty allows them to plan efficiently (ibid).

The Welsh Government did reviews of the pandemic measures. They are published in the form of a "Summary Impact Assessment (SIA)". These are being developed every three weeks. In addition, specific topics are being assessed separately. For instance, the Alert Levels in Wales August 2021 assessment, the Updated NHS Covid Pass report from 18 January 2022. The Summary Impact Assessment reports consider the effects of the measures on a range of themes, in particular wellbeing, economy, and environment. They draw on data from Public Health Wales (pertaining to Wales only), the Office for National Statistics (UK-wide), research agencies such as Ipsos Mori (UK-wide), and studies performed by charities and other organisations that represent particular groups; mostly those considered vulnerable, such as Hafal, a member-led Charity that supports people with mental health problems (Hafal, 2022).

As of 8 March 2021, people residing in England saw the easing of restrictions, namely via the government's four-step roadmap out of lockdown. At the time of its implementation, the roadmap provided a pathway to a more "normal life." (UK Government, 2021)[253]. Step 1, implemented on 8 March 2021, started with the re-opening of schools (ibid). Further changes then took place on 29 March 2021, whereby families were granted the freedom of meeting outdoors (ibid). By the time step 1 was introduced, those aged ≥70 and clinically vulnerable (see Joint Committee on Vaccination (JCVI) cohorts 1 to 4) would have obtained protection from the first dose of their vaccine (ibid). Moving on to step 2 of the roadmap, easing of restrictions included the reopening of all retail, personal care services (e.g., hair and nail salons), library and community centres, most outdoor attractions, indoor leisure (applicable to individual or household use only), indoor parent and child groups (up to 15 people, excluding under 5-year-olds) (ibid). In terms of larger events, funerals of up to 30 people and weddings, wakes, and receptions of up to 15 people were permitted. At this point, no international holidays were permitted. Permission was only related to domestic overnight stays (household only) (ibid). At least five weeks after step 2, the introduction of step 3 could commence and would include the re-opening of indoor hospitality, indoor entertainment and attractions, organised indoor sport, remaining accommodation, and remaining outdoor entertainment (including performances). "Social

[251] https://www.gov.uk/government/news/local-authorities-across-england-receive-funding-to-support-new-test-and-trace-service.
[252] Supra note, 239.
[253] https://www.gov.uk/government/publications/covid-19-response-spring-2021/covid-19-response-spring-2021-summary.

contact" would also see a maximum of 30 people outdoors, as well as indoor interactions comprising up to 6 people or a large group from 2 households only. As for larger events, most significant life events of up to 30 people could take place, as well as indoor events (1,000 people or 50% capacity), outdoor events (4,000 people or 50% capacity), and large seated outdoor venues (10,000 people or 25% capacity). Unlike step 2, the household only restriction was removed for domestic overnight stays. Subject to review, international travel was also permitted (ibid). Finally, step 4, included the re-opening of remaining businesses (including nightclubs), no legal restrictions to "social contact," no legal restrictions on life and larger events, and the permission of domestic overnight and international travel. Note that all changes would be subject to review (ibid).

Moving forward, the government, in September 2021, published the afore-mentioned 'COVID-19 Response: Autumn and Winter Plan' (Cabinet Office, 2022)[254]. The aim of this plan was to manage the virus during the colder months, when infections rates increase due to changing weather, more indoor gatherings and secondary pressures on health services due to winter flu season (Spector, 2020)[255]. Consisting of two plans, Plan A of the COVID-19 response focused on booster vaccinations, testing and isolation, advice on safer behaviours and measures at the border, whilst Plan B focused on compulsory face coverings, working from home advice and COVID-19 certification (ibid). Plan B would only be applied in the winter period if the COVID-19 situation worsened (ibid). As of 24 February 2022, COVID-19 rules in England were removed (UK Government, 2022)[256].

After the introduction of the four-step roadmap and 'COVID-19 Response: Autumn and Winter Plan,' a number of indicators motivated the UK government to adopt new measures to minimise the infection rates, namely the emergence of the Omicron variant in December 2021 (Holton & Bruce, 2021)[257].

The UK's response to the Omicron variant was the implementation of Plan B of the 'COVID-19 Response: Autumn and Winter Plan' on 8 December 2021. In his own words, current Prime Minister Boris Johnson (to be replaced in September 2022) said: "*It's not a lockdown, it's Plan B*." (Gillett & Lee, 2021)[258]. Under the new rules, face masks would be required in public settings, such as theatres and cinemas, working from home was advised, and the NHS COVID Pass was required for visitors entering nightclubs, indoor seated venues comprising more than 500 people, unseated outdoor venues comprising more than 4,000 people, and any event with more than 10,000 people. In England, individuals who possess vaccine requirements against COVID-19 or can demonstrate their previous infection (recovery) status can use the NHS COVID Pass to show their COVID-19 status (NHS Digital, n.d.)[259] According to Boris Johnson, compliance to these measures would have ensured a "*Christmas as close to normal as possible*" (ibid).

The success of Plan B can be best understood by considering the handling of the Omicron variant in other European countries. For example, when England was looking to ease its measures in January

[254] https://www.gov.uk/government/publications/covid-19-response-living-with-covid-19.
[255] https://www.kcl.ac.uk/news/covid-19-worse-in-colder-weather.
[256] https://www.gov.uk/government/publications/covid-19-response-living-with-covid-19/covid-19-response-living-with-covid-19.
[257] https://www.reuters.com/world/uk/britain-could-implement-covid-19-plan-b-early-thursday-times-radio-2021-12-08/.
[258] https://www.bbc.co.uk/news/uk-59585307.
[259] https://digital.nhs.uk/services/nhs-app/nhs-app-guidance-for-gp-practices/guidance-on-nhs-app-features/nhs-covid-pass.

2022 (Ellyat, 2022)[260]. European countries such as France and Germany were in no position to consider easing its restrictions (ibid). The reality of the fact was that as COVID-19 cases were declining in England, cases were spiking dramatically in some of the European countries (ibid). Further measures introduced to minimise infection rates during this time included the acceleration of COVID-19 booster vaccine uptake. Starting from 16 September 2021, the NHS began delivering COVID-19 booster vaccine to people in eligible groups.

The booster rollout was a success, so much so that in preparation for the 2022 New Year message, Johnson explained that he would announce meeting the target to offer the chance to get a COVID-19 booster to every eligible adult (UK Government, 2021)[261]. Note that the only downside of prioritising booster vaccine uptake to every eligible adult was that other medical appointments had to be postponed to the new year (Nuvom law, n.d.)[262]. Such conditions include all types of cancer, cardiovascular disease, diabetes and diabetes-related complications, chronic kidney disease, respiratory disease, and liver disease (ibid). New variants becoming dominant as detected with the PCR test results stemming from NHS and private laboratories, tended to provide moments of policy pivot around infection rate management. In particular, in late May 2021, it became apparent that with the emergence of the Delta variant in Wales, infections grew rapidly. This eventually signalled the start of the third wave. Instead of moving fully to Alert Level 1, the Welsh government adopted a cautious approach to the easing of protections. From 7 June, all event and activity organisers required to undertake a full risk assessment and put in place protective measures (CMO report). Also, the emergence of the original Omicron variant in Wales was treated as warranting weekly assessments between 9 and 24 December. It is difficult to establish if the infection rates have changed course because of the new measures, as the spread of the virus is so strongly shaped by a multitude of societal forces.

Wales has two iterations of the 'National Vaccination Strategy' Wales, which was published on 11 January 2021. It is based on NHS Wales's vaccination plans. From the start of the development of the vaccination strategy and organization, vaccine equity was immediately anticipated to have unequal vaccine-uptake rates. This led to the development of the 'COVID-19 Vaccination Equity Strategy for Wales'. It aims to provide people "a fair opportunity to receive their vaccination" (p1). It especially targets people from minority ethnic backgrounds, disabled people, and people living in poverty. The Strategy follows social justice legislation in Wales, and abides by the principles of the Wellbeing of Future Generations Act, the Socioeconomic Duty and the Equality Act (Future Generations Commissioner 2020, Welsh Government 2020b, UK Government 2010).

3.2 COVID-19 and Risk Perception

3.2.1 Austria

General risk perceptions of people living in Austria, as well as risk perceptions of the COVID-19 pandemic are analysed based on the so-called "Risk-Barometer on Health and Environment", which was published by the Austrian Agency for Health and Food Safety (Österreichische Agentur für

[260] https://www.cnbc.com/2022/01/19/england-looks-to-ease-covid-rules-while-europe-is-engulfed-by-omicron.html.
[261] https://www.gov.uk/government/news/prime-minister-celebrates-success-of-vaccine-programme-in-new-years-message.
[262] https://www.novumlaw.com/services/medical-negligence/delayed-cancelled-treatment-covid-19/delays-to-diagnosis-treatment-due-to-covid-19/.

Gesundheit und Ernährungssicherheit, AGES)[263]. This barometer was first established in 2017. With the available information and a representative online survey, with a sample of 610 persons, conducted in March 2022, the Austrian population was asked to reveal what incidents bothered or are still bothering them. The answers differed from age group and gender, but the aspects, which were mostly addressed are the pollution of the environment, climate change, social inequalities, energy supply, epidemics and animal diseases, data protection, genetics, digitalisation of all areas of live, nutritional quality and supply, and food safety.

In the area of health, most Austrians are concerned about the effects of chemicals and pollutants on human health, antibiotics and antibiotic resistance as well as pathogens. Pathogenic germs in food, on the other hand, are perceived by respondents as the least worrisome. In general, women are more concerned about the surveyed risks than men. The level of concern about the effects of chemicals and pollutants on human health and allergenic substances in the environment and food remained mainly unchanged between 2017 and 2022. Topics about antibiotics and their resistances, adverse drug reactions and pathogenic germs in food have also significantly decreased in risk perception, whereas concerns about pathogens, in general, have significantly increased within the observed period, majorly due to the outbreak of the COVID-19 virus and its subsequent consequences.

The internet is the main source when it comes to the collection of information regarding risk issues. According to the AGES, almost 80% of the respondents use this source of information regularly and almost half of the Austrian population always research risk topics on the internet. Referring to the use of other media, there exist significant differences between the sexes. Print media, helplines and hotlines are mostly used by men. Generally speaking, the use of the internet, online media, social media, information and dialogue events, advice centres and hotlines decreases with increasing age, whereas the use of the information sources, such as television, radio, newspapers and magazines increases.

At the beginning of the pandemic, Eberl et al. (2020) found that the majority of the people living in Austria take the pandemic seriously; and even those who did not believe that the situation was severe were willing to adapt their behaviour. This influenced risk behaviour: particularly those who felt at risk attempted to avoid risks; and risk-taking behaviour, in general, decreased at the beginning of the pandemic (Mühlböck 2020). During summer 2020, a majority of people living in Austria estimated a high risk of a second wave of the pandemic in autumn; this risk perception increased particularly among people older than 65 years (Pollak 2020). While there are no published studies (yet) on the risk perceptions of people living in Austria after the second wave, we can expect that, in parallel with a decrease in compliance with measures, an increase in vaccination rates, and the spread of less lethal variants, there is also a decrease in risk perception.

In a study of risk perceptions connected to travelling in Austria, Germany and Switzerland, Neuburger & Egger (2021) found that risk perception of COVID-19, travel risk perception and the willingness to change or cancel travel plans significantly increased at the beginning of the pandemic.

3.2.2 Belgium

In **Belgium**, a team of researchers from different universities has been monitoring the motivation, connectedness and psychological health of the Belgian population in the so-called 'motivation

[263] Österreichische Agentur für Gesundheit und Ernährungssicherheit (2022). Risikobarometer: Welche Risiken die Österreicher*innen bewegen.

barometer'[264] from July 2020 until May 2022. These surveys have also measured people's risk perception of how likely they are to get COVID-19 and get a severe infection, as well as how people perceive these risks at a population level. When infection rates go down, people are typically less concerned about the risk of contracting COVID-19. As the summary graph below shows, the prevailing risk perception typically increases when new COVID-19 waves break out, and drops in periods during which there are low case numbers.

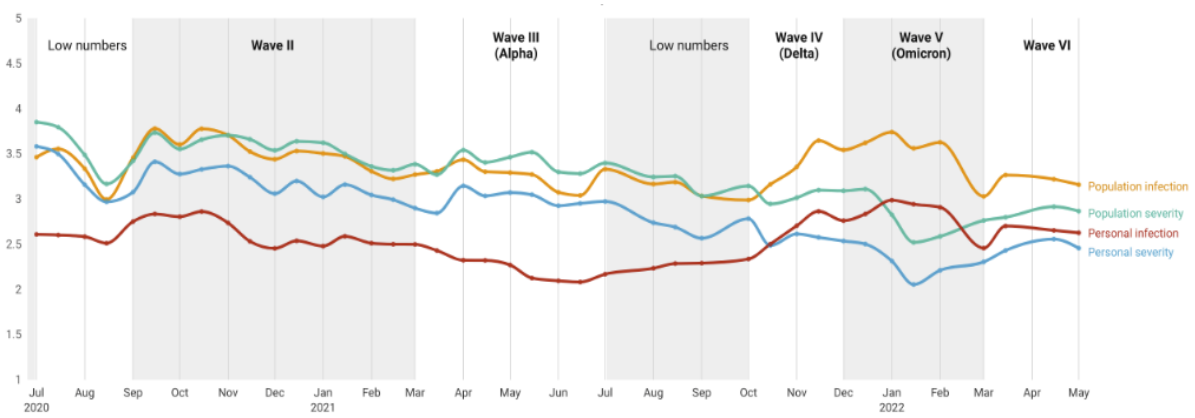

Figure 2. Evolution of risk perception Belgian population throughout the pandemic (Motivation Barometer, 2022).

The correlation between COVID-19 case rates and risk perceptions can also be linked to regional differences. For instance, during the summer of 2021 the Brussels region lagged behind in the vaccination campaign, and therefore the COVID-19 case rates were higher in Brussels. In line with this, the inhabitants considered the risks of (serious) contamination to be higher, and they were more willing to comply with the COVID-19 measures. In other words: rising COVID-19 case rates are associated with increased risk awareness, which in turn leads to increased motivation for (continued) compliance with restrictive measures (Motivation Barometer, 2021). Figure 2 demonstrates how the proportion of high and moderate compliance differs among vaccinated persons in Belgian regions.

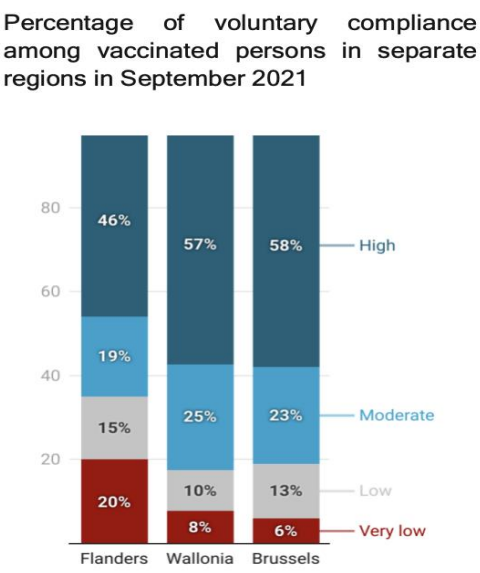

Figure 3. (Motivation Barometer, 2022).

3.2.3 Cyprus

Cyprus is no exception, albeit in comparison to Greece, there is a lack of data which stem from surveys and/or questionnaires that are tailored to in-depth explore the risk perception of Cypriots in relation to COVID-19 and whether their beliefs could potentially increase risk exposure and vulnerability. According to the data drawn from the Cypriot Ministry of Health (Cypriot Ministry of Health, 2021 – 2022)[265] which are presented in the following tables, COVID-19 infection and death rates have similar patterns which the Greek COVID-19 pattern as the highest cases are observed during months of high human mobility such as Easter, during the summer season and Christmas.

[264] www.motivationbarometer.com.
[265] https://www.pio.gov.cy/coronavirus/categories/press#30.

Table 3. COVID-19 infection and casualty rate during 2021.

Month – Year: **2021**	COVID-19 casualties	COVID-19 Infections
April[266]	52	19.736
May[267]	47	6.085
June[268]	18	3.345
July[269]	43	25.613
August[270]	81	11.652
September[271]	45	6.141
October[272]	20	4.113
November[273]	23	9.749
December[274]	40	31.862
Total cases – *From the start of the pandemic until December 31, 2021*[275].	638	166.827

Table 4. COVID-19 infection and casualty rate during 2022.

Month – Year: **2022**	COVID-19 casualties	COVID-19 Infections
January[276]	95	87.587
February[277]	122	62.732
March[278]	78	106.224
April[279]	78	47.165
May[280]	32	6.299
Total cases – *From the beginning of the pandemic until May 30, 2022*[281].	1059	489.963

[266] Epidemiological Data for April can be found in: April 1 – April 30, 2021.
[267] Epidemiological Data for May can be found in: May 1 – May 31, 2021.
[268] Epidemiological Data for June can be found in: June 1 – June 30, 2021.
[269] Epidemiological Data for July can be found in: July 1 – July 31, 2021.
[270] Epidemiological Data for August can be found in: August 1 – August 31, 2021.
[271] Epidemiological Data for September can be found in: September 1 – September 30, 2021.
[272] Epidemiological Data reports for October can be found in: October 1 – October 31, 2021.
[273] Epidemiological Data reports for November can be found in: November 1 – November 30, 2021.
[274] Epidemiological Data reports for December can be found in: December 1 – December 31, 2021.
[275] https://www.pio.gov.cy/coronavirus/categories/press#30.
[276] Epidemiological Data for April can be found in: January 1 – January 31, 2022.
[277] Epidemiological Data for April can be found in: February 1 – February 28, 2022.
[278] Epidemiological Data for April can be found in: March 1 – March 31, 2022.
[279] Epidemiological Data for April can be found in: April 1 – April 30, 2022.
[280] Epidemiological Data for April can be found in: May 1 – May 31, 2022.
[281] https://www.pio.gov.cy/coronavirus/categories/press#30.

According to research conducted in relation to the perception about vaccines and risk in Cyprus (Konstantinou et al, 2021)[282], 701 Cypriots participated from different socio-demographic (aged under 19 to over 60 years old) with various educational backgrounds (Junior high school to PhD), demonstrated that a 47.5% are willing to receive a seasonal COVID-19 vaccine, 60.7% firmly believe that it can put an end to the pandemic while 57.2% support that it should be mandatory (Konstantinou et al, 2021)[283]. Moreover, a 86.1% believe that it should be available to all countries whereas a 84.9% have not changed their mind about vaccines during the COVID-19 pandemic (Konstantinou et al, 2021)[284]. In addition, family history, demographic factors and attitudes are important contributing factors that shape the perceptions. Moreover, vaccine acceptance can differ per age group and educational background as young adults (up to the age of 20) are more reluctant to receive a vaccine than older Cypriot participants while also post-graduate participants are more inclined to accept a vaccination than participants of lower educational background. It is suggested that trust has a significant role in vaccine acceptance and reluctance as participants indicated that vaccine safety did not have an effect on their shaping perception as effectiveness and legitimacy of authorities that conducted vaccinations (Konstantinou et al, 2021)[285]. Older Cypriot citizens appear to trust more authorities, science and governmental institutions, whereas the perceived legitimacy of the authorities had a bigger role in shaping their acceptance rate of a seasonal vaccination, which simultaneously influenced the participant opinion on mandatory vaccinations and that vaccines could end the pandemic. These findings suggest that governmental institutions and decision makers should actively work in improving public trust and convey clear information through channels of communication whilst being transparent. Vaccine hesitancy which can be an active indicator of how Cypriots perceive risk in relation to COVID-19 overall may not have changed during time upon comparison between Greek and Cypriot healthcare professionals. In a study conducted by Raftopoulos et al[286] in late 2020, Cypriot healthcare professionals appear to be more sceptical in relation to vaccine efficiency, self-perceived severity of a COVID-19 infection and indicated a lower self-perceived risk of being infected, therefore the intention towards being vaccinated, particularly of young Cypriot nursing personnel, was much lower. These findings reaffirm the aforementioned findings in relation to vaccine effectiveness, trust and risk perception towards COVID-19.

3.2.4 Germany

To our knowledge, the German government has not identified causal links between COVID-19 case rates and prevailing risk perceptions among the population or among stakeholders. At the outset, it is crucial to mention that the risk perception of the population sometimes differs greatly from the risk perception and risk assessment of governmental stakeholders and other central actors. One's social and cultural context, how individually well informed one is, what kind of information one is looking for, and especially on which platform one looks for information, have paramount influence on whether the governmental crisis messages are understood and accepted and ultimately used as guidance for individual action. Additionally, the research suggests that psychological components might make it

[282] https://psycnet.apa.org/search/display?id=0665b1d9-0431-2af2-b301-00113f0f3971&recordId=4&tab=PA&page=1&display=25&sort=PublicationYearMSSort%20desc,AuthorSort%20asc&sr=1.
[283] https://psycnet.apa.org/fulltext/2022-27221-010.pdf.
[284] Ibid.
[285] Ibid.
[286] https://www.tandfonline.com/doi/full/10.1080/21645515.2021.1896907.

difficult to absorb information in a crisis situation. The risk perception of the recipients can be distorted and severely impaired if they feel anxious or stressed (BMG 2022: 49-50).

3.2.5 Greece

According to the findings of the empirical research in D4.3 Analysis: Government responses to COVID-19 and impact assessment, it has been observed that widespread fear ensued in Europe at the initial phases of the COVID-19 pandemic due to the limited information about the virus and the lack of certainty on how citizens could protect themselves utilizing the most optimum methods. In detail this research presents the following tables, explaining the death and infection rate per month that fall within the scope of this study. In **Greece** the COVID-19 related casualties until 2021[287] were 20.790 and there were 1.210.853 infections whilst in 2022 the total casualties were 29.845 and 3.453.229 infections from the beginning of the pandemic (ibid)[288]. It is important to note that 95,2% of the patients that passed away had an underlying health condition and/or were above the age of 70 years old according to the National Public Health Organization (EODY, 2021)[289].

Table 5. COVID-19 infection and casualty rate during 2021.

Month – Year: **2021**[290]	COVID-19 casualties	COVID-19 Infections
April[291][292]	2.221	77.861
May[293][294]	1.642	55.884
June[295][296]	584	18.293
July[297][298]	255	70.119
August[299][300]	716	93.057
September[301][302]	1.085	64.935
October[303][304]	1.078	83.802
November[305][306]	2.167	191.308

[287] https://eody.gov.gr/epidimiologika-statistika-dedomena/imerisies-ektheseis-covid-19/ektheseis-covid-19/.
[288] Ibid.
[289] Ibid.
[290] Ibid.
[291] https://eody.gov.gr/wp-content/uploads/2021/04/covid-gr-daily-report-20210401.pdf.
[292] https://eody.gov.gr/wp-content/uploads/2021/04/covid-gr-daily-report-202104302.pdf.
[293] https://eody.gov.gr/wp-content/uploads/2021/05/covid-gr-daily-report-20210501.pdf.
[294] https://eody.gov.gr/wp-content/uploads/2021/05/covid-gr-daily-report-20210501.pdf.
[295] https://eody.gov.gr/wp-content/uploads/2021/06/covid-gr-daily-report-20210601.pdf.
[296] https://eody.gov.gr/wp-content/uploads/2021/06/covid-gr-daily-report-20210630.pdf.
[297] https://eody.gov.gr/wp-content/uploads/2021/07/covid-gr-daily-report-20210701.pdf.
[298] https://eody.gov.gr/wp-content/uploads/2021/07/covid-gr-daily-report-20210731.pdf.
[299] https://eody.gov.gr/wp-content/uploads/2021/08/covid-gr-daily-report-20210801.pdf.
[300] https://eody.gov.gr/wp-content/uploads/2021/08/covid-gr-daily-report-20210831.pdf.
[301] https://eody.gov.gr/wp-content/uploads/2021/09/covid-gr-daily-report-20210901.pdf.
[302] https://eody.gov.gr/wp-content/uploads/2021/09/covid-gr-daily-report-20210930.pdf.
[303] https://eody.gov.gr/wp-content/uploads/2021/10/covid-gr-daily-report-20211001.pdf.
[304] https://eody.gov.gr/wp-content/uploads/2021/10/covid-gr-daily-report-20211031.pdf.
[305] https://eody.gov.gr/wp-content/uploads/2021/11/covid-gr-daily-report-20211101.pdf.
[306] https://eody.gov.gr/wp-content/uploads/2021/11/covid-gr-daily-report-20211130.pdf.

December[307][308]	2.556	265.758
Total cases – *From the start of the pandemic until December 31, 2021*.	20.790	1.210.853

Table 6. COVID-19 infection and casualty rate during 2022.

Month – Year: **2022**[309]	COVID-19 casualties	COVID-19 Infections
January[310][311]	2.651	699.861
February[312][313]	2.252	455.945
March[314][315]	1.596	591.557
April[316][317]	1.582	272.391
May[318][319]	670	124.606
Total cases – *From the beginning of the pandemic until May 30, 2022*[320]*.*	29.845	3.453.229

A surge of COVID-19 related deaths and infections particularly during April, May, July, August, October, November and December in 2021. Most cases for 2021 are observed in months that public events take place such as Eastern Holidays and Christmas Holidays, during these festivities citizens visit their relatives. Regarding 2022, albeit there is a high infection and casualty rate due to the aforementioned observation, there is a declining casualty and death rate, which is likely due to the vaccination rate in Greece (National Vaccination Campaign, n.d.)[321]. On April 1st, 2021 a total of 1.114.370 of citizens had been vaccinated with a single dose, whereas 624.681 citizens had complete vaccination (all doses) (Gov.gr, n.d.)[322]. The total vaccinations which include single dose and multi-dose vaccinations reached a total of 1.739.051 in early April 2021 (ibid)[323]. In comparison, on late December 2021, an upward rate in vaccinations is observed. Specifically, one dose vaccinations reached 7.063.140, multi-dose vaccinations recorded were 6.627.366 whereas the total number of vaccinations that were recorded until December 31, 2021 was 14.608.829[324]. This data indicate that the vaccination campaign has been successful, nevertheless, it can also be attributed not only to the citizens' willingness to be vaccinated

[307] https://eody.gov.gr/wp-content/uploads/2021/12/covid-gr-daily-report-20211201.pdf.
[308] https://eody.gov.gr/wp-content/uploads/2021/12/covid-gr-daily-report-20211231.pdf.
[309] https://eody.gov.gr/epidimiologika-statistika-dedomena/imerisies-ektheseis-covid-19/.
[310] https://eody.gov.gr/wp-content/uploads/2022/01/covid-gr-daily-report-20220101.pdf.
[311] https://eody.gov.gr/wp-content/uploads/2022/01/covid-gr-daily-report-20220131.pdf.
[312] https://eody.gov.gr/wp-content/uploads/2022/02/covid-gr-daily-report-20220201.pdf.
[313] https://eody.gov.gr/wp-content/uploads/2022/02/covid-gr-daily-report-20220228.pdf.
[314] https://eody.gov.gr/wp-content/uploads/2022/03/covid-gr-daily-report-20220301.pdf.
[315] https://eody.gov.gr/wp-content/uploads/2022/03/covid-gr-daily-report-20220331.pdf.
[316] https://eody.gov.gr/wp-content/uploads/2022/04/covid-gr-daily-report-20220401.pdf.
[317] https://eody.gov.gr/wp-content/uploads/2022/04/covid-gr-daily-report-20220430.pdf.
[318] https://eody.gov.gr/wp-content/uploads/2022/05/covid-gr-daily-report-20220501.pdf.
[319] https://eody.gov.gr/wp-content/uploads/2022/05/covid-gr-daily-report-20220531.pdf.
[320] https://eody.gov.gr/wp-content/uploads/2022/05/covid-gr-daily-report-20220531.pdf.
[321] https://emvolio.gov.gr/vaccinationtracker.
[322] https://www.data.gov.gr/datasets/mdg_emvolio/.
[323] Ibid.
[324] Ibid.

but also to the Greek Government's firm and decisive actions in implementing legislative measures that urge citizens to be vaccinated which also included fines (Kathimerini, 2021)[325], with certain exceptions. Regarding 2022, until late May, 7.915.562 citizens were recorded to receive a single dose of the COVID-19 vaccine, whereas 7.624.898 citizens had been vaccinated with all available doses (Gov.gr, n.d.)[326]. In total, 21.017.697 vaccinations were conducted in Greece until May 31, 2022 (ibid)[327].

According to a series of joint nationwide researches on COVID-19 since April 2020 to October 2021 (Dienoisis, 2020 – 2021)[328] between Dienoisis, an independent NGO that conducts socio-economic research, the National Vaccination Committee and Metron Analysis, in a sample of 1.101 citizens above the age of 17 (Georgakopoulos, 2021)[329], the majority of the interviewees, despite actively demonstrating that the pandemic has had negative psychological impact, they are overall satisfied with the management of the pandemic. In specific, the research of May 2021 suggests that 57% of the interviewees are satisfied with the management of the pandemic, whereas uncertainty (39.6%), anxiety (26.3%), insecurity (30.8%), dissatisfaction (14.8%) and optimism (21.7%) are the prevalent feelings of the interviewees at that phase (Dienoisis, May 2021, p. 6 – 13)[330]. In October 2021, citizens present conflicting but balanced opinions on whether the governmental responses are towards the "right direction", with 42% positive, 43.3% negative and 11.6% neither positive nor negative responses. In October, most respondents reported uncertainty (39.6%), anxiety (24.6%), insecurity (30.9%), optimism (18%) and dissatisfaction (19,5%) (Dienoisis, October 2021, p.6 – 13)[331]. These results indicate that citizen anxiety and optimism rates were slightly decreased while the dissatisfaction rate was significantly increased. Moreover, in October, 84.1% did not experienced mental or physical health changes, 26.1% experienced anxiety or panic attacks, 12% experienced depression, 22.3% experienced sleep disorders (Dienoisis, October 2021, p.90 – 97). In addition, 79.7% of respondents believe that politicians are not interested in the opinions of citizens while 47.5% suggest that common citizens can solve the issues of the country better than politicians (Dienoisis, October 2021, p. 106 – 109)[332].

Moreover 68.4% suggest that Greece has overcome the worst pandemic phases, 49,7% firmly agree with the pandemic management and governmental responses while 45% disagree (Dienoisis, May 2021, p.16 – 17)[333]. In relation to measure abidance, most respondents wear masks (80%), look after their personal hygiene – washing hands (75.6%) and maintain social distancing (64.6%) (Dienoisis, May 2021, p.18 – 21)[334]. Similarly, most interviewees firmly believe that the aforementioned measures contributed in the management of the pandemic, wearing masks (92%), washing hands (93.2%) and social distancing (90.3%) respectively (Dienoisis, May 2021, p.22 – 25)[335]. In October 2021, 67% citizens responded that Greece overcame the worst pandemic phase while a 26.2% disagrees (Dienosis, October 2021, p. 14 – 15)[336]. The public perception in relation to next pandemic phases can compared

[325] https://www.kathimerini.gr/society/561610201/ypochreotikos-emvoliasmos-ti-provlepei-i-tropologia-poioi-exairoyntai-kai-pote-to-prostimo-einai-50-eyro/.
[326] https://www.data.gov.gr/datasets/mdg_emvolio/.
[327] Ibid.
[328] https://www.dianeosis.org/2021/05/to-fos-sto-tounel/.
[329] https://www.dianeosis.org/2021/05/to-fos-sto-tounel/.
[330] https://www.dianeosis.org/wp-content/uploads/2021/05/pandemic_wave_6th.pdf, p. 6 – 13.
[331] https://www.dianeosis.org/wp-content/uploads/2021/11/Covid-19_7th-wave.pdf, p. 6 – 13.
[332] https://www.dianeosis.org/wp-content/uploads/2021/11/Covid-19_7th-wave.pdf, p. 106 – 109.
[333] https://www.dianeosis.org/wp-content/uploads/2021/05/pandemic_wave_6th.pdf, p. 16 – 17.
[334] https://www.dianeosis.org/wp-content/uploads/2021/05/pandemic_wave_6th.pdf, p. 18 – 21.
[335] https://www.dianeosis.org/wp-content/uploads/2021/05/pandemic_wave_6th.pdf, p. 22 – 25.
[336] https://www.dianeosis.org/wp-content/uploads/2021/11/Covid-19_7th-wave.pdf, p. 14 – 15.

with the daily data on the COVID-19, published by the National Public Health Organization (EODY) which present an upward infection rate, particularly during the Christmas period. Citizens appear slightly more conflicted on the pandemic management as 48,4% view the governmental responses positively whereas 45.8% disagree (Dienosis, October 2021, p. 16 – 17)[337]. In relation to the new COVID-19 variants, a 64.4 agree that new variants will have a negative influence in the overall management of the pandemic (21,6% very likely - 42.8% likely), while a 32.7% disagrees (24.7% unlikely – 8% very unlikely) (Dienoisis, October 2021, p. 18 – 19)[338]. In relation to non-pharmaceutical interventions such as lockdowns, respondents suggested that partial lift of lockdowns in May, should have already occurred (43.2%), some believe it took place at the right time (29.3%) whilst a minority suggest they should not have been lifted yet (22.7%) (Dienoisis, May 2021, p. 26 – 29)[339]. In October 2021, findings present conflicting views on whether new lockdowns will be implemented until the end of 2021, as 10.4% suggest it is highly likely, 25.4% likely, unlikely (34.2% unlikely) or highly unlikely (28.5%) (Dienoisis, October 2021, p. 20 – 21). These findings indicate a significant alteration in the risk perception towards COVID-19, which may likely be caused due to the availability of a vaccine and the fact that citizens demonstrate willingness to be vaccinated, as presented below, despite the high number of infections particularly during the winter of 2021, by the data published by EODY.

Utilizing a likert scale, Dienosis et al. on May 2021, further explores the attitude and trust towards several scientific and governmental actors, who were actively involved in the pandemic. Specifically, respondents trust their personal doctors and pharmacist the most (4.2/5), the National Expert/Vaccination Committee and Ministry of Health (3.3/5) respectively, WHO and international organizations such as EU CDC (3.2/5) and the Government (2.8/5) (Dienoisis, May 2021, p. 30 – 37)[340]. In a side-by-side comparison to previous research (ibid)[341], the public opinion is observed to remain relatively stable with a slight upward rate in relation to trust of citizens. In October 2021, a slight decrease in public trust can be observed as citizens suggest they trust their personal doctors and pharmacist 4.1 and 4/5 respectively, the National Expert/Vaccination Committee and Ministry of Health 3.2 and 3.1/5) respectively, WHO and international organizations such as EU CDC (3/5) and the Government (2.6/5) (Dienoisis, October 2021, p. 22 – 29)[342]. Most citizens are observed to trust vaccines (36.6%) indicating absolute trust, 27.4% trust, 21.7% have a neutral opinion, whilst only 6.1% appear to somewhat not trust the vaccines and 8.5% absolutely distrust the vaccines (Dienoisis, May 2021, p. 38 – 39)[343]. These research findings suggest that the majority of citizens in Greece are in favor of vaccines and the vaccination campaign. This is observation is reinforced as most believe that COVID-19 is a serious threat to the society (80,4%) and that COVID-19 vaccines had a positive impact in countering the virus (85.8%) (Dienoisis, May 2021, p. 40 – 43)[344]. In relation to the vaccination rate 52.4% respondents report satisfaction, 43,4% are unsatisfied (Dienoisis, May 2021, p. 44 – 45)[345], therefore, citizens are in favour of accelerating the vaccination procedure in Greece. Similarly, in October 2021, 34.5% respondents firmly trust the vaccines, 28.2% trust vaccines, 17.3% remain neutral

[337] https://www.dianeosis.org/wp-content/uploads/2021/11/Covid-19_7th-wave.pdf, p. 16 – 17.
[338] https://www.dianeosis.org/wp-content/uploads/2021/11/Covid-19_7th-wave.pdf, p. 18 – 19.
[339] https://www.dianeosis.org/wp-content/uploads/2021/05/pandemic_wave_6th.pdf, p. 26 – 29.
[340] https://www.dianeosis.org/wp-content/uploads/2021/05/pandemic_wave_6th.pdf, p. 30 – 37.
[341] Ibid.
[342] https://www.dianeosis.org/wp-content/uploads/2021/11/Covid-19_7th-wave.pdf, p. 22 – 29.
[343] https://www.dianeosis.org/wp-content/uploads/2021/05/pandemic_wave_6th.pdf, p. 38 – 39.
[344] https://www.dianeosis.org/wp-content/uploads/2021/05/pandemic_wave_6th.pdf, p. 40 – 43.
[345] https://www.dianeosis.org/wp-content/uploads/2021/05/pandemic_wave_6th.pdf, p. 44 – 45.

in comparison to 7.9% who do not trust vaccines and 11.6% firm vaccine deniers (Dienoisis, October, p. 30 – 31)[346]. Upon comparison of the research conducted in May and in October, it is evident that neutral opinion citizens decreased in number, adopting a positive or a negative opinion. In addition, most respondents continue to believe that COVID-19 is a serious threat to the society (75%) whereas consider that vaccination should be obligatory for healthcare personnel (64.7% firmly agree – 10.5% agree), educational personnel (54% firmly agree – 17.7% agree), LEAs (49% firmly agree – 19.8% agree) for all citizens (28,3% firmly agree – 28.1% agree) (Dienoisis, October 2021, p. 32 – 39)[347]. These findings suggest that citizens continue to perceive COVID-19 a serious threat and support obligatory vaccinations, particularly for a certain line of professions in which there is a frequent contact with other citizens. Most respondents have a vaccinated family member (56.8%) or have been vaccinated (38.9%) while a 31.6% has neither been vaccinated nor has a vaccinated relative during May 2021 (Dienosis, May 2021, p. 46 – 47)[348]. In the relevant research of October 2021, 75.3% of the total respondents were vaccinated in comparison to 22.6% of the citizens that did not receive a vaccine, 55.8% would most likely and 25% would likely have a third dose upon availability in comparison to 4.5% who would opt out (Dienosis, October 2021, p. 44 – 47)[349]. Moreover, upon inquiry of who motivated the respondents more in getting a vaccine, 58.4% suggested it was their own choice, 27.2% suggested their doctors, 14% suggested being persuaded by what they have read/heard and 7.8% suggested they were motivated by healthcare experts/scientists (Dienoisis, October 2021, p. 48 – 51)[350]. These findings highlight the importance of the vaccination communication efforts and the main scientific actors in governmental responses as well as the role of familiar healthcare experts. The vaccinated respondents suggest a 97.8% satisfaction rate of the overall process, indicating they had a single dose (55.8%) or two doses (44.2%) (Dienoisis, May 2021, p. 48 – 51)[351] .

Despite the controversies, misinformation, rumors and falsified information which revolve around vaccines, most vaccinated respondents chose Pfizer/BioNtech (52,6%), Astra Zeneca (32,6%), Moderna (12,7%,) Johnson & Johnson (2.1%), whereas 56.1% experienced no side-effects, 42.3% stated mild side-effects (Dienoisis, May 2021, p. 52 – 55)[352]. Most respondents did not have a side-effect (46.6%) or had mild side-effects (50%) during October 2021, which in comparison to the findings of the research in May 2021, there is no indication of a sharp change in experiencing side-effects, which may debunk the main fear of vaccine deniers whilst similarly most respondents suggested to feel better after being vaccinated (53.7%) or the same (42.9%) (Dienoisis, October 2021, p. 56 – 59)[353]. In addition, 74.8% was determined to get vaccinated from the beginning, 24% changed their mind about vaccination and received a vaccine, and most opted for the vaccine offered by Pfizer/BioNtech (67.6), with Astra Zeneca (14%), Moderna (11%) and Johnson & Johnson (7.4%) closely follow (Dienoisis, October 2021, p. 52 – 55). Most respondents feel better after being vaccinated (66.2%) and a 32.5% has not felt any difference (Dienosis, May 2021, p. 56 – 57)[354]. Once inquired whether all respondents would wish to be vaccinated against COVID-19 and the new variants, most suggested that they have already been

[346] https://www.dianeosis.org/wp-content/uploads/2021/11/Covid-19_7th-wave.pdf, p. 30 – 31.
[347] https://www.dianeosis.org/wp-content/uploads/2021/11/Covid-19_7th-wave.pdf, p. 32 – 39.
[348] https://www.dianeosis.org/wp-content/uploads/2021/05/pandemic_wave_6th.pdf, p. 46 – 47.
[349] https://www.dianeosis.org/wp-content/uploads/2021/11/Covid-19_7th-wave.pdf, p. 44 – 47.
[350] https://www.dianeosis.org/wp-content/uploads/2021/11/Covid-19_7th-wave.pdf, p. 48 – 51.
[351] https://www.dianeosis.org/wp-content/uploads/2021/05/pandemic_wave_6th.pdf, p. 48 – 51.
[352] https://www.dianeosis.org/wp-content/uploads/2021/05/pandemic_wave_6th.pdf, p. 52 – 55.
[353] https://www.dianeosis.org/wp-content/uploads/2021/11/Covid-19_7th-wave.pdf, p. 56 – 59.
[354] https://www.dianeosis.org/wp-content/uploads/2021/05/pandemic_wave_6th.pdf, p. 56 – 57.

vaccinated (38.9%), a 33.6% is absolutely certain that they will be vaccinated, 14.5% is less enthusiastic but still positive in being vaccinated whilst in comparison only 4.8% is reluctant and a 6.2% is absolutely determined to not be vaccinated (Dienoisis, May 2021, p. 58 – 59)[355]. The next inquiry solidifies the aforementioned data as a 31.8% of the respondents would want to be vaccinated as soon as possible, 47.1% wish to be vaccinated when it is their turn while 20.7% declared to not be in a rush to be vaccinated (Dienoisis, May 2021, p. 60 – 61)[356]. These findings suggest that citizens are aware that vulnerable groups should be prioritized in being vaccinated and would wait for their turn. Emphasizing on citizens who strongly oppose vaccination, a 67.9% believes that it may have side effects, 20.6% believes that it may not be effective while a 5.2% considers COVID-19 to be a mild illness and a 6.9% suggests that they have already been infected with COVID-19 (Dienoisis, May 2021, p. 64 – 65)[357].

A 58.1% would be against of vaccinating their children while a 65.9% in favor of the COVID-19 certificate (Dienoisis, May 2021, p. 66 – 69)[358]. Contrary to the findings of May 2021, in October 2021, respondents suggested that their children have been vaccinated (38.2%) or will be vaccinated (20.4%) in comparison to the parents that will not vaccinate their children (30.7%) and indecisive respondents (8.8%) (Dienosis, October 2021, p. 40 – 41). It is also important to note that only 32.1% parents will vaccinate their children between the ages of 12 – 17, in comparison to 46.1% that will not vaccinate their children and 18.1% indecisive respondents (Dienoisis, October 2021, p. 42 – 43)[359]. Respondents are observed to be somewhat conflicted on how plausible it can be to be infected by COVID-19 as a 18.4% suggested high probability, 33.8% suggested relative probability, 32.2% not that likely, 12.4% not likely at all (Dienosis, May 2021, p. 76 – 77)[360] . Once requested to share their opinion in relation to the level of danger of being infected by COVID-19, 24.1% respondents suggest that it is very dangerous, 41.5% suggest that COVID-19 is quite dangerous in comparison to 18.1% suggesting that COVID-19 is not that dangerous and only 1.3% suggesting that COVID-19 is not dangerous at all (Dienosis, May 2021, p. 78 – 79)[361].

In relation to the vaccine deniers, 58% suggested that they have decided by their own volition to not the get vaccinated, 22.1% were influenced by what they read or heard particularly by content online (5.6%) while only 10.8% and 7.3% suggest they have been advised not to get vaccinated by a doctor or scientist respectively (Dienoisis, October 2021, p. 60 – 61)[362]. Moreover, 43.6% decided to not be vaccinated from the start, 37% intended to get vaccinated but changed their mind while 9.2% got infected (Dienosis, October 2021, p. 64 – 67)[363]. In October 2021, 77.4% respondents were already vaccinated, while only 15.5% would not get vaccinated against COVID-19 and/or a variant of COVID-19, whereas most vaccine deniers suggest that they do not trust the vaccines due to side-effects (57.8%), do not believe that they are effective (24.6%) and do not believe in vaccines (25.7%) (Dienoisis, October 2021, p. 68 – 75)[364]. It is evident, upon the comparison between the research that took place in May and October 2021 that misinformation which was mainly orchestrated by several anti-vaccine

[355] https://www.dianeosis.org/wp-content/uploads/2021/05/pandemic_wave_6th.pdf, p. 58 – 59.
[356] https://www.dianeosis.org/wp-content/uploads/2021/05/pandemic_wave_6th.pdf, p. 60 – 61.
[357] https://www.dianeosis.org/wp-content/uploads/2021/05/pandemic_wave_6th.pdf, p. 64 – 65.
[358] https://www.dianeosis.org/wp-content/uploads/2021/05/pandemic_wave_6th.pdf, p. 66 – 69.
[359] https://www.dianeosis.org/wp-content/uploads/2021/11/Covid-19_7th-wave.pdf, p. 42 – 43.
[360] https://www.dianeosis.org/wp-content/uploads/2021/05/pandemic_wave_6th.pdf, p. 76 – 77.
[361] https://www.dianeosis.org/wp-content/uploads/2021/05/pandemic_wave_6th.pdf, p. 78 – 79.
[362] https://www.dianeosis.org/wp-content/uploads/2021/11/Covid-19_7th-wave.pdf, p. 60 – 61.
[363] https://www.dianeosis.org/wp-content/uploads/2021/11/Covid-19_7th-wave.pdf, p. 64 – 67.
[364] https://www.dianeosis.org/wp-content/uploads/2021/11/Covid-19_7th-wave.pdf, p. 68 – 75.

campaigns had a severe negative effect on the public opinion about vaccines, particularly due to high increase of respondents suggesting their lack of trust in vaccines. This is furtherly reinforced as respondents appear to be conflicted in case the vaccination were to become mandatory as 35.1% are in favor and 62.2 against, while 72.6% believe that there are various malicious actors that purposely generate misinformation, 69.8% suggest that it is a right to not be vaccinated, 65.8% suggest that vaccine deniers are not well informed, 57% suggest that vaccine deniers' behavior is anti-social, while 42.6% of the respondents tend to avoid vaccine deniers are they consider them dangerous (Dienoisis, October 2021, p. 76 – 83)[365].

This data is reflected on several occasions as a small percentage of vaccine deniers are observed to frequently organize protests against the vaccination campaign and pandemic management, actively demonstrating their opposition. On the 14th of July, mass protests took place in Athens, Thessaloniki and other major cities in Greece against the measures against COVID-19 such as obligatory vaccination and non-pharmaceutical interventions. The anti-vaccine movement held signs against the measures quoting that "nazi vaccines and (tech) chips", "The variant of Greeks is unity", "No to the obligatory vaccination" (To Vima, 2021)[366]. Within the next ten days several protests took place against COVID-19 measures in Athens with ranging from approximately 1.000 (Ethnos, 2021)[367] to 5.000 participants (Kathimerini, 2021)[368]. In these protests anti-authority radical leftists and members of the radical right would often clash with the police resulting in several injuries (ProtoThema, 2021)[369]. It is important to note that one of the main organizers of these protests, particularly the one in Athens in early July, who is also in charge of the anti-vaccine movement "Free once again" (Avgi, 2021)[370] is a doctor, Cardiologist/heart specialist, who is observed to incite social strife, often suggesting that the vaccines are experimental and correlates the current government with Junta (In, 2021)[371]. In response the Medical Association of Athens, referred the aforementioned doctor to the disciplinary board for the unscientific and counterproductive views and activities which incited social strife and generated misinformation (iefimerida, 2021)[372]. These findings indicate that the scientific community and governmental responses should actively work in debunking misinformation and myths about COVID-19, which were likely highly exaggerated by conspiracy theorists and the anti-vaccination movement.

Respondents appear to present conflicting views regarding the right to request services from vaccinated-only personnel with 47.6 in favor and 50.8% against, while most (75.9%) support that when Science and Religion clash, the scientific community is right (Dienoisis, October 2021, p. 88 – 89)[373]. Concluding, most respondents estimate that the "new normality" will be within 2022 (37.5%) or after 2022 (30.7%), whereas 69.9% strongly believe that vaccines can save lives and 24.5% are positive that vaccines save lives in comparison to 1.8% and 2.7% that are reluctant or disagree completely (Dienoisis,

[365] https://www.dianeosis.org/wp-content/uploads/2021/11/Covid-19_7th-wave.pdf, p. 76 – 83.
[366] https://www.tovima.gr/2021/07/14/society/stous-dromous-oi-antiemvoliastes-se-athina-kai-thessaloniki/.
[367] https://www.ethnos.gr/greece/article/167085/syntagmaepeisodiasthsygkentroshkatatoyypoxreotikoyemboliasmoy.
[368] https://www.kathimerini.gr/society/561445474/se-exelixi-poreia-antiemvoliaston-sto-kentro-tis-athinas-eikones/.
[369] https://www.protothema.gr/greece/article/1145281/epeisodia-sti-sugedrosi-ton-arniton-tou-emvoliou-sto-sudagma-horis-maskes-kai-apostaseis-alla-me-staurous/.
[370] https://www.avgi.gr/koinonia/391674_sygkentroseis-me-stayroys-kai-hrysaygitika-synthimata.
[371] https://www.in.gr/2021/07/15/life/stories/faidon-vovolis-poios-einai-o-arnitis-giatros-pou-organose-tin-sygkentrosi-ton-antiemvoliaston-stin-omonoia/.
[372] https://www.iefimerida.gr/ellada/o-isa-paei-sto-peitharhiko-ton-faidona-boboli.
[373] https://www.dianeosis.org/wp-content/uploads/2021/11/Covid-19_7th-wave.pdf, p. 88 – 89.

May 2021, p. 80 – 83)[374]. Citizens are observed to be more positive in entering the phase of new normality during 2022 (43.1%) or after 2022 (47%) (Dienoisis, October 2021, p. 84 – 85)[375], indicating that respondents continue to perceive COVID-19 as a valid and persistent threat. The change of perception in relation to COVID-19 is also reaffirmed by the Minister of Health, who in recent public statements suggested that Greece has now entered the phase of "co-existance" (Capital, 2022)[376] with COVID-19, suggesting that the current measures do not have a mandatory nature while do not abide a "zero COVID" policy like for instance China, also highlighting that Greece has a lower death/infection rate in comparison to the European Average infection rate (To Vima, 2022)[377].

3.2.6 Ireland

Analysing risk perception in Ireland, a 2022 study including 800 participants examined people perceptions and incorporated numerous contextual risk factors for COVID-19 infection (Timmons et al, 2022)[378]. The observations were then compared with the results from a sample of medical experts who engaged in the same assignments (ibid). Utilizing three psychologically distinctive tasks, overall findings proved that the public found it difficult to incorporate environmental risk factors when assessing the risk of contracting COVID-19 in social settings (ibid). For example, environmental risk factors may be the duration of a meeting and whether an event takes place indoors or outdoors (ibid). Particularly, relative to medical experts, the public miscalculated the advantages of socialising outdoors instead of indoors (ibid). That said, it appeared that participants concentrated more on how many people they were in close proximity to (ibid). This struggle, combined with the new discovery that perceived risk can be minimised by independent factors (e.g., other psychological needs), suggested that people were likely to unconsciously situate themselves in settings with greater risk of COVID-19 infection, thus possibly contributing to the transmission of the COVID-19 virus (ibid). One year into the pandemic, a different study (Borges & Byrne, 2022)[379] presented contradicting results in terms of COVID-19 risk perception. Focusing on the period from 16 of February 2021 to 14 June 2021, a study investigating COVID-19 risk perception and preventive behaviours in third-level students (University, technological, colleges of education[380]) in Ireland (ibid) focused on periods in which Ireland was under national restrictions (16th February to 11th April 2021) and a period in which COVID-19 restrictions were starting to ease (12th April to 14th June) (Borges & Byrne, 2022)[381] with 364 third-level students (77.2% females, and 22.3% males) (ibid), observed that third-level students in Ireland own more than adequate levels of COVID-19 associated knowledge, are adequately engaged with preventive behaviours, and own reasonable levels of risk perception (ibid). More precisely, some of the key findings were:

[374] https://www.dianeosis.org/wp-content/uploads/2021/05/pandemic_wave_6th.pdf, p. 80 – 83.
[375] https://www.dianeosis.org/wp-content/uploads/2021/11/Covid-19_7th-wave.pdf, p. 84 – 85.
[376] https://www.capital.gr/epikairotita/3629234/th-pleuris-mpainoume-sti-fasi-sunuparxis-me-ton-koronoio.
[377] https://www.tovima.gr/2022/04/20/society/pleyris-mpainoume-se-fasi-synyparksis-me-ton-koronaio/.
[378] Timmons S, Belton CA, Robertson DA, Barjaková M, Lavin C, Julienne H, Lunn PD. Is it riskier to meet 100 people outdoors or 14 people indoors? Comparing public and expert perceptions of COVID-19 risk. J Exp Psychol Appl. 2022 Feb 24. doi: 10.1037/xap0000399. Epub ahead of print. PMID: 35201843.
[379] Borges, J., & Byrne, M. (2022). Investigating COVID-19 risk perception and preventive behaviours in third-level students in Ireland. *Acta Psychologica*, *224*, 9. doi: 10.1016/j.actpsy.2022.103535.
[380] https://www.citizensinformation.ie/en/education/the_irish_education_system/overview_of_the_irish_education_system.html.
[381] Supra note, 368.

1. **Age did not influence risk perception levels or engagement in preventive behaviours.** This finding specifically applied to third-level students aged ≤ 25 years recording the same levels of risk perception and preventive behaviours as those above the age of 26 (ibid).
2. **Fairly higher levels of risk perception and preventive behaviours were noted for females compared to males**. Following this analysis, however, it was noted that when translating the results, the uneven dissemination of respondents would require attention. This is because the study consisted of significantly fewer males than females (ibid).
3. **The study confirmed the "hypothesis of a positive relationship existing between risk perception and preventive behaviours" (ibid).** More precisely, the study identified that as risk perception increased, so did self-recorded preventive behaviours. Note that in the study, risk perception was estimated using a measure developed by Lanciano et al. (2020)[382]. This measure comprised nine features and was measured on an 11-point Likert scale (scale used to measure attitudes, knowledge, perceptions, values, and behavioural changes) varying from 0 = not at all to 10 = very much. The measure included two parts – health risk concern and health risk likelihood. To capture overall risk perception, the two parts were then added together (ibid). The findings are in accordance with prior studies, suggesting that higher risk perception signifies higher preventive behaviours (Alicea-Planas et al, 2021)[383]. Also seen in prior research (Commodari, 2017)[384] (Rubaltelli, 2020)[385], risk perception and preventive behaviours were much higher during the timepoint of national restrictions in contrast to when the COVID-19 restrictions were eased (ibid).
4. **Dissimilar to prior research, no connection between comprehension of COVID-19 and risk perception was identified in the study**. While understanding of COVID-19 was quite high among the sample of third-level students, knowledge did not have a meaningful influence on risk perception levels. However, as the study was carried out a year after the COVID-19 outbreak, it could be that more data were made available to the public in contrast to prior research, and subsequently overall knowledge of COVID-19 was higher among the participants. Hence, there was little difference in knowledge levels among the existing sample which may have led to a low possibility of knowledge being associated with risk perception levels (ibid).
5. **A number of predictors of preventive behaviours among third-level students were acknowledged in the study**. For example, in contrast to residing at home during the academic term, residing in communal student accommodation signified a decline in preventive behaviours (ibid).

3.2.7 Israel

In relation to COVID-19 and risk perception, no relevant studies have been conducted in Israel, therefore there is a lack of data that could explore and elaborate on COVID-19 that may relate with how citizens in Israel perceive risk.

[382] Lanciano, T., Graziano, G., Curci, A., Costadura, S., & Monaco, A. (2020). Risk perceptions and psychological effects during the Italian COVID-19 emergency. Frontiers in Psychology, 11, Article 580053.
[383] https://doi.org/10.1177/1540415320985141.
[384] https://doi.org/10.1177/2158244017718890.
[385] https://doi.org/10.1111/bjhp.12473.

3.2.8 Italy

Italians think of virus-containment practices as their civic duty, but many believe that most of their fellow citizens have not adopted such practices enough. The young are both more negative about others' behaviour, but also less inclined to follow containment rules themselves. A negative consequence that emerged from relevant studies is the deterioration of people's trust in others during the crisis. Women and people under 30 were those undergoing a sharper decline (Morein Common, 2021). Moreover, Italians seemed divided in their opinion about how the country managed the pandemic: 54% declared to be proud of how the Italian government handled the pandemic while 46% declared to be disappointed. In particular, 72% of the population believed that the measures implemented during COVID-19 were reasonable and proportional while 28% believed restrictions were unreasonable and disproportionate.

Approximately with the end of the first lockdown in Italy and the progressive flattening of the epidemic curve, a scientific study (Tagini, 2021) reported that those living with people at high risk, those who experienced COVID-like symptoms, who had cases/deaths among friends or relatives, who worked near/in contact with COVID-19 patients, individuals who adopted more often the preventive measures, those with higher levels of anxiety and depressive symptoms, with an avoidant coping style and with an external health-related locus of control, reported higher levels of risk perception. On the contrary, men with a better self-reported physical health, with higher emotional stability and open personality traits reported lower levels of risk perception. Focusing on the perceived adequacy of the information received about COVID-19 symptoms, prognosis, and how to prevent the infection, the more people believed to be well-informed, the more they perceived a higher risk. Moreover, the analysis showed that risk perception does increase among women with poor health or chronic diseases, among women living with vulnerable people or who experienced COVID-like symptoms. Such high levels of anxiety predicted a higher perceived risk, but depressive symptoms did not. People believe that their health depends on inscrutable forces, such as fate and God, or on other people (i.e., they have an external locus of control) the more they perceive higher risk. They believe that their health is unrelated to their own choices, likely feeling no control over the contagion and, thus, perceiving higher risk.

Finally, it seems that being adequately informed about COVID-19 encourages people to comply with the containment measures, possibly because of a better understanding of the disease-related outcomes and of the rationale behind actions adopted by the government. On the other hand, if people believe they cannot do anything on their own to avoid the infection (because others determine their health), they might adopt a fatalistic approach, considering it pointless to engage in the recommended behaviours.

Another survey (Corea et.al, 2022), conducted in November 2021 observed an increase of the activities in public places, such as eating at a restaurant, using transports, and attending indoor spaces, despite their role in the spread of the SARS-CoV-2. Compliance with two of the main COVID-19 public health measures, such as wearing a mask and hand washing, slightly increase after the second dose of vaccine and decrease as a willingness after the booster dose, but what is more concerning is that maintaining physical distancing consistently decreased and hand hygiene was more used than physical distancing. In general, the vaccinated people reduce over time their attitudes towards the adoption of the majority protective measures against COVID-19 infection. Availability and accessibility to information on COVID-19 vaccination are crucial for the general population to help the individuals to make informed decisions and to have safe preventive behaviours. It is particularly notable that the internet has become the third major source for people seeking vaccine information, with the risk of receiving unreliable information, with their general physician and institutional sources being the first options for whilst seeking

information relevant to COVID-19[386]. This study reveals that less than half of the participants indicated the perception of the risk of getting COVID-19 and that COVID-19 is a severe disease and they trust in the efficacy of the booster dose. The low perception about COVID-19 severity and vaccine efficacy do not seem to motivate individuals to get vaccinated despite the extraordinary impact of the disease and the mass vaccination campaign. Therefore, public health messaging and education programs could be more focused on the impact of diseases and are needed to make people aware of the fact that, although vaccinated, they are still at risk of getting the disease as well as reassuring them of the safety of the vaccination and also helping them understand the impact of the vaccination on SARS-CoV-2 spread. It is evident how information in the different pandemic phases has played a decisive role for people. Risk perception varies according to the sources and information received. The openness towards the end of the state of emergency, the end of compulsory vaccination and not least the beginning of the war in Ukraine have shifted the focus away from the pandemic.

3.2.9 Portugal

Given the success of carrying out laboratory screenings in specific contexts (e.g., schools), which supported the already existing scientific evidence that cases of SARS-CoV-2 infection, and even outbreaks, in a school context are correlated with the incidence of infection in the community, namely through contagions that occur outside of the school, and the need to carry out tests on teaching and non-teaching staff, as well as students of the 3rd cycle of basic education and secondary education, formalized by the Directorate-General for Health, through the Opinion "Laboratory Testing Strategy for SARS-CoV-2 - Schools 2021/2022», justified and proved adequate for the protection of public health in the school community to carry out laboratory tests for SARS-CoV-2 at the beginning of the 2021-2022 school year. Hence, on September 9th 2021 , it was authorized that the Directorate-General for School Establishments (DGEstE) incurred in the cost of acquiring services for carrying out rapid antigen tests, using the direct agreement procedure, in view of the obvious urgency, up to a total amount of (euro) 11 150 080; Determine that the financial burdens arising from this resolution are met by adequate amounts entered or to be entered in the budget of the DGEstE, which may be financed or refinanced through REACT-EU (Recovery Assistance for Cohesion and the Territories of Europe), or using national funds if this proves necessary; and Establish that the charges resulting from the acquisition provided for are fully paid in 2021. Similarly, to research conducted on other countries about Risk perception, in research conducted in Portugal with 3404 participants which examined the early phases, both healthcare professionals and the general population are observed to be fully aware of the risk revolving around COVID-19, as these two groups assess that there is a moderately to highly likely probability of being infected (Peres et al., 2020)[387]. Moreover, these groups suggest that non-pharmaceutical interventions such as isolation (quarantine) is effective in controlling the virus (70% respondents agree), while the participants indicate that the health services were poorly prepared (50.1% general population and 63.5% HCPs respectively) (ibid). In relation to communication about COVID-19 from health authorities, 60% of the participants suggested they were “moderately” satisfied (ibid). In addition, researchers in Portugal have established the COVID-19 Perceived Risk Scale and COVID-19 Phobia Scale, examining the contributing factors influencing citizens and their perception of risk and fear of COVID-19, suggesting that risk perception characteristics include voluntariness (COVID-19 introduces an uncontrollable risk), knowledge about COVID-19, visibility (risk of being infected from

[386] https://www.nature.com/articles/d43978-021-00099-2.

[387] https://www.researchgate.net/publication/341760139_Risk_Perception_of_COVID-19_Among_the_Portuguese_Healthcare_Professionals_and_General_Population.

an invisible threat such as COVID-19) and trust (COVID-19 has an unknown, ever-evolving nature thus likely influences citizen trust with information they receive from mass media throughout the different pandemic phases) (Leite et al., 2021)[388]. Further, high infection and casualty rates, the lack of common strategy in combination with the general risk perception, may lead to a higher perception of risk surrounding COVID-19 (Ibid). Concluding, in research which assessed the knowledge of the Northern Portuguese population in relation to COVID-19, most participants (81.3%) are observed to have a good overall knowledge about COVID-19 and while the study stressed the importance of health education in relation to pandemic mitigation and control (Olivera et al, 2022)[389].

3.2.10 Spain

In relation to COVID-19 and risk perception, no relevant studies have been conducted in Spain, therefore there is a lack of data that could explore and elaborate on COVID-19 that may relate with how citizens in Spain perceive risk.

3.2.11 Sweden

In relation to COVID-19 and risk perception, no relevant studies have been conducted in Sweden, therefore there is a lack of data that could explore and elaborate on COVID-19 that may relate with how citizens in Sweden perceive risk.

3.2.12 Switzerland

To our knowledge the Swiss government has not officially identified causal links between Covid-19 case rates and prevailing risk perceptions among the population or among stakeholders. Nonetheless, from the analysis of the communication strategy of the Swiss government in reference to rising or decreasing Covid-19 cases it may be concluded that at the beginning of the pandemic risk perception was characterized by a general uncertainty both among decision makers and the general public due to the novelty of the situation, however, as the federal government managed to communicate clearly and coherently trust into state institutions increased. After the federal government had left communication up to cantons the situation was perceived as uncontrolled even though the infection rate was shrinking which again changed as the federal government retook the responsibility for pandemic communication (Balthasar et al. 2022: 62-63). Further from a survey conducted in January 2021, it can be concluded that when it comes to perception of economic risk, the Swiss population is generally more concerned about adjoined societal issues than being individually affected (Balthasar et al. 2022: 22).

3.2.13 United Kingdom (England & Wales)

In November 2020, the Behavioural Insights Team, also informally known as the "Nudge Unit," undertook an assessment measuring the UK population's understanding of COVID-19 risk (The Behavioural Insights Team, 2021)[390] Overall, researchers concluded that people in the UK had a good awareness of the activities which were riskier than others (ibid). For example, most people recognised that nightclubs and pubs are more hazardous than walks in parks and takeaways (The Behavioural Insights team, 2020)[391]. At the time, however, researchers discovered that people were miscalculating

[388] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8544227/.
[389] https://www.mdpi.com/2075-4698/12/3/82.
[390] https://www.bi.team/blogs/risky-business-covid-19-risk-perception-going-into-summer-2021/.
[391] https://www.bi.team/blogs/people-have-a-good-sense-of-which-settings-are-riskier-than-others-in-terms-of-coronavirus-transmission/.

how much safer it was to interact with individuals outdoors rather than inside (ibid). Since then, the 'Fresh Air' concept was added to the government's 'Hands, Face, Space' guidance (ibid).

The researchers collected new data from almost 5 000 adults in England (ibid). These data focused on the period from March 2021 to May 2021. The three main findings were the following:

1. **People still had sensible perceptions about which specific social settings are riskier than others**. When offered a variety of short text descriptions of diverse day-to-day situations, researchers asked how likely people assumed that someone would catch or transmit COVID-19 in a specific situation. According to the researchers, responses were "mostly sensible". For example, respondents ranked overcrowded indoor settings (e.g., busy meetings in people's homes, playgroups, or church services) as much riskier than scenarios where groups of people were intermingling concisely in outdoor locations (e.g., parks or takeaway restaurants) (ibid).
2. **People assumed that COVID-19 vaccination and face masks were the most effective in terms of reducing transmission risk – but may still be undervaluing the benefits of outdoor meetings**. Because the risk involved in meeting others is also shaped by what specific safety measures people act on, researchers also tested the different weightings people placed on four kinds of precaution. Researchers presented participants with one of sixteen diverse explanations of a social meeting and varied the meetings in terms of location (outdoors versus indoors), mask-wearing (masks versus unmasked), number of people available (two versus ten), and vaccination status (all present vaccinated versus no-one vaccinated). Researchers later asked the participants how risky they thought the scenario was in terms of COVID-19 transmission. Yet again, they had good perceptions; they assumed the highest risk scenario was one where an unmasked, unvaccinated group of ten people met indoors. Moreover, the lowest risk was one where a group of two masked, vaccinated people met outdoors. Further investigating these results, researchers discovered that out of the four main safety precautions scrutinised, participants rated having the COVID-19 vaccine "*as the single most effective precaution in terms of reducing transmission risk, with facemasks a close 2nd*" (ibid). Participants also interpreted outdoor meetings as less risky than indoor meetings yet viewed this as a comparatively less significant precaution (ibid).
3. **One in four people did not realise that the vaccine needs time to work. Realistically speaking, it takes several weeks after vaccination for people to develop the antibodies that offer them the right level of protection against COVID-19**. When asked, one in four assumed that vaccines offer protection more or less straightaway – and this was particularly higher among the younger generation (ibid).

3.3 Vaccination and Governmental Initiatives

3.3.1 Austria

Due to high infection rates and the rise in numbers of occupied intensive care units in autumn 2021, campaigns were planned to motivate the Austrian population to get vaccinated. During this period, the daily numbers of first-time vaccinated people were decreasing. Therefore, the Centre for Public Health of the Vienna Medical University and the Donau University Krems published a study which indicates certain incentives for unvaccinated people to get vaccinated (Schernhammer et al 2021).

The study was mainly conducted in August 2021 within the DACH region (Deutschland, Austria, Confœderatio Helvetica), which means that the sample was composed of individuals from Germany, Austria, and Switzerland. In sum, the sample consisted of 3.067 people, out of which 1.019 belonged to the Austrian population, with participants aged between 18 and 90 years. Within this sample, there were 183 Austrians (18%) who outlined that they did not have been vaccinated against COVID-19 until that time and that they also did not have registered for vaccination. According to the answers of these individuals, the most popular incentives for getting vaccinated would have been the following: selection of the vaccine by themselves (stated by 23.5 per cent of the unvaccinated sample), provision of a voucher for getting vaccinated (8.7 per cent) and the chance of participating in a lottery with winning prizes (6.6 per cent). Other incentives might have been the opportunity of getting vaccinated at the workplace (3.8 per cent), the offering of a meal after getting vaccinated (3.3 per cent) and the provision of a sticker, which visualises the status of vaccination (1.6 per cent). Among other things, long-term studies regarding the effects of the used COVID-19 vaccines, money and the possibility of oral vaccination were also mentioned.

However, a link to misinformation or at least lacking information can be identified when it comes to the fact that the vaccine is free of charge, and selectable as 15.8 per cent argued that they would rather get vaccinated if they do not have to spend any money on the serum. Moreover, the possibility of vaccine self-selection, which has in fact been offered in most federal provinces, since a sufficient number of vaccines were available from summer/autumn 2021, was identified as attractive especially by higher educated individuals whereas the opportunity of getting a voucher or participating in a lottery was more attractive for the less educated and younger part (aged between 18 and 35 years) of the unvaccinated population.

The implementation of a vaccination lottery was already in the starting blocks in Austria and a model project of the Austrian government. The idea was to provide the Austrian population with vouchers worth 500 euros, redeemable in selected commercial stores. This measure was not limited to already vaccinated people, meaning that the vaccination lottery should have served also as an incentive for getting the third, so-called “booster” dose. The National Austrian Broadcasting Cooperation (Österreichischer Rundfunk, ORF) was entrusted with the transmission of the drawing on a regular basis. However, due to legal disruptions, the ORF was not able to follow the plan of the government and the idea of the lottery was discarded shortly after.

Another option might have been a financial grant for municipalities, which manage to get a certain percentage of their inhabitants vaccinated. These grants might have been used for campaigns on the community level. However, because of obstacles in the financial constitutional law and the lack of a constitutional majority, this plan was postponed as well.

A non-representative only study by Schernhammer et al. (2021) found high levels of unwillingness to get vaccinated among the respondents, with higher rates among women and younger Austrian, but also among those in favour of political opposition parties, particularly the right-wing Freedom Party of Austria (Freiheitliche Partei Österreich, FPÖ. As such, they found a correlation between distrust in the government and the “unfortunate politicisation of much of the COVID-19 response”. Schernhammer et al. also reference studies prior to COVID-19, which similarly indicate low acceptance levels regarding vaccinations among persons living in Austria. Partheymüller, Eberl & Paul (2021) found that younger people, people with low income, and people who are distant from politics, such as non-voters and those not eligible to vote, are particularly likely to be hesitant about the vaccination. They also found a correlation between low trust in government organisations and public broadcasting and vaccine hesitation.

In January 2022, about 83 per cent of the participants in a study of the Austrian Corona Panel Project (Eberl, Partheymüller & Paul 2022) were vaccinated at least once; 5 per cent were hesitant, and 12 per cent did not want to get vaccinated. 49 per cent of the respondents supported mandatory vaccinations, while 38 per cent rejected the idea; and 65 per cent are in favour of mandatory vaccinations for certain professions with a higher risk of infection. As such, agreement with mandatory vaccination increased in the autumn and winter of 2021, before the law was suspended in June 2022.

Regarding, governmental measures, specially designed for people who did not want or have not been vaccinated during the COVID-19 pandemic, it must be noted that until the moment the official lockdown for unvaccinated people was announced in November 2021, there had not been any specific measure implied by the government dedicated to people who were unvaccinated. There were two essential mechanisms, which were adapted to analyse the epidemiological situation and to implement tailor-made solutions for the respective event.

One of these mechanisms was designated as “Corona traffic light” (Corona-Ampel), which has been used to assess the COVID-19 situation in Austria. The traffic light has five different colours, representing different risk levels, either on a regional (districts) or a provincial base (federal provinces). The colours were defined by the Corona Commission, using specific indicators to decide whether the accurate ones represent the epidemiological situation. This tool was not only useful for the government regarding the announcement and implementation of new measures but also for private persons, who were able to adapt their own behaviour to the situation.

However, a study by the Austrian Corona Panel Project (Pollak 2020) highlighted that the purpose of the Corona traffic light is extremely controversial since a major part of the Austrian population has not adapted their behaviour according to the recommendations presented by the responsible commission. Furthermore, many people in Austria felt not well-informed and were of the opinion that the messages of the traffic light were rather confusing than helpful. Additionally, actions taken by the government were also not always in line with the suggestions given by the traffic light, since it has solely served as an advisory instrument. That caused a lot of criticism.

As with other legal instruments, the “G-rules” have been implemented. At the moment, they are invalid in most sectors, since the epidemiological situation has somewhat calmed down. But if the circumstances demand it, the probability is high that the rules are going to be implemented again. However, their introduction meant not only restrictions for the unvaccinated but also for vaccinated people and they became stricter as the COVID-19 situation was getting more serious. The G-rules served as kind of entry requirements for certain institutions, activities or even work and are as follows:

- 3G: entry is allowed/possible for fully vaccinated, recovered and/or tested people (either PCR-tested or tested with an antigenic test),
- 2,5G: entry is allowed/possible for fully vaccinated, recovered and/or tested people (PCR-tested),
- 2G+: entry is allowed/possible for fully vaccinated and/or recovered people, who must provide an additional PCR test, and
- 2G: entry is allowed/possible either for fully vaccinated and/or recovered people.

The 2G+ rule was already preventing unvaccinated people from participating in certain social events and activities as well as obligating them to wear a mask at their workplace. On the 15th of November 2021, the lockdown for unvaccinated came into force and lasted until the 31st of January 2022. During this period unvaccinated persons were only allowed to leave their homes for certain important reasons. After the lockdown had ended, the 2G+ rule was again valid for the unvaccinated population.

To sum up, implemented governmental measures, specially designed for people who were unvaccinated at that time, were the **2G+ rule and the lockdown for unvaccinated persons**.

3.3.2 Belgium

In **Belgium**, the approach towards vaccination mostly focused on encouraging people to get vaccinated, instead of introducing more stricture measures. Yet there was still to some degree a "carrot and sticks" approach in Belgium, using both positive and restrictive ways of persuading people to get vaccinated. In October 2020, a coronavirus commission was created, led by Pedro Facon, with broad decision-making power and rolled out the vaccination campaign which officially began on 5 January 2021, after an initial pilot phase at the end of December 2020 (COVID-19 Fact Sheet, 2021). Residents and staff in nursing homes were the first to be vaccinated, and then healthcare workers. The next phase began in March 2021, vaccinating people aged 65 and over and those aged 18+ at high risk (from a list of comorbidities, as well as pregnant women). To identify those as high risk, the federal task force used data made by general practitioners, with the responsibility of updating the files in the central database lying with the local doctors. The vaccination strategy recommended vaccinating older adults by decreasing age categories. Phase 2 began in May/June 2021 and involved the adult population 18 years and older, again in decreasing age categories. In July 2021, 1.7 percent of those in Flanders who were offered a vaccine explicitly denied it, with an additional 8 percent not showing up to their appointments (TT & |TT|, 2021). Those who registered on the QVAX reserve list could be reassigned unused vaccination spots if they became available. By August 2021, more than 310,000 Belgians (3% of the population) received their vaccination through this system (Vanham, 2021). From July 2021 onwards, teenagers aged 16-17 (first starting with those at high risk) were invited to be vaccinated, preceding those aged 12-15. Since the end of December 2021, a primary vaccine is offered to children aged 5-11 years, starting with those at high risk, using a reduced dose. In September 2021, an additional dose was recommended in immunocompromised persons. Since October 2021, booster doses have been offered to residents of care homes and people aged 65 and over. From December 2021 the whole 18+ population was invited to receive booster doses. Since the 4th of March 2022 the booster campaign has been extended to 12–17-year-olds with high risk. Since the end of January 2022, a second booster dose was recommended for immunocompromised persons, at least three months after the additional dose. In Flanders, a second booster vaccination is currently being offered to people staying in nursing homes and individuals older than 80 years old. It seems likely that this second booster will be widened to more groups in Autumn 2022. During these phases, the government decided to install 150 large vaccination centres across the country, however, in order to motivate more people to get vaccinated, and address insufficient coverage amongst the population, the government implemented other strategies such as to work with community-based organisations, utilize the active involvement of primary care physicians, pharmacists and cooperated with religious leaders for communication and outreach, pop-up additional vaccination sites and desks to help with vaccine appointment reservations, dispatch mobile vaccination teams for vaccination at home and outdoors for of the average Belgian population and vulnerable people (undocumented people, homeless, sex-workers), offered free transport to vaccine centres, created toolboxes with information on vaccination (flyers, posters, presentations), translated into multiple languages (ECDC, 2022).

To increase accessibility of vulnerable groups to healthcare, 50 Community social and Health Workers were employed in various Flemish and Wallonian cities at the beginning of 2021, and prevent health inequality rising in the context of the COVID-19 pandemic (Beel, 2022). These professionals aimed at bridging the gap between vulnerable groups and primary health and welfare services as they could

inform, motivate and direct more vulnerable groups to receive their vaccination[392]. These pop-up centres were deployed to allow people to come along for a vaccine without having to book in advance. In Antwerp, the vaccination rate in certain parts of the city was lower than others, often in more deprived areas with many non-native Dutch speakers, therefore from July 2021, Eerstlijnzones began deploying pop-up vaccination centres in Antwerp, to approach people in their own neighbourhood and motivate them to get vaccinated (NWS, 2021). This was open to those without papers or residence in Belgium, and could ensure more vulnerable groups were reached, such as refugees, homeless people, or those more digitally illiterate. From August 2021 in Brussels vaccination buses travelled around often in more deprived neighbourhoods to make vaccinations more accessible and convenient for more vulnerable groups (NWS, 2021). In September 2021, whilst 83% of adults in Belgium were fully vaccinated, the vaccination rate in Brussels was at 62.5% (Moens, 2021). In response to the lower vaccination in Brussels, additional measures were taken, including vaccinating people in shops (NWS, 2021).

In terms of communication, the **Belgian** response was also based on a strategy document, issued by federal Government Commissariat for COVID-19 on the operationalization of Belgium's vaccination strategy which outlined how communication on vaccination efforts will be integrated into existing communication structures and how popular opinion will be continuously monitored so that communication strategies can be adapted over time accordingly (Government Commissariat COVID-19, 2020). The communication strategy regarding vaccination was by the 'Social Debate and Communication Unit', which is composed of communication officers from federal public services, as well as external communication professionals with experience in traditional media, digital communication and public debate. The central messages and operationalization of this communication strategy are decided at the federal level, but with considerable involvement of the federated entities as they are ultimately responsible for organizing vaccination at the local level (Government Commissariat COVID-19, 2020). As such, local public health stakeholders play an important role in communication about the vaccination strategy. The main messages of the campaign revolve around why getting vaccinated is important, how the vaccine works, why the vaccine is safe, and to explain which groups of people are prioritized in the vaccination strategy. National and regional media campaigns are underway via traditional channels (TV, radio) and social media channels, and targeted communication strategies are set up to target vulnerable groups, healthcare providers, and patient organizations (ibid.) Dissemination of multilingual information was crucial to inform the entire population about the vaccination. Additional, targeted and multilingual campaigns with key figures and self-organisations from communities were necessary to inform and persuade people in super diverse neighbourhoods around the COVID-19 vaccinations (Geldof et al., 2022). Communication with vulnerable groups can hereby occur at the community level through social services, other local government services, and local non-profit organizations (Crisiscentrum, 2020)[393].

The official **Belgian** government website provides multilingual information on vaccination such as brochures and audio. On the website of the Integration and Civic Integration Agency, information on the vaccination campaign is available in several languages, formats and in clear Dutch. On the website there is also a page with important lessons and tools on reaching out to vulnerable groups with a

[392] For example, a team of seven community health workers based in Antwerpen managed to direct more than 850 people within a week to a pop-up vaccination centre by Doctors of the World (Beel, 2022). Many of whom had insecure status and lacked papers.

[393] For example, the Institute of Tropisch Medicine in Antwerpen conducted information sessions on the vaccination with community based organisations working with vulnerable groups.

migration background, with examples and best practices from different Flemish cities and municipalities. They also launched the free mobile app Crisis Information Translated (CIT), offering non-native speakers up-to-date and accurate information on vaccination and the current coronation measures, in 18 languages. This includes the route in the vaccination centre and the medical questionnaire. Several municipalities such as Antwerpen, Genk, Ghent and Brussels have also placed information regarding vaccinations for low-literacy and non-native speakers on their local websites. The Integration and Civic Integration agencies in Antwerp (Atlas vzw) and Ghent (IN-Gent), are crucial actors for reaching newcomers and non-native speakers in the largest cities in Flanders. The agencies give tips on how to use audio to reach non-Dutch speakers or low-literacy Dutch speakers. Atlas vzw distributes materials about the measures and the vaccination strategy in multiple languages on the website, in emails to participants, and during social orientation courses and face-to-face interviews. The Brussels non-profit association Foyer vzw organised an information campaign in 18 languages on the corona vaccine, with practical and multilingual information about the vaccination in Brussels in film format. The vaccination centre Bolwerk in Vilvoorde published a video in Berber/Ruffin on YouTube about the vaccination flow. Moreover, Watwat.be is a website geared towards younger members of the Flemish population, including accessible information about the COVID-19 vaccination. Here they also have a brochure with information about the virus in Dutch, Farsi, Arabic, Turkish, French and English. Information about the COVID-19 vaccine in simple Dutch as well as in a range of other languages has been developed in collaboration with the Flemish centre for clear communication Wablieft (Wablieft, 2020). These communication materials include texts with basic information, visualizations, and videos. The distribution of such materials is primarily aimed at intermediaries and professionals who work or deal directly with vulnerable target groups. The use of interpreters was used to assist non-native speakers in vaccination centres. For example, Mechelen provides volunteer or video interpreter support at vaccination centres, as does the City of Genk. On the Ghent website there is a web portal to request interpreters for both non-native speakers and people with disabilities, including clear language resources, telephone interpreters, Flemish Sign Language Interpreters and mobile loop.

Figure 4. ECDC WEBINAR 23 June 2021 (Wyndham-Thomas & Van Den Brandt, 2021)[394].

[394] This slide is from a presentation by government agencies on "Reaching vulnerable population during the COVID-19 Belgian vaccination campaign" demonstrating specific types of measures taken in Wallonia to encourage vaccination of more vulnerable groups.

Figure 5. Campaign images "Laat je vaccineren"[395].

Belgium, similarly, to other countries, implemented a series of measures (Simmons-Simmons, n.d.)[396] and relevant ministerial decisions regarding vaccinations which were also disseminated by the National Crisis Centre (n.d.)[397]. The initial plan for Belgium was to achieve a 70% vaccination rate of the overall population, a figure deemed minimal for 'herd immunity'. The more transmissible delta variant demanded vaccinologists such as Pierre Van Damme in June 2021 to state that the threshold should be raised to 85% to 90% to substantially increase safety (Chini, 2021). The lower vaccination rate in certain parts of the country, combined with the threat of the Delta variant to progress made, meant that the Covid Safe Ticket ('CST') began to be introduced in Belgium to raise the numbers of those vaccinated while restricted access to social activities for those who refuse the vaccine. Those under 18 were excluded from the CST, and were not restricted from activities if unvaccinated. The European digital corona certificate was announced on 4th June 2021, as a requirement for travel in the summer. In Belgium this was accompanied with a scheme to receive two PCR tests reimbursed if they could not yet be vaccinated. In early September the Belgian government announced a vaccination obligation for healthcare personnel. On November 26, 2021 the Consultation Committee held another meeting in response to the rapidly deteriorating situation. In hospitality, the number of people per table was limited to 6; discos and dance halls were closed; and indoor public events were only allowed to take place while seated, with Covid Safe Ticket and mouth mask. On December 29, 2021, As a result of the suspension of the measures for the cultural sector pronounced by the Council of State, the Consultation Committee decided to restore the conditions for the cultural sector and by extension also for cinemas and the events sector, to those of 3 December: seats only, with mouth mask, use of CST from 50 visitors, and a maximum of 200 visitors. As of 7th March 2022, there was a loosening of measures, where the CST was no longer required; no more Passenger Locator Form (PLF) within the EU, no more testing and quarantine obligations with COVID certificate. In addition, the epidemic emergency and the federal phase of the national emergency plan were lifted after two years, whereas

[395] For example, the Flemish government's agency for care and health has rolled out the regional '*laat je vaccineren*' (get vaccinated) campaign: www.laatjevaccineren.be/campagne-covid-19-vaccinatie.
[396] https://www.simmons-simmons.com/en/publications/ck9jux1oa74ci0900pcpw833f/covid-19-belgium-to-end-all-covid-measures.
[397] https://crisiscentrum.be/nl/newsroom/coronavirus-de-antwoorden-op-al-je-vragen.

as of May 2022, further measure relaxations were introduced which included the lifting of mouth mask obligation on public transport and most travel restrictions, except for high-risk countries.

In **Belgium**, as of August 13, 2021, Belgium introduced the CST for allowing access to outdoor events of over 1,500 people. This ticket proved that someone has been fully vaccinated (at least two weeks from their final dose), that they have received a negative PCR test within the previous 48 hours, or that they have coronavirus antibodies from a recent infection. From early September, this was extended to indoor events, although postponed in Brussels because of worse COVID-19 situation and as of October 2021 discotheques, dance halls and nightclubs could reopen, provided that they had a Covid Safe Ticket and appropriate ventilation. From the 1st November 2021, the CST was required for visiting restaurants/catering and gyms in Flanders and Wallonia while it already applied in Brussels, whereas on mid-November 2021, in response to rising COVID-19 cases, the CST along with face masks became compulsory for the catering industry, theatres, concert halls, cultural centres, cinemas, museums, indoor amusement parks, public and private events for 50 people indoors and 100 people outdoors. As of 7th March 2022, a gradual measure loosening took place there was a loosening of measures, which meant that there were no more testing and quarantine obligations or a necessity of demonstrate the Covid Safe Ticket or the COVID certificate.

3.3.3 Cyprus

In **Cyprus** and based on the relevant discourse of the Cypriot President Anastasiades, the options were either mandatory vaccination or through other measures in order to encourage Cypriot citizens in getting vaccinated. The Government of Cyprus, respecting the right of citizens to choose, did not adhere to the mandatory nature of vaccination process such as Greece, thus vaccination was optional in Cyprus. Specifically, the President of Cyprus mentioned: "We have chosen measures aimed at protecting the majority from a few people's indifference or choice. He stressed that the Government's intention is not to divide citizens into vaccinated or not and that respect is a given to every citizen's right of choice. However, as he said, the duty of the State is to protect the right to live and work of all citizens and that is why the decision to demonstrate a safety card (SafePass) aims not to endanger the country's health system, ensuring the health of citizens and not to endanger the viability of businesses that are consequently linked to jobs and also to not endanger the right to unhindered enjoyment of the freedoms of those who have been vaccinated" (Ethnos, 2021)[398]. As scientists conclude, it should be realized that the virus will now be part of our lives, for a time that still cannot be calculated. Mr. Anastasiades stressed that the goals that have been set, the whole effort is common and will receive the support of the whole society, political parties, Church, news agencies, various other organized groups, scientific community, the workers and entrepreneurs (ibid)[399].

Cyprus, similarly to other countries such as Greece, implemented targeted information and awareness campaigns for voluntary vaccination via a variety of institutions (University of Nicosia, 2021), however was reluctant to impose fines, and emphasized in respecting the individual right to safe socialization of both people who chose to be vaccinated and people who chose not to do so. Towards that objective, the Cypriot Council of Ministers took steps to ensure that social and economic activity continues for all citizens, regardless of their choice (Naftemporiki, 2021)[400]. Specifically, as mentioned by President

[398] https://www.ethnos.gr/World/article/166375/kyproskoronoiosaysthropoihshtonmetrongiatonkoronoio.
[399] Ibid.
[400] https://www.naftemporiki.gr/story/1747107/kupros-mi-emboliasmenoi-polites-ano-tou-91-ton-epibebaiomenon-krousmaton.

Anastasiades, the State has a duty to protect the right to life and work of all citizens and concluded that if stricter measures were implemented emphasizing on the compulsory demonstration of safety cards (SafePass), aim to achieve balance between not endangering the country's health system, business viability, unhindered employment and ensuring the good health of citizens (Ethnos, 2021)[401]. In conclusion, there was no specific course of action of the governmental mechanism for citizens who were not vaccinated or who did not want to be vaccinated, as the Government's intention was not to separate citizens into vaccinated or not and the aim was to respect the individual right of choice of each citizen.

In **Cyprus**, as of December 22, 2021, all employees who completed their vaccination against Covid-19 or held a certificate of illness (lasting 180 days) were required to present a negative PCR laboratory test or a Rapid test for rapid antigen detection with a duration of 7 days so they could access in-site their workplace, nevertheless, employees who received the booster (3rd) dose of vaccine were excluded. From December 15, 2021 to January 31, 2022, entry to social and religious events such as weddings, entry into catering establishments within the hotel units was allowed only to people who had received at least one dose of the vaccine with a prerequisite to possess a negative result of a PCR laboratory test or a rapid antigen test. This decision of the Council of Ministers also applied to the following venues: indoor and outdoor stadiums, theaters, cinemas, performance halls, music and dance centers, entertainment centers and restaurants. It is clarified that people who completed their vaccination course with two doses in case of two-dose vaccine, and one dose in case of a single-dose vaccine, do not need to have to present a negative PCR or Rapid test result, as well as people who received the booster dose of vaccine (Euronews, 2021)[402]. From December 30, 2021, entry to entertainment centers, music and dance centers, banquet venues, weddings and similar events, they were allowed to participate only with the additional presentation of a negative Rapid test of 24 hours. Authorities highlights that entry is allowed only to fully vaccinated people (Kathimerini, 2021)[403].

3.3.4 Germany

The German government has not publicly identified the exact sets of indicators on which specific decisions were based, aside from 7-day incidence rate. However, reports such as the BMG “Evaluation of the Legal Foundation and Measures of Pandemic Policies” provide significant insight into the various types of data collected by governmental agencies[404]. Pandemic management requires quick decision-making based on the available data and scientific evidence. Registration data monitored the course of the pandemic in Germany, but also provided valuable information based on individual cases. The system is very sensitive when it comes to recording cases early in the pandemic and at a relatively low incidence. Nonetheless registration data is only partially useful under the circumstances of a high incidence. Other surveillance tools are designed to monitor acute respiratory diseases, record and track epidemiology, disease severity, clinical burden, and mortality. Despite this, governmental decision-makers have heavily relied on registration data throughout the course of the pandemic (BMG 2022: 43-44). In Germany the following data was acquired in order to reach an evidence-based decision: registration data in accordance with the IfSG, data for contact tracing, data for monitoring

[401] Supra note 383.
[402] https://gr.euronews.com/2021/12/22/kypros-safe-pass-covid-ola-ta-metra-gia-giortes-trapezi-tests-flightpass-aerodromio-emvoli.
[403] https://www.kathimerini.gr/world/561650605/kypros-nea-perioristika-metra-exaitias-tis-omikron/.
[404] https://www.bundesgesundheitsministerium.de/fileadmin/Dateien/3_Downloads/S/Sachverstaendigenausschuss/220630_Evaluationsbericht_IFSG_NEU.pdf.

resources in the health care system and for monitoring of the vaccination rate, syndromic surveillance data and research supply data (BMG 2022: 41).

In hindsight the pandemic has repeatedly demonstrated the importance of a systematic acquisition of up-to-date data, their political assessment and scientific analysis. According to the evaluation report of the committee of expert of the ministry of health there is need for improvement when it comes to acquisition, availability and utilization of data. To be more precise the German government should aim for representative random sampling and controlled scientific studies and projects, establishing further digital contact tracing systems like DEMIS and SORMAS as well as promoting digitalization of the health care system, adherence to the pandemic plan and its differentiation of containment, protection and mitigation phases, expansion of the DIVI-register for a more detailed insight into the resource utilization of the health care sector, instalment of a more differentiated vaccination record system and a coherent high quality data structure on federal level (BMG 2022: 45-47). Particularly, with regard to the selection of indicators for governmental decision it is suggested that scientific evidence can solely be achieved through representative random samples and model calculations. 7-day-incidence or other isolated numbers are not sufficient in themselves to assess the infection process and to be used as a scientific base and to evaluate the capacity of the health care system. In addition, there are dependencies on other factors such as demographic conditions as well as environmental factors and comorbidities (BMG 2022: 44-45).

In relation to measures utilized in order to motivate vaccinations, the federal government imposed a variety of measures to increase the vaccination rate of its population. First, it was determined that vaccine access should be designed without obstacles. From the beginning, all vaccine doses were therefore free of charge for everyone living in Germany. From December 2020 on, during the period of prioritizing older people, further financial and mobility hurdles were reduced by local “vaccination taxi” offers, driving the elderly to vaccination centres (cf. Impftaxis | Coronavirus | Landeshauptstadt Dresden). Furthermore, attempts were made to break down language barriers through multilingual information available on official sites and through technologically-mediated language assistance at the local vaccination centers. It was furthermore made possible to show proof of vaccination either in hard copy or by mobile QR code. To facilitate the crossing of borders, the same certificate applied in all EU member states. Second, a priority was set on raising trust in the quality of the vaccines. The government attempted to achieve this through a high level of transparency regarding the multi-stage approval processes, as well as campaigns with celebrities such as #ArmsHigh (#ÄrmelHoch: #ÄrmelHoch | Zusammen gegen Corona). A priority was also set on making vaccines available through general practitioners, in order to provide greater confidence, as patients feel less anonymous and can seek more intimate advice. In general, attempts were made to provide residents with multiple options of where to be vaccinated: e.g., in clinics and surgeries, at general practitioners' offices, in hospitals, or in vaccination centres.

In relation to the approach that the governmental response utilized for citizens that did not want to get vaccinated, until Spring 2021, the government relied on persuasive communications. Unvaccinated people had the same rights and responsibilities as the vaccinated, even though the government highly recommended a primary immunisation, and later on a booster. From March 5, 2021, the COVID-19 Protective Measures Exemption Ordinance was enacted, offering more rights to the vaccinated. The measure ensures that, for example, vaccinated and recovered people will no longer be restricted from private gatherings. Night-time restrictions under the Infection Protection Act also no longer applied to these groups of people. From August 2021, additional regulations were imposed that granted differing

privileges to the vaccinated and unvaccinated. These regulations, described in the following section, mark a shift from a purely persuasive campaign to an incentive- and disincentive-based campaign. While mandatory vaccination – i.e., a coercive campaign – was discussed, by Spring 2022, it appears highly unlikely that the German government will go this route.

Vaccine-based restrictions were also implemented in Germany. From August 23, 2021, the 3G rule was applied, mandating that proof of vaccination or recovery, or a recent negative test, were required for access to hospitals, nursing homes, indoor catered events, and festivals, as well as to visit the hairdresser or beauty salon (cf. Geimpft, genesen, getestet: 3G-Regel gilt seit dem 23. August (bundesregierung.de)). During the fourth wave of Corona (Spring 2021), an even stricter 2G or 2G+ rule was imposed, mandating that proof of vaccination or recovery, and in some cases additionally a negative test, were required to access to a range of venues and activities; as a result, in effect, people who had not been vaccinated were only allowed to shop in grocery shops, pharmacies, and drugstores.

Nevertheless, in the following months, the application of 3G, 2G, or 2G+ in different types of venue and activity varied greatly from state to state, as well as the duration of the regulations (cf. Coronavirus: Regeln in den Bundesländern | Bundesregierung and Corona-Regeln: Was in welchem Bundesland gilt | tagesschau.de). In March 2022, "Facility-based mandatory vaccination" was introduced, requiring employees of clinics, nursing homes and similar institutions must present a 2G proof, called the (Einrichtungsbezogene Impfpflicht: Corona-Impfung: Die wichtigsten Fragen und Antworten | Bundesregierung).

3.3.5 Greece

In **Greece**, mandatory vaccinations for the citizens over-60 years old is one of the main measures implemented, which was deemed necessary because, according to the relevant data, 9 out of 10 COVID-19 deaths related with citizens over 60 years of age. By November 30, 2021, there were still 520,000 citizens over the age of 60 who had not been vaccinated and were the main target group of this measure. On the same date, the Greek Prime Minister announced that if unvaccinated people of the aforementioned age group do not book their vaccination appointment by January 16, 2022, an administrative fine of 100 euros per month would be issued. The financial penalty was certified through the Independent Authority for Public Revenue (IAPR) and the income would be funnelled as special fund to support the NHS (iefimerida, 2021)[405]. On Monday, January 17, 2022, the measure of imposing administrative fines on unvaccinated citizens over 60 or vaccinated citizens who had their vaccination 7 months ago, was approved since the second dose, was officially established. Through the IAPR, data relevant to citizens who did not receive a third dose or have not planned their vaccination was cross-checked and an administrative fine of 100 euros was imposed. According to governmental announcements, citizens who remain unvaccinated until January 16, would be fined with 100 euros per month, however, the fine was set to 50 euros particularly for January whereas half that amount for citizens that would complete their vaccination until January 15th (Imerisia, 2022)[406]. In order to

[405] https://www.iefimerida.gr/ellada/ypohreotikos-emboliasmos-gia-ano-60-eton-allios-prostimo-100-eyro-mina.

[406] https://www.imerisia-ver.gr/%CE%B1%CF%81%CE%B8%CF%81%CE%BF/39081-%CE%B1%CF%80%CE%BF-%CE%B4%CE%B5%CF%85%CF%84%CE%B5%CF%81%CE%B1-%CF%84%CE%BF-%CF%80%CF%81%CE%BF%CF%83%CF%84%CE%B9%CE%BC%CE%BF-100-%CE%B5%CF%85%CF%81%CF%89-%CF%83%CF%84%CE%BF%CF%85%CF%82-%CE%B1%CE%BD%CE%B5%CE%BC%CE%B2%CE%BF%CE%BB%CE%B9%CE%B1%CF%83%CF%84%CE%BF%CF%8

achieve higher vaccination rates in citizens of over 60 years of age, Minister of Health Thanos Plevris, considered the possibility that the aforementioned target group should not pay the 100 euro fine, provided that they complete their vaccination(s) even at late March – early April, 2022 (HealthView, 2022)[407]. During a debate for the extension of the pandemic measures in the Parliament, the Minister suggested that the main objective is to achieve higher vaccination rates, offering incentives to the over 60 years old citizens, whereas also suggested that any de-escalation measures decided, which would come into force from April 15th – late August, would be in accordance with the recommendations provided by the Healthcare Expert Committee (Ibid, 2022)[408]. Moreover, the Minister of Development and Investments, Adonis Georgiadis, announced that incentives, such as a five days' leave, would also be given to members of the Armed Forces who have already been vaccinated or would opt to be vaccinated. Another measure to encourage citizens in getting vaccinated was that in order to attend (psychometric, physical and interview examination process) exams set by the Supreme Council for Civil Personnel Selection (ASEP), participants would have to present certificate of vaccination or a rapid test of two days (Aftodioikisi, 2022)[409].

Mandatory vaccinations were initially raised on the basis of professional criteria for certain employment categories, which was introduced with Article 206 of law 4820/23.07.2021, which however, raised ethical and legal issues (Rigou, n.d.)[410]. Unvaccinated healthcare workers, employees in nursing homes and care facilities for citizens with disabilities, were also faced with administrative penalties such as suspension of duties and forced unpaid leave. On July 21, 2021, a relevant amendment was submitted to the Parliament, which introduced severe fines of up to 200,000 euros for employers in the abovementioned categories who continue to employ unvaccinated employees. Specifically, the minimum rate of these fines would be 10.000 and up to 50.000 euros for each violation, whereas upon re-examination and in case of recidivism, 20.000 per violation and up to 200.000 euros (In, 2021)[411], therefore, all employers were responsible of informing employees their obligation to be vaccinated and check the relevant vaccination certifications through relevant electronic applications until 31.12.2021[412]. According to the amendment, no suspension time limit to unpaid leave was implemented for employees who refused to be vaccinated and would not have an insurance coverage during that period. To fill the spots generated from the suspended employees, an equal number of new employees would be recruited with three-month contracts who were also required to present certificate of vaccination or infection. According to governmental official, Stelios Petsas, work suspension act as a decisive measure for unvaccinated employees. In relation to the unvaccinated citizen compliance, a well-known Professor in Medicine and founder of Institute of

5%CF%82-60-%CE%BA%CE%B1%CE%B9-%CE%B1%CE%BD%CF%89-%CE%BF%CE%B9-%CE%B5%CE%BE%CE%B1%CE%B9%CF%81%CE%B5%CF%83%CE%B5%CE%B9%CF%82-%CE%BA%CE%B1%CE%B9-%CF%80%CE%BF%CE%B9%CE%BF%CE%B9-%CE%B8%CE%B1-%CF%80%CE%BB%CE%B7%CF%81%CF%89%CF%83%CE%BF%CF%85%CE%BD-50%CE%B1%CF%81%CE%B9%CE%BA%CE%BF.

[407] https://www.healthview.gr/kinitro-emvoliasmoy-gia-toys-ano-ton-60-eton-parathyro-gia-mi-pliromi-prostimoy-anoigei-to-ypoyrgeio-ygeias/.

[408] Ibid.

[409] https://www.aftodioikisi.gr/dimosio/asep-mono-gia-emvoliasmenoys-ti-proteinei-o-alivizatos-ti-apanta-o-proedros-tis-anexartitis-archis/.

[410] https://www.ow.gr/ygeia/ipoxreotikos-emvoliasmos-poso-sintagmatikos-einai/.

[411] https://www.in.gr/2021/07/21/greece/ypoxreotikos-emvoliasmos-tsouxtera-prostima-gia-tous-ergodotes-pou-apasxoloun-anemvoliastous-eos-kai-200-000-eyro/.

[412] Ibid.

Preventive Environmental and Occupational Medicine, Athina Linou, criticized the punitive nature of measures, suggesting that a distinct line should be drawn between compliance and punishment whereas also suggested that utilizing alternative measures and a vaccination campaign in 22 regions, higher vaccination rates have been observed (Sentra, 2021)[413].

The National Committee on Bioethics and Technoethics in **Greece**, assessed the case of mandatory vaccinations in the field of healthcare from an ethical perspective, particularly emphasizing on the following question: "*As long as the pandemic continues to threaten and cost human lives and provided that there are approved, safe and effective vaccines, is it morally acceptable to take mandatory measures to vaccinate workers in health facilities?*"[414]. The Committee distinguished two categories: routine vaccinations (e.g. for known diseases, paediatric and non-paediatric) and vaccinations during emergencies, such as a pandemic. According to the Committee, mandatory vaccinations utilizing vaccines that are unproven to be safe, would constitute a violation of ethical obligations aimed in protecting public health, even in emergencies such as pandemics, nevertheless, studies on the effectiveness and safety of vaccines demonstrated that unvaccinated individuals have a severe COVID-19 related risk than the risk that stems from potential side effects of the approved COVID-19 vaccines. In summary, according to the data, the benefits of vaccinations outweigh any potential side effect at individual and general population level[415]. The Committee then proposed a "scalable initiative" approach with three stages: The first stage includes targeted information and awareness campaigns for voluntary vaccination, tailored to each target group (doctors, nurses, laboratory workers, caring staff, etc.). Campaigns based on scientific evidence that are constantly updated, provided that there is a prior understanding of the general perceptions and fears. The second stage involves incentive/discouragement measures that can be implemented by the State in cooperation with the administration of healthcare related entities (such as facilitation of appointments for vaccination, flexibility in working hours on vaccination days, priority in the choice of licenses, or mandatory use of double masks and personal protective equipment) whereas the third state revolved around the provision for compulsory vaccination as a last resort, which ought to have a specific timeframe and be applied only if the measures prior, do not yield significant increase of vaccination rates[416].

As of July 16th to August 31st, 2021, **Greece** implemented several measures related to vaccination and restricting citizens from participating in specific activities, such as accessing indoor entertainment venues (restaurants, cinemas, theatres) that can only function as unmixed at 85% of their capacity. Especially for the indoor nightclubs, only unmixed spaces were allowed with coverage of 85% of the usable area, provided that social distancing and precautionary measures were adhered by participants. All nightclubs, outdoor and indoor, operated in accordance with the social distancing rules that generally applied to catering business (Typosthes, 2021)[417]. Specifically, entertainment areas such as nightclubs would operate exclusively with seated people until August 31, 2021. Moreover, as of July 16th to August 31st, 2021, indoor entertainment businesses such as restaurants, cinemas, theatres will operate solely for vaccinated civilians up to 85% of their capacity. Similarly, all nightclubs, outdoor and indoors, would also have to operate according to the distance rules that applied whereas the owners

[413] https://sentra.com.gr/linoy-gia-ypochreotiko-emvoliasmo-akr/.
[414] Supra note, 394.
[415] Ibid.
[416] Ibid.
[417] https://www.typosthes.gr/oikonomia/255090_magazia-kleistoi-horoi-apagoreysi-eisodoy-se-mi-emboliasmenoys-me-2-doseis.

of these businesses could choose to voluntarily label unmixed spaces, nevertheless, enclosed places were mandatorily characterized as unmixed. In relation to festivals, participants would also have to abide by the general protective measures against the virus (Kathimerini, 2021)[418]. As part of the measures to deal with the coronavirus pandemic, three different categorizations were introduced: "Covid Free Area", "Mixed Space" and "Fully vaccinated staff" which were available in gov.gr. In "Covid Free Spaces", stores were able to operate at 85% of their capacity. In “mixed spaces” only seated customers were allowed, while separate spaces of the business were provided for vaccinated customers or recently ill or tested customers. Finally, the last category certified the companies in which all employees have been vaccinated[419]. Regarding sports competitions, during that timeframe, they would have to be held with spectators only in unmixed areas, outdoor or indoors with an 80% of the stadium capacity. 5% of the audience capacity foresaw minors who have been tested. The maximum attendance limit was set to 25,000 spectators for outdoor stadiums and 8,000 spectators for indoor stadiums [420] In unmixed spaces, minors below the age limit which was set, would be allowed access with a parent’s declaration that they have conducted a self-test. Employers in both private and public sectors, were granted the right to request whether employees have been vaccinated or not.

A free of charge digital application titled "Covid Free GR", which was launched in July 13, which was compatible with both android and iOS mobile devices and used to conduct a validity check on vaccination and disease certificates in order to determine whether citizens would access indoor and outdoor mixed areas. The aforementioned application shows only the name of the screened citizen and does not withhold permanent or temporary data. The application displays three verification levels which are Green, Yellow and Red. Green indication suggests that the citizen has been vaccinated or infected with COVID, yellow suggests that the citizen has a negative COVID-19 test and red indication suggests the certificated is invalid (Foskolos, 2021)[421].

According to constitutionalists in **Greece**, COVID-19 vaccination cannot be imposed in a form of physical coercion, nevertheless, it can be implemented with a series of penalties for unvaccinated citizens, therefore experts suggest that mandatory vaccination of employees, particularly healthcare workers that work in elderly care facilities and hospitals, and the suspension of their professional activities as well as salary deprivation ought to be conducted according to the constitutional principle of proportionality. A few very important legal considerations in this case are if there will be a specific timeframe for the penalty of suspension of work and if employees will be allowed to acquire employment in a working environment that does not impose the obligation to be vaccinated[422]. Moreover, employers have the right to transfer unvaccinated employees to other positions in order to create physical distance with their colleagues or switch to teleworking, if possible, however if these measures cannot be implemented, according to legal experts, employers can exercise their managerial right to place employees to holiday/suspension, as long as they refuse to get vaccinated, based on the provisions of the Civil Code as it is interpreted that the employee causes dysfunction in the business. Academics that specialize in labor law suggest that employers have a reasonable interest as well as an obligation to impose the safety and health regulations on both customers and employees of their

[418] https://www.kathimerini.gr/society/561431962/ypochreotikos-emvoliasmos-kai-kalokairi-kathimenon-ola-ta-nea-metra/.
[419] Ibid.
[420] Ibid.
[421] https://www.imerisia.gr/ergasia/18174_ypohreotikos-emboliasmos-kai-anastoli-ergasias-ta-epomena-bimata-kai-oi-apopseis-ton.
[422] Ibid.

business[423]. As stated in Article 62 of the new labor law, full and part-time upon an individual written agreement with their employer, are entitled to a one-year unpaid leave, which can be extended upon new agreement. During this period, employment contracts are suspended and no insurance contributions are due while the agreement is filed in the Information System (P/S) "ERGANI" and a copy is sent to the Electronic National Social Security Agency (e-E.F.K.A). The contract obligations and rights of both parties resume upon the expiration of the unpaid leave[424].

As of June 28, 2021 the curfew ceased to apply, thus catering businesses increased their number of people from 6 to 10, a reception upper limit was set to 300 people for outdoor areas, organized beaches could have up to 120 people per 1000sqm and the mandatory self-tests for employees were abolished, 15 days after the completion of their latest vaccination. In addition, the committee of experts suggested that both unvaccinated and vaccinated civil servants that belong to increased risk group category B may work on-site, whereas civil servants of category A can work in positions that do not have contact with the public. Moreover, administrative authorities of healthcare related facilities would determine how to utilize nursing and medical staff, based on their risk category (Naftemporiki, 2021)[425]. Public services also redefined the way citizens were served, who were now being accepted with scheduled appointments, but not exclusively, whereas they would still adhere to protection measures such as mandatory wearing masks per and social distancing of one person per 16 square meters[426]. On November 6, 2021, a series of contemporary measures were announced, changing the status of unvaccinated citizens, due to the fourth COVID-19 wave and the high infection cases. Unvaccinated employees would have to present two rapid or PCR tests per week at their own expense at their workplace, including both private and public sector, whereas unvaccinated citizens would have to present a negative rapid test to access public services, shops, banks, dining businesses with the exception of supermarkets, churches and pharmacies (CNN, 2021)[427]. As of November 22, 2021, all unvaccinated adult citizens, were prohibited from accessing indoor businesses, even with the demonstration of a negative COVID-19 test, a measure that applied to theatres, cinemas, gyms, museums with the exception of catering businesses. Moreover, vaccinated citizens of over 60 years of age would have a valid certificate up to seven months as based on medical data, vaccine efficiency deteriorates (Skai, 2021)[428]. Concluding, in relation to places of worship, unvaccinated citizens would also have to present a negative laboratory test[429].

3.3.6 Ireland

Ireland early in 2021 ranked first in Europe as the country with the highest vaccination rate, since 89.1% of people aged twelve and above were fully vaccinated (Kennedy & Picheta, 2021)[430].

[423] Ibid.
[424] Ibid.
[425] https://www.naftemporiki.gr/story/1742868/telos-stin-apagoreusi-kukloforias-en-anamoni-ton-dieukolunseon-ton-emboliasmenon.
[426] Ibid.
[427] https://www.cnn.gr/ellada/story/287818/koronoios-ola-ta-nea-metra-poy-aforoyn-toys-mi-emvoliasmenoys.
[428] https://www.skai.gr/news/politics/mitsotakis-apagoreysi-kleistoi-xoroi-anemvoliastoi-kyliomeno-orario-rapid-test-naoi.
[429] Ibid.
[430] https://edition.cnn.com/2021/11/17/europe/ireland-covid-curfew-intl/index.html.

To motivate people, get vaccinated, a number of measures were introduced by the Health Service Executive (HSE). Two HSE campaigns worth highlighting. The first one in July 2021, was an initiative from HSE which partnered up with dating apps and various brands in a new campaign to encourage people to register for the COVID-19 vaccine when their age group was opened. More precisely, in a cooperation with dating apps such as Tinder, Match, OK Cupid, Hinge, and Plenty of Fish, the '*For Us All'* campaign, offered a series of benefits such as 'Super Likes' (a feature which alerts a potential match of a user's interest) and additional profile boosting capabilities for app users who want to demonstrate their support for COVID-19 vaccine and match with users who have been vaccinated. The Tinder app users who joined the program were able to add stickers such as "vaccinated" or "vaccines save lives" to their dating profile while also obtaining a free "super like" to "help them stand out among potential matches," said the HSE Health Executive in July 2021 (Pollak, 2021)[431]. Additionally, Tinder's vaccination programme included initiatives to help fight misinformation. Furthermore, the dating app also included a vaccine centre link to inform users about the COVID-19 vaccination (ibid).

In October 2021, and due to an increase in confirmed COVID-`19 cases, the second HSE campaign was created with a focus on motivating unvaccinated people get the vaccine (Lee, 2021)[432]. On Monday 25 October 2021, 1,845 new cases of COVID-19 were recorded by the DoH (ibid) whereas 497 patients were hospitalised of which 99 patients were in Intensive Care Units (ICUs) (ibid). The campaign can be considered successful since the HSE observed that due to the campaign a small increase in COVID-19 vaccination was achieved (ibid). The campaign also focused on providing people with reliable information in relation to the COVID-19 vaccine (ibid). Key target groups were those considered to be vulnerable, especially medically. Further target groups included those with only one COVID-19 dose and people in geographical areas with smaller vaccination percentages (ibid). Commenting on COVID-19 vaccination amongst vulnerable groups, it was officially stated that access to reliable COVID-19 sources proved substantially important, especially when considering the impact seen in ICU and hospitals (ibid).

Except from the HSE campaigns, further measures introduced to boost COVID-19 vaccine uptake. In July 2021, it was announced that customers intending to visit pubs and restaurants must have official evidence of complete COVID-19 vaccination or recovery within the last 180 days (Harrison, 2022)[433]. As of 3 August 2021, Northern Ireland's Chief Scientific Advisor Ian Young reported that the Republic of Ireland's measures in relation to restaurants, bars etc assisted COVID-19 vaccination rates surpass Northern Ireland's (BBC, 2021)[434]. Around 76% of Ireland's adult population was reported to be entirely vaccinated, compared to 72.1% in Northern Ireland (ibid). According to Young, these measures had "incentivised" vaccination (ibid). As of 6 February 2022, it was reported that 95.2% of the adult population had received two COVID-19 vaccination doses, while 71.4% received a COVID-19 booster dose on top. As of 10 February 2022, Ireland was ranked as the first country in completely vaccinated adults against COVID-19 in the European Economic Area (Department of Health, 2022)[435].

[431] https://www.irishtimes.com/news/health/hse-links-with-dating-apps-to-encourage-young-people-to-get-covid-vaccine-1.4621375.
[432] https://www.irishexaminer.com/news/arid-40729179.html.
[433] https://www.bbc.co.uk/news/world-europe-57965158.
[434] https://www.bbc.co.uk/news/uk-northern-ireland-58069252.
[435] Department of Health. (2022). *Title: COVID-19 Mandatory Vaccination-Ethical and Human Rights Considerations* (p. 11).

Despite Ireland's high vaccination uptake, NPHET still considered to introduce a vaccine mandate following the publishing of a future paper by the Department of Health on complexities relating to the vaccination process (Killeen, 2021)[436]. On 11 January 2022, in a press release, Professor Karina Butler, Chair of the National Immunisation Advisory Committee, claimed that a vaccine mandate could be needed for "the overall good" (ibid). Opposing the idea of a vaccine mandate, DoH Chief Bioethics Officer Siobhán O'Sullivan, in a 2022 paper titled 'COVID-19 Mandatory Vaccination-Ethical and Human Rights Considerations,' (Department of Health, 2022)[437] question the application of mandatory vaccine policies and argues that mandates bring more harm than good (ibid). According to O'Sullivan, a vaccine mandate is unlikely to drastically boost uptake amongst those who remain unvaccinated, and may even generate distrust in the Government, heighten opposition and anti-vaccination feelings more generally. O'Sullivan further added that countries who have initiated or were contemplating the introduction of COVID-19 vaccine mandates witnessed public resistance and civil disorder. Thus, O'Sullivan argues that "*vaccine mandates would most likely disproportionately penalise the most disadvantaged in society and serve to exacerbate existing social inequalities*" (ibid). Ireland decided not to enforce vaccine mandate policies and followed a different approach opted for an advisory path instead (ibid). The success Ireland has already achieved in relation to encouraging COVID-19 vaccination amongst those who did not initially want to get vaccinated has predominantly been based upon trust and transparency rather than punishments and imposition (ibid). At the time of writing, O'Sullivan stressed the importance of sustained efforts of engagement, listening respectfully, communicating effectively, and offering sensible and targeted support to those who have yet to be vaccinated (ibid).

Restrictive measures towards unvaccinated citizens in Ireland, included travel restrictions and more precisely, following the detection of the Delta COVID-19 strain, travel rules applicable to unvaccinated individuals were altered (Murphy, 2021)[438]. For instance, people arriving in the Republic of Ireland who were not vaccinated had to self-isolate for 10 days. Note that these rules only applied to passengers arriving from the UK (ibid). This is because the Delta variant, which was first identified in India, was the dominant strain in Britain at the time of identification (Breaking News, 2021)[439]. Unlike the previous Alpha variant outbreak, the Delta variant was 60% more infectious (ibid). In regards to the hospitality sector, on 29 June 2021, it was announced that Ireland would restrict indoor drinking and eating in bars and restaurants to those who were not fully vaccinated against COVID-19 or who have been not infected by the virus due to concerns about the Delta variant (France24, 2021)[440].

The restrictions implemented received mixed reviews. Negative criticism received by the Restaurants Association of Ireland who declared that the policy is prejudiced and impracticable (BBC, 2021)[441]. In his own words, Chief Executive Adrian Cummins stated: "Restaurants, pub and café owners will not be placed in the unenviable, complex and difficult position of allowing vaccinated customers enter indoors and restricting non-vaccinated costumers to outdoor dining." Cummins further added that "such a

[436] https://www.euractiv.com/section/politics/short_news/ireland-mulls-mandatory-vaccinations/.
[437] Supra note 419.
[438] https://news.sky.com/story/ireland-to-impose-tighter-restrictions-on-british-travellers-amid-delta-variant-concerns-12332958.
[439] https://www.breakingnews.ie/ireland/rpt-ireland-to-consider-additional-restrictions-on-travel-from-britain-1140954.html
[440] https://www.france24.com/en/europe/20210629-ireland-limits-indoor-dining-to-fully-vaccinated-over-delta-fears
[441] https://www.bbc.co.uk/news/world-europe-57649546.

practice of refusing access to goods and services is currently illegal under equality acts" as many people employed within the hospitality sector belonged in age groups that were not able to receive the COVID-19 vaccine since it was not available for their group yet. According to Cummins, unvaccinated workers could possibly be asked to decline service to their peers (ibid).

3.3.7 Israel

The vaccination campaign in Israel started in December 2020. On the report time frame the third and fourth doses of the vaccine were administered. The MoH conducted a national campaign calling for people to get vaccinated. As an incentive for vaccination, the green badge that allowed entrance to public places and workplaces, and that was required for entering Israel, was given to vaccinated people (or people who recovered from COVID-19). Those who were not vaccinated had to perform a PCR test that, when was negative, provided them with 72 hours of temporary green badge.

In October 2021, Israel was the first country to make a booster shot a requirement for receiving the green badge. Those who have received two vaccine doses, and those who have recovered from coronavirus, were issued passes valid for six months after the date of their vaccination or recovery. Moreover, the Government of Israel has mobilized and utilized 919 members of the Israeli Defence Force in regular and reserve service, particularly qualified personnel that are paramedics or medics, in order to assist the healthcare system in relation to the vaccination of citizens (Government of Israel, 2021)[442]. This allocation of assets would apply until late October 2021 with a possible extension of up to three months upon amendment of the governmental decision. The rules of participation in this civil-military cooperation (CIMIC)[443] and joint effort between the Ministry of Defence and the Ministry of Health, strictly defined that soldiers would have to undergo a specialized training in the field of healthcare, they could vaccinate a citizen only with his/her consent, separately for each vaccination and strictly prohibiting coercion, and would act in accordance to the professional guidelines that were set by the Ministry of Health which would entail to sign a commitment of retaining medical confidentiality (Government of Israel, 2021)[444]. The IDF would not be responsible for the vaccination policy which includes the method of administering the vaccine and would neither retain medical records while all relevant documentation of personal information would be submitted to the Ministry of Health (Ibid).

3.3.8 Italy

Right after the outbreak of COVID-19 pandemic, Italy adopted strict non-pharmacological preventive measures, including lockdowns, physical distancing and wearing masks. In addition, the vaccine was presented as a way to help counteract the COVID-19 pandemic at national and international level. Moreover, a strong diversification of target-population began with the vaccination campaign measures: the strategic plan for the prevention of SARS-CoV-2 infections and implementation of a national vaccination campaign was developed by the Ministry of Health, the Extraordinary Commissioner for COVID-19 Emergency, the National Agency for Regional Health Services, the Italian Medicines Agency and it was adopted on the 12th March 2021. The strategic plan described the preparation for the implementation of vaccination and recommendations on population prioritization. On 12 March 2021, Interim recommendations on SARS-CoV-2/COVID-19 (Ministero della Salute et al.)

[442] https://www.gov.il/he/departments/policies/dec500_2021
[443] Civil-military co-operation.
[444] https://www.gov.il/he/departments/policies/dec500_2021

vaccination target groups were adopted categorizing vulnerable people into six (6) different groups, based on age and pre-existing medical conditions criteria other priority groups were social and health care workers, school and university staff (teaching and non-teaching), armed forces, law enforcement agencies and emergency services.

From the beginning of the vaccination Italian media filmed[445] the first people being vaccinated who were healthcare professionals working at National Institute for Infectious Diseases "Lazzaro Spallanzani" (IRCCS Istituto Nazionale per le Malattie Infettive "Lazzaro Spallanzani") with the aim of fighting the scepticism and encourage people to vaccinate. The public perception of COVID-19 vaccination in Italy was influenced by different points of view: there were citizens who were against the vaccination, others that would rather postpone their vaccination due to fear and others who expressed trust in the vaccination (Bucchi et al., 2022). To ensure public trust, many actors contributed to the sharing of information: World Health Organisation, national government, Civil Protection Department, National Institutes of Health, local authorities and healthcare workers exposed their views through radio, television, newspapers, institutional websites, and social media. The involvement of scientific experts in the media coverage during COVID-19 pandemic influenced the attitudes towards vaccination, in fact, researchers stated that in times of global health crisis like the COVID-19 pandemic, clear and trustworthy communication among institutions, experts and citizens is crucial (Bucchi et al., 2022). For this reason, in addition to the several decree laws adopted, the Italian government decided to run numerous communication campaigns on the Coronavirus health emergency. In particular, there were 4 different communication campaigns promoting COVID-19 vaccination that were broadcast on TV, the web and on social media. They were targeted to the whole population and they aimed to raise awareness on vaccination as a key tool in the fight against the COVID-19 pandemic. The first of these communication campaigns was an advertising video called "*La stanza degli abbracci*"[446] ("The hugging room") and it was launched in January 2021 on national television to show that vaccination could bring everyone back to normal social activities in the long run.The second campaign was an advertising video called "*Vaccini sui luoghi di lavoro. Uniti, per la ripresa in sicurezza*"[447] ("Vaccines in the workplace. United for safe recovery") and it was launched in June 2021, it was directed mainly to workers and companies and its objective was to inform workers of the opportunity to have access to COVID-19 vaccines even at their own company, to emphasise the importance of the agreement between the Government and the social partners to set up extraordinary vaccination points at workplaces, a useful intervention to return to work safely and to relaunch the economy and to highlight the common objective of relaunching the country after the Coronavirus experience; The third campaign were 5 advertising videos called "*Riprendiamoci il gusto del futuro*"[448] ("Let's take back the taste of the future") in which famous testimonials make a v-sign to symbolise "V" of vaccine and victory, and it was launched in June 2021; The fourth campaign was made up of 2 advertising videos called "*Facciamolo per noi*"[449] ("Let's do it for us") in which famous testimonials emphasised how a large proportion of Italians had already had the vaccine, for the good of all, and how science is able to fight this virus. In addition to the theme of the importance of the booster dose, the spot reminded us that it was also possible to vaccinate children aged 5 to 11 from that moment on.

[445] https://www.youtube.com/watch?v=BuFqWP5eT3I
[446] https://www.governo.it/node/16069
[447] https://www.governo.it/node/16974
[448] https://www.governo.it/node/17220
[449] https://www.governo.it/node/18906

According to research conducted during the pandemic in Italy, the sources of information most widely consulted by Italians during the pandemic are television and/ or radio news programs. Specifically, in October 2020, 54% of Italians rely on these sources when searching for COVID-19 news; 52% of respondents in January 2021 and 29% in May 2021 rely on television and/or radio news programs when searching for information about the anti-COVID-19 vaccines (Bucchi et al.).Based on those data, it is possible to state that the previously mentioned campaigns are among the main campaigns that the Italian government implemented to strengthen trust in the scientific community, create awareness about the effectiveness of vaccines and motivate people to vaccinate at national level. In addition to those communication campaigns, research showed that one of the strongest drivers for vaccine uptake was the risk perception of contracting the virus: when the perception of the risk of contracting the virus is higher, there is a higher willingness to vaccinate so researcher declare the importance of a public health communication more focused on the impact of diseases, also to "make people aware of the fact that, although vaccinated, they are still at risk of getting the disease as well as reassuring them of the safety of the vaccination and also helping them understand the impact of the vaccination on SARS-CoV-2 spread, which may increase the likelihood of compliance" (Corea et al., 2022).

Since the beginning of the vaccination campaign in December 2020, the central government, together with the national health institutions, implemented different measures to push citizens to vaccinate even if they were quite sceptical about the vaccines and they did it by making access to many life spheres possible only to vaccinated people. The main relevant decrees put in force from April 2021 to December 2021 provided for compulsory vaccination for specific groups like health professionals, school and university staff, and university students, allowed free movement to specific regions, access to workplaces, both public and private and giving the possibility to carry out certain entertainment, social and sport activities and access education, training and education services facilities, only for those with COVID-19 green certifications. In November 2021, a series of measures to contain the fourth wave of pandemic were enacted in four different areas: compulsory vaccination and third dose; extension of compulsory vaccination to new categories; establishment of the enhanced "Green Pass" (vaccination certificate or COVID-19 negativity certificate valid 24 hours after the result of a swab); strengthening of controls and promotional campaign on vaccination. Concerning the booster dose, the Ministry of Health with the **Circular of 8 April 2022**, recommended the administration of a second booster dose (or fourth dose) for people aged 80 years and over, residents of residential care facilities for the elderly (RSA)[450], persons aged 60 and over with high frailty due to concomitant/pre-existing conditions (see Annex 2 Circular of 8 April 2022).In addition to that, the **Decree law of 24th March 2022** extended the anti-Covid vaccination requirement until 15th June 2022 only for specific categories (e.g teachers and staff of schools and universities; armed forces and law enforcement personnel; prison staff; people aged 50 and over) and until 31st December 2022 for health professionals and health care workers; all workers employed in social-health and social-assistance residential facilities (e.g. hospitals, assisted healthcare residences, outpatient clinics, etc) and students on degree courses engaged in traineeships for qualification to practise the health professions. The above-mentioned decrees were measures implemented to increase the vaccination rate at national level by forcing the most hesitant people to complete at least the primary vaccination cycle. In fact, the compulsoriness of COVID-19 green certification to access workplaces, means of transport and almost any outdoor activity brought many people, including the sceptical ones, to vaccinate. According to COVID-19 Open-Data

[450] The acronym RSA stands for Residenze Sanitarie Assistenziali, namely Nursing Homes.

Vaccini[451] -on 20th June 2022- 47,943,593 people received the primary vaccination cycle and this corresponds to 80,9% of the total population while 39,406,702 people received the booster dose and the number corresponds to 67,0% of the total population. A consequence of the large-scale vaccination was a change in the adherence to other preventive measures -social distancing, washing hands, wearing face-masks-. Recent research showed that in Italy the concern of contracting COVID-19 gradually declined with the vaccination campaign (Corea et al. 2022). If before the vaccination there was a mean value of concern[452] of 7.7, after the booster dose the value had descended to 4.2, meaning that many people started participating in several activities and started paying less attention to public health measures.

3.3.9 Portugal

The development, availability, and administration of safe and effective vaccines against COVID-19 is a key step to respond to the public health crisis we are experiencing worldwide, saving lives, allowing the containment of the disease, protecting systems and contributing, in a decisive way, to the recovery of the economy. The work carried out by the European Commission in this matter, ensuring access to safe and effective vaccines against COVID-19, does not exempt each Member State from establishing its own vaccination plan, namely defining the vaccination strategy, ensuring the logistics of storage and distribution of vaccines, ensuring the electronic record of the respective administration and surveillance of possible adverse reactions and promoting transparent communication with the population about the importance of vaccination. Thus, the relevance of vaccination in combating it and the need for the pace of vaccine administration to correspond to their availability, justifies that, by way of exception, all necessary procedures are implemented to increase the number of health professionals (e.g., technical assistants) involved in the vaccination process, in particular the inoculation process, as of July 30th 2021.

In Portugal regarding the measures which were implemented to motivate people to get vaccinated and the measures related to vaccination which restrict citizens for participating in specific activities there are no indications or relevant data that suggest there have been changes in the modus operandi of the governmental response.

3.3.10 Spain

In the context of Spanish vaccination strategy, as depicted in Deliverable 4.1[453] he more vulnerable groups, defined by age and previous diseases, were completely vaccinated by May 2021. After them, younger cohorts were progressively called to be vaccinated. In Spain according to some studies (Dong *et al.*, 2022) citizens embraced vaccination stipulating it as the only way to solve the crisis caused by Covid-19 spreading. Spanish citizens believe that vaccines are safe and they protect against the Covid-19, reduce mortality and severe disease. According to public health experts, vaccination has avoided millions of deaths because of the Covid-19 (Watson *et al.*, 2022). For this reason, there were no measures approved in Spain to incentive or force citizens to get vaccinated with the exception of some regions which introduced the Covid Passport. When booster was approved by the end of 2021, citizens were also receptive and attended the vaccination points in order to be protected by the third dose.

[451] https://github.com/italia/covid19-opendata-vaccini

[452] The value of concern of contracting COVID-19 virus was measured on a 10-point Likert scale according to Corea et al. 2022.

[453] More information is avaliable *in Ponencia de Programa y Registro de Vacunaciones* del CISN.

Currently the Spanish Ministry of Health is discussing the possibility of receiving the fourth dose, mainly for vulnerable population.

According to official data[454] updated on June 10th 2022, 40.527.090 individuals have completed their vaccination in Spain. This represents an 85,5% of the targeted population, excluding children younger than six years old. In comparative terms, this represents a success that is allows reducing hospitalizations, deaths, restrictions, the economic recovery, and going back to normality.

Until May 2022, Spanish authorities offered daily information about contagions, hospitalizations and deaths. Experts created a set of indicators as a reference for either implementing restrictive measures or revoking them. These indicators however, have not been useful because decision makers did not use them, a problem that that has been pointed out by some stakeholders in respective interviews, in the context of Deliverables 4.3 and 4.4. This has also been identified as a source of political conflict in Spain. Nonetheless, since May 2022 and onwards, Spain is applying a new strategy. Authorities are implementing a set of indicators similar to the ones used for the flu seasonal epidemic. Some specific Hospitals report the number of Covid-19 cases to the Spanish Health Authorities[455]. Currently, the pandemic in Spain seems to be under control, mortality is lower than previous years, and hospitalization rates are much lower than they were[456].

The definition of vulnerability and the prioritization of different vulnerable groups to receive public support have not been changed during the pandemic in Spain. The same definition of vulnerability adopted in the beginning of the pandemic, which includes (a) in terms of health issues, older population and people with previous diseases, are the most targeted groups and (b) regarding economic issues, people that became unemployed or under suspension of their economic activity, are the ones that have received public support. Nevertheless, the public discourse is growingly focusing now on the mental issues that the pandemic has caused in some population groups. Thus, people that were not considered as severely affected by the Covid-19 are now identified as being affected by the measures implemented to reduce the spreading of the virus. This is the case of young people, who have received more attention as the rate of suicides among young population has increased since the starting of the pandemic, such as the suicidal attitudes increased more than a 6 percent in Catalonia for example (Pérez *et al.*, 2022) and some mental health policies have been adopted aiming to reduce the rate of suicides among young population.

3.3.11 Sweden

The Swedish strategy for vaccination campaigns built, as most other measures, on voluntary choice and most of the campaigns focused on spreading information so that citizens could make an informed decision. This was also true for campaigns targeted to those living in immigration dense suburbs with

[454] See https://www.vacunacovid.gob.es/

[455] See El País, https://elpais.com/sociedad/2022-01-10/espana-ultima-un-plan-para-crear-un-sistema-de-vigilancia-para-la-covid-como-una-gripe-comun.html

[456] See the MOMO, a system to monitor the expected deaths according to previous records, compared to the actual deaths. This serves to estimate the bias between expectations and reality and can be useful to see how many deaths is causing Covid-19 nowadays: https://www.sanidad.gob.es/ciudadanos/saludAmbLaboral/planAltasTemp/2019/sistemaMoMo.htm#:~:text=diciembre%20de%202017.,El%20Sistema%20de%20Monitorizaci%C3%B3n%20de%20la%20Mortalidad%20Diaria%20(MoMo)%2C,la%20magnitud%20de%20dicho%20exceso

low levels of vaccination (VGR Focus, 2022)[457]. A demographic problem with vaccination was the reluctance to take the vaccine among citizens with migrant backgrounds, and especially those living in immigration dense suburbs. This skewness in vaccination rates was visible already in the Spring 2021 and the PHA and other agencies tried to understand why this was happening and what to do about it (SVT Nyheter, 2021)[458]. National vaccination campaigns from the PHA and regions (responsible for vaccination) were launched, also with information in different languages. Decisions were taken during the fall to let local needs guide the campaigns, and examples of local vaccinations/health guides and drop-in vaccination outside mosques, vaccine-buses and other activities were tried out (News Cision, 2021)[459]. To further increase vaccination rates, the government allocated 40 million Swedish crowns (app. 4 million Euros) at the end of September to speed up the vaccination program among groups who had not yet been vaccinated. Even if these attempts are evaluated as quite successful, there are still significant gaps in vaccination against COVID-19 in Sweden depending on where you are born. In May 2022 the vaccination rate (two does) among the oldest (+60 years) were above 95 percent, while being approximately ten percent points lower among those born outside Sweden. Similar gaps were found in all age cohorts and the largest differences related to where you are born are found between middle aged residents (app. 35 percent units) (Public Health Agency of Sweden, 2022)[460]. Further, there are socio-economic factors related to taking the vaccine. Income plays a role, where lower income – independent of where you are born – relates to lower vaccination, especially among those being younger than 60 years. The same tendencies can be found between people with different levels of education.

3.3.12 Switzerland

The BAG and Federal Commission for Vaccine Issues (Eidgenössische Kommission für Impffragen, EKIF) identified the aims of the vaccination campaign as not to reach 100% immunity, but rather, to a) reduce the disease burden, especially the risk of severe progressions; b) reduce the burden on the health care system; and c) reduce negative health, psychological, social, economic, and cultural impacts of the pandemic (i.e., by allowing as many aspects of "normal life" to continue as possible) (2021). When vaccination first became a possibility, at-risk groups were prioritised, whereas the general population were sometimes not able to access vaccines as quickly as desired, due to insufficient provision of doses to the cantons – this was criticised in the BAG evaluation report of February 2022 (Balthasar et al. 2022).

The main two tools the Swiss government used to encourage vaccination were an intensification of the vaccination camping itself and the enactment of the 2G rules. The former measure was consisting not only of an intensive vaccination week in November 2021, but also of information campaigns and personal consultations. Enabling employers and educational institutions to control workers and students for certificates served as another tool to push people towards vaccination. It is likely that the combination of these two measures acted as both push and pull factors to increase vaccination rates.

[457] https://vgrfokus.se/2022/03/guiderna-i-nordost-pratar-vaccin-med-folk-pa-gatan/
[458] https://www.svt.se/nyheter/inrikes/folkhalsomyndigheten-kritiseras-nar-utrikesfodda-halkar-efter-i-vaccineringen-detta-har-vi-varnat-om
[459] https://news.cision.com/se/liberalerna-i-stockholmsregionen/r/fyra-provtagningsbussar-mot-covid-startas,c3419047
[460] https://www.folkhalsomyndigheten.se/folkhalsorapportering-statistik/statistikdatabaser-och-visualisering/vaccinationsstatistik/statistik-for-vaccination-mot-covid-19/uppfoljning-av-vaccination/vaccinationstackning-i-undergrupper/

However, the BAG evaluation report of February 2022 did indicate that weakness of the communications directed toward the general population, including: 1) lack of timely information and updates provided by federal authorities to the cantons, who accordingly could not respond to questions from the population; 2) inaccurate information on the availability of vaccine doses and appointments; 3) confusion on which groups had been prioritised, when, and why (Balthasar et al., 2022).

3.3.13 United Kingdom (England & Wales)

To motivate more of the UK population to get vaccinated, a number of measures were introduced to encourage uptake. In relation to strengthened funding the measures are as follows: Prior to Christmas (2021) and the New Year (2022), an additional £22.5 million in funding and deployment of vaccine ambassadors (also known as Vaccine Champions) were positioned across the country to boost vaccine uptake (UK Government, 2021)[461]. Forming part of the Community Vaccines Champion scheme, the Vaccine Champions worked within local areas to offer advice about COVID-19 and the vaccines. Champions also worked with councils to highlight barriers to obtaining reliable information and to provide customized assistance, such as phone calls to digitally excluded individuals, helplines, and connecting to GP surgeries (ibid). To help people get their COVID-19 vaccines, a series of initiatives were also created (ibid). Initiatives include a travelling vaccine bus, additional pop-up sites and new vaccine centres in eminent sites (ibid). At the same time, Vaccine Champions gave out leaflets on the Get Boosted Now campaign (UK Government, 2021)[462] as well as data on testing and recommendations to curtail the spread of the COVID-19 virus (ibid).

Furthermore, in relation to rewards the measures are as follows: The introduction of rewards to motivate people to get vaccinated has been described as “vaccine bribes” by reporters (Klingert, L., 2021)[463] Predominantly aimed at young people, the UK government supplied vaccine rewards via the following initiatives: 1. Free transport with ride-hailing companies; Uber and Bolt (ibid) 2. Cinema tickets and fast-food deliveries from the food delivery company Deliveroo, described in the media as “Kebabs for jabs”) (ibid) 3. Enrolling celebrities to influence and increase COVID-19 uptake in particular groups of society as well as the general public. Using celebrities to promote a government agenda is something that has been done for a number of years and has proven to be highly effective (Du-Lieu & Grassi, 2020)[464] 4. Dating sites/applications offering rewards and bonuses (e.g., extra credits to boost a user's profile to achieve wider coverage and icons/labels demonstrating the users support or compliance with COVID-19 vaccination) (Mutebi, 2021)[465].

By rendering some people more vulnerable to severe illness and death after infection than others, the eligibility priority list motivated those to get vaccinated. Also, the strategy was to make vaccinations as convenient as possible, both in terms of location and reachability of the sites as well in terms of time pressures (time to travel and to administer a vaccine). The vaccination campaign, focused on increasing convenience, was both organized around spatial spread over the country and in terms of where communities live. This included the upscaling of the number of mass vaccination sites and the

[461] https://www.gov.uk/government/news/225m-of-funding-announced-in-new-community-push-to-get-nation-boosted-now
[462] https://www.gov.uk/government/news/get-boosted-now
[463] https://www.politico.eu/article/coronavirus-vaccine-reward-europe-skepticism/
[464] https://www.hud.ac.uk/news/2020/december/covid-vaccine-celebrity-endorsements/
[465] https://post.parliament.uk/covid-19-vaccine-coverage-and-targeted-interventions-to-improve-vaccination-uptake/

number of GP practices as well as a range of other primary care practitioners, including dentists and optometrists that offer(ed) the vaccine over time (ibid). Moreover, the National Vaccination Strategy aimed to build confidence in the vaccine. People received paper letters addressed to them specifically with all the details of the vaccine on offer for them with guidance leaflets of side effects, statistics about vaccine-related issues, ingredient content lists and assurance that it was not interfering with certain religious convictions. A Welsh Audit report (2021) states that "work undertaken by Community Health Councils has found that the public have generally been happy with the communication that they have received from health boards" (p20).

For people deemed statistically less likely to accept the vaccine offer the following actions were taken: 1. Direct representation on the Government's Vaccine Equity Committee; 2. Community-led approaches to organize the programme for specific groups; 3. Offer of reasonable adjustments and novel delivery models; 4. Responsive messages from 'trusted voices' and community leaders for communication to address specific concerns immediately .This organization of addressing differential vaccine uptake resulted in several sub-strategies, for instance for homeless people , higher education students, and unpaid carers.

In a 15 May 2021 press release, it was noted that the UK Government will organize the world's first Global Vaccine Confidence Summit in an effort to drive vaccine uptake in the fight against the COVID-19 (UK Government, 2021)[466]. The summit took place on 2 June, considering ways the governments, civil society, and private sector – including social media companies – can challenge vaccine misinformation and strengthen public health messages to advance vaccine confidence (ibid). In the summit, the UK announced its plans to launch a Global Vaccine Confidence Campaign. The campaign would involve close cooperation with G7 (an inter-governmental political forum) and partner countries, including the World Health Organisation (WHO), Organisation for Economic Cooperation and Development, and international organisations (e.g., Cambridge University, Harvard University, and the London School of Hygiene and Tropical Medicine). An important aim of the campaign was to "*raise vaccination confidence and build resilience of global audiences to vaccine misinformation*." (OECD, 2021)[467]. Thus far, the outcomes of the campaign have been relatively successful. In a report titled '*Global Health, Global Britain: Government Response to the Committee's Fifth Report, Sixth Special Report of Session 2021-22*,' outcomes have included: 1. Co-delivering digital activity concentrating on strengthening resilience to misinformation and endorsing COVID-19 vaccine benefits, leading to 153 million total views since the campaign's launch (House of Commons Foreign Affairs Committee, 2021)[468]. 2. Development of the international Healthcare Practitioners Toolkit to support healthcare workers to build vaccine confidence, delivering this through 130+ international healthcare associations and membership bodies, reaching healthcare practitioners globally (ibid).

Complementing the campaign also included guaranteeing access to trustworthy and unbiased media. Realising that the British Broadcasting Corporation (BBC), is editorially independent, the provision of supplementary services to tackle disinformation was the BBC World Service's decision to make. The Foreign, Commonwealth & Development Office (FCDO) gave the BBC World Service an £8 million funding uplift for 2021–22. Note that £3 million was exclusively allocated to tackling disinformation

[466] https://www.gov.uk/government/news/summit-to-build-global-confidence-in-vaccines-to-be-convened-by-the-uk-government

[467] https://www.oecd.org/coronavirus/policy-responses/enhancing-public-trust-in-covid-19-vaccination-the-role-of-governments-eae0ec5a/

[468] https://publications.parliament.uk/pa/cm5802/cmselect/cmfaff/955/report.html

(Ibid)[469]. The COVID-19 Vaccination Equity Strategy for Wales (2021) states that data and intelligence 'on a granular level' would be collected and prompt targeted and tailored action. It targets people "who are under-served by traditional healthcare services to address vaccine inequity" (p1). It sought to gather insights into specific barriers and enablers for vaccination within such groups. Regarding measures imposed on unvaccinated citizens, a number of key events are worth touching on. The restrictive measures include restrictions on travel, social events, and employment. Specifics of the restrictions are presented below. In relation to travel, on 17 May 2021, the UK government gave the green light to UK citizens intending to travel abroad to specific countries (UK Government, 2021)[470]. A key mechanism introduced to enable international travel was the traffic light system categorised into a red, amber, or green list based on risk of COVID-19 (NHS Scotland, 2021)[471]. This traffic light system had different rules applied to both vaccinated and un-vaccinated citizens. The green list, for example, required unvaccinated travellers to show a pre-departure negative test (72 hours from departure) along with booking a day 2 and day 8 PCR test. It was also compulsory to quarantine for 10 days upon arrival at the individual's home or appropriate accommodation. Vaccinated individuals, on the other hand, did not require a pre-departure negative test. A PCR test on the second day after arrival, however, was required (Dream World Travel, 2021)[472].

Regarding social events, touching on access to nightclubs, the UK government, in July 2021, revealed that those who had not taken the COVID-19 vaccine would not be allowed to enter nightclubs once they reopened (BBC News, 2021)[473]. Although compulsory vaccination would have potentially prevented the reclosure of nightclubs (ibid), the general response to compulsory vaccination amongst those working in the industry was one of frustration (ibid). For example, CEO of UK Hospitality Kate Nicholls called the announcement "a hammer blow" for a fraught industry trying to rebuild (ibid). Other comments include boss of the Night Time Industries Association Michael Kill claiming: "*80% of nightclubs have said they do not want to implement COVID passports, worrying about difficulties with enforcing the system and a reduction in spontaneous consumers, as well as being put at a competitive disadvantage with pubs and bars that aren't subject to the same restrictions and yet provide similar environments*" (ibid). COVID-19 pass presentation for nightclub entry came into force on 15 December 2021 (Sollof, 2021)[474], and was eventually scrapped towards the end of January 2022 (Scroll, 2022)[475]. Last but not least, regarding the employment and especially for those working in the health and social care sector in England, new regulations agreed by parliament and introduced in late 2021 made it illegal for an employer delivering Care Quality Commission (CQC) regulated activities to employ an unvaccinated worker (without a permissible exemption) in a face-to-face role from 1st April 2022 (Unison, 2022)[476]. Note that the CQC covers hospitals, care homes, home care, dental and GP surgeries,

[469] Ibid.
[470] https://www.gov.uk/government/speeches/traffic-light-system-safe-return-to-international-travel#:~:text=I%20have%20confirmed%20that%2C%20from,requirements%20when%20travelling%20to%20England
[471] https://www.fitfortravel.nhs.uk/news/newsdetail.aspx?id=24032
[472] https://dreamworldtravel.co.uk/blog/uks-traffic-light-system-a-great-way-to-plan-your-trip-this-summer-amidst-covid-19/
[473] https://www.bbc.co.uk/news/business-57893788
[474] https://www.digitalhealth.net/2021/12/nhs-covid-pass-entry-nightclubs-large-venues/
[475] https://scroll.in/latest/1016026/england-lifts-covid-19-curbs-vaccine-passes-no-longer-mandatory-to-enter-nightclubs-other-venues
[476] https://www.unison.org.uk/health-news/2022/01/mandatory-covid-vaccination-of-health-and-care-workers-england/

and all other care services (Information now, n.d.)[477]. Within the NHS, these new rules were commonly referred to as Vaccination as a Condition of Deployment (VCOD). With this in mind, new guidance for employers emphasises making all efforts to persuade staff to have the vaccine, redesign roles or look at redeployment options away from direct face-to-face roles (ibid). Where such efforts were not possible, employers may have found themselves in situations where they had no choice but to discharge individuals rejecting the vaccine, without an allowable exemption, by 1 April 2022 (ibid). Furthermore, as of 15 March 2022, the VCOD was revoked and people working or volunteering in care homes no longer needed a COVID-19 vaccine to enter the grounds (UK Government, 2022)[478]. The decision to revoke the VCOD policy came after evidence of good vaccine uptake and the possible impacts of the policy on the workforce (Croner-I, 2022)[479].

In Wales, the NHS Covid Pass (that proved people had been vaccinated) served to prevent access of unvaccinated or untested people to board planes and travel abroad via other means. Also, from 11 October, the NHS COVID Pass was necessary to enter: 1, Nightclubs 2. Indoor, non-seated events for more than 500 people, such as concerts or conventions 3. Outdoor non-seated events for more than 4,000 people 4. Any setting or event with more than 10,000 people in attendance. The restriction of entrance to these venues and events was lifted in Spring 2022.

3.4 Governmental responses

3.4.1 Austria

In Austria, generally, three different agencies have been installed since the outbreak of the pandemic for support provision. They mainly serve as advisory bodies, meaning that the final decisions regarding crisis and pandemic management are still made by the government. All of these agencies are still operating and are as follows:

- **Corona Commission:** In September 2020, at the beginning of the second wave in Austria, the Corona Commission was created. The commission itself is an advisory body, which regularly conducts an evidence-based risk assessment of the COVID-19 situation in Austria. It consists of scientists as well as risk managers from the federal government and the governments of the federal provinces. With this composition, it is ensured that different perspectives, not only from science but also from practice can flow into the risk assessment, which is based on figures (e.g., case numbers, regional vaccination coverage rates, hospital stays and bed occupancy rates in hospitals) and data (source searches, tests). The Corona Commission is also responsible for the establishment, maintenance, and evaluation of the situation with the help of the "Corona traffic light". In compliance with a manual that is regularly adapted, traffic light colours are assigned according to pre-defined signal values depending on the risk situation.
- **GECKO:** In December 2021, a new interdisciplinary crisis management body, namely GECKO (Gesamtstaatliche COVID-Krisenkoordination), was founded with the mission of developing concrete solutions and recommendations for decision-makers in pandemic management and ensuring a coordinated nationwide approach, especially in the areas of COVID-19 vaccination,

[477] https://www.informationnow.org.uk/organisation/care-quality-commission/#
[478] https://www.gov.uk/government/publications/vaccination-of-workers-in-social-care-settings-other-than-care-homes-operational-guidance/coronavirus-covid-19-vaccination-as-a-condition-of-deployment-for-the-delivery-of-cqc-regulated-activities-in-wider-adult-social-care-settings
[479] https://app.croneri.co.uk/whats-new/government-confirms-it-revoking-vaccination-condition-deployment

testing, and drug supply. Special characteristics of GECKO are its multi-professional structure and the participation of a wide range of different stakeholders. In addition to representatives of the federal government and the federal provinces, other experts from various disciplines are represented.

- **COVID forecast consortium:** The COVID forecast consortium consists of experts from the Vienna University of Technology (TU Wien), DEXHELPP, dwh GmbH, the University of Vienna, the Vienna Medical University, Complexity Science Hub Vienna (CSH), Gesundheit Österreich GmbH and UMIT - Private University of Health Sciences, Medical Informatics and Technology. The consortium develops weekly short-term forecasts based on epidemiological key figures regarding the development of new infections and the COVID-19 occupation in intensive care units and normal wards in Austria. It is further supported by data evaluations from the Austrian Agency for Health and Food Safety (AGES).

The major part of the implemented and adapted federal acts, ordinances and announcements imposed by the Austrian decision-makers were addressing the general population, meaning that no differences between individual vulnerable groups were made. However, some legal amendments directly affected acts and ordinances which indeed exist to support specific vulnerable groups. The concerned vulnerable groups are, therefore:

- Hospitalised COVID-19 infected people,
- personnel, working in hospitals,
- people at risk of poverty,
- unemployed people,
- women,
- people belonging to the COVID-19 risk group (health issues), and
- migrants and asylum seekers.

The **cultural, socio-economic, health and educational effects of governmental responses,** which relate not only to the general population but also to identified vulnerable groups are mainly based on a study conducted by Gesundheit Österreich GmbH, which was published in December 2021 (Haas et al 2021).

Since the outbreak of the pandemic, **social** tensions among the Austrian population have increased widely. Due to different attitudes and opinions towards certain topics, phenomena like the social division between and social coldness among people as well as a certain loss of humanity were reported. This had also been promoted by politics, because of constant opinion divergences between the parties within the National Council. Social tensions were especially noticeable by the absence of acceptance of other opinions, attitudes and situations or by expressing angry arguments about harmless or unimportant things. People also tended to refuse help from relatives and friends during this time. Divergent points of view regarding the pandemic and the measures taken were also responsible for the ending of friendships or the emotional distance between relatives or the people belonging to the inner friend circle. Tensions were also observed where people suddenly found themselves under difficult economic circumstances and therefore felt financial dependence on family and friends.

There is the impression that people were more open-minded and helpful before the pandemic. That has changed since COVID-19 itself is either underestimated (“It is a simple flu.”) or perceived as a very dangerous disease, with which people do not want to come in contact and therefore refuse to help others. The Austria Corona Panel Project found that at the beginning of the pandemic, the majority of

the Austrian population followed measures; persons saw themselves and others as behaving in accordance with the prevailing rules. This willingness to follow the measures decreased with the longer duration of the pandemic; particularly with a decrease in the population's assessment of the measures' meaningfulness. Respondents of the survey also mentioned orienting themselves by the behaviour of others after the first lockdown. The study also found that women and older people reported following rules more than men and younger people (Schiestl, Kalleitner & Kittel 2020; Kittel & Kalleiter n.d.).

The pandemic as well as the measures taken by the government to prevent the spread of the virus had **several economic and social effects**, which were majorly caused by job (and income) loss and the lack of compensation opportunities. That means people who were already suffering from insecure working conditions and underemployment before the occurrence of the pandemic had either lost their job or were severely restricted in fulfilling gainful employment. That counted especially for sex workers, artists, women with caring responsibilities, people with health issues and people with migration backgrounds. Another group which had been highly affected was the staff working in COVID-19 stations in hospitals. Those concerned reported that they were investing more time in caring for patients, that they were working many hours of overtime, and that they were suffering from additional pressure through the protective equipment and measures taken, to prevent themselves as well as their families from infection. Similar arguments were also given by people working within the health sector, but not on COVID-19 stations. The persons concerned reported that although they were working under an increased load of work, they had to continue working fully efficiently despite the lack of compensation opportunities. The closure of schools had also some effects on families, mainly due to care responsibilities, distance learning/home-schooling and working from home. Parents were barely able to manage the balance between child care and work. Single parents were especially affected by these difficulties. For families with financial shortages, it was particularly difficult to provide the infrastructure needed for the school children.

Generally speaking, people who were concerned by employment disturbances, which finally led to (total) income losses, were in many cases dependent on savings to cover at least fixed costs. Overall, it was demonstrated that especially those people who were precariously employed prior to the pandemic, those who were self-employed, in education and/or had a low income and had only a small financial buffer, as well as single earners, faced major financial challenges. Although there were several financial grants imposed by the government for supporting certain groups in economically difficult situations, some of the concerned people were not able to profit from these aids, either because there was simply no legally legitimated demand or because they were prevented by other obstacles (e.g., forms that were difficult to understand, exceptionally digital access to certain services and/or bureaucratic effort). People who were already unemployed before the pandemic experienced it very diversely. From a purely financial point of view, nothing changed for this group of people. Financial support, such as the increase in unemployment assistance and the bonus of 450 euros, meant financial protection. However, this bonus could be seized, was also not available to everyone, and was subtracted from the means-tested minimum income. Furthermore, the energy crisis currently affecting Europe may further exacerbate the situation of this group. People with physical disabilities, especially those who are blind or visually impaired, reported that carers who belong to certain support services and normally help them with their day-to-day tasks were sometimes not able to visit them at their homes, since they wanted to protect themselves from possible infection with the virus (that counted in particular for self-employed carers) or had to stay at home because their children were not able to attend school (that affected especially women). That caused staff shortages within support services,

which from then were not able to provide their services to the same extent as before the emergence of the pandemic. Additionally, people with physical disabilities often faced recklessness and discrimination towards them. Blind or visually impaired people, for instance, reported verbal abuse, especially on public transport, since it was not so easy for them to keep their distance from others due to their limitations and without the help of their carers. They also mentioned a lack of support in public spaces, e.g., because broken traffic lights for visually handicapped people were not fixed (because no one noticed and no one notified it) or level differences at construction zones were no longer adjusted.

The situation for asylum seekers was also precarious due to the COVID-19 pandemic. During the asylum procedure, most of them attend (German) language courses, which are not only serving as "employment" possibilities (because during the asylum procedure they are not allowed to work) and thus daily structure, but also the participants and course instructors often also represent the only social environment ("family"). However, the change to online courses was portrayed as very difficult (by both course instructors and participants) due to the fact that there was either no or only partial (e.g., in the accommodation or in public places) available internet access in sufficient quality. The pandemic and the imposed restrictions also meant the absence of many volunteers who had provided support in learning German. Not only asylum seekers but also migrants reported an increase in discrimination, represented by stares in public, keeping a greater distance or the total breaking of contact, because of migration background. Those concerned also mentioned that they refused to go outside because they were afraid of doing something illegal. This was often accompanied by reports of a high police presence in certain areas and the experience of being stigmatised because of their appearance (e.g., skin colour). Problems were also caused by the uncertainty about current government policies and regulations because asylum seekers and migrants often do not have the opportunity to receive information via social media, radio or television or they simply did not understand the information. Some information was only translated with delays.

Among other things, additional findings were:

- People who live and work in Austria but whose family lives abroad suffered from the lack of contact with their children, partners and family members due to COVID-19 travel restrictions.
- Patients in nursing homes or hospitals reported that restrictions regarding visit opportunities (e.g., regular visits from family and friends) made the situation for them even more difficult (despite their vulnerability caused by health issues).
- The pandemic has made it more difficult to provide housing to homeless people.
- In addition to experiences of discrimination, experiences of aggression towards publicly visible vulnerable groups (e.g., disabled people, migrants) were also observed.
- Domestic violence has also increased, as this was evidenced by a 30 per cent increase in trespassing bans.

The **health effects** were mainly related to psychological problems, but also to physical complaints, in most cases as a consequence of financial worries and the lack of social relationships, particularly the lack of physical intimacy and support, but also uncertainty and fears about the future, fears about a potential infection with COVID-19 (also due to a previous or chronic illnesses), and general negative emotions among people led to a higher stress level, inner withdrawal, a lack of exercise, worries, insecurities, fears, anger and frustrations. This caused additional consequences like mood swings, sleep disturbances, increased aggressive behaviour, and depressive symptoms. In the worst case, people were suffering severe depression, ongoing anxiety, and suicidal thoughts. Even those who were able to work from home experienced feelings of isolation over time. People who already had mental health

problems prior to the pandemic reported that they had become worse as new worries occurred, daily structures were vanishing, relatives died, trauma was re-experienced, and there were no additional compensatory options to receive strength again. People with physical disabilities reported that their physical abilities decreased because it was difficult for them to leave their homes independently and support services were limited, especially during the lockdowns. Increased loneliness was also an issue they had to cope with. Asylum seekers living in larger accommodations were also affected by mass quarantine if a reported COVID-19 case occurred. This had in some cases drastic consequences. Addiction treatments, for instance, could not be continued in the first few days, and as a result, some infected people simply vanished, without giving a hint regarding their possible residence. Findings of a study by Łaszewska, Helter, and Simon (2021) suggest that the second lockdown in November/December 2020 **"appeared to have significantly more negative effects in terms of personal experiences of attachment to the local community, appreciation of healthcare workers and people around, and feeling of understanding better what really matters in life**." In addition, it caused more disruption to friendships, leisure activities, and community and family lives; and compliance with government-issued measures was reduced. Compliance also decreased between the two lockdowns.

The educational effects of the pandemic as well as the implemented measures and restrictions affected children and parents differently, as this has often been dependent on the level of education. According to a study conducted by the University of Vienna in 2022, parents of kindergarten-aged children were especially concerned about the effects of the lockdowns (Zartler et al. 2022). As the children were not able to see their peers, parents feared that they would not be able to be integrated into social opportunities again. Also, the situation of pre-schoolers was worrying some parents, as they feared that they would not be adequately prepared for school entry. However, home-schooling has brought up some new experiences, for both parents and children. The online lessons were sometimes perceived as vacation and leisure time by some children, so they did not show a lot of dedication, when it came to paying attention to the teacher, participating during lessons or doing the homework. Some parents provided intensive support to keep their children on track. Parents of elementary students pointed out that even during the first lockdown, their children had already forgotten basic skills (e.g., writing letters). Generally, the longer the lockdowns were lasting, the more unmotivated children became to follow the online lessons properly. However, some even noticed that they actually like going to school and that they miss being on site.

3.4.2 Belgium

In **Belgium**, the main governmental/public institution for social services and support is the Public Centre for Social Welfare (OCMW: *Openbaar centrum voor maatschappelijk welzijn*). Legal residents of Belgium are entitled to social assistance if they do not have sufficient resources to get by. Each Belgian town or city has its own OCMW, offering a wide range of services. Examples of support provided by the OCMW include financial aid; housing; medical aid; home care; employment; debt mediation; psychosocial support; legal aid; (crisis) shelter; guidance and financial assistance concerning energy supply; and cultural vouchers to promote social and cultural participation (Belgium.be, 2022). From the beginning of the pandemic, the OCMW have played a key role in responding to the far-reaching (indirect) impacts of the COVID-19 crisis and associated policy measures. For example, back in April 2020 the OCMW received 6 million euros subsidy for food aid, as the pandemic caused more people to have to rely on food banks. In the same time period, the OCMW also received additional governmental funds to provide recipients of a 'living wage' (social welfare benefits, *leefloon*) with 15% more money to compensate for the impact of the pandemic. Later on in

the pandemic, OCMW also received funding for additional types of support. For instance, in January 2021 the OCMW were given 10 million euros to finance programmes and interventions to promote the psychological well-being of OCMW users and improve preventive health services (Vlaanderen, 2021). The OCMW experienced a surge in questions and demand for help during the COVID-19 pandemic. This ranged from queries related to (afterschool) childcare, to support for the elderly and assisting people experiencing a loss of income. The OCMW remained open during the COVID-19 pandemic. However, especially in the first wave, contact with the OCMW was typically restricted to digital means of communication. Walk-in appointments were no longer possible, and the OCMW had to deal with the multitude of questions by phone and email. Already early on, local government representatives signalled that this significantly affected the accessibility of OCMW services, as not all families have a laptop and internet (Justé, 2020). Switching to online services can hamper the five key principles of good service provision often cited by Belgian governmental agencies: Accessibility, Availability, Understandability, Affordability & Usability (the "five B's": *Beschikbaarheid, Begrijpbaarheid, Betaalbaarheid & Bruikbaarheid)* (Hubeau & Parmentier, 1991). It has been noted that the 'digital acceleration' caused by the COVID-19 restrictions deepened the pre-existing digital divide in Belgium. Prior to the COVID-19 crisis in 2019, the percentage of households with a monthly income below €1,200 that did not have an internet connection was 29%, compared to 1% for households with an income of more than €3,000. Using the Internet to send forms to governmental authorities was a problem for 56% of the former, compared to 30% for the latter group (Brotcorne & Marien, 2020). Policy measures on working from home, distance learning, relying on a digital offer in care and services, and a preference for electronic payments (and in some cases an actual ban on cash payments) during the pandemic accelerated the digitalisation of Belgian society. In combination with the closing of public places with internet access, as well as the reduced accessibility of services like OCMW, this led to the exclusion of people with limited or no access to the internet (de Vaal & Stroobants, 2021).

In **Belgium**, the federal government of Belgium set up a policy network to help manage the COVID-19 crisis (*Monitoring van de sociale impact van de COVID-19-crisis in België*, 2020). The Working Group Social Impact COVID-19 Crisis (WG SIC) is responsible for monitoring and evaluating the socio-economic impact of COVID-19 related measures and of the pandemic on vulnerable groups. This includes identifying at risk groups and which groups are falling through the safety net of the socio-economic measures, making their problems visible. For example, the WG SIC documented the impact on groups such as sex workers, disabled people, job students, those with precarious employment, artists, families with children etc (*ibid*). It makes proposals on additional socio-economic measures for policy makers to consider and encourages coordination with the regions for better implementation of the measures. The WG SIC also supports the Taskforce for Vulnerable Groups[480] with impact analyses. On 8 April 2020, the Vulnerable Groups Task Force was established by the National Security Council, consisting of the Federal Ministers for Poverty Reduction and Social Inclusion and the Regional Ministers for Poverty and Social Action (BAPN, 2020). The aim was to examine how COVID-19 policies have impacted vulnerable groups, determining which groups are falling outside the scope of socio-economic measures and suggest additional socio-economic measures accordingly. Alongside the WG SIC, the Taskforce for Vulnerable Groups is also assisted by a consultative group represented by people from the 'field', members of civil society, and experts from institutes such as Poverty Reduction Centre and Myria (Ibid).

[480] https://www.mi-is.be/nl/tools-ocmw/task-force-kwetsbare-groepen.

In Flanders, the Flemish Government set up a task force on vulnerable families on 24 April 2020 (*Maatregelen Voor Kwetsbare Gezinnen in Het Kader van COVID-19 | Armoede - DWVG*, 2020). The aim of the task force was to monitor the impact on vulnerable groups, ensure the flow of information between policy levels to civil society and people in a vulnerable position, and determine solutions in coordination with other levels of government (federal and local authorities). The task force consists of two working groups. One with representatives from civil society, and the other with representatives of the coordinating minister for Poverty Reduction, the Minister-President and the Deputy Ministers-President (Ibid).

In the Walloon Region, a social emergency task force was set up on 19 March 2020 by the Government, in collaboration with the Walloon Network against Poverty (BELGA, 2020). The task force aims to respond to the consequences of the coronavirus epidemic which impacts the most vulnerable groups. This task force is coordinated by the cabinet of the Minister-President, consisting of representatives of Walloon Ministers, as well as representatives from the Walloon Network for the Fight against Poverty (RWLP), the Federation of Public Social Welfare Centres (CPAS), the Federation of Social Services (FDSS), the Public Service of Wallonia (SPW) and the Walloon Agency for Quality Life (AViQ) (Ibid).

The National Crisis Centre (NCCN) collaborated with different organizations in efforts to make government communication during the COVID-19 pandemic more accessible to vulnerable groups in society. On a number of occasions, communication with vulnerable groups occurred at the community level through social services, other local government services, and local non-profit organizations. As the pandemic progressed, data and research concerning the social and economic impact of both the pandemic and the government response improved. This meant that later measures could become more targeted and better address the needs of different groups in society.

In **Belgium** the government recognised that **socio-economic factors** have a considerable impact on life expectancy and health outcomes, and these inequalities could also be observed in COVID-19 outcomes. For instance, in Belgium, in the first COVID-19 wave excess mortality among people over 65 years of age in the lowest income decile was more than double that in the highest (Decoster et al., 2020).

Studies from other countries (notably the UK and the USA) show that there are also **ethnic inequalities** in COVID-19 outcomes, as people with a migrant background become infected more often and show more severe symptoms (e.g. Aldridge et al., 2020; Otu et al., 2020). In **Belgium**, a first piece of anecdotal evidence came from hospitals in South-East Limburg, which reported in mid-March 2020 that more than half of the COVID-19 patients they were seeing came from the Turkish community (Geldof, 2020b). In Belgium, however, this aspect was underestimated and understudied for a long time. Initially, there was no stratified epidemiological data available at all on how the COVID-19 burden may differ among cultural, religious or ethnic minority populations (Vanhamel et al., 2020). Indeed, research into this topic was very slow to get off the ground (Geldof, 2021). A first impetus came in August 2020 from the newspaper De Tijd, where journalists analysed COVID-19 infection trends at the levels of a statistical sectors, which is the smallest geographical unit of analysis (typically the size of a few streets or a small neighbourhood). Their analysis showed that the incidence of COVID-19 infections was highest in the poorest neighbourhoods in Belgium, which are often also super-diverse in terms of ethnic background d, especially in the larger Belgian cities (Bervoet & Roelens, 2020).

Pre-existing inequalities also have an impact on how people experience the restrictive measures taken to prevent the spread of COVID-19. Employees with temporary contracts or people doing undeclared

work (e.g. cleaning) face significant financial consequences (Geldof, 2020a). A negative impact can also be felt in **education** (e.g. Hagenaars et al., 2022). Many families have been unable to provide their children with access to a computer, internet and a quiet space to work. Children whose parents do not speak fluent French or Dutch have been particularly disadvantaged (De Standaard, 2020b). Despite efforts to address these challenges, such as the City of Antwerp's programme to donate laptops to families with children, the COVID-19 crisis widened the education gap (Stad Antwerpen, 2021).

A study by Gambi and De Witte (2021) identified a significant learning delay resulting from the school closures during the first part of the pandemic, corresponding to six months of schooling. Across the different subjects, the learning delay was the highest for languages (Dutch and French). The study also showed increased inequality between and within schools, with some schools unable to reach all students. Another study by Van Den Broeck and De Bonte showed that 70% of all schools managed to keep in touch with almost all students during the first lockdown, 25% of the schools were able to reach 60% to 80% of the students, and 5% of schools were able to reach fewer pupils (Van den Broeck & De Bonte, 2021). Schools with an average or high Educational Deprivation Indicator reached far less pupils than schools with a lower one. Special education schools also found it more difficult to keep in touch with all students during the lockdown. Another reason for increased disparity is that many children did not have a laptop to do their schoolwork, 1 in 10 had no internet connection at home and more than 1 in 10 did not have a quiet workplace at home to do schoolwork (Gambi & De Witte, 2021). Inequality increased in schools with more students from lower socio-economic groups, and those in urban areas with many different nationalities. In the long term, this loss of learning can lead to lower wages and a higher chance of unemployment. Finally, the study from Telenet also reports on the emotional impact of the COVID-19 measures on children and young people, particularly the loss of the social aspect of education (Ibid.,). The impact is even greater in special education. On the plus side, it is indicated that students have become more independent and their technical skills have improved.

The lockdown measures also have a particular impact on people's ability to practice their **religion**. For example, among Jewish communities in Antwerp the outbreak control measures presented contemporary challenges related to the remote organization of religious life (Vanhamel et al., 2020). The Ramadan period and festivities during both the spring of 2020 and 2021 were also significantly impacted by the pandemic measures.

There were also some **legal** factors which shaped the governmental response to the pandemic in Belgium. The COVID-19 measures in Belgium are not based on a state of emergency, as the Belgian Constitution does not allow for suspension of rights. However, many measures taken in the COVID-19 response do affect fundamental rights, such as the right to education, religion, assembly, free movement, and private life. In Belgium, these measures were implemented through a ministerial decree, which in turn is based on a 2007 Civil Security Act (FPS Internal Affairs, 2007). However, this law was created for acute and temporary emergencies like fires, explosions or the release of radioactive material, not for long-term health crises (Verbergt, 2020b). The legal basis for COVID-19 measures in Belgium was further complicated by the fact that at the time of the first wave of the pandemic, Belgium was led by the Wilmès caretaker administration.

As in many other countries, the **Belgian** government has had to perform a balancing act between protecting public health and protecting economic interests. The pandemic certainly has had significant negative consequences for the Belgian economy. An analysis by the FPS Economy in early 2022 (FOD Economie, 2022) reported that during the first three quarters of 2020, the turnover of companies subject to VAT fell by 10.3% compared with 2019. Yet with an overall increase in turnover of 5.2%

during the first three quarters of 2021 compared to 2019, 2021 was a year of economic recovery. The analysis of the 12 sectors that make up market services shows that 7 sectors have not yet returned to pre-crisis turnover levels in the first three quarters of 2021. The events sector (RR) and food service industry (Horeca) (II) were hit particularly hard in 2020 and remain so in 2021. In spite of the economic and health crisis, the number job losses in 2020 were low, with the labour force declining by only 0.02% on an annual basis. Of the 38 industries included in the European Economic Activities Nomenclature, 16 recorded a drop in the number of employees, such as the manufacture of electrical equipment (-8.2% compared with the previous year) and the hotel and catering industry (-7.6% compared with the previous year). A comparison with the corresponding period in 2019 shows that the employment situation in the third quarter of 2021 is more positive (+1.9 %). Only two sectors still show a decline in employment. Real gross domestic product (GDP) increased by 0.5% in the fourth quarter of 2021 compared to the previous quarter and by 5.6% compared to the fourth quarter of 2020. For the first time since the start of the COVID-19 pandemic, economic activity returned to its pre-crisis level and even slightly exceeded it in the third quarter of 2021 (FOD Economie, 2022).

3.4.3 Cyprus

Cypriot authorities adhered to similar modus operandi as other States such as Greece in providing awareness, guidance and socio-psychological support about COVID-19 through governmental support agencies and Ministries. The respective governmental entities established several psychosocial support hotlines such as the 1420 for citizens that present symptoms of respiratory system infections and have recently travelled in a country that have high rates of COVID-19 cases or have been exposed to a confirmed COVID-19 infected citizen the last 24 hours, as well as 1450 and 1412 so that citizens can acquire information that relate to COVID-19 24/7 and from 8:00 until 20:00 respectively. The aforementioned hotlines are operated by the Ministry of Health, which remain in full operation whereas the Ministry of Foreign Affairs has established a 24/7 hotline (+357)22801000) relating to COVID-19 for Cypriots living abroad and is operated by the National Center for Crisis Management. Moreover, the Ministry of Social Welfare has established a hotline (1433) with the main purpose of information dissemination about all urgent measures implemented, which is operational every Monday to Friday as of 8:00 to 18:00. The Ministry of Defence has established several hotlines (22421600, 22495666, 22495671, 22421745) so that Cypriot citizens can be informed about the movement restriction measures every Monday to Friday as of 8:00 until 21:00 while the Ministry of Education, Culture, Sports and Youth has Student Welfare Service established hotlines dedicated to providing information to students who live abroad and are entitled a governmental benefit of 750e in order to cover their expenses due to their inability to travel back to Cyprus for the Easter Holidays (22804002, 22804050, 22804053, 22804055) as well as hotlines about COVID-19 for students of all educational levels (Primary education: 22800713, 22800800, Secondary Schools: 22809577, 22800635 and Secondary technical and vocational education and training: 22800651, 22800652) (Cypriot Government, n.d.)[481]. Finally, government numbers about coronavirus information can be found at the website of the governmental press and information office (Cypriot Government, n.d.)[482].

Government decisions targeted the entire **Cypriot** population. The COVID-19 pandemic, in addition to the negative impact it has caused on the health of citizens and added stress on the healthcare system, it has also caused a major blow to the economy, while it remains uncertain when the economy will be

[481] https://www.pio.gov.cy/coronavirus/pdf/hotlinesGR.pdf.
[482] https://www.pio.gov.cy/coronavirus/.

able to recover due to the uncertainty that exists regarding the length of the healthcare crisis. In order to mitigate these negative consequences, the Cypriot Government actively worked in creating a Government Strategy Plan that aims in restarting the economy by promoting economic growth and the creation of new jobs, taking into account the advantages and potential of the economy. In addition to the plans for future development, some measures were needed to support the health system, vulnerable groups and employees or self-employed persons whose work was partially or completely limited due to the pandemic (Vrachimis, n.d.)[483]. A relevant measure is "One-Off grant", which includes funding beneficiary businesses and self-employed persons, if they met specific criteria[484] including being forced to suspend their operation during the 1st to 15th of March 2021. This decision was based on the relevant Decree of the Ministry of Health, to cover and support the operating expenses of March 2021, as yet another practical support to businesses and employees that have been significantly affected by the effects of the pandemic and the necessary measures to limit its spread. The one-off grant concerns businesses and self-employed persons who submitted the relevant application and were approved in the Special Schemes of March 2021.

Moreover, the Ministry of Labor, Welfare and Social Insurance also paid a sum of 1,000 Euros, a measure which had been announced by the Ministry of Finance and concerned self-employed citizens who are registered in the Social Insurance Services as self-employed and had previously been approved for participation for at least three periods in the Special Support Schemes for Self-Employed Implemented by the Ministry of Labor, Welfare and Social Insurance. The amount of this one-off support based on the data of the Ministry of Finance and the Department of Taxation and the annual turnover cannot exceed 15,600 euros (Ibid)[485]. Furthermore, in the context of the continuous process of reviewing the measures taken to address the crisis due to the pandemic and with a view to supporting both employees and businesses, whose operation was significantly affected due to the effects of the pandemic, businesses and self-employed persons who, based on the Decisions of the Council of Ministers, have suspended their operation for the period 26/04/2021 until 9/05/2021, were supported with an additional one-off grant for their operating expenses. In addition, all businesses that took part in March and April 2021 in the Plan of Economic Activities Related to the Tourism Industry or Economic Activities that are directly affected by Tourism will also receive the one-time sponsorship of March and April. For example, a catering business with 6 to 9 employees that was a beneficiary in March 2021 and April 2021, in addition to the sponsorship to cover the salaries of its employees, received a one-off grant of 5,000 Euros and around mid-May will receive an additional One-Off grant for operating expenses of another 5,000 Euros (ibid)[486]. It is noted that for businesses that belong to the above categories of economic activities but for any reason will not be beneficiaries in the Special Plans of April 2021, if they have been affected by the measures taken for the period 26/04/2021 to 9/05/2021 and will be beneficiaries for the respective Special Plans of May 2021, they will receive the above additional One-Off Support along with the payment of special allowances for the period May

[483] http://mof.gov.cy/assets/modules/wnp/articles/202009/739/docs/covid_19.pdf.

[484] Beneficiaries had to fulfil one of the following economic activities/criteria: (1) food industry restaurants, cafes, bars, pubs and similar businesses), (2) dance schools and gymnasiums (3) conference and trade fair organizers and trade fairs (4) of performing arts including their supporting activities (5) amusement parks and other theme parks and playgrounds (6) other amusement and entertainment activities (7) Theatres and cinemas (8) Photographers (9) Taxi drivers.

[485] Ibid.

[486] Ibid.

2021 (ibid)[487]. In parallel with the payment of the additional one-off grants, the implementation of all other Special Schemes concerning the support of employees continues, including a new Special Scheme for a Special Allowance for Absence from Work for Childcare, which concerns employees who must necessarily be absent from work due to the suspension of the operation of nurseries and centers for the protection and employment of children. From this Special Scheme, employers who are not covered by any of the other Special Schemes can receive support for their affected employees. Concluding according to the Government with the simultaneous implementation of measures that aim in protecting the health of citizens, measures have been adopted to support employees and businesses, so that every employee affected by the effects of the pandemic can have an adequate income for their expenses, but also businesses can be supported for part of their operating expenses (euronews, 2021)[488]. Concluding, as a common practice between Ministries, the Ministry of Labor host specific guidelines on the operation of businesses in order to protect business owners, employees and citizens (Ministry of Labor, n.d.)[489].

In **Cyprus** the most affected by the pandemic sectors were tourism/hospitality (hotels and restaurants), arts and culture, commerce, construction and real estate. Other sectors, such as wholesale and retail trade in essentials, transport, as well as utilities, have limited negative direct effects. In addition to the direct effects, however, significant indirect ones are also found in other sectors of the economy, such as the food industry, financial services and professional services. Finally, there is also marginal compensation from the public administration and the health sector (Stephanou, n.d.)[490]. The huge impact of the pandemic on the mental health of citizens is a fact that is also confirmed by the official data of the Mental Health Services of the SHSO (Nikolaou, 2021)[491]. In an interview the Director of Services, Anna Paradisioti, stressed that if we focus on the referrals made to the Mental Health Services, there is a clear increase in the incidence of mental disorders in children and adolescents compared to the previous year. According Ms Paradisioti, the mental health problems that were recorded mainly during the pandemic and the quarantine were anxiety disorders, depression, and even a combination of them. Furthermore, she highlighted a relapse which was observed in already vulnerable people, who had pre-existing mental health problems. As Ms. Paradisioti suggested, the quarantine caused a variety of effects on the citizens' mental health, which, however, with the appropriate support and care from health professionals, can be overcome or at least managed by the person and his family (Nikolaou, 2021)[492].

To better address vulnerability during the pandemic, as part of the governmental response, th booster dose to people over 80 years of age and a 3rd dose to people aged 12-17 years, as announced by the Ministry of Health of Cyprus, in the context of the efforts made to strengthen immunity and especially groups of the population that are more vulnerable to serious illness against the coronavirus (Capital, 2022)[493]. From March 30, 2022, the administration of this new round of vaccines will begin through

[487] Ibid.
[488] https://gr.euronews.com/2021/04/28/kypros-metra-stirixis-gia-antimetopisi-epiptoseon-covid.
[489] http://www.mlsi.gov.cy/mlsi/dli/dliup.nsf/All/4AF1B6998BCE1A2BC225856D003562B2?OpenDocument.
[490] https://www.pwc.com.cy/en/articles/articles-2020/covid-19-cyprus-economy-article-michalis-stephanou.html.
[491] https://simerini.sigmalive.com/article/2021/7/16/uperesies-psukhikes-ugeias-auxese-peristatikon-logo-pandemias/.
[492] Ibid.
[493] https://www.capital.gr/diethni/3624365/kupros-tin-enarxi-xorigisis-4is-dosis-emboliou-gia-eualotes-omades-tou-plithusmou-anakoinose-to-up-ugeias.

the walk-in vaccination centers that operate in all districts of Cyprus nevertheless the measure remains to be optional in nature. Specifically: a) The booster /4th dose in the first phase will be administered to people over 80 years of age, to people regardless of age who live or work in nursing homes and closed structures, given that the period of five months has elapsed since the receipt of the booster / 3rd dose. For the administration of a vaccine to people over 80 years of age, an identification document (identity card, passport) and a vaccination card must be presented (Ibid)[494]. This will be followed by an update on the vaccination with a booster / 4th dose of people aged 70 years and over, health professionals and immunocompromised people. b) The booster / 3rd dose will be administered to people over 12 years of age with an MRNA technology vaccine given that the period of six (6) months has elapsed since the receipt of the 2nd dose. Finally, for the administration of a vaccine to people aged 12-17 years, an identification document (identity card, passport) and the vaccination card must be presented (Ibid)[495].

3.4.4 Germany

On a federal level, governmental measures have primarily been enacted by existing state institutions. However, special consultative bodies have been created to provide guidance during the pandemic. As mentioned above, at the onset of the pandemic, a joint BMI/BMG crisis task force was called to deal with the COVID-19 pandemic in February 2020, and has been responsible for advising the Federal Government and implementing policy decisions made by the Federal Government. On 14 December 2021, the Federal Government and state governments convened a Coronavirus Expert Council (Corona ExpertInnenrat der Bundesregierung). The purpose of the Expert Council is not to make policy, but to assess response measures to date, as well as to contribute recommendations for measures going forward, from a multidisciplinary rather than a purely epidemiological perspective; it does not impact the mandate of other responsible scientific bodies, namely the Standing Committee on Vaccination (Ständigen Impfkommission, STIKO), the German Ethics Council (Deutscher Ethikrat), the Robert Koch-Institut, and the Paul-Ehrlich-Institut.

In brief, governmental responses in the health domain have focused on the general population, with special attention paid to supporting “at-risk groups” – the definition of which has gradually expanded over the course of the pandemic. Meanwhile, a much broader set of measures have targeted both the whole of society / general population and specific population groups, institutions, and sectors. With regard to responses in the health domain, the initial definition of at-risk groups focused on factors that increased the chance of a severe progression. A 29 October 2020 guidance issued by the Robert Koch Institute elaborates on these factors:

- Age
- Underlying diseases
- Suppressed immune system due to disease or as an effect of medication
- Multidimensional physical/health vulnerabilities (multimorbidity) (RKI 2020 [20 October])

Over the course of the pandemic, official definitions of at-risk groups shifted to encompass factors that increased the chance of SARS-CoV-2 exposure as well. The Robert Koch Institute Standing Commission on Vaccines (Ständige Impfkommission, STIKO) “Decision of the STIKO on the 1st update of the COVID-19 vaccination recommendation” defined a stepwise vaccination strategy informed by both health

[494] Ibid.
[495] Ibid.

vulnerabilities and social vulnerabilities. Specifically, six priority groups are identified based on four risk clusters:

- Risk factors for a severe disease progression (see above)
- Persons with an elevated risk of infection at work:
  - Workers in medical institutions
  - Other health care workers
  - Teachers and early childhood educators
  - Retail workers.
  - Workers in critical infrastructure:
  - Public health workers
  - Other infrastructure workers, including first responders and transportation workers
- Persons at risk due to other living or working conditions:
  - Residents in senior and care facilities
  - Persons with dementia or other cognitive disorders
  - Residents and workers in arrival points and collective accommodations for asylum-seekers
  - Residents and workers in homeless shelters
  - Persons with precarious work and living situations, including:
    - Those who work in spaces where many people work in close proximity without adequate ventilation or personal protective equipment
    - Low-wage and short-contract workers who may be less likely to call in sick
    - Itinerant workers who often cross-national borders in crowded vehicles and live in shared accommodations (examples are workers in meat processing plants and distribution centres and seasonal agricultural workers)

The STIKO strategy is guided by "the overarching ethical goal of minimising harms to health and society caused by the COVID-19 pandemic," taking into account "the principles of self-determination, justice, solidarity and urgency" (RKI 2021 [8 January], Section 11). Whereas public health measures targeted the general population, with special measures taken to support the aforementioned vulnerable groups, the broader set of measures implemented by the federal and state governments targeted a wide range of population groups and institutions. These included:

- Population groups
  - Bonus payments and tax relief for **parents**, increased for **single parents**.
  - Relief payments for **parents of sick children**.
  - Housing and utilities support for **the unemployed**.
  - Helplines for **vulnerable women** threatened with domestic violence and **people suffering from depression**.
  - Informational campaigns to prevent fraud against **individuals** and **businesses.**
  - Raise in minimum wages for **nursing practitioners**.
  - Digital learning platforms and mobile devices for **students**.
- Institutions/sectors
  - Expanded and simplified access to the short-work (Kurzarbeit) scheme, a program in which **employers** can reduce their **employees'** working hours, with social security funds reimbursing employees a percentage of their lost wages.

- Provisions for tax-free bonuses for **employees**.
- Stabilisation funds directed toward **industry**.
- Up to 750 million euros for vaccine research and development (i.e., **Pharmaceautical research institutions and industry**).
- Grants for **businesses** that invest in the production of new, innovative health care products.
- Grants and credit programs for **MSMEs** in general.
- Targeted financial support for **MSMEs** that participate in vocational training programmes.
- Targeted financial support for **art and cultural centres**, especially in rural areas.
- Targeted financial support for **live music venues**.
- Targeted financial support for **self-employed culture workers**, including visual and performing artists, artisans and craftspeople, authors, translators, organisers of music festivals and live music programmers.
- Targeted financial support for **children's and youth hospices**.
- Targeted support for social organisations such as **homeless shelters**, **workshops for the disabled**, and **cultural integration centres**.

In relation to the governmental perception on vulnerability, on 14 December 2021, the Federal Government and state governments convened a Coronavirus Expert Council (Corona ExpertInnenrat der Bundesregierung). The 11th Statement of the Expert Council, "Pandemic Preparedness for Autumn/Winter 2022/2023", issued by on o8 June 2022, augments the RKI's earlier guidelines, including with regard to targeting vulnerable groups. Notably, the Statement concludes with a section on the need to protect vulnerable groups – among which the elderly, those with prior medical conditions, and children and youth are mentioned. The focus on children and youth sets the Statement apart from prior guidelines: specifically, the Statement asserts that "Child welfare must be considered, including access to society, education, and sport, especially for children with prior medical conditions. This will require significant improvements in the effectiveness and efficiency of child health care systems, most critically paediatric stationary care" (Corona ExpertInnenrat 2021, p. 21). Within three scenarios developed by the Expert Council for Autumn/Winter 2022/2023, the risk of overburdening the paediatric care system is emphasised. This focus on children and youth sets the Statement apart from guidelines released in 2020 and Q1-3 2020.

This trend of broadening the range of vulnerabilities recognised in official statements continues in the "Evaluation of the Legal Foundation and Measures of Pandemic Policies". The "Evaluation" asserts that vulnerable groups requiring specific attention include, but are not limited to, those living under the poverty line (less than 60% of median income), those with low socio-economic status, refugees and other migrants (including labour migrants), and homeless/houseless people. The rationale given for designating these groups are based on both health and socioeconomic considerations: i.e., these groups faced higher risks of infection, more severe courses of illness, more severe mental health issues, and more severe financial burdens. These groups were also harder to test, trace, or vaccinate (BMG 2022: 96-97). The "Evaluations" assesses federal efforts to meet these groups' needs as inadequate, and suggests that lessons could be learnt from regional governmental and/or civil society initiatives, such as 'Hotels for Homeless' in Hamburg or 'Housing First Berlin' (BMG 2022: 97).

Due to this lack of sufficient support for the most vulnerable, the BMG determined the following as important learnings from the COVID-19 health crisis. Firstly, social inequality is to be seen as an

independent topic within the politics of a pandemic. Secondly, prevention should be target-group oriented. Thirdly, alternatives for those who are not sufficiently protected in their own homes need to be established. Additionally, there is need for stricter oversight of hygienically precarious work environments. Further, easy and affordable access to personal protective equipment, like masks and testing, is essential. Compensation for financial disadvantages is important. Last but not least, vulnerable groups need to be specifically targeted when it comes to vaccinations and prioritized in the vaccine rollout (BMG 2022: 98-99).

A Month-by-month timeline, from April 2021 to March 2022 on governmental course of action is displayed below.

April 2021

- Stiko recommends the use of AstraZeneca for people over 60 years of age. The chancellor speaks about insecurities towards side-effect findings "Trust comes from knowing that every suspicion and every individual case will be investigated," the Chancellor said. Under age 60 shall receive mRNA vaccines for a second shot. Federal Health Minister Jens Spahn stressed: "Citizens in Germany can rely on the fact that vaccines approved in Germany are meticulously monitored - and that the results of this monitoring are made transparent."
- 7.04.21 GP practices join the vaccination campaign. The prioritisation of the vaccination regulation is also the basis for decisions by doctors' practices. It remains the same: those most in need of protection should be vaccinated first. Initially, the medical practices are called upon to vaccinate primarily immobile patients by home visit. The same applies to people with pre-existing conditions that are associated with a high risk in case of coronavirus infection. Beyond that, however, prioritization can be applied flexibly within the framework of efficient vaccination organisation.
- 14.04.21 Multilingual communication aid “aidminutes.rescue” app added a vaccination mode to support medical staff during the process in different languages.
- 14.04.21 **No face-to-face teaching if the incidence is over 200:** The infection situation does not stop at the school door. Due to the dynamic infection situation, it is therefore right to come to nationwide regulations here as well, if the epidemiological situation requires it. If the incidence exceeds 200, attendance classes in schools and regular care in day-care centres should be prohibited. Possible exceptions: Graduating classes and special schools.
- 15.04.21 with an amendment to the Occupational Health and Safety Ordinance, employers will now be obliged to offer their employees who cannot work in a home office a Corona test once a week. Employee groups with an increased risk of infection are to be offered testing twice a week.
- 29.04.21 Federal Education Minister Karliczek gives the go-ahead for the development of the National Education Platform for the access to digitally-supported education.
- 30.04.21 Federal Government support: Corona supplement for people who receive basic security benefits or social benefits 150 Euros. Child Bonus of 150 € supporting families (The one-off payment is not offset against social benefit).

May 2021

- 5.05.21 The COVID-19 Protective Measures Exemption Ordinance (*COVID-19-Schutzmaßnahmen-Ausnahmenverordnung*), enacted 8 May 2021, provides for exemptions and relief for vaccinated people and those who have recovered from COVID-19 disease: This

means, for example, that vaccinated and recovered persons will no longer be counted at private gatherings. Night-time exit restrictions under the Infection Protection Act also no longer apply to these groups of people.

- The Coronavirus Entry Regulation comes into force on 13 May. countries are classified as risk, high incidence or virus variant areas.
- 12.05.21 Spahn and Karliczek announced another programme for drug research. especially important for people who cannot be vaccinated against the virus.
- 27.05.21 Targeted support for the cultural sector: Federal Government's special fund for cultural events of up to 2.5 billion euros.

June 2021

- 4.06.21 In the "Summer of Vocational Training", the partners of the "Alliance for Initial and Continuing Vocational Training" want to promote dual training among young people and companies - under the hashtag #AusbildungSTARTEN. The Federal Government is also a partner in this alliance. The aim is for as many young people as possible to be able to start their vocational training in a company in 2021. Because the Corona crisis must not become a training or skilled labour crisis.
- 7.06.21 in Germany Corona vaccination will be available to anyone who wants it and who ist living in Germany - in doctors' surgeries, at company doctors' offices and in vaccination centres.
- 17.06.21 virtual conference of health ministers (GMK): Topics discussed health of children and young people in the context of the Corona pandemic and the long-term effects of a Corona disease, Long Covid.

July 2021

- 2.07.21 Anyone entering Germany from one of the risk areas must fill out a digital entry registration form. This allows the health offices to see who has entered their area of responsibility on a daily basis. They monitor compliance with the quarantine obligation. Seehofer explained. "In summary, I would like to say for the point of control that the message is clear: Whoever enters must expect to be controlled."
- 13.07.21 Proof of vaccination: Not every family has a smartphone. With the new certificate wallet, users can also store the certificates of other people in the household, such as children or partners. All existing certificates are grouped by person and can be easily retrieved. This should be a relief, especially when travelling during the summer holidays.
- 15.07.21 The Federal Government is providing a total of 200 million euros for the purchase of mobile air purification devices. The devices are to help reduce the risk of infection as much as possible and protect the health of school and day-care children. Background: Children under twelve cannot be offered vaccinations until further notice. At the same time, there is a risk of increased infection if classrooms or group rooms cannot be ventilated or cannot be ventilated sufficiently.

August 2021

- 3.08.21 Conference of Health Ministers has decided that from September 2021, a booster vaccination will be offered in nursing homes, institutions for integration assistance and other institutions with vulnerable groups, usually at least six months after completion of the first vaccination series. Patients with immunodeficiency or immunosuppression as well as those in

need of care and the very elderly in their own homes should be offered a booster vaccination by their attending physicians. Study data to date show that these groups in particular benefit from a booster vaccination.

- 6.08.21 Many cultural workers have lost income from their artistic work in the Corona pandemic. Until the end of 2021, they can earn up to an additional 1,300 euros per month from non-artistic self-employed activities through the "Corona Special Regulation".
- 10.08.21 At the Global Health Summit in Rome on 21 May this year, Germany announced that it would provide at least 30 million vaccine doses, especially for developing countries, by the end of the year.
- 10.09.21 The Permanent Vaccination Commission (STIKO) recommends a Corona vaccination of pregnant women from the 2nd trimester of pregnancy and of non-vaccinated or incompletely vaccinated breastfeeding women with two doses of an mRNA vaccine such as Bionntech or Moderna.

September 2021

- 15.09.21 A working group of the Federal Ministry of Family Affairs and the Federal Ministry of Health with other experts write a report and discuss the importance for preventive health promotion offers should be made more accessible to children and adolescents. The aim is for the Länder and municipalities, together with the health insurance funds and other local providers, to promote the revival and expansion of offers for children and adolescents, with a focus on preventing and combating risks such as lack of exercise, malnutrition and also stress symptoms in children and adolescents. Children and adolescents who were already exposed to increased stress and particularly affected before the pandemic are to receive targeted support.
- 23.09 Federal Cabinet last decided on 22 September to extend the regulation on entry quarantine up to and including 10 November 2021.

October 2021

- No significant changes.

November 2021

- 1.11.21 The Robert Koch Institute (RKI) has recorded a clear trend since the end of September: new infections with the coronavirus are on the rise again. Compared to the previous week, the 7-day incidence in all age groups currently increased significantly. High 7-day incidences were observed in the age groups of 5- to 49-year-olds as well as in those over 90 years of age. This is shown in the current RKI status report on Covid-19. The incidence of hospitalized cases and the number of Covid-19 cases in intensive care units also increased, according to the report, and a significantly higher number of reported outbreaks in medical facilities and in homes for the elderly and nursing homes were recorded.
- 4.11.21 In order to break the fourth wave, the minister presented three points, the implementation of which he will discuss with the health ministers of the federal states on Thursday and Friday. 1. consistently adhere to precautionary measures that have been adopted 2. compulsory testing concepts for nursing homes 3. increase the pace of booster vaccination.
- 12.11. The free Corona citizen tests will be reintroduced. Dynamic infection - serious situation: Wieler appealed: "Reduce your contacts. Above all, avoid situations where several people

come together indoors. Please follow the AHA-and-L rules always and everywhere, also at 2G and 3G events. So, wear a mask even at 2G. If you have symptoms of acute respiratory infection, please make sure you stay at home and get tested by PCR."

- 18.11 Vaccination for all, but priority for those at risk: vaccination should be offered primarily to people who are particularly at risk: People with immunodeficiency, people over 70 years of age, residents and persons cared for in institutions for the elderly, as well as staff in medical and nursing facilities. And of course, people who have not been vaccinated so far should be vaccinated as a matter of priority.
- 25.11.21 new Infection Protection act continuers 3 G mandatory testing in hospitals and homes. Testing obligations for employees and visitors of hospitals, preventive care and rehabilitation facilities has been extended.
- Cabinet extends the simplified access requirements for short-time allowance into next year. Temporary workers also have access to short-time allowance. The accumulation of minus hours is completely waived.
- 29.11.21 "Currently, more than 4,000 covid patients are receiving intensive care," added Robert Koch Institute President Lothar Wieler. He said 2,000 patients alone had been admitted within a week. "The numbers are going steeply upwards, and in all federal states," Wieler continued. Most patients are between 50 and 79 years old, he said. 85 per cent require some form of ventilation. Care is now limited in the majority of hospitals: Transplantations, tumor patients no longer get their treatment.

December 2021

- 2.12.21 fourth Wave of Corona: new guidelines and restrictions for example - People who have not been vaccinated are now only allowed to shop in grocery shops, pharmacies and drugstores. In all other shops, the 2G rule applies - only vaccinated and recovered people are allowed to enter. - In schools, masks are compulsory for all grades.
- 10.12.21 Network Enforcement Act, which obliges platforms such as Facebook and Twitter to delete criminally relevant statements and in future to report them to the authorities (vax vs. unvax).
- 13.12.21 By March 2022 employees of clinics, nursing homes and similar institutions must present proof of being vaccinated or convalescent. This has been decided by the Bundestag and the Bundesrat. The so-called "facility-related" vaccination obligation applies to employees in clinics, nursing homes, outpatient care services and similar facilities and is regulated in the Infection Protection Act.
- 28.12.21 Another change relates to the testing and verification requirements for children. As it is now possible for children from the age of five to be vaccinated against Covid-19 and testing for this group of people is unproblematic, the age limit for the obligation to provide evidence and the obligation to segregate is lowered from currently twelve years to six years.

January 2022

- 25.01.22 PCR tests are to be concentrated in future on particularly vulnerable groups and employees who care for and treat them. In other words, on staff especially in hospitals, in surgeries, in nursing care, institutions for integration assistance and for persons at risk of severe courses of disease.
- 31.01.22 Lauterbach states: High number of unvaccinated elderly is a problem.

February 2022

- 2.02.22 The Federal Government Commissioner for Culture and the Media is providing a total of up to 105 million euros for live music events and national music festivals in 2022. For example, funding is available for concrete live music projects of all music genres that make cultural work possible under the difficult conditions of the pandemic, including "Umsonst & Draußen" music festivals with national significance.
- 4.02.22 The Standing Committee on Vaccination (STIKO) has published a new recommendation: according to this, certain people should receive a second booster vaccination with the previous mRNA vaccines - from BioNTech or Moderna.
  These include people who are particularly at risk, such as people who live or are cared for in nursing homes, as well as everyone over 70 and people with immune deficiencies.
  A second booster is also recommended for people who work in medical or care facilities - especially if they have direct contact with vulnerable people entrusted to their care.
- 17.02.22 Olaf Scholz emphasized: "As European and African partners, we are working hand in hand to kick off local vaccine production in Ghana, Senegal, South Africa and Rwanda." Establishing local vaccine production in Africa was the topic of an internationally attended event in Marburg on Wednesday. The concern to promote the establishment and expansion of production facilities in Africa goes back to the "Compact with Africa" initiative. In Berlin on 27 August 2021, BioNTech, the Institut Pasteur de Dakar (SEN) and the Rwanda Biomedical Centre as well as EU Commission President Ursula von der Leyen signed a communiqué on "Vaccine Equity for Africa".

March 2022

- 3.03.22 Relief for children: Children under the age of six who return from high-risk areas no longer have to be quarantined. Children between six and twelve years of age can end quarantine directly by a negative test. §G verification requirement is generally waived for children up to twelve years.
- 11.03.22 In order to inform refugees from Ukraine about protection against a Corona infection and the Corona vaccination, the BZgA provides information materials in Ukrainian. The graphics and leaflets explain, for example, what rules like "3G" or "2Gplus" mean. They illustrate testing possibilities and hygiene tips. They also provide information on all questions about the COVID-19 vaccination.
- Basic protection for vulnerable groups, local public transport and schools. Vulnerable people - including those in nursing homes, outpatient care or hospitals - are to continue to receive special protection. Certain basic protection measures such as mandatory masks and tests should therefore remain in place in these facilities. The obligation to wear masks in buses and trains and the obligation to test in schools should also remain in place.
- 28.03.22 Lauterbach called for a more aggressive approach to the fourth vaccination. Currently, less than ten per cent of those recommended by the Standing Commission on Vaccination (STIKO) for a second booster are actually vaccinated a fourth time. This is recommended for people over 70 years of age as well as risk patients with certain pre-existing conditions and for employees in health and care facilities.

3.4.5 Greece

In **Greece**, several governmental support initiatives that were created during the pandemic and continued to operate until the later phases. A prime example of such services is the psychosocial support program titled "none alone in the pandemic" implemented to accommodate the needs of the general population, particularly for hospitalized people with Covid-19, their families, as well as healthcare professionals with the provision of psychological support through remote consultation. The aforementioned program has provided psychosocial support to over 12.000 citizens. Another initiative is the COVID-19 support Hotline (10306) which has received over 200.00 calls. The national healthcare system was also reinforced with 215 psychiatrists and 4.000 nurses in order to create and strengthen structures and initiatives aimed at supporting the mental health of citizens (Amma, 2022)[496]. Moreover, seven (7) day centers will be developed that will offer training programs for physicians, as a part of Primary Healthcare, as well as psychosocial support and education on psychological support for employees and unemployed citizens[497].

Due to the severe impact in the mental health and well-being of both citizens and healthcare professionals and based on a survey between Hellas EAP, the Laboratory of Experimental Psychology of the School of Psychology of the National and the Kapodistrian University of Athens, which present findings associated to increased levels of anxiety, anger, loneliness and depression among 1,232 participants in both private and public sectors (Kaselaki, 2021)[498], the Ministry of Health disseminated instructions relating to psychological support (Ministry of Health, n.d.)[499].

In order to raise awareness and increase the vaccination rate of high-risk groups, multiple ministries[500] and local administrative bodies, in a joint effort facilitated easier vaccination conditions targeting homeless foreigners and nationals, third-country nationals, drug and alcohol addicts, citizens with limited access to public goods and services. The two phases of this initiative include the provision of the bureaucratic means to get vaccinated through the issuance of a temporary Social Security Registration Number (PAMKA) as well as a vaccination certificate. The General for the Reception of Asylum Seekers has received over 80 requests to participate from municipalities whereas the total amount of request reach up to 114. In addition, educational material such as guidelines on PAMKA has been disseminated while the General Secretariat of Public Health of the Ministry of Health issued a call for expressions of interest, inviting civil society actors[501] to participate in the vaccination process for the aforementioned groups. The vaccination of vulnerable citizens is set to be conducted in polyclinics of civil society bodies or through Mobile Care Units, according to the national regulations of medical science and ethics, health and safety and the planning of the National Vaccination Program against COVID-19 coronavirus. Further, it is important to highlight that during the process of PAMKA and certificate issuance, vaccination and movement to and from the vaccination centers or the services that issue these certificates, authorities are prohibited from arresting beneficiaries for illegal stay and

[496] https://www.amna.gr/health/article/646315/Z-Rapti-I-epidimia-eiche-simantika-epizimia-epidrasi-stin-psuchiki-ugeia-ton-ergazomenon-ston-tomea-tis-ugeias.
[497] Ibid.
[498] https://www.ey.com/el_gr/workforce/covid19-pos-epireastike-i-psyxiki-ugeia-ton-ergazomenon-stin-ellada.
[499] https://www.moh.gov.gr/articles/health/dieythynsh-dhmosias-ygieinhs/metadotika-kai-mh-metadotika-noshmata/c388-egkyklioi/6936-korwnoios-covid-19-odhgies-psyxologikhs-yposthrikshs-twn-politwn.
[500] Such as Ministry of Health, Ministry of Migration and Asylum, Ministry of Labor and Social Affairs as well as local government and civil society bodies.
[501] Participating bodies that are included in the National Vaccination Program against COVID-19 are: Doctors of the World, PRAKSIS Associations, Médecins Sans Frontières, Hellenic Red Cross and SAMS.

employment. It has been decided that the protection of public health of both host society and beneficiaries is a supreme good, which cannot be linked to the residence status (Onmed, 2022)[502].

The government in an initiative to support the digitization of services and healthcare system, secured 278m Euros from the Recovery Fund. In order to mitigate the negative impact of COVID-19, 1.5 billion euros are intended to support hospitals, healthcare centers and primary health care institutions, digitization of services and the creation of a system which provided home service to patients (Efthimiadou, 2021)[503]. This digital transformation includes the development of a national digital health record for citizens, improvement of hospital digital readiness emphasizing on clinical information systems, digital programs for cancer management and reinforcement of remote medicine initiatives[504]. At this moment, the Citizen's National Electronic Health Record is still at an early stage, which is intended to include all medical data of citizens, prescribed medicine received, hospitalization and diagnostic test records. Upon completion, all healthcare professionals will be able to access a patient's record as the project has a nationwide scope. This initiative will require the cooperation between all private and public healthcare institutions[505]. As Secretary General for Primary Health Care of the Ministry of Health Marios Themistokleous suggests that to achieve digital transformation, e-appointments, Individual Electronic Health Record and the development of tele-medicine, are crucial parts so that citizens that live in remote areas have access to health services[506]. A similar initiative has already taken place by the Center for Documentation and Costing of Hospital Services (KETEKNY), which implemented an individual health record in almost all hospitals of Crete without any particular cost as the local hospitals have establish digital communication and have successfully achieved remote access of a patient's medical record[507]. Concluding, governmental initiatives in mitigating the negative effects of COVID-19 through information dissemination, support and awareness raising include the COVID-19 Helpline (10306) which is operational usually almost 24 hours per day (EODY, n.d.)[508].

The COVID-19 measures that were implemented in **Greece**, mostly aimed at the main population, nevertheless, some tailored measures emphasized in specific target groups. In June 2021, guidelines were disseminated by the National Public Health Organization to implement measures that aimed at the prevention and control of the spread of COVID-19 in elderly care facilities, clinics for chronically ill citizens and regional social welfare centers that host elderly and/or chronically ill citizens. The aforementioned facilities host elderly patients as well as people of any age with severe chronic underlying diseases (eg diabetes mellitus, cardiovascular and chronic respiratory diseases, immunosuppression, etc.), who belong to the high-risk groups due to their severe health condition and potential complications from COVID-19. Moreover, these are facilities with a high risk of transmission therefore it was deemed necessary to systematically monitor and implement the necessary health measures for the early detection and prevention of the spread not only of SARS-CoV-2 but also of other respiratory pathogens including the influenza virus, tailored to protect patients, employees and visitors. Some measures are based on the vaccination rate of employees, visitors and patients

[502] https://www.onmed.gr/ygeia-politiki/story/395799/koronoios-protovoylia-gia-ygeionomiki-thorakisi-emvoliasmo-eyaloton-politon.
[503] https://www.ethnos.gr/health/article/163226/tithaallaxeistisyphresiesygeiasmetatonkoronoiopoiesthapshfiopoihthoyn.
[504] Ibid.
[505] Ibid.
[506] Ibid.
[507] Ibid.
[508] https://eody.gov.gr/tilefoniki-grammi-psychokoinonikis-ypostirixis-10306-gia-ton-koronoio/?print=print.

according to which visitation rate is determined. More specifically, the administration disseminates and updates information regarding the vaccination coverage rate of each facility to the competent authorities, whereas the vaccination status of visitors is certified only by the vaccination certificate presented upon entrance during visiting hours, while visitors or staff with symptoms that may relate to COVID-19[509] are prohibited. In addition, visitations are prohibited if the employee vaccination coverage is less than 95% and less than 85% for visitors, whereas these visitations are conducted exclusively outdoors, after visitors present a negative laboratory test for COVID-19 upon entrance, wearing a double mask (or FFP2-type mask) and adhering to all protective hygiene measures is mandatory. Visitors with a negative COVID-19 self-test are accepted only if it has been carried out by a health professional within the facility at the same day, alternatively visitors are permitted upon demonstration of a molecular test for COVID-19 within 48 hours before their visit (EODY, 2021)[510].

In January 2022, additional measures were announced to mitigate the economic impact of the COVID-19 pandemic which emphasized on temporary suspension of employment and compensation for employees and businesses. As of 1/1/2022 and until 31/1/2022, employers in nightclubs, bars, concert halls, music related professions could suspend the employment of their employees who subsequently become beneficiaries of a special purpose compensation which is calculated to the amount of EUR 534 per month (CNN, 2022)[511]. For the abovementioned timeframe the state budget would also cover the entirety of the insurance contributions whereas as of 14/1/2022 until 31/1/2022, employers in theatres, art – event venues and playgrounds could suspend the employment of all their employees whereas in catering, travel agencies, hotels, reservation services, cinemas, gyms, sports education and sports activity facilities, dance schools, physical well-being, amusement parks and theme parks, casino business owners could suspend 25% of their employees[512].

Another tailored measure was the suspension of payment instalments for January 2022, which was postponed until the end of the current arrangement, of regulated debts to the tax administration for businesses who were particularly impacted by the negative economic impact of COVID-19 and had their working activities temporarily suspended[513]. In May 2022, according to epidemiologist professor Mr.Tsiodras, all citizens will come in contact with COVID-19, however vulnerable and unvaccinated citizens are the most high-risk groups. In addition, he suggested that an estimated 80% Europeans already came in contact with the virus and emphasized that hybrid immunity has been achieved in both Greece and other European nations, namely a combination of vaccinations, natural disease and good weather conditions which pave the ground towards normality (Ertnews, 2022)[514]. Professor Tsiodras emphasized that an early diagnosis of symptoms and administration of antiviral therapies is also important in saving the lives of high-risk groups whereas stressed out the importance of wearing

[509] e.g. runny nose, pharyngalgia, fever, cough, respiratory distress, etc.
[510] https://eody.gov.gr/wp-content/uploads/2021/06/odigies-idrymata-chronios-paschonton-kai-%CE%9C%CE%A6%CE%97-20210604.pdf.
[511] https://www.cnn.gr/oikonomia/story/297429/koronoios-ta-nea-metra-stirixis-gia-ergazomenoys-kai-epixeiriseis.
[512] Ibid.
[513] Ibid.
[514] https://www.ertnews.gr/eidiseis/epistimi/evzoia/ygeia/s-tsiodras-dyskolo-na-provlefthei-to-mellon-tis-covid-19/.

masks and social distancing, while observed to be utterly unyielding in retaining the measure of wearing masks in pharmacies, hospitals and public transportation (Naftemporiki, 2022)[515].

Medical professionals in **Greece** are recognized as one of the most negatively impacted target groups by COVID-19. At the 15th Panhellenic Scientific and Professional Nursing Conference of the Greek Nurses an extensive reference was made on the pandemic and the negative impact on the mental health of nursing staff while praised the contribution of the healthcare professionals who "are the backbone of the National Health System", stressing that "during the pandemic, our nurses managed to keep the NHS standing, always staying by the side of our sick fellow citizens" by the Greek Deputy Minister of Health (Amma, 2022)[516]. Based on the results of a survey which was conducted among 402 employees at the "Attikon" Hospital, the epidemic had a significantly detrimental effect on the mental health of the healthcare professionals. According to the research findings of this survey, high rates of anxiety, depression, insomnia and anxiety, were recorded. At the same time, healthcare professionals faced stigmatization within their communities, as their relatives and fellow community members avoided contact due to fear of potentially being infected with COVID-19. In addition, healthcare personnel demonstrated high rated of fatigue (67.9%) and burnout (42.9%)[517].

In relation to education as schools were gradually returning to an in-person modus operandi, the well-being and academic performance of students due to school prolonged closure remained as the major question. For this case, the Organisation for Economic Co-operation and Development suggests that even though schools have reopened, the imprint of their closure is strong and will persist for a long time (OECD, 2022)[518][519]. A report identified a correlation between the duration of the closure and the academic performance of students in a 2018 PISA reading test. As can be observed, the lowest performing participants were countries in which in-person learning days were lost due to COVID-19, whereas best performing countries shut schools down for a relatively short time, which highlights learning inequalities in a worldwide scale. In addition, according to OECD's Education and Skills Directorate Andrea Schleicher, the learning progress and opportunities that were lost are severe and are attributed to political decisions, however stresses what social footprint the pandemic has left on students. According to Mr. Schleicher the longer schools remain closed, the greater the learning loss but more importantly, school attendance is not interpreted only as in a transaction, during which students simply receive learning content but is an important social context that influences social experiences, therefore if students are left out then their social networks and their well-being is equally impacted (Kitsikopoulos, 2021)[520]. Moreover, according to speech-language pathologist Maria Rousohatzaki, children of all ages face difficulties and the severe consequences of COVID-19 such as poor socialization, addiction to electronic devices and insecurity, highlighting the importance of socialization within schools and outdoor/indoor playgrounds for children in preschool age. Since non-pharmaceutical interventions introduced movement limitations and prohibited gathering in high human density areas, parents are observed to be extremely fatigued, tense and hyperactive who in turn encounter difficulties in discovering ways to communicate in an effective manner with their

[515] https://m.naftemporiki.gr/story/1859762/loimoksiologoi-i-epomeni-maxi-ton-epistimonon-tha-einai-me-ta-poluanthektika-mikrobia.
[516] https://www.amna.gr/health/article/646315/Z-Rapti-I-epidimia-eiche-simantika-epizimia-epidrasi-stin-psuchiki-ugeia-ton-ergazomenon-ston-tomea-tis-ugeias.
[517] Ibid.
[518] https://oecdedutoday.com/education-recovery-after-covid/.
[519] https://link.springer.com/chapter/10.1007/978-3-030-81500-4_1.
[520] https://gr.euronews.com/2021/05/24/pandemia-sxoleia-synepeies-mathites.

children at home. Moreover, the socialization that takes place within schools is a crucial part of children development and according to Ms. Rousohatzaki, alternative options cannot substitute entirely face-to-face teaching and socialization[521]. Another negative social consequence of the COVID-19 and social isolation measures revolves around the transmissibility of the virus and citizen consciousness which can lead to strengthening "xenophobia", interpreted as in avoiding any person who is considered an outsider to citizen's social cycle, which can extend towards all non-familiar individuals. This may likely be the outcome of emotional isolation which is expressed in the form of anxiety disorder and depression, anger and pressure. It has been observed that remote communication, whilst restricting face-to-face contacts, has a significant impact on interpersonal and social relationships, which require in-person contact to establish themselves on a physical and emotional level (Athanasiou, 2021)[522].

The negative impacts particularly concerning the hospitality and tourist industry, upon assessment of Mediterranean economies, Greece had a better performance in comparison to Italy, Spain and Croatia, while is on par with France, which has a diversified economy and is less dependent on tourism while performed a little worse than Portugal. Overall, Greece has balanced the weight between health and economic impact which is interpreted as a great success in terms of protecting the health of citizens and without sustaining a disproportionate economic penalty (Stratopoulos, 2021)[523]. There is no indication that the perception of vulnerability in Greece has changed in comparison with the prior classification of vulnerable populations from COVID-19. A prime example of vulnerable populations are elderly citizens, migrants, refugees, impacted employees with and/or without underlying diseases, such as diabetes or obesity, are considered more vulnerable to serious illness even if they are vaccinated. Vulnerable populations require an increased, tailored socio-economic protection framework to mitigate the negative effects of the pandemic (TaxHeaven, 2022)[524].

3.4.6 Ireland

Since the COVID-19 pandemic began the government has provided a range of support. With a particular on business support, some examples of the initiatives introduced include the following:

The Irish government with the outbreak of the pandemic provided multiple types of support especially for businesses. More precisely, regrading **financial support** the government introduced the **Employment Wage Subsidy Scheme (EWSS)** by replacing the Temporary Wage Subsidy Scheme (TWSS), the EWSS provided a flat-rate subsidy to qualifying employers based on the numbers of eligible employees registered in the payroll and gross pay to employees (Employment Wage Subsidiary Scheme, 2021)[525]. For most businesses, the EWSS lifted on 30 April 2022. For businesses highly affected from measures introduced in December 2021, the EWSS came to an end on 31 May 2022 (Citizens Information, n.d.)[526]. Another initiative of support was the **COVID-19 Credit Guarantee Scheme**, which was introduced in September 2020. The scheme was designed to assist with supplementary lending to

[521] Ibid.
[522] https://www.psychologynow.gr/arthra-psyxologias/koinonia/koronoios/10432-epistrofi-stin-kanonikotita-kai-oi-epiptoseis-tou-koronoioy.html.
[523] https://www.protagon.gr/themata/covid-19-ki-omws-i-ellada-ta-katafere-kalytera-apo-pollous-evrwpaious-44342266956.
[524] https://www.taxheaven.gr/news/59104/self-tests-mono-sta-paidia-me-symptwmata-meta-tis-diakopes-kai-thn-epistrofh-sta-sxoleia-oloklhrh-h-shmerinh-paroysiash-apo-to-yp-ygeias.
[525] https://www.gov.ie/en/service/ead8c-employment-wage-subsidy-scheme-ewss/.
[526] https://www.citizensinformation.ie/en/employment/types_of_employment/self_employment/supports_for_businesses_covid19.html.

Small Business Enterprises (SMEs), Primary Producers and small Mid-Caps[527] who were affected by the COVID-19 pandemic (Finance Ireland, n.d.)[528]. Under the scheme, loans ranged from €10,000 to €1 million, for terms of up to five-and-a-half years (Citizens Information, n.d.)[529]. On 17 January 2022, Tánaiste (the deputy head of the government of Ireland) publicised the extension of the scheme, which remain until 30 June 2022 (ibid).

The Online Retail Scheme was a support initiative, which run from 5 May-1 June 2022 and provided funding up to 80% of the entitled project cost (80,000 euros max), for first time applicants**,** 50% of the eligible project cost up to 80,000 euros, for applicants who were awarded funding in the previous Online Retail Scheme calls (Citizens Information, n.d.)[530]. Conditions applied included applicants being Irish based retail enterprises with 10 or more full-time employees (ibid). **The Digitalisation Voucher,** it was issued for companies in the manufacturing and internationally trade service sectors valued of 9,000 euros (ibid). Eligible businesses could use the voucher to purchase technical or advisory services from official providers, in order to apply digital tools and techniques in their business (ibid).

In Ireland, the target populations of the government's responses have been those whose health considered to get highly affected from COVID-19. They were distinct in two groups: "very high risk" (or "extremely vulnerable") and "high risk" groups. The Health Service Executive (HSE) defines these groups by age and medical conditions. For instance, the ''very high-risk'' group included people over 70 years old and/or with down syndrome, cancer, patients, patients with unstable or severe cystic fibrosis, diabetic or people with a BMI over 40 etc (Health Service Executive, n.d.)[531]. The ''high-risk'' group included people over 55 years who were not fully vaccinated alongside with the booster dose, blood cancer patients in the past 5 years and patients with chronic heart disease etc (ibid)[532].

While the initial advice in March 2020 was these group of people to stay at home, from April 2021, the advice has changed in line with the ease of restrictions (Health Information and Quality Authority, 2021)[533]. The HSE website provided specific advice to persons in the ''high risk'' categories in terms of 'going out' and 'staying safe at home' and 'what the people you live with should do'(Health Service Executive, n.d.)[534]. The website also provided advice on immune system and visiting nursing homes and residential care facilities and COVID-19 and pregnancy (Ibid)[535].

In addition to the medically high-risk groups, the Irish Government put in place initiatives to help mitigate the impact of COVID-19 on other socially vulnerable groups. The HSE National Social Inclusion Office is tasked with providing advice on socially vulnerable groups in Ireland. In March 2021 the HSE office stated that six groups ((i) Travellers; (ii) Roma; (iii) persons in homeless settings; (iv) persons in

[527] A Small Mid-Cap is an enterprise that is not an SME but has fewer than 500 employees. Additional information is available at: https://www.grantthornton.ie/insights/blogs/summary-of-packages-and-supports-available-through-enterprise-ireland/.
[528] https://www.financeireland.ie/products/sme-agri-finance/sbci-funding-for-smes/.
[529] https://www.citizensinformation.ie/en/employment/types_of_employment/self_employment/supports_for_businesses_covid19.html.
[530] https://www.citizensinformation.ie/en/employment/types_of_employment/self_employment/supports_for_businesses_covid19.html.
[531] https://www2.hse.ie/conditions/covid19/people-at-higher-risk/overview/.
[532] https://www2.hse.ie/conditions/covid19/people-at-higher-risk/overview/.
[533] https://www.hiqa.ie/sites/default/files/2021-12/Rapid-review-of-protective-measures-for-vulnerable-groups.pdf.
[534] Supra note, 513.
[535] Ibid.

addiction settings; (v) persons in women's refuges; and (vi) persons in direct provision) should be prioritised alongside with the medically vulnerable for vaccination prioritization since potential people in these groups are "prematurely aged or have chronic disease risks" (Fitzgerald & McKenna, 2021)[536]. The recommendation was not fully adopted in the Immunisation Guidelines established by the independent National Immunisation Advisory Committee, the 'Traveller and Roma communities' as well as 'people who are homeless' were included in the 16-64 age group for vaccination (Health Service Executive, 2022)[537].

To assist Travellers groups, the 'Traveller COVID-19 Accommodation Preparedness Checklist' pilot was launched in October 2020 in Sligo, Donegal and Leitrim due to the disadvantages faced by the Travelling community in terms of access to healthcare services. This pilot was aimed at strengthening the preparedness and infection prevention and control in Traveller accommodations. On 29 July 2021, a report was published outlining the results of the pilot proving that the initiative offered various benefits in Traveller's health.

Other governmental and NGO initiatives created to minimise health inequalities experienced by the Traveller and Roma communities in Ireland during the early stages of the pandemic, included the HSE Social Inclusion's National COVID-19 Traveller and Roma response team (formed in March 2020) and the Traveller COVID-19 Helpline which were also evaluated by a study published by practitioners in June 2021. The study found that the interventions "contributed to minimise the potential widening of health inequities during the initial response to the pandemic". NGOs and healthcare providers in Ireland have worked collaboratively through pre-pandemic Traveller Health Units. According to the study, partnership working was against crucial to success. Some of the findings included:

- *"… one of the essential strategies introduced was the establishment of new community-health partnerships at a national level, with a broader range of partners including specialists in public health medicine. These partnerships adopted a successful approach aimed at curbing the spread of the virus by coupling the medical response with a social response and through the synergy of multiple partners from different sectors."*
- *"Culturally sensitive communications and targeted public health measures helped to decrease inequities in access to healthcare and exposure to the virus through provision of isolation facilities, hygiene kits and accessible information on COVID-19 which resonated with Traveller culture's belief system." (Villani et al, 2021)[538].*

Ireland's nursing homes community was highly affected from COVID-19, especially in the early stages of the pandemic. This led to a COVID-19 'Nursing Home Expert Panel' report in August 2020 which included a series of recommendations. Following the report an inter-agency Implementation Oversight Team was established to oversee implementations of the recommendations. The fourth progress report on the recommendations was published on 21 June 2022 (Department of Health, 2020)[539]. In the report it was stated that multiple short- and medium-term recommendations from the Expert Panel - such as free PPE, access to expert advice and support via COVID-19 response teams, a serial testing programme, IPC training and guidance, and financial supports - were now mainstreamed into

[536] https://www.hse.ie/eng/about/who/primarycare/socialinclusion/about-social-inclusion/researchreports/vaccine-approach-for-vulnerable-groups.pdf.
[537] https://www.hse.ie/eng/health/immunisation/hcpinfo/guidelines/covid19.pdf.
[538] https://doi.org/10.1177%2F1757975921994075.
[539] https://www.gov.ie/en/publication/c7f5b-covid-19-nursing-homes-expert-panel-report-implementation-oversight-team/#progress-reports.

nursing homes (Department of Health, 2020)[540] In terms long term recommendations, the report included the provision of €22 million in Budget 2022, legislative proposals to enhance governance of nursing homes, development of a National End of Life survey and End of Life care Education, and ongoing work on the challenges faced by the carer workforce (Ibid)[541].

On 12 May 2022, the Healthcare Information and Quality Authority (HIQA) published an updated analysis on factors associated with COVID-19 outbreaks in nursing homes in accordance to the 6.7 recommendation of the Expert Panel's 2020 report. The analysis was based on data up to 12 May 2021 (citing limitations on data thereafter due to a cyber-attack on HSE systems). It was observed that the reasons which made nursing homes be riskier for COVID transmission were: the "higher community incidence of COVID-19", "the number of beds in a nursing home" and "close proximity to other nursing homes" (HIQA & HPSC, 2022)[542]. An increase in confirmed cases in nursing homes during the third wave was also observed. A core conclusion of the analysis was the substantial impact that Ireland's vaccination programme generated in terms of reducing COVID-19 outbreaks in nursing homes.

3.4.7 Israel

It is difficult to identify the main target population of the governmental responses. Certain Ministries targeted specific groups (the Ministry of Welfare targeted people who were supported by the Social Security, or residents of welfare facilities[543], the MoH targeted COVID-19 patients[544], Ministry of Economy- unemployed and small business places that were not active due to COVID-19, etc.).

Finding accessible information on the respective time period is challenging. There are very few articles that are targeting the time between April 2021 and May 2022. Reasons for that might be the "COVID-19 fatigue" after almost one and a half years of living with COVID-19; the fact that during the respective year no new developments, initiatives or legislation was introduced, and what was done was mainly re-taking steps already seen before; the relatively short time between the mentioned months and the time of writing this report- maybe as we are getting farther from the more intense days publications are fewer and will cover longer periods of time; and the fact that as COVID-19 became "reality", other news got to the headlines and to the attention (two elections and unstable governments, a new president was elected, Meron mountain stampede, Operation Guardian of the Walls, Beijing Olympic games).

The Israeli governmental response mechanism included the implementation of several mobility and movement restrictions to contain the virus (Government of Israel, 2021)[545], after the specialized administrative authority and power has been granted to the government in order to address COVID-19 (Government of Israel, 2021)[546]. These restrictions apply for business activities in workplaces[547],

[540] Department of Health. (2020). *COVID-19 Nursing Homes Expert Panel Report: Implementation Oversight Team: Fourth Progress Report on the Implementation of the COVID-19 Nursing Homes Expert Panel Recommendations.*
[541] Ibid.
[542] https://www.hiqa.ie/reports-and-publications/health-technology-assessment/factors-associated-outbreaks-sars-cov-2.
[543] https://www.gov.il/he/departments/policies/molsa-corona-executive-circulars-036-2020-003.
[544] https://www.gov.il/he/departments/policies/dec155_2021.
[545] https://www.gov.il/he/departments/policies/dec995_2021.
[546] https://www.gov.il/he/departments/policies/dec_714_2021.
[547] https://www.gov.il/he/departments/policies/dec985_2021.

public spaces[548], in the field of transportation[549] which include the modus operandi of airports and flights (Government of Israel, 2021)[550]. To mitigate the negative impact of COVID-19 in the socio-economic domain, the Government of Israel has rolled out financial assistance and welfare support (2022)[551] for Israeli and Palestinian citizens[552]. In specific, tailored response addressed the needs of the hospitality industry[553], employees affected by the pandemic[554] (2022)[555] providing the opportunity to work remotely[556], the transportation industry[557], students and educators[558], foreign nationals that would visit Israel during the pandemic[559] and financial assistance to business owners that paid rent (Government of Israel, 2021)[560].

Concluding, it is evident that the governmental response of Israel has changed through the duration of the pandemic as suggested by a relevant study, according to which, the protection of children was made extremely challenging due to social isolation, reduced social services and maltreatment. Upon assessment of 28 governmental policy documents and 22 relevant media articles, Katz and Cohen (2020)[561] concluded that the initial governmental policies in protecting children were inadequate as the initial decision was to shut down several social services such as residential care units which accommodated the needs of young vulnerable citizens and declared social workers as “non-essential”, which however have been revoked after a few weeks due to child advocate media pressure which resulted in policy changes (ibid). Tailored responses towards children have mainly revolved around vaccination (Times of Israel, 2021)[562], (France24, 2021)[563].

3.4.8 Italy

In Italy a National influenza pandemic preparedness and response plan (“Piano nazionale di preparazione e risposta a una pandemia influenzale”) was already in place since 2003, according to WHO guidelines and recommendations, which aimed to strengthen the pandemic preparedness at national and local level Nonetheless, when the pandemic started, the pre-existing pandemic plan was ignored and the virus circulated freely in Italy with the biggest problem to be the high number of hospital clusters and healthcare personnel who became infected. Additional challenges were imposed by the decision by the Italian government to issue a set of decrees that gradually increased restrictions within lockdown areas (“red zones”), which were expanded until they were ultimately applied to the entire country. As a result, Italy induced the spread of the virus rather than preventing it. The selective

[548] https://www.gov.il/he/departments/policies/dec612_2021.
[549] https://www.gov.il/he/departments/policies/dec972_2021.
[550] https://www.gov.il/he/departments/policies/dec999_2021.
[551] https://www.gov.il/he/departments/policies/molsa-corona-executive-circulars-037-2020-003.
[552] https://www.gov.il/he/departments/policies/palestinians_employments_in_hotels_gouta_0721.
[553] https://www.gov.il/he/departments/policies/dec175_2021.
[554] https://www.gov.il/he/departments/policies/dec436_2021.
[555] https://www.gov.il/he/departments/policies/daysoffaccumulation20202021.
[556] https://www.gov.il/he/departments/policies/dec295_2021.
[557] https://www.gov.il/he/departments/policies/dec982_2021.
[558] https://www.gov.il/he/departments/policies/phs-420137720.
[559] https://www.gov.il/he/departments/policies/dec190_2021.
[560] https://www.gov.il/he/departments/policies/dec601_2021.
[561] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7538112/.
[562] https://www.timesofisrael.com/as-omicron-rises-bennett-tells-parents-protect-your-kids-5th-covid-wave-is-here/.
[563] https://www.france24.com/en/middle-east/20210823-israel-starts-covid-antibody-testing-for-children-three-and-older.

approach to initially lock down some regions but not others might have inadvertently facilitated the spread of the virus in regard with the fact that when Authorities announced the closing of Northern Italy, a massive exodus to Southern Italy was provoked which undoubtedly spread the virus to regions where it had not been present.

Moreover, in the onset of the pandemic, the problem was the data paucity. More specifically, it has been suggested that the widespread and unnoticed diffusion of the virus in the early months of 2020 may have been facilitated by the lack of epidemiological capabilities and the inability to systematically record anomalous infection peaks in some hospitals. The lack of protocols for managing emergencies was also acknowledged in the response of the territorial health systems. The "Piano Nazionale in risposta a un'eventuale emergenza pandemica da COVID-19" [National Health Plan in response to a possible COVID-19 pandemic emergency] established epidemiological surveillance of COVID-19 cases in Italy, on the basis of the case definitions prepared by the WHO and the technical specifications provided by the ECDC. Moreover two additional documents replaced the previous influenza pandemic plans: "Prevenzione e risposta a COVID-19: evoluzione della strategia e pianificazione nella fase di transizione per il periodo autunno-invernale" [Prevention and response to COVID-19: evolving strategy and planning in the transition phase for the autumn-winter period] and "Piano strategico-operativo nazionale di preparazione e risposta a una pandemia influenzale (PanFlu) 2021-2023" [National Strategic-Operational Plan for Pandemic Influenza Preparedness and Response (PanFlu) 2021-2023]. The first one refers to the second pandemic phase, while the last is valid from the end of the state of emergency.

In addition to that, since 28th February 2020, the "Istituto Superiore della Sanità" (ISS) has been coordinating a surveillance system that integrates at individual level the microbiological and epidemiological data provided by the Regions and Autonomous Provinces and ISS National Reference Laboratory for SARS-CoV-2. At the beginning of every day dedicated infographic show – with graphs, maps and tables – a description of the spread in time and space of the COVID-19 epidemic in Italy and a description of the characteristics of the people affected. Twenty-one indicators, set out by the Minister of Health's decree of 30th April 2020, are part of a set of tools that help to understand the progress of the epidemic and the risk of uncontrolled and unmanageable transmission in Italy. The results of this work are national and regional reports shared with the relevant health authorities, which survey the evolution of the epidemic in the country, noting, for example, the phase change and accelerations in transmission that have occurred since the end of September 2020. The indicators, 16 of which are "compulsory" while 5 are optional, allow the evaluation of three aspects of interest for risk assessment: probability of spread, impact and territorial resilience ("Come funziona l'analisi del rischio epidemico - ISS", 2020). Once the data have been collected and tested, an analysis is carried out using two algorithms, one for probability and one for impact. Combining the results of these into a risk matrix (annexed to the Health Ministerial Decree of 30th April 2020), the risk level itself is calculated. The document "Prevenzione e risposta a COVID-19: evoluzione della strategia e pianificazione nella fase di transizione per il periodo autunno-invernale" [Prevention and response to COVID-19: strategy development and planning in the transition phase for the autumn-winter period], circulated by Ministry of Health (Circular No. 0032732 of 12th October 2020), offers a guide, for the autumn-winter seasons, to responding to the epidemic, taking into account the different levels of risk that may occur over time and at the same time in the different Italian Regions as the following graphs indicatively demonstrate.

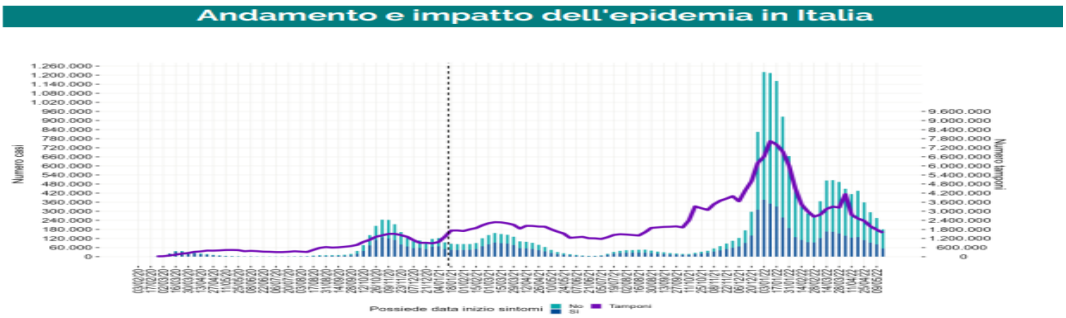

Figure 6. Weekly cases of covid-19 reported in Italy by date/diagnosis (left) and number of weekly swabs performed (right)[564].

Although COVID-19 cases are higher in number than in previous pandemic phases (figure 1), the CFR is decreasing (figure 2). The implemented measures took into account hospitalisations and infections among the adult and elderly population.

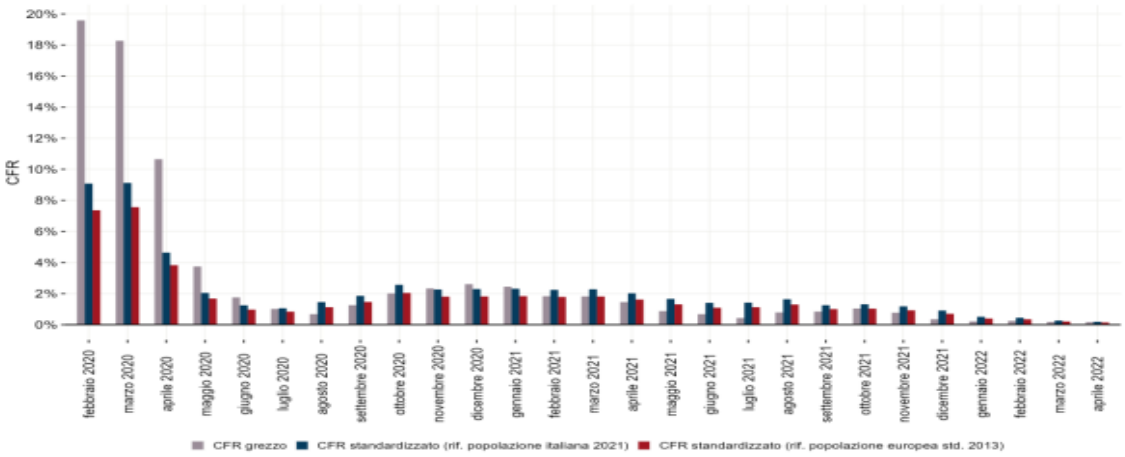

Figure 7. Trend by month of the crude and age-standardised Case Fatality Rate (CFR) compared to the Italian population (2021) and the European population (2013)[565].

The COVID-19 pandemic had a huge impact on the whole population. The measures adopted by the central government during the pandemic had also strong effects on different populations. Homeless people, people living with non-communicable diseases, people living with disabilities, people living with HIV (World Health Organisation- Regional Office for Europe), people living in detention facilities, workers and precarious workers, children, healthcare professionals, migrants and refugees living in informal settlements (MEDU and UNHCR).In regard to health effects, according to a study conducted by the National Institute of Health -in addition to very frail people and elderly people- disadvantaged population groups may be at higher risk of morbidity and mortality from SARS-CoV-2 infection due to

[564] Source https://www.epicentro.iss.it/coronavirus/bollettino/Bollettino-sorveglianza-integrata-COVID-19_25-maggio-2022.pdf.
[565] Source https://www.epicentro.iss.it/coronavirus/bollettino/Bollettino-sorveglianza-integrata-COVID-19_25-maggio-2022.pdf.

living and working conditions and barriers to accessing healthcare: foreign individuals, including economic migrants, short-term travellers and refugees seem to experience a delay in diagnosis of SARS-CoV-2 and this is probably due to language, administrative, legal, cultural and social barriers that may hinder rapid access to health services, possibly leading to delayed diagnosis (Fabiani et al., 2021).

Much research in Italy also focused on mental health and psychological issues linked to COVID-19 crisis (e.g. social withdrawal, isolation, fear of contracting the virus, uncertainty of the future etc) and perception of the levels of solidarity during the pandemic (Morein Common, 2021). A study conducted for the International Journal of Environmental Research and Public Health, showcased that mental health and individual adjustment to the COVID-19 situation can be explained by socio-demographic factors, health-related factors, lifestyles, attitudes and behaviours, lockdown experience, and place of residence. According to this study, better adaptation and mental health are observed among men, people with a higher educational level, people with lower sadness, nervousness, and burnout, and people whose health situation did not worsen with the pandemic. In terms of lifestyle, a better adaptation seems to be related to a better quality of sleep, fewer nightmares, a higher practice of physical activity, and less consumption of processed foods and sweets.

Regarding the issue of vulnerability, relevant research showed how inequalities increased in all age groups during the pandemic (CIV-N, COVID-19 Italy Vulnerabilities). The data confirmed that COVID-19 did not have the same impact on the entire population. The people most affected are people from the most disadvantaged economic groups and those with mental health problems, disabilities and living with comorbidities. People who live in poverty and often have unstable working conditions and incomes have been most at risk of losing their jobs. This increasing financial uncertainty further damaged their mental health and had a negative impact on their stress level. In addition, people with mental health problems or living with various illnesses suffered from the inability to access mainstream health services and receive the appropriate support that was guaranteed before the pandemic at both school and work levels. The restraining measures also highlighted and exacerbated some pre-existing social problems, including gender-based violence, which increased as a result of the lockdowns (World Health Organisation- Regional Office for Europe).

Monitoring the impact of the Covid-19 pandemic on different economic-productive sectors with a stress test approach conducted by the National Centre for Economics and Labour (CNEL), revealed that "since the days of the lockdown, 68.7% of Italian households have managed to keep their income unchanged and, indeed, 2.7% have even seen their economic condition improve. Approximately one third, on the other hand, risked falling below the waterline, finding themselves with fewer resources at their disposal and not being able to return to normality. While for 16.7% of households (approximately 4 million families) the losses were limited to up to 25% of income, for 7.7% the reduction was between 25 and 50% (almost two million families) and for 5.5% (just under one and a half million families) the drop was more than 50%. In summary: 18 million households are saved, 7.5 million households risk asphyxiation" (Consiglio Nazionale Economia e Lavoro- CNEL).

In this context, the implemented measures concerned also the support of individuals and families who have suffered a drop in income and the help for businesses to prevent them from closing due to lack of liquidity. This programme has been partially initiated by the "Sostegni" Decree (Support Decree] ("LEGGI ED ALTRI ATTI NORMATIVI"), when, in March 2021, anti-poverty funds were allocated to support families and workers, establishing funds destined for municipalities for the adoption of urgent food solidarity measures as well as to provide support to families in need with regard to the payment of rents and household utilities. The decree also renewed the Emergency Income (around 400 and 800

euro, depending on the size of the household and the presence of disabled or dependent members) for further four instalments, covering the months of June, July, August and September 2021. The Fund to combat child educational poverty, with the aim of supporting disadvantaged children was also renewed and increased for 2022. The planned measures also strengthened aid for companies and VAT holders affected by the crisis, covering fixed costs, such as rents and utility bills, as well as interventions to foster credit and liquidity and tax deferrals and exemptions. There were also extra resources for young people and local authorities. The National Recovery and Resilience Plan (PNRR) enhances the economy through the launch of numerous public works, non-refundable investments and loans ("Gazzetta Ufficiale").

Children and young people were also affected by the pandemic and the restrictive measures taken: according to the CIV-N report, school closures had an impact on the health and well-being of young people. School closures meant that children with behavioural disorders could no longer receive the same support to which they had been used to and that the educational gap between children from different socio-economic groups was widening. According to the CNEL report, during the lockdown, distance learning (DAD) was not able to engage all students, despite the fact that schools made an effort to fill the gaps in technology and connectivity as much as possible. In April 2020, only 1.2% of the more than 2,800 school leaders interviewed reported that they had succeeded in engaging all students; conversely, more than 10.0% of students were missing in 18.0% of institutions. In addition, 53.6% emphasised that with DAD, students with special educational needs were not fully involved.

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3.4.9 Portugal

In regard to the governmental support agencies which created during the pandemic on April 19th 2021, amends were made to the Order nº 11737/2020, of November 26, that determined the constitution of a **task force** for the elaboration of the **Vaccination Plan** against COVID-19 in Portugal[566]. The time elapsed and the accumulated experience suggest that an adjustment should be made, both in the structure and in the competences assigned to the task force, in order to adapt them to the evolution of the vaccination process. This Order states the preparation, conduction, and execution of the 'Vaccination Plan against COVID-19 in Portugal', comprising a coordinating group and three support groups, with the mission of:

- Establish the integrated strategic planning of the vaccination process, involving the logistical, executive and communicational components;
- Coordinate and articulate the efforts of government departments involved in the vaccination process.

The task force coordinating group was composed by Vice Admiral Henrique Eduardo Passaláqua de Gouveia e Melo, who leads the coordinating group of the task force and the support groups and reports to the Minister of Health, articulating, through their respective representatives, with the Ministers of National Defense and Internal Administration in the context of their respective competences.

Moreover, the coordinating group is responsible for:

- Advising and advising the task force coordinator in his/her duties;

[566] Despacho n.º 3906/2021, 2021-04-19.

- Guarantee the connection with the structures that they represent, in the task force, for the purposes of the macro articulation of the necessary support for the vaccination process.

The task force coordinator was responsible for:

- Articulate, monitor and evaluate the implementation process of the approved Vaccination Plan;
- Define and adapt, within the framework of availabilities and needs at each moment, the strategy for implementing the Vaccination Plan, in accordance with the technical guidelines of the competent authorities;
- Monitor and evaluate the efficiency of the implementation process and propose the adaptation, with the competent entities of the Ministry of Health, of the established procedures, whenever deemed necessary and appropriate;
- Promoting and leading the dialogue with all public and private bodies, and with professionals deemed relevant to the vaccination process;
- Promote the articulation and enhancement of the territorial network implemented, within the framework of the National Health Service and other public health structures, in accordance with the needs arising from the implementation of the Vaccination Plan;
- Ensure the execution of other activities related to the Vaccination Plan that are entrusted to it;
- Articulate with the responsible bodies in the Autonomous Regions of Madeira and the Azores all aspects necessary for the implementation of the Vaccination Plan in the respective regions;
- Define and adapt, according to the needs, the constitution of the support nucleus for the conduction of the coordination function.

The task force coordinator is directly supported by a support group, made up of soldiers and civilians provided by the Armed Forces Branches and the General Staff of the Armed Forces. Support groups are assigned the following designations, functions and composition:

- Strategic Planning Support Group
  - Functions: To plan the vaccination process in the medium and long term, through the management of the Vaccination Plan that allows its adaptation to the external and internal conditions that affect it;
  - Composition: 1 representative of each of the following entities – DGS, INFARMED (National Authority for Medicines and Health Products), SPMS (Shared Services of the Ministry of Health), SUCH (Common Use of Hospitals Service), ACSS (Central Administration of the Health System), and 1 representative of the support group to be designated by the task force coordinator.
- Execution Support Group:
  - Functions: To coordinate inter-ministerial efforts to carry out the vaccination process, in accordance with the approved plan and defined strategic management, through permanent work in the Situation Room;
  - Composition: 1 representative of each of the following entities – DGS, INFARMED, each of the Regional Health Administrations, INSA (National Institute of Health Doctor Ricardo Jorge), SPMS, SUCH, General-Staff-State of the Armed Forces, National Emergency and Civil Protection Authority, GNR (Republican National Guard), PSP (Public Security Police), and 1 representative of the support group to be designated by the task force coordinator.

- Communication Support Group:
  - Functions: Communicate the vaccination process, adapting it to all target audiences, in articulation with the Office of the Minister of Health, which, in turn, articulates with the Office of the Prime Minister, when necessary;
  - Composition:1 representative of each of the following entities – DGS, INFARMED, SPMS, and 1 representative of the support group to be designated by the task force coordinator.

On May 28th 2021, the Government defined the scope and specific conditions for the operation of the "IVAucher" program[567,568].The State Budget for 2021 determined the creation of the «IVAucher» program, with the aim of boosting and supporting three sectors strongly affected by the pandemic: **accommodation, culture, and restaurants**; and, simultaneously, boosting private consumption. It consists of a mechanism that allows final consumers to accumulate the amount corresponding to the entire **Value Added Tax** (VAT) borne on consumption in the accommodation, culture and catering sectors, during a quarter, and use this value during another quarter, in consumption in those same sectors. The calculation of the value corresponding to the VAT borne by final consumers is made from the amounts contained in the invoices communicated to the Tax and Customs Authority with the purchaser's tax identification number. Moreover, the VAT exemption for intra-community transfers and acquisitions of goods needed to combat the effects of the pandemic disease COVID-19is extended until December 31st 2021[569]. Later, on December 31st 2021, the effects of the VAT exemption applicable to transmissions of in vitro diagnostic medical devices and COVID-19 vaccines are extended[570].

On June 16th 2021, The Plan "Reactivate Tourism | Build the Future" was approved, aiming to stimulate the economy and tourist activity, and to overcome the objectives and goals of economic, environmental and social sustainability defined in "Tourism Strategy 27", promoting tourism throughout the year and throughout the territory, highlighting the topics of investment support, training of companies and qualification of human resources, promotion and sales programs for the placement of their products on the markets. At the same time, the Government will give priority to the issue of air accessibility and mobility, fundamental areas for the competitiveness of the destination[571].

On April 19th 2021, Spark Foundation which was established to **face the social impact of the COVID-19** pandemic, based in Lisbon, and whose areas of action are supporting small and medium-sized businesses, families, employment and housing is recognized by the Secretariat of State for the Presidency of the Council of Ministers, André Moz Caldas[572].

On February 15th 2021, the Government had announced the reinforcement of support for the economy and employment, namely in the culture sector, it was necessary to amend the Regulation on Cultural Support Measures in the context of the response to the COVID-19 disease pandemic, approved by Ordinance no. 37-A/2021, with regard to extraordinary support for artists, authors, technicians and other cultural professionals and support within the scope of the Directorate-General for Cultural Heritage, the Directorate-General for Books, Archives and Libraries (DGLAB) and the Regional Directorates of Culture. Hence, on April 7th 2021, first amendment to the Regulation of Cultural Support

[567] Decreto Regulamentar n.º 2-A/2021, 2021-05-28.
[568] Portaria n.º 119/2021, 2021-06-07.
[569] Lei n.º 33/2021, 2021-05-28.
[570] Despacho n.º 12870-A/2021, 2021-12-31.
[571] Resolução do Conselho de Ministros n.º 76/2021, 2021-06-16.
[572] Despacho n.º 3897/2021, 2021-04-19.

Measures was made in view of the requests made, there was a need to improve some of the criteria for **granting extraordinary support to artists, authors, technicians and other cultural professionals**. Thus, an alternative criterion for verifying the registration of workers with the finances was added, as well as it was allowed applicants to have some income from work for others, covering in particular very short-term employment contracts[573]. On September 3rd 2021, due to the significant participation, an additional effort directed at the culture sector was justified, especially directed at professionals and structures that are not part of the business fabric, with an expansion of the funding sources mobilized for this purpose[574].

On April 7th 2021, there was alterations by parliamentary appreciation of Decree-Law no. 10-A/2021, of February 2, establishing exceptional mechanisms for the **management of health professionals to perform assistance activities**, within the scope of the COVID-19 pandemic disease[575]. The management mechanisms provided for in this decree-law could only be used to deal with the exceptional and temporary increase in functions directly related to the COVID-19 disease pandemic, including the respective Vaccination Plan, and as long as that need remained, as well as and for the recovery of suspended care activity, in terms of primary health care and hospital care.

Moreover, alterations by parliamentary appreciation of Decree-Law no. 8-B/2021, of January 22, which establishes a set of **support measures regarding school and non-school face-to-face activities**, were made for instance regarding[576]: single-parent families with a dependent child or dependent, under 12, the parent may opt for teleworking or exceptional family support, even if there are other forms of providing the activity, namely by teleworking.

On April 16th 2021 activities of **tourism, culture, events and shows sectors** covered by the changes introduced by Decree-Law 23-A/2021, of March 24,were defined regarding partial waiver and exemption from the payment of social security contributions, and to Decree-Law 46-A/2020, of July 30, regarding support for self-employed workers, sole proprietors, managers and members of statutory bodies with management functions, and to Decree-Law 6-E/2021, of January 15, regarding the access to extraordinary support for the reduction of economic activity[577]. Contributory exemptions were established in the extraordinary support for the progressive recovery, as well as partial exemptions, especially aimed at the tourism and culture sectors, seriously affected by the current health crisis.

On April 23rd 2021, conditions for access to the **credit line** with subsidized interest rates were established for **fishing sector operators**[578]. Given that companies in the fisheries sector, producer organisations, fishermen's associations, and the processing industry continued to face cash flow difficulties due to the economic situation caused by the pandemic, and bearing in mind the recent change in the temporary framework for measures to State support approved by the European Commission, in accordance with Commission Communication C (2021) 34, of 1 February 2021. This provided for an increase in the maximum aid limit to be granted by a company active in the fisheries and aquaculture sector, to the amount total of (Euro) 270 000 gross per beneficiary, and the extension of the deadline for the conclusion of loan contracts until December 31st 2021. Later, on February 2nd

[573] Portaria n.º 80-A/2021, 2021-04-07.
[574] Portaria n.º 184-A/2021, 2021-09-03.
[575] Lei n.º 17/2021, 2021-04-07.
[576] Lei n.º 16/2021, 2021-04-07.
[577] Portaria n.º 85/2021, 2021-04-16.
[578] Portaria n.º 90/2021, 2021-04-23.

2022, amends were made the Ordinance no. 90/2021, of April 23, which established the conditions of access to the credit line with subsidized interest rates for fishing sector operators[579].

Finally, on April 26th 2021, the conditions were met for the **continuation of the strategy of progressive uplifting of the containment measures**, allowing for a gradual and phased resumption of economic activity, namely with the reopening of a number of facilities and establishments and the lifting of the suspension of teaching activities and face-to-face training. There is no need to maintain the suspension of the obligation to comply with the duty of active job search, as well as its demonstration before the public employment service, when it involves traveling in person[580].

Last but not least, on February 14th 2022, the maintenance of the **State's personal guarantees** was authorized for: the COVID-19 Economy Support Line; COVID-19 Economy Support Credit Line - Micro and Small Companies; Major Cultural Events; Sports Federations and Medium and Large Tourism Companies[581].

The exceptional situation triggered by the COVID-19 disease pandemic has required the Government to approve extraordinary and urgent measures, which guarantee social and economic support for families and companies. The evolution of the epidemiological situation worldwide and the unprecedented sharp proliferation of the number of cases of infection by SARS-CoV-2 in Portugal, determined the approval of a set of exceptional measures to ensure the reduction of the risk of transmission of the disease, but also the reduction and mitigation of the economic impacts arising from the pandemic outbreak. The efforts of the Portuguese, combined with a policy of massive testing and vaccination progression, allowed for a sustained reduction in the number of new daily cases of those infected with the COVID-19 disease, with a similar reduction in the number of cases. admitted to hospitals and the occupancy rate of intensive care units, having met the criteria identified by the experts as fundamental for controlling the pandemic. In the 2021 budget year, the Government's main priorities refocused on combating and controlling the pandemic and recovering the Portuguese economy, protecting household income, employment and business activity.

Since March 15th2021, the progressive and gradual uplifting of restrictive measures has continued, based on the epidemiological assessment and verification of pandemic control criteria, namely the assessment of the risk of transmissibility of the virus and the level of incidence, based on the approved risk matrix. This methodology allowed the weekly assessment of progress in the lack of definition in mainland Portugal and the application of local measures in municipalities with higher levels of incidence. It also made it possible to control the number of patients admitted to hospitals and the occupancy rate of intensive care units, keeping these values below the criteria identified by experts as fundamental for controlling the pandemic. In addition, on June 4th 2021, the objective of vaccination, with at least one dose, of the population over 60 years of age is in the process of being successfully completed.

The effects on all economic activities reached a dimension that at that date was not possible to anticipate, but that today, more than 12 months later, we can see that they had unprecedented impacts and severe consequences of an economic and social order worldwide, with some uncertainty. and uncertainty regarding the evolution of the disease and, consequently, its real effects in all sectors of activity. At the national level, there were also unprecedented impacts, considering the restrictions and limitations that had to be imposed to control the disease and mitigate contagion, which triggered

[579] Portaria n.º 69/2022, 2022-02-02.
[580] Despacho n.º 4225-A/2021, 2021-04-26.
[581] Despacho n.º 1932/2022, 2022-02-14.

a generalized retraction in the normal development of almost all economic and productive activities, covering different sectors. Tourism is one of the most affected sectors, and throughout this period the Government has come to find structured responses to mitigate the first wave of the pandemic, which have been prolonged, deepened and complemented by new measures, in order to contain the effects of the second. and third waves, which once again forced the imposition of strong restrictive measures.

The containment of the COVID-19 pandemic in the country is based on the early, rapid and effective identification of cases of SARS-CoV-2 infection, as a result of a programmed and targeted testing strategy, complemented by the creation of additional testing opportunities, through inter-institutional articulation. The reinforcement of laboratory capacity that has been developed, according to the principles of complementarity, integration and functional incorporation, subsidiarity, access, quality and diagnostic adequacy, has allowed the massive implementation of laboratory screenings for SARS-CoV-2, decisive to contain the spread of the virus, and, as well, contribute to the process of deconfinement. The COVID-19 disease pandemic, in addition to the dramatic health consequences and the serious economic and social crisis it caused, put the current legal framework to the test, at the constitutional, legal and status of the Autonomous Regions.

3.4.10 Spain

Restrictions affecting freedom of movement were revoked as the State of Alarm ended in May 2021. From then, regular legislation has been enough to impose individual restrictions, much less restrictive than the previous ones. Spanish law designed to protect public health (Organic Law 3/1986) foresees the capacity of regional governments to impose some restrictions to fundamental rights. This regulation was reinforced by the Royal Decree-Law approved by the Government in June 2020 (RDL 21/2020), just after ending the first State of Alarm. The Constitutional Court, however, declared this Royal Decree, contrary to the Spanish Constitution. For the Court, the judiciary power can only analyze whether a decision made by public administration fits or does not fit the rule of law if this is impugned by someone. Consequently, the previous request for judicial authorization foreseen both in the Organic Law 2/1986 and Royal Decree-Law 21/2020) is not possible since Sentence 70/2022 adopted by the Constitutional Court. Nonetheless, this authorization was applied during the pandemic[582].

The main restrictions since May 2021 had to do with the compulsory use of masks, and the Covid Passport necessary to attend events or hostelry services in some regions. Since then, there has been no need of judicial authorization, except some decisions made by Catalonia's autonomous government in December including some restrictions to reinforce social distance during December 2021, coinciding with the Omicron wave. Compulsory use of face masks in interiors was approved by the Law 2/2021, substituting the prevision of the State of Alarm which also forced to use masks. Wearing mask has been compulsory in Spain, depending on the period, both inside and outside buildings. From March 2021 to June 2021, wearing masks was mandatory both inside and outside buildings. Since June 2021, this obligation remained only in interior spaces, including shops; bars and restaurants (when citizens were not eating or drinking and only for this moment), Hospitals, public transport, universities and schools, pharmacies. In December 2021, when Spain was hit by the Omicron variant, and despite the high level of vaccination, authorities declared compulsory the use of masks also in exteriors, coinciding with Christmas. Once the Omicron wave ended, masks were again only needed inside buildings. The Royal Decree-Law 115/2022, approved in February 2022, allowed to the government to

[582] More information about Constitutional Court's decision, avaliable here: https://elpais.com/espana/2022-06-02/nuevo-varapalo-del-constitucional-al-gobierno-por-su-estrategia-juridica-contra-la-pandemia.html.

approve a Royal Decree to permit citizens not to use masks unless they go in public transports, hospitals and other health services such as pharmacies. This Royal Decree (RD 286/2022) that implied the end of using masks in interiors was finally approved at the end of April 2022.

The second restriction was relevant with the need of having a complete vaccination schedule in order to be able to go in some shops, bars, events, or travelling. Whether citizens had or not the stipulated doses of the vaccine could be proved by the Covid Passport. In general, Covid Passport has been compulsory for travelling abroad, since European Union coordinated the measure and established a common Passport for all the EU-members. To enjoy services provided by bars and stores, having a Covid Passport was only compulsory depending on the region. It was the case, for instance of the Spanish regions of Catalonia, Andalusia, Asturias, Valencian Community or Balearic Islands. In some countries, this measure intended to incentive the vaccination among population groups who refused to be vaccinated. Once omicron variant appeared, it was not clear whether vaccination could protect people against contagions or not, and the use of the Covid Passport has been severely declined. This restriction was eventually revoked since January 2022 and Covid Passport is requested only for international travels. As showcased in Deliverable 4.1., implemented restrictions impacted Spanish social and economic life severely. However, as soon as mobility restrictions were abrogated, a strong economic recovery started in Spain. Fiscal instruments designed to protect citizens of unemployment due to the suspension of economic activity, as the ERTES (an instrument to suspend the labor relationship for a period of time and recover it once the situation came back to normal), remained. According to official data, represented in figure 1, more than three million of people were benefited from the ERTE program in the first months of the pandemic, when restrictions were stronger. Since May 2021 to February 2022, the number of Spanish citizens protected by ERTEs decreased from more than 573.000 people to 120.000. During the hardest months of the pandemic, the number of individuals protected by an ERTE were over than 3 million people. Figure 1 reflects the evolution of the main fiscal instrument used to assure wage replacements when economic activity was almost suspended.

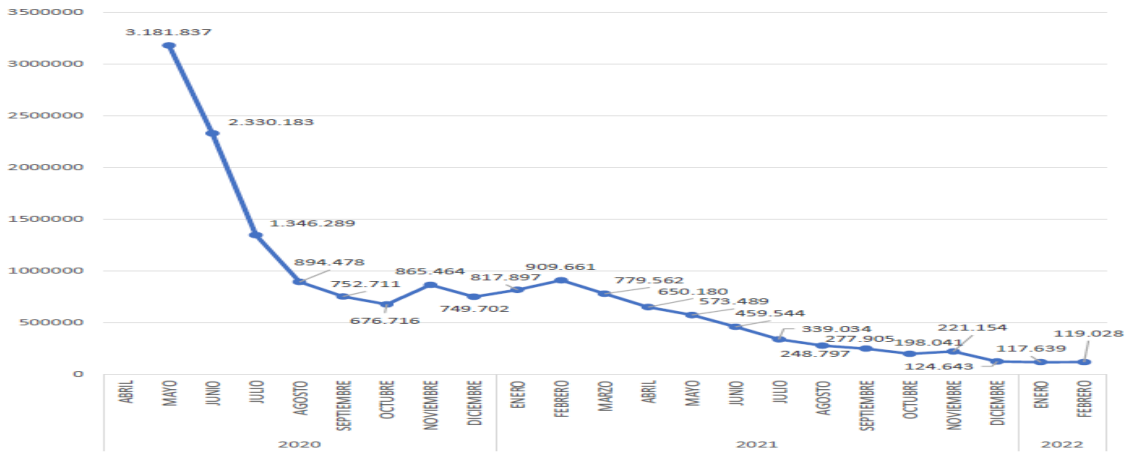

Figure 8. Evolution of people benefited from ERTEs[583].

Given the recovery of the Spanish economy, national and regional governments are focusing on applying and designing policies to implement the European Recovery Fund - Next Generation. Spain

[583] Source: own elaboration from data from the Ministry of Inclusion, Social Security and Migrations.

has received the first part of the funds and the national budget has been approved to modernize and make more competitive the Spanish Economy.

3.4.11 Sweden

During this period (on December 22nd) the government also released a plan for improving communication to the public, especially targeting groups where vaccination rates were lower compared to the average population. This task was given to the PHA, National Board of Health and Welfare, Swedish Civil Contingencies Agency, and Medical Products Agency to make sure vaccination about COVID-19 was gathered, easily accessible and updated. The Government agencies should also acknowledge aspects of dis- and misinformation in relation to vaccination (Government of Sweden, 2020)[584]. On December 21st Sweden again introduced mandatory vaccine certificates for adult foreign citizens entering Sweden from EU/EES and the Nordic countries. Other certificates showing vaccine status, recovery from COVID-19 the last six months or a recent negative test could also be valid (Government of Sweden, 2021)[585]. On December 23rd the government decided to implement stricter measures including a vaccine certificate, mandatory seating with social distance, limited numbers of attendees etc. to be used for public gatherings and public events. These regulations were strengthened on January 12th, since opening hours for restaurants and pubs were limited (close at 23.00 latest). On January 19th a new limitation of public gatherings and public events were executed and the new maximum for attendees was 500 (seated) persons. The General Director of PHA also declared that these measures were valid for all residents, both vaccinated and non-vaccinated because of uncertainty to what extent the vaccines protected from the Omicron variant of the virus (The Express, 2021)[586].

The infection rates were rising around Christmas 2021 and in the beginning of 2022, and the levels kept being high as the Omicron variant spread in Sweden during the first months of the new year[587]. What was different compared to previous waves, were the significantly higher levels of infection rates, but still less hospitalization of COVID-19 cases and lower death rates compared with earlier waves. Even if the pandemic was still prevalent in Sweden, the Government decided on February 8th to remove most of the restrictions, such as limitations for public gatherings and events, such as social distance requirements, mandatory seating, and group size in restaurants and pubs (previously 8 persons was the maximum for persons from the same group/family/company). Further, recommendations to use face masks in public transportation were also removed. Advice to avoid attendance to and organizing of sports events or other meetings were also abandoned and companies and universities were advised to start the process of ending distant work and remote teaching. Some recommendations were still in place, such as campaigns for vaccination, and advice for the non-vaccinated to avoid crowded public gatherings. In terms of traveling, EU vaccine certificates were no longer needed for travellers from EU/EES countries when entering Sweden. The PHA General Director explained the decision by first declaring that the COVID-19 pandemic still was a serious problem globally, but also that a new approach was needed, which was to learn how to live with the virus. The argument posed was that immunity in society was high and that continuing with strict measures might cause severe problems in

[584] https://www.regeringen.se/pressmeddelanden/2020/12/informationsuppdrag-om-vaccination-mot-covid-19/.
[585] https://www.regeringen.se/pressmeddelanden/2021/12/andringar-i-inreseforbuden-till-sverige/.
[586] https://www.msn.com/sv-se/nyheter/international/d%c3%a4rf%c3%b6r-g%c3%a4ller-restriktioner-%c3%a4ven-vaccinerade-%e2%80%9domikron%e2%80%9d/vi-AAS1Cee.
[587] Ibid.

society. Similar judgements and decisions were made at the same time in Denmark and Norway (Expressen, 2022)[588].

On April 1st COVID-19 no longer was classified as a socially dangerous disease, which means it is no longer subject to the Infection Protection Act, further the Pandemic Act was also removed. The last restrictions were lifted, such as travel restrictions from countries outside EU/EES[14]. Still, the Government decided that a doctor's duty to report COVID-19 should continue to be mandatory to facilitate the tracking of the infection (Government of Sweden, 2022)[589]. After the outbreak of the pandemic, on 30 June 2020, the Swedish government, following the request of the Swedish Parliament, appointed the so-called Corona Commission (CC), an independent commission assigned to evaluate the Government's response to the COVID-19 pandemic in Sweden. It was formed of a panel with 8 experts from different sectors. In December 2020, a report by the commission criticized the Government for failing to protect people living in elderly homes or with home care to the high level of community spread (Corona Commission, 2020)[590]. In October 2021, the commission's second report characterized the Government's response in early 2020 as "insufficient" and "late" (Corona Commission, 2021)[591]. The Commission's final report was presented in February 2022.

In their first report (Corona Commission, 2020)[592], the CC concluded that "the strategy to protect the elderly has failed" and that "the general spread of infection in society is most likely the single most important factor behind the high spread of infection in Sweden's special care homes." Shortcomings in the organization and staffing of elderly care were pointed out and it was argued that "elderly care was unprepared and ill-equipped to deal with a pandemic." The CC argued that the shortcomings in elderly care had been known for a long time and that current and previous governments were responsible. The late attention given to the problems in elderly care and the length of time it took to identify the need for protective equipment in elderly care was also criticized.

In its second and final reports (Corona Commission, 2021)[593], the CC argued that the Government's and the public health authority's choice of advice and recommendations rather than closing schools and pre-schools was the right one. However, the advice should have been formulated as clear rules of conduct and not open to interpretation, such as "avoiding unnecessary travel" and keeping "an appropriate distance". They also noted that imprecise advice and recommendations made even greater demands when it came to communicating with people with a first language other than Swedish, or who for other reasons had difficulty taking in messages.

The CC believed that the Public Health Agency and the Government took " too few, too late and too weak" measures compared to neighbouring Nordic countries and in relation to the spread of the disease, and that the disease therefore spread unnecessarily in society. Returning winter holiday travellers should have been quarantined, entry bans imposed earlier, and the attendance limit for public gatherings lowered. Legal support would have been needed for early closure of public places, such as shopping centres, swimming pools, restaurants, cultural and sporting events, and hairdressers'

[588] https://www.expressen.se/nyheter/coronaviruset/sverige-danmark-norge-darfor-oppnar-vi-upp-igen/.
[589] https://www.regeringen.se/pressmeddelanden/2022/03/tillfalliga-smittskyddslagar-slutar-galla-den-31-mars/.
[590] http://www.sou.gov.se/wp-content/uploads/2020/12/SOU_2020_80_%C3%84ldreomsorgen-under-pandemin_webb.pdf.
[591] https://www.regeringen.se/rattsliga-dokument/statens-offentliga-utredningar/2021/10/sou-202189/.
[592] http://www.sou.gov.se/wp-content/uploads/2020/12/SOU_2020_80_%C3%84ldreomsorgen-under-pandemin_webb.pdf.
[593] https://coronakommissionen.com/publikationer/slutbetankande-sou-2022-10/.

salons. The authorities should not have required full evidence to recommend protective measures, instead they should have recommended face masks in public places as soon as they were available.

The Corona Commission also stated that coordination of the responsibilities both within national, regional and municipal level, as well as between the levels, has been a challenge. It expresses that "The system of preparedness is based on geographical responsibility for specific areas. But this arrangement can become unclear in a crisis centered on health care and disease prevention and control. At a regional level, area responsibility rests on county administrative boards, while health care and disease control are handled by regional councils in the same geographical areas. It is far from evident how this lack of clarity should be reduced. /…/ experience of the pandemic has highlighted the importance of the proposals for regional-level administrative reform and clearer central government control, repeatedly presented by earlier inquiries. The Commission considers that the question of far-reaching administrative reform, advocated by those inquiries, must as soon as possible, and in earnest, be made the subject of new, open-minded deliberations." (Corona Commission, 2022)[594].

3.4.12 Switzerland

In relation to governmental support agencies that were created during the pandemic and with regard to governmental definitions of vulnerable groups, please see section 3.1.13[595]. In addition to these groups, specific populations targeted by governmental responses include the unvaccinated, who have been subject to communication campaigns. The primary definition of those defined as 'besonders gefährdet' was established in Annex 7 of Verordnung 3 über Maßnahmen zur Bekämpfung des Coronavirus which was issued in June 2020. For details of those medically defined as vulnerable see 3.1.3. Those groups were also among the priority groups in the vaccine rollout along with those over 65, medical personnel and their close relatives (BAG & EKIF 2020). A change in the definition of vulnerable groups as solely medically defined to a conceptualization that also takes those socially disadvantaged into account can be detected in to evaluation report by BAG of February 2022. It is however no longer only restricted to vulnerability to the disease but also vulnerability to the psychological, economic, social and educational disadvantages of Covid-19 measures. In the report people in elderly homes, children and young people, asylum seekers, families and women as those affected by the increase domestic violence and the lack of child care support throughout the pandemic are recognized as particularly vulnerable (Balthasar et al. 2022: 33-34).

3.4.13 United Kingdom (England & Wales)

With a particular focus on the years 2021 and 2022, a number of government-support agencies were created. For the spring budget of 2021, the former UK Chancellor Rishi Sunak broadcasted a variety of extensions to continuing COVID support packages to assist businesses, individuals, and the economy as lockdown guidelines started to ease (BDO, 2022)[596]. Worth mentioning is the COVID-19 Additional Relief Fund (CARF) of £1.5 billion (UK Government, 2021)[597]. Announced on 25 March 2021, the fund supports businesses affected by COVID-19 but are unqualified for existing support linked to business rates. The scheme applies to the 2021/2022 rating year only (ibid). Extensions to government support

[594] Ibid.
[595] pages 62 to 67.
[596] https://www.bdo.co.uk/en-gb/insights/tax/corporate-tax/covid-19-government-support-for-individuals-and-businesses.
[597] https://www.gov.uk/government/publications/covid-19-additional-relief-fund-carf-local-authority-guidance.

were further developed in October 2021 (BDO, 2022)[598]. For example, Sunak broadcasted a number of expansions to the schemes under the Government's 'Jobs Plan,' in addition to a number of schemes to assist individuals, including the long-term unemployed and those exposed to redundancy after the end of furlough (ibid), a scheme enabling employers to acquire a government grant to cover the majority of wages for employees not working due to COVID-19 restrictions.

Then, in the Autumn 2021 budget, Sunak broadcasted ongoing rate relief for some high street businesses and an extension to recovery loans for Small to Medium Enterprises (SMEs) (ibid). Support systems include: 1. "Further Business rates relief 2. Recovery loans extended to June 2022" (ibid). In response to the spread of the Omicron variant in the UK, the government, on 21 December 2021, announced an additional package of support for businesses including: 1. "Direct grants for hospitality and leisure businesses 2. Local authority discretionary grants for other businesses 3. Theatre and museum funding 4. Statutory Sick Pay funding for SMEs" (ibid). With a particular focus on support programmes in 2022, concluding support measures to end – forming part of the government's 'Living with Covid' strategy – were the payments for self-isolation and the Coronavirus Statutory Sick Pay Rebate Scheme, in February and March 2022 correspondingly (Institute for Government, n.d.)[599]. With a focus on support provided during the Omicron surge commencing in December 2021, support provided include schemes to help hospitality, leisure and accommodation businesses survive during the Omicron surge (UK Government, 2021)[600]. Known as the Omicron Hospitality and Leisure Grant, local councils were given one-off grant funding (ibid).

In relation to Wales were created the following governmental support agencies during the pandemic: Initially, during the first wave, a new advisory committee was created, specifically targeting race: The First Ministers Black, Asian and Minority Ethnic COVID-19 Advisory Group. Its socio-economic Sub-Group published its only report on 22 June 2020. Furthermore, the Joint Committee on Vaccination and Immunisation (JCVI) advises UK health departments on immunization. In late September 2020, the COVID-19 sub-committee was instated, and it had their first meeting on September 24th. This subcommittee has representation from England and Wales. Last but not least, under the Health and Care Research Wales and organized by the PRIME centre Wales, the Sub center 'Wales COVID-19 Evidence Centre' was created in Spring 2021. It does rapid assessments and evaluations and publishes them in report such as "Vaccination uptake (barriers/facilitators and interventions) in adults from underserved or hard-to-reach communities" (Wales COVID-19 Evidence Center, 2021)[601].

It was recognised early in the pandemic that ethnic minorities were affected more severely than others in the UK. For example, during the second wave of the pandemic, it became apparent that the risk of dying from COVID-19 in the UK was much higher among the Bangladeshi and Pakistani communities (UK Government, 2021)[602]. The main reasons for the higher impact on ethnic minorities transpired as due to primarily socio-economic and demographic factors such as occupation, deprivation, and household size, as well as underlying health conditions being more prevalent in certain communities

[598] Supra note, 576.
[599] https://www.instituteforgovernment.org.uk/explainers/coronavirus-economic-support
[600] https://www.gov.uk/guidance/check-if-youre-eligible-for-the-omicron-hospitality-and-leisure-grant.
[601] http://www.primecentre.wales/resources/RES/RES%2000006_Wales%20COVID-19%20Evidence%20Centre._Rapid%20evidence%20summary.%20Vaccine%20uptake%20equity_June%202021.pdf
[602] https://www.gov.uk/government/publications/final-report-on-progress-to-address-covid-19-health-inequalities/final-report-on-progress-to-address-covid-19-health-inequalities

(UK Government, 2022)[603] There were four progress reports published during 2020 and 2021 to track progress on the concerns raised in the Public Health England report 'COVID-19: Review of Disparities in Risks and Outcomes' (June 2020). The fourth and final of these reports was published on 3 December 2021 entitled 'Final report on progress to address COVID-19 health inequalities' (UK Government, 2021)[604]. The report discussed government efforts to address the greater risk COVID-19 had posed to ethnic minorities in the UK in five sections: (i) measures to address COVID-19 disparities; (ii) data evidence of disparities; (iii) data quality; (iv) stakeholder engagement and insights; and (v) communications. This final progress report, together with the policy paper 'Inclusive Britain: government response to the Commission on Race and Ethnic Disparities' published on 17 March 2022 are the main documents outlining the governments adaptations during COVID-19 for ethnic minorities (UK Government, 2022)[605]. The latter report points to the lack of trust held by ethnic minority groups in the UK Government and the harmful impacts of deliberate misinformation spreaders on these groups especially (Ibid)[606].

The December 2021 final progress report describes the governments 'evolving' approach as understanding of the risks become more apparent. Most relevant, the report provides an update on new measures introduced since May 2021. These measures include:

- Targeted communications to increase vaccine uptake in the Bangladeshi, Muslim, Indian, black and migrant communities, as well as among pregnant women, via webinars, videos, animations and campaigns with NHS ethnic minority staff, community faith and leaders, and community-focused radio stations.
- Development of a 'Bridging the Uptake Gap' toolkit for Black African and Black Caribbean populations to guide NHS staff and partners to support vaccine take-up.
- Continuation of the Community Champion programme (launched in Jan 2021) with £23 million funding to support vaccine uptake by knocking on doors to increase awareness of a vaccination bus in their area, and developing myth-busting programmes for schools. At the time of report, 14,000 community champions were said to have been recruited under the scheme.
- Increased community access to COVID-19 testing via the Pharmacy Collect service (over 97% pharmacies in England providing tests), via workplace testing in small businesses employing the disproportionately affected groups or in higher-risk occupations, and students in higher education.
- A review of the effectiveness of medical equipment on different races was announced in November 2021 following concerns around the accuracy of pulse oximeter readings on persons with darker pigmentation and skin tones (UK Government, 2021)[607]

[603] https://www.gov.uk/government/publications/inclusive-britain-action-plan-government-response-to-the-commission-on-race-and-ethnic-disparities/inclusive-britain-government-response-to-the-commission-on-race-and-ethnic-disparities

[604] https://www.gov.uk/government/publications/final-report-on-progress-to-address-covid-19-health-inequalities/final-report-on-progress-to-address-covid-19-health-inequalities.

[605] https://www.gov.uk/government/publications/inclusive-britain-action-plan-government-response-to-the-commission-on-race-and-ethnic-disparities/inclusive-britain-government-response-to-the-commission-on-race-and-ethnic-disparities.

[606] Ibid.

[607] https://www.gov.uk/government/publications/final-report-on-progress-to-address-covid-19-health-inequalities/final-report-on-progress-to-address-covid-19-health-inequalities.

The final progress report resulted in a series of recommendations (all accepted by the UK Prime Minister) for reaching ethnic minorities in the COVID-19 pandemic moving forward and future public health campaigns. These recommendations pertain to improved data quality, such as coding, increased participation of ethnic minorities in clinical trials, using the communication measures implemented for future public health campaigns etc (Ibid)[608] In addition, government and health agencies were asked to:1. *"address specific ethnic minority groups rather than a homogenous group (through for example use of the term 'BAME')* 2. *ensure that public health communications do not stigmatise ethnic minorities when explaining that they may be more vulnerable or at higher risk."* (UK Government, 2021)[609].

In Wales, the main target population for the governmental responses is not described as such. Nonetheless, government documents specifically name groups that stand out. Therefore, these groups, including specifically vulnerable populations, are addressed as exceptions to what is treated as the most easily governable subjects (i.e. 'the majority' population). Equality has been a leading theme on governmental impact assessments of the pandemic measures. Target populations in these assessments were categorised as people with protected characteristics (age, disability, gender re-assignment, pregnancy and maternity, race, religion, sex/gender, sexual orientation, marriage and civil partnerships, children and young people, low-income households). These groups have suffered historic (pre-pandemic) marginalisations and do not stem from particular concerns around the virus.

The main health effects from these governmental responses to the population of interest and especially to ethnic minorities the progress report based on Office of National Statistics (ONS) data indicated varying trends between the waves. Between the first wave and the second wave, the progress report noted there to be: 1. *"a decrease in the excess risk of mortality for Black African and Caribbean groups (compared with the White British ethnic group)* 2. *an increase in excess risk of mortality for Bangladeshi and Pakistani ethnic groups (compared with the White British ethnic group)."* (Ibid)[610]. It then stated that *"data on infections from October 2021 shows that the white population currently has the highest case rate"* contrary to earlier stages of the pandemic (Ibid)[611].

The Living with COVID-19 Plan (February 2022) reports UKHSA data on vaccine booster uptake noting remaining disparities. The booster uptake is lowest among Black and Pakistani adult populations (below 35%) with disparities also noted between the least deprived (84%) and most deprived areas (53%), as well as low uptake among 18 – 24-year-olds (39%) (HM Cabinet Office, 2021)[612] Among 12–15-year-olds, there were also large disparities reported regarding initial vaccine doses; the lowest numbers in the Gypsy/Roma, Irish Traveller, Black Caribbean and Black African groups (ibid)[613]. The Plan notes that the drivers of COVID-19 inequalities are exacerbated by wider socio-economic and health inequalities and points to the UK Government's 'Levelling Up the United Kingdom' white paper which outlines future investment in health, local infrastructure and leadership, as well as education and skills to address geographical inequalities as part of a wider response (Ibid)[614].

[608] Ibid.
[609] https://www.gov.uk/government/publications/final-report-on-progress-to-address-covid-19-health-inequalities/final-report-on-progress-to-address-covid-19-health-inequalities.
[610] Ibid.
[611] Ibid.
[612] https://www.gov.uk/government/publications/covid-19-response-living-with-covid-19.
[613] Ibid.
[614] Ibid.

The UKHSA reported on 13 May 2022 encouraging data on vaccine uptake among pregnant women but noted that disparities remain with ethnic minorities (31% of black pregnant women had one or more vaccine doses compared to 58% white pregnant women) and with women from lower areas of deprivation (38.9% of pregnant women in most deprived areas had one or more doses compared to 71.1% in least deprived areas). (UK Health Security Agency, 2022)[615].

In relation to the perception of vulnerability was more related to the different elements of the Welsh Government's pandemic responses and did not change significantly over time. Nonetheless, the intensity of COVID-19 as a threat to all people, including vulnerable individuals, recently changed with Chief Medical Officer Frank Atherton changing the threatening tone of the pandemic to "learning to live with it" referring to the virus. With the restrictions lifted and cases rising quickly in Wales, protective measures have become a matter of personal choice: "Whilst it is no longer mandatory, people should still wear a facemask in health and care settings and in crowded indoor places and remember all the other simple steps they can take to stop the spread, particularly around more vulnerable people" (Ibid). Vulnerable groups that had been identified in relation to the infection rates along social lines and intensity of exposure were not priorities in the vaccination strategy. Instead, the vaccination campaign tended to prioritise individuals based on their potential contact with the virus, including frontline workers outside clinical settings, taxi drivers, and service workers who are disproportionately women and BAME people living in poverty.

[615] https://www.gov.uk/government/news/vaccine-uptake-among-pregnant-women-increasing-but-inequalities-persist.

4 Discussion

Having finalised the analysis of the all countries under research on the governmental responses towards COVID-19 pandemic the following outcomes can be noted on the basis of an initial comparative analysis across countries. In most if not all cases, our target countries witnessed a governmental and crisis management mechanism structural reform as of April 1st, 2021 until late May 2022. The extend of these changes in some cases such as Sweden, would be interpreted as the change of key decision makers including the Prime Minister whereas in other cases such as Italy, Greece, Cyprus, key ministers would be changed due to internal political friction or as an attempt to introduce new political figures through inner-party rotation. In most countries the modus operandi in pandemic management did not differ from the previous pandemic phases whereas all countries adopted measures orientated towards entering a phase of co-existence with the virus and gradual disengagement from strict measures. As modern crises are significantly multidimensional and complex, it has been observed that crisis such as the COVID-19 pandemic cannot be confined by geographical of social boundaries, whereas on the contrary, as observed in the **research findings of D4.3 Analysis: Government responses to COVID-19 and impact assessment**, crises can intensify and re-ignite deeper societal issues that mainly stem from socio-economic inequalities and inequities, thus, prolonging the negative impacts.

Based on the research findings, most of the target countries did not implement additional measures which were not implemented in the previous phases. All countries are observed to have implemented mobility restrictive measures and non-pharmaceutical interventions such as lockdowns and curfews, measures aimed to rejuvenate the economy and support citizens and businesses as well as gradually disengaging from strict measures and instead orientating towards a phase of co-existence due to the availability of COVID-19 vaccines and the vaccination rates in each country. To better address contemporary crises, managers should base their efforts whilst adhering to several core elements: Preparedness – flexibility and capacity, identification and implementation of lessons learned from previous crises, the importance of scientific contribution and crisis communication as well as the nature of crisis coordination which can include centralized or decentralized management.

According to the findings of the empirical research in D4.3 Analysis: Government responses to COVID-19 and impact assessment, it has been observed that widespread fear ensued in Europe at the initial phases of the COVID-19 pandemic due to the limited information about the virus and the lack of certainty on how citizens could protect themselves utilizing the most optimum methods. In detail this research presents the relevant tables and figures, explaining the death and infection rate per month that fall within the scope of this study.

4.1 Governmental structural changes, main differences, landmark events, contributing indicators and main socio-economic, cultural and legal factors influencing governmental responses

Table 7. Changes in Governmental structures.

Governmental Structures	Structural changes	Different modus operandi with pre-existing crisis mechanisms[616]	Main landmark events	Indicators to adopt new measures
Austria	Yes	No	Implementation of COVID-19 containment policies, gradual disengagement from non-pharmatecutical intervertions and movement restriction policies	COVID-19 infection and casualty rates. Socio-economic, cultural and legal Vulnerability indicators. Utilization of a epidemiological overview traffic light system.
Belgium	No	No	Ibid.	Ibid.
Cyprus	Yes	No	Ibid.	Ibid.
Greece	Yes	N/A	Ibid.	Ibid.
Germany	No	N/A	Ibid.	Ibid.
Ireland	Yes	Yes	Ibid.	Ibid.
Israel	No	N/A	Ibid.	Ibid.
Italy	No	No	Ibid.	Ibid.
Portugal	Yes	No	Ibid.	Ibid.
Romania	N/A	N/A	N/A	N/A
Spain	N/A	No	Ibid.	COVID-19 infection and casualty rates. Socio-economic, cultural and legal Vulnerability indicators. Utilization of a epidemiological overview traffic light system.
Switzerland	No	N/A	Ibid.	Ibid.
Sweden	Yes	Yes	Ibid.	Ibid.
UK (England)	No	Yes	Ibid.	Ibid.
UK (Wales)	Yes	Yes	Ibid.	Ibid.

[616] *Please not that in certain cases such as in Belgium, the governmental response built on the pre-existing modus operandi and developed additional services, agencies and tools in order to adapt to the COVID-19 pandemic.*

In **Austria**, the COVID-19 pandemic impacted mentally, and physically multiple Ministers involved in the pandemic management, similarly to several target countries, and led to withdrawals and resigns. Similarly, to Greece and Cyprus, there were political reasons also in some cases and the Ministry of Health was the one who faced the most resigns as the primary entity in the pandemic management. In Austria, like in Belgium, there were pre-established governmental entities for crisis management both in regional and federal level. However, just like with the majority of the target countries, own bodies were established, for advice provision to the responsible actors on COVID-19. The Austrian Ministry of Social Affairs, Health, Care and Consumer Protection offered financial support to vulnerable groups in order to cope with the consequences of the pandemic establishing special directives. Vulnerable groups were identified as people in ''Risk of poverty, Significant material deprivation as well as People, living in households with no or very low employment intensity''. Regarding economic measures, Austria responded rapidly and offer multiple relief measures for business to assist them during the pandemic. However, closed borders affected labour conditions and new initiatives were created to mobilize Austria's large but inactive labour reserves, including female part-time or non-workers and workers of a higher age. Sectors which were highly affected such as Tourism and Hospitality were additionally supported through upskill and employment initiatives. Laws and ordinances were altered and adapted to the pandemic response as well as new ones were created to address the pandemic challenges. Social life was also substantially impacted in Austria since restrictions and measures affected personal relationships and social life was shift to digital relationships. For communication purposes, as the majority of the target countries, Austria utilized all available sources of communication including press conferences, campaigns, websites, Hotline 1450 and specialized COVID-19 bodies. During the various pandemic waves in Austria, the overall strategy was slightly changed by putting the provincial governors in charge of the pandemic management and responses in their federal provinces. Thus, lockdowns were issued not necessarily in a national level during the waves but as demanded by each province. However, rules and restrictions were issued for unvaccinated people and after the announcement of a lockdown for unvaccinated people, the federal government imposed a nationwide lockdown by the end of November 2021, which also affected vaccinated people. Further, even though it was announced that vaccination will be mandatory from February 2022, it was postponed due to legal reasons and reassessments. The Omicron variant led to the establishment of the GECKO commission which had as an objective to provide recommendations and advice for the new variant. A study in Austria highlighted the importance of public participation in pandemic response, because without the help and adequate behaviour of the population, government measures and laws have only a limited effect. Concluding, lockdowns and curfews as well as mandatory face mask use and obligatory or restrictions to unvaccinated people were the key measures taken during the pandemic waves.

Belgium did not experience a radical governmental structural or a modus operandi change in pandemic management, as it has been observed with Austria, Greece and Cyprus, whereas similarly to other countries, Belgium utilized non-pharmaceutical interventions such as curfew measures, which were criticized by some citizens as unconstitutional (De Groote & Verelst, 2020). Prior to the COVID-19 pandemic, similarly to Austria, Belgium already had a crisis management structure consisting of a National Focal Point (NFP) in line with International Health regulations (IHR) and WHO, while also established the Risk Assessment Group (RAG), GEMS (Expert Committee on Management Strategy), Risk Management Group (RMG), Economic Risk Management Group or ERMG and the Expert Strategy Exit Group (GEES) that had a consulting role and conducted risk analyses utilizing scientific and epidemiological data, thus supporting decision making (Desson et al., 2020). The coordinator of the

aforementioned groups was a Corona Commissariat, led by the director-general of FPS Public Health. In Belgium, at a federal and local level, governments could impose stricter measures in their vicinity. Similarly, to Greece and Cyprus, during the period this deliverable examines, the vaccination campaign was at full steam, and measures in Belgium were gradually relaxed considerably, which included lifting people capacity, re-opening businesses, less travel and movement restrictions among other relaxations, which increased as of 2022. Belgium, similarly to other countries set up a warning system, adopting the 'corona barometer', a 3 colour code system (yellow, orange, red) which was based on the COVID-19 risk and pressure towards the healthcare system, analysing data on the epidemiological situation taking into account the following indicators: numbers of GP consultations, infection rates, hospital admissions, and occupation of intensive care units. (Sanen, 2022). Prior to the 3 colour system, Belgium examined two more versions, a corona barometer of four alarm levels and a corona switch of two levels which were rejected.

In **Cyprus**, similarly to Austria and Greece, the governmental structure changed radical, particularly in late June 2021 (Protothema, 2021)[617], encouraging the participation of female decision makers. The key changes include the new Ministers of Health, Public Order and Social Welfare, nevertheless, no significant change in the modus operandi of the Government relating to the pandemic management and measures was observed. Cyprus, just like the majority of the target countries, continued to utilize non-pharmaceutical interventions, teleworking and social distancing (Euronews, 2022)[618], (Protothema, 2022)[619] (Euronews, 2022)[620] while encouraged vaccination efforts (Ethnos, 2021)[621]. The disaster management system in Cyprus was pre-established based on the Civil Defence Law of 1964 and has a central government approach, aim in taking action against all natural and manmade disasters (Fraunhofer INT, 2018[622]). Even though the focus is orientated towards preparedness, response and recovery, Cyprus lacks of a united national disaster risk reduction strategy (Fraunhofer INT, 2018)[623]. Similarly, to other countries, Cyprus perceived COVID-19 as a national threat therefore established and maintained bilateral and multilateral communication channels for information and good practice sharing, whereas continued to implement movement containment policies, gradually lifting restrictions. In comparison to Greece, Cyprus adopted a more neutral approach towards vaccination, making the process optional.

In **Greece**, the Government proceeded with a radical internal restructuring of the administrative composition on August 31, 2021, similarly to Austria and Cyprus (Kathimerini, 2021)[624], (In.gr, 2021)[625], (To Vima, 2021)[626], introducing new Ministers such as the new minister of Health, however, similarly to Cyprus, it did not change the modus operandi of the Government in relation to the pandemic

[617] https://www.protothema.gr/politics/article/1136044/kupros-oi-allages-stin-kuvernisi-anastasiadi-emfasi-sti-summetohi-gunaikon/.
[618] https://gr.euronews.com/2022/01/10/kypros-covid-19-se-isxy-nea-metra-gia-thn-pandhmia-apo-shmera-10-1.
[619] https://www.protothema.gr/world/article/1198152/nea-metra-stin-kupro-gia-tin-anahaitisi-tis-metallaxis-omicron/.
[620] https://gr.euronews.com/2022/01/06/kypros-covid-19-analytika-ta-nea-metra-poy-isxyoyn-apo-6-1.
[621] https://www.ethnos.gr/World/article/166375/kyproskoronoiosaysthropoihshtonmetrongiatonkoronoio.
[622] https://civil-protection-humanitarian-aid.ec.europa.eu/system/files/2019-04/peer_review_-_report_cyprus_2018_v5.pdf.
[623] Ibid.
[624] https://www.kathimerini.gr/politics/561465277/allages-sto-kyvernitiko-schima-kyvernitikos-ekprosopos-o-ioannis-oikonomoy/.
[625] https://www.in.gr/2021/08/13/politics/kyvernisi/mini-anasximatismos-ti-allazei-sto-kyvernitiko-sxima/.
[626] https://www.tovima.gr/2021/08/13/politics/mini-anasximatismos-ti-allazei-sto-kyvernitiko-sxima/.

management, which included non-pharmaceutical interventions. Moreover, one of the main actors in the governmental response against COVID-19, epidemiologist professor Sotiris Tsiodras, withdrew from conducting frequent press conferences. Greece similarly to the majority of the target countries, experienced a gradual measure disengagement and a transitional phase of co-existance with COVID-19, including lifting a wide range of COVID-19 related measures, in relation to movement restriction, business operation, participant and costumer capacity, abolishment of PLF among other measures, which constitute the main landmark events for this specific period. Similarly, to most of the examined European states, Greece established interministerial expert committees and was supported by healthcare scientists who had a central role in the pandemic management, whereas the vaccination campaign had a significant role in gradual measure disengagement. In contrast to European states in central Europe such as Belgium and Austria, Greece, similarly to countries in the Mediterranean region such as Italy and Spain, opted for a central government, top-down approach in relation to the pandemic management and implemented obligatory vaccinations for healthcare personnel and citizens, who were otherwise be fined or suspended from their employment (Kathimerini, n.d.)[627]. Moreover, Greece continued to implement the socio-economic measures, particularly tailored for citizens impacted by COVID-19. The main indicators for the five colour epidemiological warning system mainly were epidemiological data which are collected by the Hellenic National Public Health Organization (EODY, 2020)[628], (EODY, 2022)[629].

In **Germany** the overall governmental structure remained the same with only a change in the government, similarly to Belgium and Ireland in comparison to Greece, Cyprus and Austria, which resulted from the elections on 26 of September 2021 whereas accordingly the actors involved in the pandemic policymaking did not significantly alter since the same Ministries and forces were responsible for the pandemic decision making/management. However, mid-December 2021 the government assessing the situation decided to establish a Coronavirus Expert Council aiming to assess response measures as well as to provide recommendations for new measures from a multidisciplinary rather than a purely epidemiological perspective. In the state level cabinet ministers were appointed which were also involved in pandemic responses on state/local level as well as CSOs which were actively engaged and play a critical role in the multi-level governance of the pandemic on a local level since they acted as a ''bridging organization'' between actors. The German government has been dedicating its resources to protecting the health and the well-being of vulnerable groups during the pandemic. The pandemic measures affected majorly the life of children and youth and new measures were implemented in order to be able to return to schools safely. Additionally, in relation to vaccination efforts the creation of a multilingual communication aid app for those who are not speaking German was an initiative to assist vaccination efforts as well as non-speaking German residents. Also, it has to be mentioned that the refuge crisis from the war in Ukraine affect the pandemic fight but the government provided necessary information materials in Ukrainian to address this challenge.

In Germany as in most EU countries economic measures were introduced to ease the economic burden the pandemic brought to citizens and businesses. Initiatives such as free COVID test in order for workplaces to be secured since weekly testing was mandatory for employees, financial assistance to vulnerable groups, short-time allowances, liquidity assistance for small businesses, tax relief measures

[627] https://www.kathimerini.gr/tag/epicheirisi-eleytheria/.
[628] https://eody.gov.gr/oi-komy-toy-eody-xepernoyn-tis-1-000-apostoles-kata-ton-proto-mina-leitoyrgias-toys/.
[629] https://eody.gov.gr/komy-testing-eody/.

for businesses and individuals, and a strengthening of the negotiating position of commercial tenants to address vocational training disruptions during the pandemic, summer vocational training was offered. Finally, the German government assist also the cultural sector identifying issues that arise for artists since they employment was highly affected. In regards to legal adaptations in Germany from the beginning of the pandemic until April 2021 the core governmental legal responses to COVID-19 were the first, second, third, and fourth Acts on the Protection of the Population in the Event of an Epidemic Situation of National Importance. In the following period and between April 2021 and May 2022, several significant laws and regulations were passed. The new laws and regulations were primary about protective measures, vaccination, social distancing, social gatherings, quarantine, entry in the country etc. as well as mandatory vaccination for medical and care workers from spring 2022. It has to be highlighted also that in Germany in order to combat misinformation, the Network Enforcement Act came into force, mandating digital platforms to delete false information regarding the pandemic.

The German government assisted vulnerable groups from the start of the pandemic by either establishing target measures and restrictions for vulnerable groups, or by prioritizing them in vaccination or by providing benefits and economic assistance. Vulnerable groups were identified and continue to be identified during the pandemic whereas the government assist them appropriately in all pandemic waves. In overall in Germany the measures and restrictions were as in most EU countries. During the pandemic waves restrictions were eased and introduced as needed in relation to confirmed cases and availability in ICS beds. Vaccination prioritization and mandates for booster shots, measures in schools and offices, constant testing as well as benefits and assistance were provided in order to reduce COVID-19 impact, efficiently manage the pandemic and tackle social disparities. Rules and restrictions for unvaccinated people and social distancing measures were also changing through the pandemic waves. It is important to be noted that the German authorities to combat misinformation brought into force the Network Enforcement Act which mandated social media platforms to delete false information while report them in the authorities. Finally, Germany is getting ready for autumn and winter 2022/2023 aiming at providing vaccines for all variants. Even though communication campaigns and messages from the German government were successful in the beginning since measures were efficiently adopted and measures were obeyed. However, as the pandemic was evolving the campaign characterized insufficient since the strategy should have been alternated and adapted accordingly. Also, differences on the federal and regional level led to perceptions such as uncoordinated, incomprehensible and non-transparent messages. Another issue that impacts communication was that some campaigns did not manage to reach their target audiences or a wide audience and as the pandemic was evolving and people had access to more studies and information in general, communication remained top-down failing to achieve its goals and reach specific target groups. Additionally, the German government was heavily relied on cases tracking and did not utilize other pandemic surveillance tools.

Ireland eased all restrictions in February 2022, similarly to most target countries, getting into a transitional phase where citizens were advised to be risk aware, whereas no radical structural changes are observed. Accordingly, the specialized entity established in the beginning of COVID-19 pandemic to oversee and provide national direction on the COVID-19 strategy concluded its work. A COVID-19 Advisory Group with members of multi-disciplinary expertise was established to assist the new phase by monitoring, advising and identify new technologies. The Irish health care system was in a reforming period, nevertheless, the pandemic proved beneficial to this transition since decisions and alterations made faster and more efficient. In Ireland pre-existing pandemic plans existed both for regional and

for national levels, similarly to Austria, Belgium and Cyprus, however the Irish COVID-19 response followed a 'complex emergency' framework, whereby ad-hoc systems were put in place to govern the emergency at central level similarly to most southern European States. This decision was criticized but it proved quite successful for the pandemic response.

The Irish governmental responses to COVID-19, between April 2021-April 2022, were predominantly focused on exiting the COVID-19 pandemic and most restrictions were ceased while advising citizens to be risk aware and follow the advice once they experience any symptoms. Even though from May 2021, Ireland got in the recovery and reopening phase the new variants as well as the fourth pandemic wave demanded again restrictions which were put in place early in December 2021. Each pandemic wave and each COVID-19 new variant demanded new measures which were introduced accordingly. It has to be noted though that in Ireland, it was observed that during the pandemic, numerous guidelines gave *An Garda Síochána* further powers, such as arrests without warrant. Penalties included fines of up to €5,000, imprisonment up to six months, or both. Lockdowns, night curfews, mandatory mask use and restrictions for unvaccinated people were the primarily measures during the pandemic waves.

Israel, similarly to Belgium, did not proceed with a radical structural change in the government during the period of early April 2021 and late May 2022 and no new support agencies emerged, but existing structures were reinforced, financially supported (Government of Israel, 2021)[630] and strengthened (Government of Israel, 2021)[631]. The main landmark events were the introduction of the fourth (mainly Delta variant) and fifth (mainly Omicron variant) waves, as well as the roll-out of the third dose of the vaccine to the entire population, as well as the fourth dose of the vaccine for high risk groups including citizens older than 60 years, immunocompromised citizens, patients in long term care facilities and healthcare professionals. A risk identifying & assessment system was in place, similarly to most European countries, titled the "traffic light" model (Ministry of Health, n.d.)[632] which was utilized and was based on the epidemiological data, illustrated the regional COVID-19 status quo and subsequently influenced responses over the country (Bachner, 2020)[633]. For instance, this system regulated which educational institutions would implement remote learning and which would continue face-to-face learning. The governmental response was led with the support of in a multidisciplinary scientific committee, similarly to most countries, which had a consolatory and policy making role (Peleg et al, 2021)[634].

Since February 2021, there have been no structural changes in the **Italian** government, similarly to Belgium and Israel among other target countries. Since April 2021 various legislative initiatives were approved, further implementing urgent measures for management of the COVID 19 pandemic including the declaration and the extension of the State of Emergency and the division of Italian regions by four different colours where different restrictive measures were entailed, based on the analysis of the epidemiological situation of each region. The competency of the Head of the Civil Protection Department and the structure of the Special Commissioner for the implementation and coordination of measures to contain and combat the pandemic and for the execution of the national vaccination

[630] https://www.gov.il/he/departments/policies/dec368_2021.
[631] https://www.gov.il/he/departments/policies/dec426_2021.
[632] https://www.gov.il/en/departments/guides/ramzor-cites-guidelines.
[633] https://www.timesofisrael.com/whats-the-traffic-light-plan-all-you-need-to-know-about-the-new-virus-rules/.
[634] https://www.mdpi.com/2199-8531/7/4/208#cite.

campaign were also extended. Since the declaration of the state of emergency in Italy, a technical-scientific Committee was established with broad involvement of government and state officials, in order to overcome the prevailing emergency, having the mandate of advising and supporting the coordination activities to overcome the pandemic. In March 2022, the State of Emergency was ceased while new measures to overcome the emergency phase were dictated, such as extending the obligation to wear FFP2 type masks in indoor environments (e.g. means of transport and crowded public places) and declaring the end of the "coloured" zone system. Following the termination of the Covid-19 state of emergency the scientific Committee was dissolved and the role of the Special Commissioner was revoked. Despite the end of the emergency state, a Vaccination Campaign Completion Unit was established effective until December 2022 taking over all relevant competencies from the abrogated governmental structures meaning mainly the completion of the Vaccination Campaign and the implementation of any needed measures.

During this period, **Portugal** experienced some changed to the governmental structure, similarly to Greece, Cyprus and Austria among other target countries. The main changes was 1) the Presidential Election on January 24th 2021, which was won by the incumbent President, Marcelo Rebelo de Sousa (former leader of PSD[635]) 2) The local Elections of September 26th 2021, including elections for the Municipal Chamber, Assembly and Parishes Assemblies 3) Legislative Elections on January 30th 2022[636]. To combat the rising COVID-19 infections Portugal extended the State of Alert until May 31st, 2022[637]. Portugal, similarly to the majority of the target countries emphasized on protecting the human rights of foreign citizens, particularly vulnerable people such as refugees, asylum seekers as well as people with disabilities. The main highlight governmental responses as of April 2021 until late May 2022, were the Deconfinement Plan which initiated a gradual ease of restriction measures[638], which encouraged teleworking and business modus operandi changes, as well as decrees such as the Regional Regulatory Decree n.º 3/2021/A[639], introducing tailored measures for specific period of time, such as the Easter period. Portugal is observed to adhere to non-pharmaceutical interventions and the implementation of hygiene measures, similarly to most target countries, with a gradual disengagement of the aforementioned measures, based on the epidemiological overview of the country.

Since April 2021, **Spain** advanced towards a pre-pandemic context, regarding both the government structures, the restrictions to enforce social distance, and the deployment of economic measures to support people economically hit by the restrictions. The emergency state[640] which was utilized to diminish the spread of the Covid-19 in Spain, similarly to Italy, conferred special powers to both the central and the regional governments to limit citizens' rights, ended in May 2022. Since then, the main restrictions affecting citizens' fundamental rights, such as the freedom of movement[641], were considered unnecessary.

During this period, however, the Constitutional Court examined whether the State of Alarm declared between March 2020 and June 2020, respected the Spanish Constitution of 1978. According to the

[635]Social Democratic Party (PSD): One of the two major parties in Portuguese politics (liberal-conservative, centre-right). Its major rival being the Socialist Party (PS) on the centre-left.

[636]https://sicnoticias.pt/especiais/eleicoes-legislativas/2021-10-27-Parlamento-chumba-Orcamento-do-Estado-7b00c570.

[637]Resolução do Conselho de Ministros n.º 41-C/2022, 2022-05-06.

[638]https://eportugal.gov.pt/pt/noticias/governo-anuncia-plano-de-desconfinamento-ate-3-de-maio.

[639]Decreto Regulamentar Regional n.º 3/2021/A, 2021-04-01.

[640] *State of Alarm.*

[641] lockdowns, curfews, or limits to move from one territory to another.

Court, the Spanish Government and Parliament violated Spanish citizens' right of free movement as restrictions affecting movement were too severe and declared the relevant articles unconstitutional and the legal form of the imposed measures inappropriate. According to the Court's Decision, if Spanish Authorities wanted to suspend mobility, the appropriate state of emergency was the State of Exception that can go further and suspend other fundamental rights. Under this, legal structure restrictions can be more severe and affect more deeply citizen's rights. Additionally, the role of the Parliament to approve a State of Exception is more salient since the declaration must be approved by the Parliament and not only ratified, by absolute majority. Nonetheless, the Decision of the Constitutional Court paid attention only to the first State of Alarm declared on March 2020. However, the Court is currently studying the State of Alarm declared in October 2020 and ended in May 2021 and had a different structure and delegated powers to the Presidents of the Autonomous Communities. Whether this delegation fits or not the Spanish Constitution is something under debate.

Sweden, similarly to Greece, Cyprus and Austria among other states experienced a radical change in the governmental structure but unlike the aforementioned states, a new Prime Minister, Magdalena Andersson[642] was elected who introduced a contemporary plan to fight COVID-19 thus a change in the modus operandi was identified, which included a centralized approach on governmental responses, firm restrictions in containment measures whilst aiming to increase vaccination rates. In relation to governmental responses and differentiated course of action from pre-covid-19 crisis management mechanism, there are no clear indications or relevant data that suggest there have been changes.

In Switzerland, due to COVID-19, the federal government received extraordinary power that allowed to maked decisions on a nationwide scope, nevertheless, the basic structure of the Swiss government did not change.

Regarding governmental structural adaptations in March 2021, in the UK and Wales, unlike other countries that opted for a radical structural change or retained their structural structure, England's Department of Health and Social Care (DHSC) initiated a transformation phase for the public health system, thus disbanded PHE and created new bodies taking into account lessons learned by the COVID-19 pandemic[643]. The main objective is to orient the **UK** Health Security Agency (UKHSA) towards being able to protect the society against "infectious diseases and external health threats" and also promote public health as an 'Office of Health Promotion' within the DHSC (ibid).

Moreover, the UK Government similarly to most countries prioritised higher vaccine rates and introduced a transitional phase of co-existence with COVID-19, thus publishing in September 2021 the 'COVID-19 Response: Autumn and Winter Plan', highlighting the positive impact of the COVID-19 vaccination campaign. Subsequently, the government published the 'COVID-19 Response: Living with COVID-19' on February 2022, whereas as all domestic legal restrictions ceased, which is a clear indicator that COVID-19 would be treated as like all other infectious diseases. Unlike the UK, **Wales**, similarly to Greece, Cyprus and Austria among other target countries, experienced several radical changes in key roles within the governmental structure, nevertheless, the decision makers that were relevant with COVID-19 responses remained mostly unchanged.

642 https://www.france24.com/en/europe/20211129-sweden-elects-andersson-as-first-female-pm-for-second-time-in-a-week.

643 https://www.gov.uk/government/publications/transforming-the-public-health-system/transforming-the-public-health-system-reforming-the-public-health-system-for-the-challenges-of-our-times.

Despite having pre-existing crisis response plans such as the Civil Contingencies Act (CCA), the **UK** government drafted the Coronavirus Bill, which however is assessed to have had a negative impact in relation to the implementation due to limited capacity of the relevant administrative bodies[644]. On the other hand, the **Welsh** Government conducted frequent reviews on measures, encompassing themes such as the economy, environment and wellbeing, which were published in "Summary Impact Assessment (SIA)".

The main landmark events for the **UK** were the pathway towards the new normality which was clearly indicated by the 'COVID-19 Response: Autumn and Winter Plan' in September and the lifting of COVID-19 restrictions as of 24 February 2022. Similarly, a clear indicator for Wales was the publication of "Together for a safer future: Wales' Covid-19 transition from pandemic to endemic" on March 2022.

The main indicators which led to adopt additional measures during the period this research examines for UK and Wales was mainly the emergence of the Omicron and Delta variant in May 2021 and December 2021 respectively. Both encouraged higher vaccination rate with their national vaccination strategies and campaigns[645].

4.2 COVID - 19 and Risk perception

Table 8. COVID -19 and Risk Perception.

COVID-19 and Risk Perception	Citizen risk perception in relation to COVID-19[646]
Austria	Increased risk awareness
Belgium	Ibid.
Cyprus	Ibid.
Greece	Ibid.
Germany	N/A
Ireland	Increased risk awareness
Israel	N/A
Italy	Increased risk awareness
Portugal	N/A
Romania	N/A
Spain	N/A
Sweden	N/A
Switzerland	N/A
UK (England)	Increased risk awareness
UK (Wales)	Increased risk awareness

[644] https://www.civilserviceworld.com/news/article/we-have-special-legislation-to-cope-with-crises-like-covid-so-why-didnt-the-government-use-it.

[645] i.e. the'National Vaccination Strategy' Wales, which was published on 11 January 2021 which eventually led to the development of the 'COVID-19 Vaccination Equity Strategy for Wales'.

[646] *Please note that there is a significant lack of relevant data in several target countries, thus indicated with N/A. Moreover, risk awareness may highly depend on a variety of factors and the socio-economic, educational and cultural standing of a citizen in his/her respective country, as well as other characteristics such as age group etc.*

In relation to risk perception, citizens in **Austria** perceived the pandemic as a serious matter. Particularly during the first pandemic wave, even citizens who didn't comprehend the importance and severity of the situation, abided with the measures. Moreover, citizens were cautious and risk aware for travelling in the beginning of the pandemic, whereas citizens in risk, felt the urge to be more cautious and followed the measures thoroughly, nevertheless, it was observed that during the second pandemic measure compliance was decreased due to vaccination and the less harmful COVID-19 variants. Hence, this can justify a potential decrease in risk-perception of Austrian citizens.

In **Belgium**, in a joint effort a team of researchers from multiple universities monitored the motivation, connectedness and psychological health of the Belgian population in a 'motivation barometer'[647] from July 2020 until May 2022. This research measured risk perception, while research findings indicate that when infection rates go down, citizens are typically less concerned about the risk of contracting COVID-19, similarly to the majority of the target countries (Motivation Barometer, 2022). Moreover, regional differences may impact COVID-19 perception, as rising COVID-19 case rates are associated with increased risk awareness, which in turn leads to increased motivation for (continued) compliance with restrictive measures (Motivation Barometer, 2021).

For Cyprus, in comparison to Greece and Belgium, there is a significant lack of data which stem from surveys and/or questionnaires that are tailored to in-depth explore the risk perception for **Cypriot** citizens, risk exposure and vulnerability. Based on the data drawn from the Cypriot Ministry of Health (Cypriot Ministry of Health, 2021 – 2022)[648], a pattern[649] that relates to COVID-19 infection and death rates indicates that during months of high human mobility such as Easter, during the summer season and Christmas, citizens are more likely to be infected, which can be attributed to several factors. Nevertheless, in relevant research, it can be observed that most citizens are willing to have a COVID-19 vaccine and consider that vaccines can end the pandemic, while half of the participants suggest vaccines should be mandatory (Konstantinou et al, 2021)[650]. Socio-demographic factors can influence and shape perceptions, as vaccine acceptance may per educational level and age group, specifically, young adults who have a lower educational background are observed more reluctant to receive a vaccine than older Cypriots with a higher educational background (Konstantinou et al, 2021)[651]. In addition, trust, legitimacy and transparency towards/of authorities, science and institutions have a central role in risk perception and vaccine acceptance in the Cypriot society (Raftopoulos et al)[652].

In relation to **Greece**, there is a plethora of research in relation to COVID-19 and risk perception. Similarly to Cyprus, based on data drawn from the National Public Health Organization (EODY, 2021)[653], an epidemiological pattern can be identified, indicating high human mobility in accordance with specific events that take place such as Christmas, summer holidays and Eastern. Based on this data, as well as the close connection to religion, traditions and culture, could likely explain why citizens may likely to continue participating in cultural and religious events, despite their perception of COVID-19 and risk. In a joint effort, multiple researchers conducted nationwide socio-economic research in

[647] www.motivationbarometer.com.
[648] https://www.pio.gov.cy/coronavirus/categories/press#30.
[649] Which is common with the Greek infection data.
[650] https://psycnet.apa.org/fulltext/2022-27221-010.pdf.
[651] Ibid.
[652] https://www.tandfonline.com/doi/full/10.1080/21645515.2021.1896907.
[653] Ibid.

Greece emphasizing on perception revolving around COVID-19 and risk (Dienoisis, 2020 – 2021)[654], (Georgakopoulos, 2021)[655]. The main findings indicate that the pandemic had severe negative psychological impact[656] to participants, who have a positive evaluation of the governmental management, however believe that politicians are not interested in the opinions of civilians (Dienoisis, October 2021, p. 106 – 109)[657]. Moreover, most participants believe that Greece has overcome the worst pandemic phases and a strong majority abided to the measures that believe they made a difference in combating COVID-19. In Greece, participants highly trust their personal doctors and pharmacists, while the expert committee, international organizations and the government follow, whereas in relation to vaccines citizens also trust their efficiency, appear to be satisfied with the procedure and the strong majority believes vaccines had a positive impact (Dienoisis, May 2021, p. 40 – 43). This is reinforced by the perception that COVID-19 is a serious threat for most Greeks, who also support mandatory vaccinations particularly for healthcare and educational personnel (Dienoisis, October 2021, p. 32 – 39)[658]. Moreover, citizens are observed to agree with the prioritazation of vulnerable groups, nevertheless half participants are observed to be reluctant in vaccinating their children. In relation to vaccine deniers, it is evident that misinformation and falsified information has highly impacted their perception about the severity of COVID-19 and trust towards vaccines. Concluding, a strong majority (75.9%) is in favour of the scientific community than the religious community in matters such as the COVID-19 pandemic (Dienoisis, October 2021, p. 88 – 89)[659].

For **Germany** there were not sufficient data about risk perceptions and correlation to case rates. However, it can be stated that risk perception of the general public may differ from the risk perception of governmental stakeholders and policy makers. Other reasons that may influence risk perception individually can be social and cultural context or information seeking and platforms chosen as well as the messages from the government may be interpreted differently. Research has proved that psychology plays a critical role in absorbing information during crises since stress and anxiety is a critical aspect.

A study in **Ireland** revealed that risk perceptions were sometimes impacted by psychological needs and people miscalculated the advantages of socialising outdoors instead of indoors or came into contact with people and thus, being in a greater risk of infection. However, a second study in Irish university students observed that the vast majority owned great knowledge about COVID-19 and were risk aware. More precisely, some of the key findings were that age did not influence risk perception levels or engagement in preventive behaviours, in contrast to Cyprus, fairly higher levels of risk perception and preventive behaviours were noted for females compared to males considering thought always the limitations on participants' gender and lastly the study confirmed the hypothesis of a positive relationship existing between risk perception and preventive behaviours.

In Israel, in relation to COVID-19 and risk perception, no relevant studies have been conducted in **Israel**, therefore there is a lack of data that could explore and elaborate on COVID-19 that may relate with how citizens in Israel perceive risk.

[654] https://www.dianeosis.org/2021/05/to-fos-sto-tounel/.
[655] https://www.dianeosis.org/2021/05/to-fos-sto-tounel/.
[656] *Uncertainty, anxiety, insecurity, dissatisfaction, sleep disorders, panic attacks, depression.*
[657] https://www.dianeosis.org/wp-content/uploads/2021/11/Covid-19_7th-wave.pdf, p. 106 – 109.
[658] https://www.dianeosis.org/wp-content/uploads/2021/11/Covid-19_7th-wave.pdf, p. 32 – 39.
[659] https://www.dianeosis.org/wp-content/uploads/2021/11/Covid-19_7th-wave.pdf, p. 88 – 89.

Italians perceive virus-containment practices as their civic duty, thus abided to the measures similarly to the majority of the target countries, but many believe that most of their fellow citizens have not adopted such practices enough. The young are both more negative about others' behavior, but also less inclined to follow containment rules themselves. A negative consequence that emerged from relevant studies is the deterioration of people's level of trust in others during the crisis. Moreover, Italians seemed divided in their opinion about how the country managed the pandemic: 54% declared to be proud of how the Italian government handled the pandemic while 46% declared to be disappointed. In particular, 72% of the population believed that the measures implemented during COVID-19 were reasonable and proportional while 28% believed restrictions were unreasonable and disproportionate. Similar rates of positively assessing the governmental management of the crisis, were also observed in Greece. In addition, relevant studies revealed that those living with people at high risk, those who experienced COVID 19 symptoms, had cases/deaths among friends or relatives, worked near/in contact with COVID-19 patients, reported higher levels of risk perception. Moreover, the analysis showed that risk perception does increase among women with poor health or chronic diseases, living with vulnerable people or who have experienced COVID 19 symptoms. Finally, it seems that being adequately informed about the pandemic encourages people to comply with the containment measures, possibly because of a better understanding of the disease-related outcomes and of the rationale behind actions adopted by the government. In addition, compliance with preventive measures such as wearing a mask and hand washing, slightly increase after the second dose of vaccine. Even though the vaccinated people reduce over time the adoption of protective measures against COVID-19 infection, availability and accessibility to information on COVID-19 vaccination are crucial for individuals to make informed decisions and have safe preventive behavior.

Similarly, to the majority of other countries and based on the experience and lessons learned from COVID-19, Portugal is observed to have changed the interpretation of COVID-19. Even though there is limited data that may suggest how the average citizen perceived risk in relation to COVID-19, from a governmental perspective, the period this study examines is a transitional phase from a danger that requires the implementation of States of Alarm towards co-existance, as it has been observed with the majority of target countries.

In relation to COVID-19 and risk perception, no relevant studies have been conducted in **Spain**, Sweden and Switzerland, therefore there is a lack of data that could explore and elaborate on COVID-19 that may relate with how citizens in Spain, Sweden and Switzerland respectively perceive risk.

In the **UK**, Researchers suggest that citizens were aware of activities with a higher risk such as going to nightclubs rather than going for a walk or takeaways[660], nevertheless, researchers discovered that citizens miscalculated how safe it was to internal with others outdoors than indoors, therefore the government adopted and incorporated the 'Fresh Air' concept within the 'Hands, Face, Space' guidance[661]. The main findings on risk perception indicate that citizens were aware of riskier social settings, citizens believe that facemasks and vaccinations are the two most effective measures against COVID-19 transmission, nevertheless, one out of four citizens could not comprehend how much time vaccines require in order to be fully effective[662]. In several relevant researches conducted in **Wales**, young BAME participants considered themselves at a lower risk than their older counterparts (Singhal

[660] https://www.bi.team/blogs/people-have-a-good-sense-of-which-settings-are-riskier-than-others-in-terms-of-coronavirus-transmission/.
[661] Ibid.
[662] Ibid.

et al, 2022)[663], a widespread perception in Europe among young citizens as observed above, whereas in older research, the government in Wales attempted to establish a set of core behavioral recommendations in the form of guidelines for sustaining COVID-19 safe behaviors domestically (Welsh Government, 2021)[664].

4.3 Vaccinations and Governmental Initiatives

Table 9. Vaccinations and Governmental Initiatives.

Vaccinations and Governmental Initiatives	Measures that encourage vaccinations	Measures tailored towards vaccination reluctance	COVID-19 measures that restrict citizen participation to activities
Austria	Yes	Yes	Yes
Belgium	Yes	Yes	Yes
Cyprus	N/A	N/A	Yes
Greece	Yes	Yes	Yes
Germany	Yes	Yes	Yes
Ireland	Yes	N/A	Yes
Israel	Yes	Yes	Yes
Italy	Yes	Yes	Yes
Portugal	N/A	N/A	Yes
Romania	N/A	N/A	N/A
Spain	Yes	No	Yes
Switzerland	N/A	N/A	N/A
Sweden	N/A	N/A	N/A
UK (England)	Yes	Yes	Yes
UK (Wales)	N/A	N/A	N/A

In autumn 2021, campaigns were planned to motivate the **Austrian** population to get vaccinated due to the pressure that the health system was facing. Certain incentives were provided to motivate unvaccinated. The most popular incentives for getting vaccinated were the selection of the vaccine by themselves, which did apply to most federal provinces, the provision of a voucher for getting vaccinated and the chance of participating in a lottery with winning prizes. The first incentive was chosen mainly from older people whereas the latter ones were chosen from younger ages. Initiatives such as vaccination lottery or grants for municipalities that achieved a high level of vaccinated citizens were not utilized at the end due to legal and general obstacles. Further, higher levels of vaccination hesitancy were found among women and younger Austrian, but also among those in favour of political opposition parties. Trust levels in government was also a critical reason for vaccination hesitancy. In

[663] https://physicianjnl.net/index.php/phy/article/view/119.
[664] https://gov.wales/sites/default/files/pdf-versions/2021/8/2/1629217252/technical-advisory-group-sustaining-covid-safe-behaviours-wales.pdf.

regards to mandatory vaccination, it started with positive feedback around 49% which was surprisingly increased in the autumn and winter of 2021.

In Austria, specific measures for both unvaccinated and vaccinated people were introduced and they became stricter as the COVID-19 situation was getting more serious. The G-rules served as kind of entry requirements for certain institutions, activities or even work and were separated in four categories. The distinctions were made mainly between vaccinated/recovered and unvaccinated people and there were times that even vaccinated people should have been tested before entry a specific place. On the 15th of November 2021, the lockdown for unvaccinated begin and lasted until the 31st of January 2022. During this period unvaccinated people were only allowed to leave their homes for certain important reasons.

Belgium, emphasized on encouraging citizens in getting vaccinated instead of introducing stricter measures, similarly to Cyprus and the majority of the target states. Vaccinations were prioritized for elderly and young citizens who had a high-risk exposure and are considered vulnerable, a modus operandi utilized by all target countries, such as patients in nursing homes, migrants, refugees, sex workers, young children among other groups. To do so, the government established 150 vaccination centres and cooperated with community-based organizations, primary health physicians, religious leaders and pharmacists, who were actively involved in conducting vaccinations and communicating about the importance of vaccines (ECDC, 2022). To increase accessibility of vulnerable groups to healthcare, 50 Community social and Health Workers were employed in various Flemish and Wallonian cities, thus, preventing health inequality (Beel, 2022). Belgium utilized both traditional and contemporary means of communication, waging information campaign at a national and federal level, highlighting the importance of local public health stakeholders, whereas it revolved around explaining common questions such as prioritization in vaccination, why getting vaccinated is important, how the vaccine works and why the vaccine is safe. Moreover, similarly to other countries, Belgium implemented a series of measures to restrict the spread of COVID-19, which included non-pharmaceutical interventions, participant capacity limitations and the COVID safe ticket, which indicated the vaccination status of a citizen.

Cyprus, in comparison to Greece opted for a more neutral approach toward vaccinations, and similarly to most countries encouraged citizens to be vaccinated. Moreover, targeted information and awareness campaigns for vaccinations were conducted (University of Nicosia, 2021), however Cyprus is observed to be reluctant in imposing fines. Cyprus implemented similar measures in restricting the spread of COVID-19 such as non-pharmaceutical interventions, limiting the participant accessibility and capacity in events and businesses, however, allowing fully vaccinated people to enjoy access in contrast to unvaccinated citizens (Kathimerini, 2021)[665].

Greece, contrary to Cyprus, aiming to increase the vaccination rates, implemented mandatory vaccinations particularly for the citizens over-60 years old and healthcare personnel which was deemed as a necessary measure due to the risk exposure rate. In relation to vaccinations, Greece continued to prioritize vaccinations on vulnerable groups and implemented administrative fines for citizens that would choose to not be vaccinated or suspension from their employment until their vaccination was completed or incentives such as paid leave for employed personnel in the public sector

[665] https://www.kathimerini.gr/world/561650605/kypros-nea-perioristika-metra-exaitias-tis-omikron/.

and in the armed forces (iefimerida, 2021)[666], (Aftodioikisi, 2022)[667]. The mandatory nature of vaccinations raised legal and ethical concerns (Rigou, n.d.)[668] whereas some experts suggested that instead of a choosing a punitive approach, citizens could be encouranged in getting vaccinated by utilizing a more citizen-friendly approach (Sentra, 2021)[669]. The National Committee on Bioethics and Technoethics in Greece, assessing the case of mandatory vaccinations concluded that since the COVID-19 vaccine safety has been proven, as the benefits outweigh potential side effects, no violation applies and suggested targeted information and awareness campaigns and provision of incentives. Similarly to most countries, Greece implemented several measures related to vaccination and restricting citizens from participating in specific activities and accessing businesses (Typosthes, 2021)[670], introducing three classification categories: "Covid Free Area", "Mixed Space" and "Fully vaccinated staff" which corresponded to specific accessibility limitations based on vaccination status (Kathimerini, 2021)[671]. Most of these restrictive measures would be gradually lifted.

Multiple measures adopted from the **German** government in order to motivate people to get vaccinated as well as simplify the procedure. For instance, vaccines were available for free and in the beginning in priority groups as in most countries. Further, initiatives such as transportation to vaccination centers for elderly people were established also for free. Timely and accurate information in order to reduce hesitancy and campaigns with well-known people were utilized also as well as information in multiple languages to reduce language barriers. Proof of vaccination was also provided either by QR codes or hard copies and the EU passport was adopted as in almost all EU countries. However, in Germany also restrictions were lifted for vaccinated but remain unvaccinated and there were times that the later were restricted from multiple activities even in specific workplaces such as the health sector.

Ireland early in 2021 was the EU country with the highest vaccination rate and that was a result of targeted measures and two successful vaccination campaigns which proved that efficiently motivate people to get vaccinated. The second campaign focused on key target groups such as vulnerable population, especially medically as well as vaccinated ones with only one dose and people in geographical areas with smaller vaccination percentages. It was also officially stated that access to reliable COVID-19 sources proved substantially important, especially when considering the impact seen in ICU and hospitals. Despite the fact Ireland had a high vaccination percentage, restrictions for unvaccinated people were issued focusing on traveling/entry the country and visiting public spaces, a measure which was adopted by most target countries. Even though a discussion around mandatory vaccination took place, at the end it was decided not to be implemented and a different approach was followed choosing an advisory role instead of punishing and or forcing people to get vaccinated. Irish government choose trust and transparency rather than punishments and fines, similarly to most target countries such as Cyprus, Belgium and Austria among other.

[666] https://www.iefimerida.gr/ellada/ypohreotikos-emboliasmos-gia-ano-60-eton-allios-prostimo-100-eyro-mina.
[667] https://www.aftodioikisi.gr/dimosio/asep-mono-gia-emvoliasmenoys-ti-proteinei-o-alivizatos-ti-apanta-o-proedros-tis-anexartitis-archis/.
[668] https://www.ow.gr/ygeia/ipoxreotikos-emvoliasmos-poso-sintagmatikos-einai/.
[669] https://sentra.com.gr/linoy-gia-ypochreotiko-emvoliasmo-akr/.
[670] https://www.typosthes.gr/oikonomia/255090_magazia-kleistoi-horoi-apagoreysi-eisodoy-se-mi-emboliasmenoys-me-2-doseis.
[671] https://www.kathimerini.gr/society/561431962/ypochreotikos-emvoliasmos-kai-kalokairi-kathimenon-ola-ta-nea-metra/.

Amidst the COVID 19 pandemic, a strategic plan for a national vaccination campaign was developed and adopted on March 2021 by all competent authorities. In this context, vaccination target groups were adopted categorizing vulnerable people into six (6) different categories, based on age and pre-existing medical conditions criteria. Other priority groups were social and health care workers, school and university staff (teaching and non-teaching), armed forces, law enforcement agencies and emergency services.

To ensure public trust in COVID-19 vaccination campaign, many actors contributed in sharing relevant information[672] exposing their views through radio, television, newspapers, institutional websites, and social media, an approach utilized by most target countries. In addition, the **Italian** government, similarly to most if not all countries, decided to run several communication campaigns aiming to raise awareness and strengthen trust in the scientific community and in the effectiveness of the vaccines and motivate people to get vaccinated at national level. Since the beginning of the vaccination campaign in December 2020, the Italian Authorities implemented different measures to persuade citizens to get vaccinated especially those who were skeptical about it. The main relevant decrees put in force from April 2021 provided for compulsory vaccination for specific groups like health professionals, school and university staff, and university students, allowed free movement to specific regions, access to workplaces (both public and private) and giving the possibility to carry out certain entertainment, social and sport activities and access to education and training services facilities, only for those with the COVID-19 vaccination certificate (Green Pass). In November 2021, a series of measures were enacted in four different areas: compulsory vaccination and third dose; extension of compulsory vaccination to new categories; establishment of the enhanced "Green Pass"[673] strengthening of controls and promotional campaign on vaccination. All the above-mentioned measures were implemented to increase the vaccination rate at national level by forcing the most hesitant people to complete at least the primary vaccination cycle. In fact, the compulsoriness of the COVID-19 vaccination certificate brought many people to vaccinate. According to the latest available data (June 2022) 47,943,593 people received the primary vaccination cycle and corresponding to 80,9% of the total population while 39,406,702 people received the booster dose and the number corresponds to 67,0% of the total population. Due to the suspension of the State of Emergency as of March 2022, the green pass as a prerequisite for citizens certain activities is expected to be phased out with the vaccination obligation to be maintained until 15th June 2022 only for specific categories[674] and until the end of December 2022 for health professionals, health care workers and all workers employed in social assistance residential facilities[675].

During this phase, the government in cooperation with the **Israeli** Ministry of Health rolled out the third (average citizens) and fourth (vulnerable citizens) dose of the vaccine, which was supported by a nationwide vaccination campaign. Israel, similarly to other countries provided incentives for vaccinated citizens, such as a green badge which allowed accessibility to certain public places, whereas in a cross-ministry effort, Israel mobilized personnel from the Ministry of Defence to assist with the vaccination efforts, utilizing medics and paramedics (Government of Israel, 2021)[676].

[672] e.g. WHO, national government, Civil Protection Department, local authorities, health professionals.
[673] Vaccination certificate or COVID-19 negativity certificate valid 24 hours after the result of a swab.
[674] e.g teachers and staff of schools and universities; armed forces and law enforcement personnel; prison staff; people aged 50 and over.
[675] e.g. elderly homes, assisted healthcare residences, outpatient clinics.
[676] https://www.gov.il/he/departments/policies/dec500_2021.

In **Portugal** regarding the measures which were implemented to motivate people to get vaccinated and the measures related to vaccination which restrict citizens for participating in specific activities there are no indications or relevant data that suggest there have been changes.

In the context of **Spanish** vaccination strategy, the more vulnerable groups, defined by age and previous diseases, were completely vaccinated by May 2021. After them, younger cohorts were progressively called to be vaccinated. In Spain citizens embraced vaccination stipulating it as the only way to solve the prevailing pandemic crisis. Spanish citizens believe that vaccines are safe and they protect against the COVID-19, reduce mortality and severe disease, a perception mutually shared by most target country citizens. For this reason, there were no measures to incentive or force citizens to get vaccinated with the exception of some regions which introduced the COVID-19 Passport, in contrast to most countries that implemented incentives and fines. According to official data updated on June 2022, 40.527.090 individuals have completed their vaccination in Spain, representing an 85,5% of the targeted population, excluding children younger than six years old. Amidst the pandemic, Spanish authorities offered daily information about contagions, hospitalizations and deaths. Experts created a set of indicators as a reference for either implementing restrictive measures or revoking them. These indicators however, have not been used by decision makers, resulting for this reason in political conflict in Spain. Nonetheless, since May 2022 and onwards, Authorities are applying a new strategy implementing a set of indicators similar to those of the seasonal flu, where specific Hospitals report the number of COVID-19 cases to the Spanish Health Authorities. Currently, the pandemic in Spain seems to be under control since the mortality is lower than previous years, and hospitalization rates are much lower than they were. The definition of vulnerability and the prioritization of different vulnerable groups to receive public support have not been changed during the pandemic in Spain, similarly to the majority of the target countries. Nevertheless, the public discourse is growingly focusing now on mental health issues that the pandemic has caused in some population groups. Young people have received more attention as the rate of suicides among young population has increased since the starting of the pandemic, and some mental health policies have been adopted aiming to reduce these rates.

In relation to the vaccination strategy that was adopted by **Sweden**, similarly to Cyprus, it builds on voluntary choice whereas most campaigns emphasized on information dissemination on multiple languages so that citizens could be informed about their available choices. In Sweden, a reluctance to be vaccinated was identified within minority communities, particularly people with a migrant background. Similarly, to the UK among other target countries, Sweden rolled out drop-in vaccination sites at a local level across the country and economically strengthened the vaccination program. In relation to the measures related to vaccination which restrict citizens for participating in specific activities there are no indications or relevant data that suggest there have been changes.

In Switzerland, in comparison to the majority of the target countries, there relevant stakeholder who was responsible for the vaccination campaign, the BAG and Federal Commission for Vaccine Issues (Eidgenössische Kommission für Impffragen, EKIF) identified the main objective of the vaccination campaign was to not reach 100% immunity, but similarly to the intended outcomes set by the majority of the target countries, to a) reduce the disease burden, especially the risk of severe progressions; b) reduce the burden on the health care system; and c) reduce negative health, psychological, social, economic, and cultural impacts of the pandemic (i.e., by allowing as many aspects of “normal life” to continue as possible) (2021). In Switzerland, similarly to the majority of the target countries, at-risk groups were prioritized and information campaigns were conducted to raise awaireness.

In UK, similarly to the majority of the target countries, the vaccination campaign was strengthened, whereas vaccine ambassadors were stationed across the country to encourage vaccinations[677]. Moreover, the UK government aiming in increasing the vaccine rates particularly at young citizens, similarly to most countries, provided incentives to be vaccinated which were criticized as "vaccine bribes" by some news outlets[678], a subject which in several countries was politicized (Efsyn, 2021)[679]. To do so, the UK government rolled out a National Vaccination Strategy, which intended to make easily accessible and convenient vaccinations in terms of location and reachability as well as build confidence in the COVID-19 vaccine. In relation to vaccination in Wales, citizens were observed to be satisfied with the communication about vaccines from the health boards[680]. In cooperation with WHO (2021)[681], G7 and other international organizations, the UK government announced the Global Vaccine Confidence Campaign, aimed to raise confidence in vaccination and build resilience audiences with a worldwide scope to combat vaccine misinformation (OECD, 2021)[682]. The outcomes of the campaign are assessed to have been relatively successful, nevertheless, international cooperation is one of the key lessons learned in the fight against COVID-19 (Yin et al, 2022)[683]. The most prominent measures towards unvaccinated citizens, similarly to the majority of countries were restrictions on social events, employment and travel. Similarly, in Wales, the NHS COVID Pass regulated accessibility to public means of transport and travel.

4.4 Governmental Responses

Table 10. Governmental Responses.

Governmental Responses	Newly established governmental support agencies	Main target population of responses	a. Implementation of Socio-economic, cultural, health, educational measures to Mitigate the negative impact of COVID-19. b. Perception of vulnerability.
Austria	Yes	Average population & Vulnerable population negatively impacted by the COVID-19 pandemic	A. Yes. B. Perception is shaped taking into consideration health, cultural, educational, legal, socio-economic factors.
Belgium	N/A	Ibid.	Ibid.
Cyprus	Yes	Ibid.	Ibid.
Greece	Yes	Ibid.	Ibid.

[677] https://www.gov.uk/government/news/225m-of-funding-announced-in-new-community-push-to-get-nation-boosted-now.
[678] https://www.politico.eu/article/coronavirus-vaccine-reward-europe-skepticism/.
[679] https://www.efsyn.gr/politiki/kybernisi/309781_dorakia-kai-stoys-12-17-gia-na-emboliastoyn-sto-kalathi-mitsotaki-sti.
[680] Welsh Audit report (2021).
[681] https://www.who.int/director-general/speeches/detail/director-general-s-remarks-at-the-g7-global-vaccine-confidence-summit-uk-government---2-june-2021.
[682] https://www.oecd.org/coronavirus/policy-responses/enhancing-public-trust-in-covid-19-vaccination-the-role-of-governments-eae0ec5a/.
[683] https://www.nature.com/articles/s41599-022-01106-7#Sec10.

Germany	N/A	Ibid.	Ibid.
Ireland	N/A	Ibid.	Ibid.
Israel	N/A	Ibid.	Ibid.
Italy	N/A	Ibid.	Ibid.
Portugal	Yes	Ibid.	Ibid.
Romania	N/A	N/A	N/A
Spain	N/A	Ibid.	Ibid.
Switzerland	N/A	Ibid.	Ibid.
Sweden	N/A	Ibid.	Ibid.
UK (England)	Yes	Ibid.	Ibid.
UK (Wales)	Yes	Ibid.	Ibid.

In **Austria**, three distinct agencies have been established from the beginning of the COVID-19 pandemic and are still operating for support provision. Each entity has a specific objective regarding the evolution of the pandemic like crisis management, forecasting and expertise advising. Even though the majority of the implemented and adapted federal acts, were addressing the general population without focusing on any vulnerable groups some alterations in already established acts and ordinances directly affected those groups also.

The pandemic socially affected majority of the Austrian citizens since friendships, family bonds, social life were dominated by tension of the constant change of measures as well as from debates on personal opinions regarding the pandemic in general. In addition to social, the economic impact of the pandemic proved crucial to Austrian citizens. More precisely, people under multiple employment status like artists, sex workers or with migrant background faced major difficulties such as people working in the health care sector and receiving all the pandemic burden both psychologically and physically. Even though the government issued measures for financial support of certain groups in economically difficult situations, there were cases when people did not manage to benefit from the support because there was simply no legally legitimated demand or because they were prevented by other obstacles. Citizens with physical disabilities were also highly affected since their supporting carers could not visit them due to risk of infection and there were times that received discrimination attitudes also due to their insufficient ability to follow specific measures. Both migrants and asylum seekers faced also multiple difficulties and discrimination. Language barriers, employment status and information reception were proved crucial for those groups. Educational barriers and issues arise due to home-schooling both students and teachers as well as parents and for college/university students also. The new teaching methods introduce multiple issues in the educational procedure and demand time to be adapted. Finally, mental health and physical issues were observed in Austrian citizens due to lockdowns and social distancing measures.

Belgium, the Public Centre for Social Welfare had the main role in the provision of social services and support, which has a department in each city and offered socio-economic and cultural assistance[684] (Belgium.be, 2022). Moreover, similarly to most countries' agencies, the OCMW carried out several interventions and programs that promoted psychological well-being of citizens, whereas the recipients would vary and include elderly and unemployed citizens and children among other groups. A significant observation in most countries including Belgium is that citizens with lower technological literacy or limited access to the internet were likely excluded from accessing services provided by OCMW (de Vaal & Stroobants, 2021). Moreover, the federal government set up a policy network under the leadership of the Working Group Social Impact COVID-19 Crisis (WG SIC), tasked with identifying the socio-economic impact of the pandemic on vulnerable groups and concludes that socio-economic factors have a significant impact on life expectancy and health outcomes which relate to COVID-19, particularly while examining the mortality rate of low socio-economic status citizens above the age of 65 (Decoster et al., 2020). Ethnic inequalities that relate to COVID-19 in Belgium are also observed to negatively impact the wellbeing of citizens, as migrants, minorities and refugees appear to have a higher risk exposure and severe symptoms (e.g. Aldridge et al., 2020; Otu et al., 2020), (Geldof, 2020b), (Vanhamel et al., 2020). Pre-existing inequalities were also intensified in relation to education as several families could not provide their children with access to internet, a computer or a quiet space (e.g. Hagenaars et al., 2022). Moreover, non-pharmaceutical measures such as COVID-19 are observed to have negative impact on practicing religion, introduced legal implications in relation to suspension of rights and socio-economic status of impacted citizens.

Cypriot similarly to Greece provided awareness, guidance and socio-psychological support about COVID-19 through governmental support agencies and Ministries. Several psychosocial support hotlines were established, such as the 1420, which remain in full operation and are dedicated for the average population or specified groups such as citizens during their military service, citizens that live abroad, parents and students (Cypriot Government, n.d.)[685]. In addition, government decisions targeted the entire Cypriot population, by creating a Government Strategy Plan aiming at restarting the economy and promoting economic growth, as well as implementing measures to support the health system, specific industries such as the hospitality sector, vulnerable groups and employees or self-employed persons whose work was partially or completely limited due to the pandemic, such as the “one-off grant” (Vrachimis, n.d.)[686].

Greece, similarly to most countries continued to operate support agencies and reinforced the healthcare structure. These services include psychosocial support programs (I.e. “none alone in the pandemic”), which accommodates the needs of citizens, particularly for hospitalized citizens, their families and healthcare professionals, through remote consultation (Amma, 2022)[687]. The pandemic, according to relevant research had a significantly negative impact on the psychological well-being of citizens (Kaselaki, 2021)[688], therefore, in an attempt to cater the needs of vulnerable groups and increase vaccination rates, the government emphasised in encouraging homeless foreigners and

[684] financial aid (living wage); housing; medical aid; home care; employment; debt mediation; psychosocial support; legal aid; (crisis) shelter; guidance and financial assistance concerning energy supply; and cultural vouchers to promote social and cultural participation.
[685] https://www.pio.gov.cy/coronavirus/.
[686] http://mof.gov.cy/assets/modules/wnp/articles/202009/739/docs/covid_19.pdf.
[687] https://www.amna.gr/health/article/646315/Z-Rapti-I-epidimia-eiche-simantika-epizimia-epidrasi-stin-psuchiki-ugeia-ton-ergazomenon-ston-tomea-tis-ugeias.
[688] https://www.ey.com/el_gr/workforce/covid19-pos-epireastike-i-psyxiki-ugeia-ton-ergazomenon-stin-ellada.

nationals, third-country nationals, drug and alcohol addicts, citizens with limited access to public goods and services to be vaccinated, overcoming bureaucratic obstacles, in cooperation with the local authorities. These initiatives utilized tailored communication campaigns and allowed vulnerable citizens to be vaccinated in polyclinics or mobile care units. The government also ensured that undocumented migrants would not have to fear of being apprehended as the authorities were prohibited of doing so, as COVID-19 poses a national threat to every citizen indicating respect to all citizens' human rights. Even though the implemented measures targeted the main population, tailored measures as elaborated above, emphasized at accommodating the needs of vulnerable groups. Similarly, to other countries, Greece implemented socio-economic measures such as provision of financial assistance, encouraged teleworking and remote education as well as imposed restrictions of accessibility in businesses in order to protect citizens from COVID-19. In relation to education, children, similarly to other countries appear to have been substantially impacted by COVID-19 (Kitsikopoulos, 2021)[689], (Athanasiou, 2021)[690].

In **Germany** and on a federal level, pandemic measures were primarily created through existing state institutions. However, special bodies were created either to provide advice or recommendations. The measures implemented mainly focused on the general population but special attentions were given to identified risk groups which include citizens based on age, underlying diseases, suppressed immune system and physical/health disabilities. In regards thought to vaccination prioritization more at risk groups were identified and except from health issues there were included social factors as well as employments at more risk to get exposed to the virus. Governmental responses, did not exactly diversified per target- populations. However, specific groups of people as well as institutions were set and relevant measures implemented to reduce the pandemic impact such as financial benefits, social assistance, work from home schemes for business etc. During the pandemic the German government continue to identify new vulnerable groups, enriching the at-risk groups while recommendations and advices were given in order to reduce inequalities as well as the pandemic impact on these groups.

Ireland, similarly to all target countries, provided economic support especially to business in order to secure their operation and assisted then during the difficult times of the pandemic providing funds, digitalization vouchers among other measures of assistance. Other target populations of the government's responses have been those whose health considered to get highly affected from COVID-19. They were distinct in two groups: "very high risk" (or "extremely vulnerable") and "high risk" groups which were mainly older people and/or with chronic diseases as well as older people not fully vaccinated. Specific advices were given to them. The Irish government issued initiatives for medically high-risk groups also to minimize the COVID-19 impact. Furthermore, the HSE office which providing advice on socially vulnerable groups in the country suggested that six groups such as travellers, Roma, people in homeless settings and addiction, persons in women's refuges and persons in direct provision should be prioritized in vaccination, however, the government didn't follow that suggestion completely. Specific governmental and NGOs initiatives were also introduced to assist both travelers and Roma communities. Nursing homes also were supported by governmental initiatives since it was observed that infection rates between residents were higher.

[689] https://gr.euronews.com/2021/05/24/pandemia-sxoleia-synepeies-mathites.
[690] https://www.psychologynow.gr/arthra-psyxologias/koinonia/koronoios/10432-epistrofi-stin-kanonikotita-kai-oi-epiptoseis-tou-koronoioy.html.

In **Israel**, similarly to most countries, the government attempted to cater the needs of both average population as well as specific vulnerable groups such as the elderly, children, students, minorities, citizens that lost their income through tailored responses [691],[692] among other groups (Times of Israel, 2021)[693], (France24, 2021)[694]. There is a substantial lack of data which could prove the creation of support agencies which continue to operate. Similarly to other countries, Israel imposed non-pharmaceutical interventions such as curfews and lockdowns, transportation limitations, measures impacting the modus operandi of businesses (Government of Israel, 2021)[695]. Socio-economic measures intended to mitigate the negative impact of COVID-19, included financial assistance to the transportation and hospitality industry, minorities and employees that were impacted by COVID-19 as well as business owners and students (Government of Israel, 2021)[696]. Similarly to other countries, children were significantly impacted by the pandemic due to social isolation, reduced social services and maltreatment, which is reinforced by prior research conducted by Katz and Cohen (2020)[697], who examined inadequate governmental policies which in some cases identified young vulnerable citizens and social workers as "non-essential" and would shut down social services and residential care units, a decision which would later be revoked (ibid).

Right after the outbreak of COVID-19 pandemic, **Italy** adopted strict non-pharmacological preventive measures, including lockdowns, physical distancing and wearing masks similarly to the majority of the target countries. Measures concerning teaching activities such as virtual learning were established at all levels of education. The COVID-19 vaccination certificate (Green Pass) as a means of permission of carrying out social activities[698] was also implemented. Although a National influenza pandemic preparedness and response plan was already in place since 2003 in Italy, it was ignored and the virus circulated freely with the biggest problem to be the high number of hospital clusters and infected healthcare personnel but also the lack of emergency protocols in territorial health systems. Additional challenges were imposed by the increased restrictions within lockdown areas ("red zones") applied gradually to the entire country. In this context a specific National COVID-19 pandemic response Health Plan was put into force while two new additional National Strategic plans were enacted. An upgraded surveillance system was also coordinated by the Italian Public Health Authorities (*Istituto Superiore della Sanità - ISS*) in an attempt to make the country's response to the pandemic more effective.

The COVID-19 pandemic had a huge impact on the whole population, similarly to all target countries. People from the most disadvantaged economic groups and vulnerable populations[699] were those affected the most. The increasing financial uncertainty imposed by the pandemic and the restrictive measures, further damaged their mental health and had a negative impact on their stress level. In this context the Italian Government approved a series of financial measures to support enterprises, individuals and families that were economically impacted by the pandemic, where anti-poverty funds

[691] https://www.gov.il/he/departments/policies/molsa-corona-executive-circulars-036-2020-003.
[692] https://www.gov.il/he/departments/policies/dec155_2021.
[693] https://www.timesofisrael.com/as-omicron-rises-bennett-tells-parents-protect-your-kids-5th-covid-wave-is-here/.
[694] https://www.france24.com/en/middle-east/20210823-israel-starts-covid-antibody-testing-for-children-three-and-older.
[695] https://www.gov.il/he/departments/policies/dec_714_2021.
[696] https://www.gov.il/he/departments/policies/dec601_2021.
[697] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7538112/.
[698] e.g. travelling, entertainment, food services, sports.
[699] e.g. homeless people, people living with non-communicable diseases or co-morbidities, people living with disabilities.

were allocated to municipalities for supporting families and workers and urgent food solidarity programmes were enacted. In parallel in April 2021 the country's new recovery strategy was announced aiming to move Italy forward to a pre-pandemic normality setting out the framework of measures to be applied for the gradual resumption of economic and social activities. From that time and onwards the restrictive measures were gradually revoked and the Italian Government focused on measures relating to the extension of the vaccination obligation and the restriction of access to recreational areas, entertainment and catering activities for those who did not get vaccinated. Even though the duration of the Green Pass was reduced from nine to six months, the obligation to wear FFP2 type masks on all means of transport and at outdoor and indoor cultural and entertainment venues but also sports events was further introduced.

During this period, amendments conducted in relation to Portuguese governmental support agencies, introducing a task force for the reinforcement of the **Vaccination Plan** against COVID-19 in Portugal[700]. The two main objectives of the task for was to 1) establish the integrated strategic planning of the vaccination process, involving the logistical, executive and communicational components; 2) Coordinate and articulate the efforts of government departments involved in the vaccination process. This task force was supported by sub-groups, a) Strategic Planning Support Group b) Execution Support group, c) Communication Support group, in a cooperation between both civilian and military personnel. Moreover, Portugal, similarly to the majority of the target countries continued to implement tailored socio-economic support measures for businesses and individuals impacted by the pandemic, such as the hospitality industry, first line practitioners and healthcare professionals, business owners, vulnerable groups among other groups beside the measures that targeted the average population.

Restrictions affecting freedom of movement were revoked as the State of Alarm ended in May 2021. A gradual relaxation of COVID-19 related measures was observed in most if not all target countries. From then, regular legislation has been enough to impose individual restrictions, much less restrictive than the previous ones. The main restrictions since May 2021 had to do with the compulsory use of masks, and the COVID Passport necessary to attend events or hostelry services in some regions. Wearing mask has been compulsory in **Spain**, depending on the period, both inside and outside buildings. From March 2021 to June 2021, wearing masks was mandatory both inside and outside buildings. Since June 2021, this obligation remained only in interior spaces, including shops; bars and restaurants[701], Hospitals, public transport, universities and schools, pharmacies. In December 2021, when Spain was hit by the Omicron variant, and despite the high level of vaccination, authorities declared compulsory the use of masks also in exteriors, coinciding with Christmas. Once the Omicron wave ended, masks were again only needed inside buildings. Since February 2022, the Spanish government permitted citizens not to use masks unless they go in public transports, hospitals and other health services such as pharmacies. The second restriction was relevant with the need of having a complete vaccination schedule in order to be able to go in some shops, bars, events, or travelling. Whether citizens had or not the stipulated doses of the vaccine could be proved by the COVID Passport. In general, COVID Passport has been compulsory for travelling abroad and to enjoy services provided by bars and stores, depending on the region. In some countries, this measure intended to incentive the vaccination among population groups who refused to be vaccinated. Once omicron variant

[700] Despacho n.º 3906/2021, 2021-04-19.

[701] When citizens were not eating or drinking and only for this moment.

appeared, the use of the COVID Passport has been severely declined. This restriction was eventually revoked since January 2022, requested only for international travels.

Implemented restrictions impacted Spanish social and economic life severely. However, as soon as mobility restrictions were abrogated, a strong economic recovery started in Spain. Fiscal instruments designed to protect citizens of unemployment due to the suspension of economic activity, remained in force. Given the recovery of the Spanish economy, national and regional governments are focusing on applying and designing policies to implement the European Recovery Fund - Next Generation.

In relation to the governmental support agencies which could potentially have been created during the pandemic, there are no indications or relevant data that suggest there have been changes in **Sweden**. In a multi-agency initiative, a communication plan aiming at increasing vaccination rates was introduced, which included constantly updated and easily accessible information was available. Mandatory vaccine certificates for adult foreign citizens, a practice observed to be common with most if not all target countries, were introduced on December 21, 2021[702]. Similarly, the measures that Sweden adopted were social distancing, limited number of participants on social events among others for both un-vaccinated and vaccinated citizens. At the initial pandemic phases, the Corona Commission of Sweden (2020) assessed that "the strategy to protect the elderly has failed" and that "the general spread of infection in society is most likely the single most important factor behind the high spread of infection in Sweden's special care homes."[703]. The following assessment of the Corona Commission (2021) argued whether the provision of advices and recommendations rather than closing pre-school and school was the proper action against COVID-19[704]. In comparison to other countries, when assessing Sweden's approach, many indicators suggest that it can be characterized as of weak belated action and flawed, particularly based on the death rates, deficiencies in municipal elderly care, and change of modus operandi by the new administration (Vogel, 2020), (Pashakhanlou, 2021) whereas despite the opposition to wearing masks and keeping the business open which could led to a polarized opinion among the citizens, the no-lockdown approach could have beneficial psychological impact on the Swedish citizens (Ahlander and Pollard, 2022)[705].

There are no indications that governmental agencies that provided support to Swiss nationals were created during this specific time frame, nevertheless, two COVID-19 crisis task forces were established. The first is the Taskforce Federal Office of Public Health (FOPH) COVID-19, tasked with crisis management, whereas the second is the Swiss National COVID-19 Science Task Force (SN-STF), which is actively engaged in communication strategies and has an advisory role.

Similarly, to most target countries, several government-support agencies were created in the **UK**, whereas governmental support packages aimed in assisting citizens and businesses were extended. In **Wales**, the 'Wales COVID-19 Evidence Centre', which was organized by the PRIME centre Wales and placed under the Health and Care Research Wales, was created in the Spring of 2021.

[702] https://news.cision.com/se/liberalerna-i-stockholmsregionen/r/fyra-provtagningsbussar-mot-covid-startas,c3419047.
[703] SOU 2020:8, Delbetänkande 1 – Äldreomsorgen under pandemin, December, 2020.
[704] SOU 2021:89, Delbetänkande 2 _ Sverige under pandemin, February 2021; SOU 2022:10, Slutbetänkande – Sverige under pandemin, February 2022.
[705] https://www.reuters.com/world/europe/sweden-pandemic-strategy-correct-early-response-flawed-commission-2022-02-25/.

In the **UK**, the main target population, similarly to the majority of the countries was the average population, nevertheless, emphasis was placed upon high-risk groups such as ethnic minorities[706]. The main adaptations were made based on identified trends by data collected from Office of National Statistics (ONS) which indicated 1) excess risk of mortality among ethnic minorities, 2) later pandemic phases[707] demonstrate that white population has highest case rates currently in comparison to earlier phases and 3) vaccination rates among pregnant women indicate disparities with ethnic minorities.

Similarly, in **Wales**, the main target population of the governmental responses were citizens with protected characteristics[708]. The perception of vulnerability did not change in Wales, nevertheless, contrary to the majority of the target countries, **Wales** did not prioritize the identified vulnerable citizens in terms of the vaccination process but prioritized citizens according to their potential contact with COVID-19.

[706] i.e. Pakistani and Bangladeshi communities in the UK.
[707] As of October 2021.
[708] These characteristics include: age, disability, gender re-assignment, pregnancy and maternity, race, religion, sex/gender, sexual orientation, marriage and civil partnerships, children and young people, low-income households etc.

5 Conclusions

In the course of the nearly two-year implementation of the COVINFORM project multiple observations have been drawn and various results have been produced during both the desktop and the empirical research. Focusing on Work Package 4 (WP4: Government responses and impact assessment) previous and current research reviewed and described governmental structures and responses on a national level among the project target countries as well as on a regional/local level in selected communities and case studies, performing in parallel an in-depth analysis of key dimensions of governmental response impact in the context of the COVID 19 pandemic. The current Deliverable 4.5 is an update of the Deliverable 4.1 Baseline report: Governmental responses, which contained the results of governmental structures and responses towards COVID-19 on national level in fourteen project target countries. More in particular T4.5 aims to gather and assess relevant data on how governmental responses correspond to the fight addressing the very contagious COVID-19 variants infection rate, during April 2021 to May 2022 in each target country, in relation to the risk perception of citizens, vaccination initiatives and assessment of governmental mechanisms towards COVID-19.Emphasis was placed to vulnerable groups and the way those were affected (physically, economically, socially and mentally) not only by COVID-19 but mostly from the governmental response and reaction to it, particularly as of the aforementioned timeframe. In addition, focus was given on identifying if and when governmental responses proceeded with a differentiated course of action than a pre-set crisis management plan/mechanisms whilst identifying the impact on each target country.

Based on a comprehensive comparative analysis across countries it can be noted that even though in some cases there have been no structural governmental changes since the beginning of the pandemic (as in Italy for example), in many if not the most targeted countries a series of governmental and crisis management mechanism structural reforms were observed as of April 1st, 2021 until late May 2022. The extend of these reforms varied from changes of key decision makers even of the highest level (as for example the case of Sweden's Prime Minister) to changes of persons in key ministries due to internal political friction or as an attempt to introduce new political figures through inner-party rotation. In any case, the government-centered administrative approach and the modus operandi in pandemic management adopted by the vast majority of the countries during the previous pandemic phases were at large maintained. Legislative initiatives that provided enhanced legal and administrative powers to governmental entities were extended further even though some measures raised issues of constitutionality (like the endorsement of the State of Alarm in Spain).

At the same time, almost all countries endorsed strategies aiming to strike a better balance between the implementation of public health measures and the continuity of economic and social activities that had been suspended amidst the pandemic. A phase of co-existence with the virus was initiated including a gradual disengagement from strict preventive measures and lifting a wide range of COVID-19 related measures like lockdowns, curfews and movement restriction, physical distancing, business operation, participant and costumer capacity, social, teaching and sports activities, compulsory face mask wearing etc. Nonetheless, the adoption of any additional measures by the competent Authorities was at largely decided upon the temporal evolution of the epidemiological circumstances in each country either on national or regional level and mainly the emergence of the Omicron and Delta variant. Pre-existing or ad hoc governmental and scientific entities established with the mandate to support the implementation and coordination of measures to contain and combat the pandemic and for the execution of the vaccination campaign which were extended and further enhanced during the

time period under study (April 2021- May 2022), gradually concluded their work and were respectively dissolved in most targeted countries.

In relation to risk perception, even though there are not currently sufficient data covering all targeted countries and more research is needed upon this mater, relevant studies carried out in a number of partner countries (e.g. Austria, Ireland, Italy, Cyprus, Greece, UK &Wales) reveal that because people perceive the pandemic as a serious matter abide with the implemented measures adopting preventive behaviours like hand hygiene, facemask wearing and social distancing. The analysis showcased that people acknowledge vaccination against COVID 19 as the most effective measure in combating the spread of the virus. At the same time, it seems that in most of the countries, gender, age, current health status, living conditions proximity to people at high risk, experiences with COVID 19 cases/deaths and respective working environment are decisive factors in relation to higher risk perception levels. On the other hand, the availability of COVID-19 vaccines and the gradual de-escalation of infection rates justify a potential drop in risk-perception and a decrease in pandemic measure compliance that was observed in the majority of the target states. In any case, availability and accessibility to information on all COVID 19 relative issues especially vaccination as well as the importance of public participation in the pandemic response were emphasized as crucial for the adoption of safe preventive behaviour and the effectiveness of implemented measures almost in all respective targeted countries.

When COVID 19 vaccines were made available all partner countries developed and adopted strategic plans for the deployment of vaccination campaigns at a national level. Either pre –existing or ad hoc governmental authorities established amidst the pandemic, were charged with the task of supervising and coordinating the respective procedures. In this context, vaccination target groups were adopted categorizing people into different priority groups, based on age, vulnerability, pre-existing medical conditions, risk exposure or other profession –based criteria. Countries, nevertheless in their attempt to increase the vaccination rate at a national level and bend vaccination hesitancy adopted different approaches. Others emphasized on encouraging citizens in getting vaccinated (like in Belgium, Cyprus, Spain, UK and Wales) while others introduced stricter measures such as implementation of certain rules and restrictions for unvaccinated people, establishment of relevant COVID-19 vaccination certificate, compulsory vaccination for healthcare personnel and other groups of professionals and citizens (as in Italy, Germany and Portugal for example), or even enforcement of fines or employment suspension for people who do not comply with heir obligatory vaccination (as in Greece). Measures that were in some cases characterized controversial and raised significant public concern even though they seemed to be effective in persuading more people to get vaccinated. In addition to that, all targeted countries deployed relevant communication campaigns using both traditional and contemporary means of communication (such as radio, television, newspapers, websites and social media) aiming to ensure public trust in COVID-19 vaccination campaign, raise awareness and strengthen trust in the scientific community but also in the effectiveness of the vaccines motivating people to get vaccinated especially those who were skeptical about it.

The COVID-19 pandemic had a huge impact on the whole population, to all target countries. People from the most disadvantaged economic groups and vulnerable populations were those affected the most. The increasing financial uncertainty imposed by the pandemic and the restrictive measures, further damaged their mental health and had a negative impact on their stress level. This is why the public discourse is growingly focusing on mental health issues that the pandemic has caused in some population groups. On the other hand, the definition of vulnerability and the prioritization of different

vulnerable groups to receive support have not been changed during all the pandemic waves in most if not all partner countries. In this context a series of financial measures to support individuals, families and enterprises that were economically impacted by the pandemic were approved, while in other cases fiscal instruments designed to protect citizens of unemployment due to the suspension of economic activity, remained in force. In addition to that anti-poverty funds were appropriately allocated to tackle social disparities caused by the pandemic.

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Annex: COVINFORM Research Guidelines for T4.5

1. Introduction

This document provides analytical guidance to partners involved in T4.5 of WP4, explaining the specific steps, requirements, deadlines as well as instructions for the data collection template (Excel) along with the general objectives and data collection procedures. Participants of this task are all COVINFORM Consortium partners.

2. T4.5: Describe governmental structures and responses in the target countries (update) – Workplan and Timeline

2.1 Aim and Objectives

WP4 has as its main objective to review and describe governmental structures and responses on a national level among the project target countries, as well as on a regional/local level in selected communities and case studies, performing in parallel an in-depth analysis of key dimensions of governmental response impact in the project target countries[709]. More in particular, T4.5 aims to gather and assess **governmental responses**[710], including a review of relevant **primary sources** (governmental policies and guidelines, official assessments and reports, etc.) and **secondary sources** discussing these governmental responses (scholarly studies, grey literature, etc.), resulting to a concrete report with chapters per partner country, containing top-level descriptive analysis of relevant structures and responses, cross-referenced with indicators utilised in WP2 and accompanied by an index of sources. Moreover, emphasis should be placed on how governmental responses correspond to the COVID-19 infection rate during April 2021 to May 2022 in each target country, if applicable, in relation to the **risk perception**[711] of citizens and the governmental mechanism towards COVID-19. Focus will be given to **vulnerable groups**[712] and the way those were affected (**physically, economically, socially and mentally**) not only by COVID-19 but mostly from the **governmental response and reaction** to it, particularly as of April 2021 until May 2022. In addition, emphasis should be placed in identifying

[709] Here each participant could decide on which level of governance should focus and in realtion to the following research questions, based on the reality of their countries.

[710] Focus should be given to policies and final decisions. Any reference to potitical debates/discussions should not be listed separately, just the final outcomes of such debates.

[711] Risk perceptions are beliefs about potential harm or the possibility of a loss. It is a subjective judgment that people make about the characteristics and severity of a risk.
Source:https://link.springer.com/referenceworkentry/10.1007/978-1-4419-1005-9_866#:~:text=Definition,and%20severity%20of%20a%20risk.

[712] According to EU Migration and Home affairs, vulnerable people can be minors, unaccompanied minors, disabled people, elderly people, pregnant women, single parents with minor children and persons who have been subjected to torture, rape or other serious forms of psychological, physical or sexual violence, victims of trafficking. (vulnerable person | Migration and Home Affairs (europa.eu))
Also please check the **European institute for Gender Equality** definition of vulnerable people during COVID-19, People in vulnerable situations (europa.eu) , as well as the Technical report of **European Center for Disease Prevention and Control** namely „Guidance on the provision of support for medically and socially vulnerable populations in EU/EEA countries and the United Kingdom during the COVID-19 pandemic“ Medically-and-socially-vulnerable-populations-COVID-19.pdf (europa.eu)
In this WP we will adopt a general approach on the „Vulnerable group“ definition so as to see how governemental responses apporached during COVID-19 these groups.
Vulnerabilities: "conditions determined by physical, social, economic, and environmental factors or processes, which increase the susceptibility of [an individual or] a community to the impact of hazards" (UN/ISDR, Geneva 2004; cited in the Hyogo Framework for Action 2005-2015)

if and when governmental responses proceeded with a differentiated course of action than a pre-set crisis management plan/mechanisms whilst identifying the impact on each target country.

Specific Workplan

The assessment of governmental responses will require both desktop research from the respective countries, as well as a brief 1-2-page report summary on the main inputs from each country. For the desktop research we are going to follow the basic steps of a systematic literature review, adapted to the current needs of COVID-19 specifications.

2.2. Desktop Research

The desktop research conducted by the consortium partners in T4.5, will be guided by the following research questions, which will serve as safeguard for the studies to be as representative as possible. The main research questions are:

- ✓ Kindly indicate a summary on changes, if any, in relation to: Governmental structure, main actors in decision making and policy process, main social, economic, cultural, and legal factors, adaptations of the governmental responses towards vulnerable groups, means of communication as of April 1st, 2021 until late May 2022. What impact did the structural change had if any?
- ✓ What is believed to be the causational link between COVID-19 case rate and the prevailing risk perception? Has this perception changed over time?
- ✓ In which cases have governmental responses differentiated their course of action from pre-covid-19 crisis management mechanisms? What was the impact of these responses?
- ✓ How did the governmental responses were shaped during April 2021-May 2022, can you identify landmark events during this period of time (e.g long lockdows, strict measures etc)?
- ✓ Which indicators led governments adopt new measures to minimize the infection rates? Were they successful?
- ✓ Which measures were implemented to motivate people to get vaccinated?
- ✓ What course of action did the governmental mechanism took for citizens who did not get or wanted to get vaccinated?
- ✓ Were there any measures related to vaccination which restrict citizens for participating in specific activities?
- ✓ Were any governmental support agencies created during the pandemic? And if so did they continue to operate?
- ✓ Who was the main target-population of the governmental responses? Were they diversified per target-population?

Research Sources[713]

The main sources for T4.5 research can be the following:

[713] Please check also the following link with a tutorial on effective research: The University of South Carolina Beaufort (sc.edu)

1. **Primary sources** including governmental policies and guidelines, official assessments and reports, produced directly by national governmental and policymaking bodies. Consortium partners could search inside their countries for this information (e.g. in parliament decisions, in legislation, in reports etc.) using probably official governmental websites etc.
2. **Secondary sources,** where **c**onsortium partners could search for **specific studies focusing on economic/health/social impact of governmental policies**. These may include:
    a. *Academic resources* (peer-reviewed journals, academic books, conference proceedings and other academic studies), utilising Google Scholar[714], Web of Science[715], Scopus[716], IEEE Explore[717] and/or other academic databases
    b. *Grey literature* , e.g. policy briefs, reports and presentations produced by international and EU organizations, governmental and policymaking/legal bodies, NGOs and civil society organizations, think tanks, lobbies, Security Organisations, and the private sector.
    c. *Popular resources* (online articles, press stories, websites, publicly available social media accounts and wikis), using search engines (google, Bing), newspapers databases and archives (LexisNexis[718] , ProQuest[719] , other databases from their country), Social search engines (e.g. social searcher[720]), public social media profiles of relevant bodies, organisations and companies.
    d. **Data from similar projects**, if any.

Language

The language that will be included in the research will be mainly English. However, due to the specific particularities of the research (governemental responses usually are issued in the national/regional language and there is not an English translation), all the entries will be accepted on the premise that the partners will provide a comprehensive and detailed English description of the main points of each entry and its relevance to the research.

Timeframe

The entries should cover the period from April 1st, 2021 till the current phase which is set late May 2022, with clear distinction among the relevant waves of the pandemic and vaccination initiatives in each country for comparison purposes among governmental structure/decisions/responses and vaccination campaign.

Search Terms

The following search terms could be suggested to consortium partners to ensure relevance of results with T4.5. and could be used as a starting point. Please note that this is just an indicative sample, so Consortium partners are free to add more relevant terms.

[714] Μελετητής Google.
[715] Web of Science - Please Sign In to Access Web of Science (webofknowledge.com).
[716] Scopus preview - Scopus - Welcome to Scopus.
[717] IEEE Xplore.
[718] Welcome to LexisNexis Legal & Professional.
[719] ProQuest | Better research, better learning, better insights.
[720] Social Searcher - Free Social Media Search Engine (social-searcher.com).

Main Search Term (s)	Secondary Search Terms *(Combined with AND/OR with the main search terms)*
Governmental (response, policy etc.) COVID-19 pandemic	Impact on - Economic, Societal (welfare, well-being etc.), Cultural, Educational, Health, Elderly Care, Employment Legal, Security and Criminal Justice System (Prisons-Courts-Police) Responses (April 2021 – May 2022) Legal factors/Law/Legislature Vulnerable groups Vaccination and Communication Campaigns Europe Global Countries (please use your Country name here to filter the specific responses/policies for your country e.g. Spain, Greece, Austria etc.)

Both Boolean operators[721] (AND, OR, NOT) and Truncation[722] (*, for multiple endings) along with Wildcard Symbols[723] (*, ?) can be used to combine the search terms of interest from all the columns, as well as expand the search results.

Exclusion criteria

Entries with no focus on the subject of research, with no available detailes abstract in English, with no available free text or not compliant with GDPR and/or research ethics standards, e.g. private social media profiles, data gathered in an unethical way will be excluded.

Excel specific guideliness

The excel file that Consortium Parnters need to fill in contains the following information:

- ✓ Name of Publishing Organisation/Institution/Entity
- ✓ Level of Publishing Organisation Organization/Institution/Entity
- ✓ Publication/Source Type
- ✓ Year of Publication
- ✓ Author (s)
- ✓ Search terms used
- ✓ Title of source/document/publication in the original language and an English translation

[721] Rockwell Schrock's Boolean Machine.
[722] Truncation & Wildcard Symbols - Research Process - LibGuides at Northcentral University.
[723] Asterisk wildcard (*) is used between words where variations may be possible, Question mark wildcard (?) is used to replace an unknown character.

- ✓ Language of source/document
- ✓ Detailed English Description of main points
- ✓ Timeframe of the specific response (before COVID-19, during the first wave, during the second wave)
- ✓ Population of interest which was affected by the specific response
- ✓ Impact identified on relevant population
- ✓ Hyperlink/DOI
- ✓ Other Comments

Timeline for the research and next steps

Consortium partners will be asked to provide their research entries till **30.06.2022**, focusing on **their respective countries**. The final research findings (including excel sheets) can be uploaded on the respective google drive folder and can be sent to KEMEA (l.bagkatzounis@kemea-research.gr, mv.arabatzi@kemea-research.gr, a.tsekoura@kemea-research.gr, e.dima@kemea-research.gr).

KEMEA will be responsible for the collection, the review and the systematic report of the desktop research, which will be reported to D4.5 in the end of August (M22).

All the participants are kindly requested to conduct desktop research on their respective countries. Due to the fact that some consortium partners come from the same countries, they can fill in this report jointly, until the **30.06.2022**, and send it to KEMEA (l.bagkatzounis@kemea-research.gr, mv.arabatzi@kemea-research.gr, a.tsekoura@kemea-research.gr, e.dima@kemea-research.gr). The agreed proposed workplan is as follows:

- ✓ Austria: SYNYO & AUTRC
- ✓ Belgium: UANTWERPEN
- ✓ Cyprus: KEMEA
- ✓ Israel: MDA
- ✓ Ireland: TRI
- ✓ Italy: UCSC & SAPIENZA
- ✓ Germany: SINUS
- ✓ Greece: KEMEA
- ✓ Portugal: FS
- ✓ Romania: SNCRR
- ✓ Spain: SAMUR & URJC
- ✓ Sweden: UGOT
- ✓ Switzerland: SYNYO & SINUS

- ✓ United Kingdom: TRI, MDI & SWANSEA
- ✓ US: FS (OECD) & additional support

KEMEA will integrate these reports to D4.5 in the end of August (M22).