STUDY

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Occupational safety and health: Adjusting provisions in the light of COVID-19

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Occupational safety and health: Adjusting provisions in the light of COVID-19

Abstract

The outbreak of COVID-19 has had a marked impact on workplaces and reshaped working conditions in the EU. The study explores the impact of COVID-19 on the occupational safety and health of European workers. It presents a review of the measures adopted by 10 selected Member States and an evaluation of the preparedness of the European OSH legal framework for pandemic crises. Based on these findings, the study presents conclusions and policy recommendations.

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LIST OF ABBREVIATIONS

CESI	European Confederation of Independent Trade Unions
COVID-19	Coronavirus Disease 2019
CPME	Standing Committee of European Doctors
ECDC	European Centre for Disease Prevention and Control
EFFAT	European Federation of Food, Agriculture and Tourism Trade Unions
EIGE	European Institute for Gender Equality
EMA	European Medicines Agency
ESENER	European Surveys of Enterprises on New and Emerging Risks
ETUC	European Trade Union Confederation
ETUI	European Trade Unions Institute for Research
EU	European Union
EU-LFS	European Union Labour Force Survey
EU-OSHA	European Agency for Safety and Health at Work
Eurofound	European Foundation for the Improvement of Living and Working Conditions
FRA	Fundamental Rights Agency
GDPR	General Data Protection Regulation
GEOPA-COPA	Employers' Group of Professional Agricultural Organisations in the European Union
HCW	Healthcare worker(s)
HOTREC	European umbrella Association of Hotels, Restaurants, Bars and Cafes
ICU	Intensive Care Unit
ICT	Information and Communication Technologies
ILO	International Labour Organization
IPOL	European Parliament's Directorate-General for Internal Policies of the Union

ISSA	International Social Security Association
JRC	Joint Research Centre
MEP	Member(s) of the European Parliament
MERS-CoV	Middle East Respiratory Syndrome–related Coronavirus
MSDs	Musculoskeletal disorders
NIOSH	National Institute for Occupational Safety and Health of the United States of America
OiRA	Online interactive Risk Assessment
OSH	Occupational Safety and Health
PPE	Personal protective equipment
SARS-CoV-1	Severe Acute Respiratory Syndrome Coronavirus 1
SARS-CoV-2	Severe Acute Respiratory Syndrome Coronavirus 2
US	United States of America
WHO	World Health Organization

EXECUTIVE SUMMARY

The COVID-19 pandemic has had significant impacts on the health and safety of workers in the EU by generating or aggravating occupational risks.

This study provides an overview of the types of occupational risks faced by EU workers during the COVID-19 crisis, including the different impact on certain occupations and categories of workers. It includes an overview of policy and legal measures in ten Member States to address these new and aggravated risks due to the pandemic and also assesses whether the EU OSH legislation is fit to cope with similar future pandemics. These different aspects of the study, together with the consultation of stakeholders through interviews and a focus group informed the preparation of policy recommendations

Key findings on the impact of COVID-19 on workers' safety and health

The occupational risks faced by EU workers are of different nature. The main direct risk for workers was to be infected by SARS-CoV-2 at the workplace. Certain occupations were more at risks than others, in particular the health and social care sector but also other frontline sectors required to work despite the public health restrictions.

For most of these sectors, the impossibility to telework, along with the working conditions and environments, e.g. requiring contact with patients, customers or colleagues, led to higher incidence of COVID-19 (e.g. see our research on the food and agricultural sectors, construction, and platform workers). Furthermore, the lack of PPE at the early stages of the pandemic could not ensure effective individual protection. The study highlights that healthcare workers also face additional psychosocial risks in times of pandemics and a deterioration of their mental well-being.

Certain categories of workers faced the risk of more severe complications upon infection, due to their health vulnerabilities (older workers, pregnant workers, workers with disabilities or workers with pre-existing conditions). Besides, socio-economic factors played a role in the impact of the pandemic on workers, in particular the higher representation of certain populations in occupations at higher risk of infection (younger workers, women, migrant workers), or in the existence of difficult teleworking conditions.

The unprecedented and rapid submersion of public healthcare with COVID-19 patients led Member States to adopt strict measures limiting physical interactions, in particular at work. Mandatory Telework where feasible significantly increased the number of (new) teleworkers. The occupational risks linked to telework (e.g. the lack of delimitation of work/private life, longer working hours, unclear work organisation, and ICT-specific problematics) were enhanced by the pandemic situation and the lack of preparedness and sudden shift of work organisation (e.g. absence of pre-existing experience with telework for the majority of workers, non-voluntary character, long periods without the possibility to come at the physical workplace) Furthermore, data shows a stark increase of overtime in the first months of mandatory telework.

Teleworkers faced psychosocial risks and occupational risks linked to the work organisation, and possibly heightened ergonomic risks. Teleworkers were more prone to suffer from anxiety, depression leading to suicide in e worst cases due to the lack of social interaction and general social isolation as a result of the pandemic measures.

Member States' approach to preserve workers' safety and health

The measures adopted to protect workers against biological risks relied on social distancing, reinforced hygiene for workers and workplaces and control of workers' infectivity. Besides, certain public health policies addressed the increased OSH risks faced by certain occupations (e.g. priority vaccination for healthcare, or frontline workers).

The protection of workers against psychosocial, ergonomic, and work organisation risks relied primarily on guidance and ad-hoc support. Some Member States had adopted before the pandemic measures against telework psychosocial and work organisation risks, or the recognition of a right to disconnect

Social partners participated in the preparation of rules, guidance, and their implementation in Member States. The time-pressure for governments to adopt extraordinary measures may have limited their involvement during the first months, although the situation improved over time. Many national and EU cross-sectoral and sectoral social partners adopted joint statements and collective agreements during the pandemic, mainly to organise the safe return to workplaces.

Robustness of the European OSH legislation in times of pandemics

The OSH legal framework setting general requirements and core OSH principles could be easy adapted to the new challenges of the crisis. The OSH Framework Directive requires in particular employers to adapt the protective measures to changing circumstances on the basis of risk assessments. In this regard, the COVID-19 pandemic has significantly expended the level of biological risk within most workplaces not confronted with this type of risk and created new challenges with the new working arrangements required by the massive increase in telework.

Annex III to the Biological Agents Directive could be swiftly amended to incorporate SARS-CoV-2 as a biological agent, due to the possibility for the EC to make technical adjustment under a committee procedure without going through the ordinary EU legislative procedure However, limitations appear in particular in the rules for a non-deliberate use of SARS-CoV-2.

The analysis of the other relevant individual OSH directives reveals some limitations in times of pandemics. The Workplace Directive incidentally includes provisions relevant for the protection against biological risks but is not designed for a pandemic. The highly relevant PPE Directive could not be fully implemented and relies on the availability of PPE. The Display Screen Equipment Directive and the Working Time Directive can provide a relevant legal framework to protect teleworkers in times of pandemic, if properly updated and enforced. Besides, the EU OSH legal framework does not cover the psychosocial risks of workers.

Policy recommendations

Strengthening the preparedness of European OSH legislation requires the adoption of pandemic-specific preparedness policies but also improvements to the current framework. The priority actions identified include:

- Ensuring reinforced and efficient coordination mechanisms between public health and OSH authorities in the adoption of policies in times of pandemic.
- Further supporting the training of EU workers in the implementation of OSH legislation (e.g. in particular on biological risks and risks linked to telework), and in the development of digital skills.

- Preserving the central role of risk assessments in times of pandemics, to adapt the protective measures to the diversity of workplaces and provide specific protection to specific categories of workers.
- Increasing the role of the Biological Agents at work Directive and awareness about biological risks in all workplaces by setting out specific prescriptive measures for additional sectors and imposing general prevention measures. The adoption of pandemic-specific provisions in the Workplace Directive could complement the protection provided by the Biological Agents Directive.
- Providing a legal framework to ensure the OSH of teleworkers in the EU, including a right to disconnect, and providing the means for employers and labour inspectors to implement these rules but also the Working Time Directive.
- Supporting a strong protection of workers, in particular clear rules and implementation mechanisms for teleworkers, as part of the update of the Display Screen Equipment and Workplace Directives.

1. INTRODUCTION

Since being declared a pandemic by the World Health Organization (WHO) in March 2020, Coronavirus Disease 2019 (COVID-19) has dramatically changed the working conditions and occupational risks faced by the majority of European workers. Many were requested to stay at home and work remotely to the extent possible, while so-called frontline workers were assigned to essential work in each national context, facing the risk of infection with the novel Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2). After lockdown measures were lifted, all workers returning to their workplaces continue to face the risk of contamination with SARS-CoV-2.

The protection of workers' occupational safety and health (OSH) is essential, including during a health crisis. The European Union (EU) must therefore ensure that the EU OSH legal framework is equipped with adequate provisions to address new and multiple types of occupational risk that may be triggered by future such health crises. The risk of outbreaks of zoonotic diseases is expected to increase in the coming years, due to the intensification of animal agriculture, climate change, and globalisation of exchanges, among other factors (European Agency for Safety and Health at Work (EU-OSHA), 2020a).

This study investigates the impact of COVID-19 on European workers, the different occupational risks generated or increased by the pandemic, and related measures adopted by public health authorities. The primary occupational risk is biological, defined as the risk to workers' health and safety arising or likely to arise from exposure to biological agents at work. Other risks also affected workers, i.e. psychosocial risks (potential for psychological, social and physical harm to people in workplaces), ergonomic/musculoskeletal disorders (MSDs) risks (caused by physical over-exertion, repetitive movements or unnatural postures during the performance of a job that may lead to fatigue, error, accident, occupational illness or musculoskeletal disorders), and work organisation risks (resulting from the policies, procedures, work practices and culture of an organisation, National Institute for Occupational Safety and Health of the United States of America (NIOSH)).

The response of EU Member States to the pandemic varied, as did the protection of European workers. Nevertheless, some convergence can be identified in the adoption of certain measures to prevent or mitigate the occupational risks faced by workers. As of the latest analysis conducted at European level, seventeen Member States recognised COVID-19 as an occupational disease, with some classifying COVID-19 infection as an occupational accident and others as an occupational disease (in some cases, it can be recognised and compensated as either). Nevertheless, some differences persist in respect of the sectors and occupations covered (with a primary focus on the healthcare sector) (Eurostat, 2020). During the pandemic, the boundaries between public health policies applying to workplaces and companies and purely OSH measures became blurred.

The study also addresses the robustness of current OSH legislation in facing the various occupational risks of the pandemic. Key here are the Biological Agents at Work Directive (amended during the pandemic), the OSH Framework Directive, the Personal Protective Equipment (PPE) Directive, and the Workplace Directive. Teleworkers may rely on certain provisions of the Working Time Directive and the Display Screen Equipment Directive. Certain political initiatives initiated at European level to tackle some of the occupational risks faced by certain categories of workers during the pandemic are also evaluated.

This analysis of the impact of the health crisis on workers' OSH, Member States' responses, and current EU legislation led to the preparation of policy recommendations for the European Parliament. The adoption of legislation to better protect the safety and health of workers will not only be useful for the current global COVID-19 pandemic but will also protect workers in the event of future crises or smaller

outbreaks (e.g. Q fever)[1]. The findings and policy recommendations have implications beyond such health crises. The aftermath of this pandemic may create an impetus for policies that rely more on OSH for mitigation measures in a crisis, while providing a higher protection of workers in normal times.

[1] Q fever is a disease caused by the bacteria *Coxiella burnetii.*

2. EXPLANATION OF METHODOLOGIES

Task 1 – Evaluation of the impact of the COVID-19 pandemic on workers' health and safety at work

Task 1 comprises an evaluation of the impact of the COVID-19 pandemic on the safety and health of workers. The research team carried out a **literature review** of the relevant studies (in English) on the impact of the COVID-19 pandemic on European workers. Four **cases studies** were then selected: i) meat processing plants in Germany; ii) implementation of the Framework Agreement on Telework; iii) European initiatives to protect workers' mental health; and iv) the right to disconnect in the EU. The research team carried out specific desk research on each case study. In addition, quantitative data on COVID-19 and OSH (official statistics and results of employee surveys since the outbreak of the pandemic) were identified and reviewed. The **quantitative analysis** of the data also considered the qualitative information gathered through the literature review and case studies. The research team also conducted **interviews at European level** with representatives of European social partners, European institutions, bodies and agencies, as well as industry representatives in the economic sectors where workers were the most at risk of contamination by SARS-CoV-2.

Task 2 – Review of Member States' measures to protect workers against occupational risks generated or amplified by COVID-19

Task 2 maps the measures adopted by Member States to address the occupational risks identified under Task 1, assesses the role of social partners in adopting such measures, and identifies interesting initiatives at company level. The research team **selected 10 Member States**: Belgium, Bulgaria, Czech Republic, Denmark, France, Germany, Greece, Latvia, Spain, and Sweden. Three Member States were singled out in the tender specifications for their advanced policies and legislation in the field of psychosocial risks (Belgium, Denmark, Sweden), with the remainder selected based on a preliminary analysis of the intensity of the legal measures and policy initiatives protecting the health and safety of workers during the COVID-19 pandemic, while taking into account the typology of OSH legislation, and the importance of ensuring a fair geographical representation of Member States. National experts conducted desk research on the measures adopted by Member States during the reporting period in order to obtain a complete and reliable picture of national actions[2]. They also carried out **targeted interviews** with relevant stakeholders at **national level** to inform the analysis of the 10 Member States selected.

Task 3 – Analysis of preparedness of the European OSH legal framework for pandemic crises

Task 3 assesses the preparedness of the EU OSH legislation applicable to workers affected by the COVID-19 pandemic to cope with workers' risks. The research team focused on mapping EU OSH legislation providing protection for workers for the risks specifically generated or exacerbated by the pandemic. Two Senior Experts with proven knowledge and experience of EU OSH legislation reviewed the mapping exercise and provided additional information. In parallel, European-level interviews were conducted with high-level representatives of European institutions and agencies, and European social partners, allowing the identification of potential gaps in workers' protection and validating the findings. The research team and Senior Experts conducted a legal analysis of the provisions' adaptability to pandemic crises, relying both on OSH legal expertise and practical experience of implementing OSH legislation.

[2] For example, legislative rules on the protection of workers from occupational risks, financial support for prevention, guidance and other practical actions to support workers' safety and health.

Task 4 – Conclusions and development of policy recommendations for increased preparedness of OSH legislation in times of pandemic crises

Task 4 develops conclusions and policy recommendations based on the findings of the three previous tasks. A **focus group** was held on 15 February 2022 with representatives of EU-OSHA, the European social partners, and the Senior Labour Inspectors' Committee, along with the Senior Experts, to discuss the study findings and policy recommendations The focus group allowed the validation and refining of the recommendations.

3. IMPACT OF THE PANDEMIC ON WORKERS' SAFETY AND HEALTH AT WORK

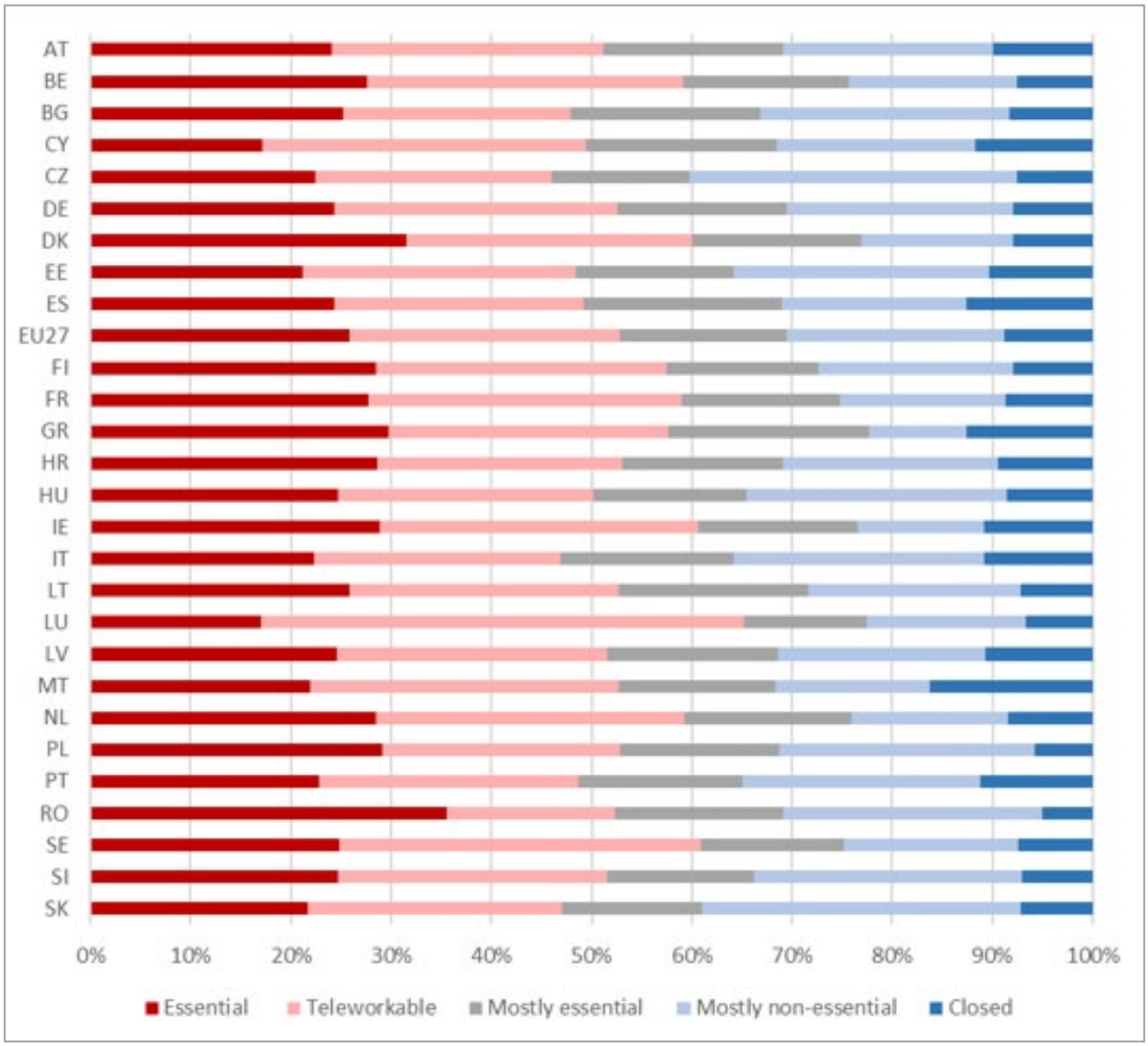
KEY FINDINGS

- The OSH of the majority of workers has been impacted by the COVID-19 crisis, either via increased biological risks, or by the wide range of occupational risks linked to teleworking. Other workers have been furloughed and received financial support from the State.
- Around 48% of employees in the EU worked (exclusively or partially) remotely during the COVID-19 pandemic in 2020. Some 46% were first-time teleworkers, creating significant challenges in companies' management of occupational risk.
- Telework was characterised by its non-voluntary character and by the impossibility of alternating with working at the regular workplace. The psychosocial risks linked to prolonged teleworking include severe mental health disease, while the use of information and communication technologies (ICT) bears its own OSH risks. The low level of preparedness among workers for prolonged periods of teleworking is likely to cause a higher prevalence of MSDs.
- The risk of infection with COVID-19 was higher in certain economic sectors, particularly affecting so-called frontline (most often considered essential) workers. These sectors include health and social care, food packaging or processing, factory/manufacturing, building and construction sites, offices, educational facilities, sales and retail, military and law enforcement, and mines. Healthcare workers have faced significant biological and psychosocial risks. The food production and agricultural sectors experienced large outbreaks of COVID-19 and a link was identified with certain socioeconomic factors. Several sector-specific working conditions placed construction workers at particular risk of infection. Finally, self-employed platform workers provided essential services, but their employment status limited their OSH protection.
- Certain specificities of workers affected their vulnerability to infection. Young workers were overrepresented in occupations with a higher risk of exposure, while older workers constituted a vulnerable group for biological risks. Workers with disabilities faced difficulties in the implementation of OSH procedures. Men experienced higher fatality rates than women, while women were overrepresented in occupations with high risk of exposure and also teleworked more. Migrant workers faced higher risks of infection, primarily due to the type of their occupation and their socioeconomic situation and living conditions.

European workers have all been affected by the COVID-19 pandemic. Most employees either became essential workers (Lodovici et al., 2022) required to work at their usual workplaces during periods of lockdown, or remote workers required to work from home exclusively or partially for tasks that can be done using telecommunication tools. Others were laid-off for operational reasons (Kniffin, 2020) where their tasks could not be conducted remotely, or where enterprises had to shut down their activities (European Foundation for the Improvement of Living and Working Conditions (Eurofound) and

European Commission Joint Research Centre, 2021)[3].

Figure 1: Employment distribution across sectoral categories (%), 2020



Source: European Union Labour Force Survey (EU-LFS) (authors' calculations); Classification of NACE two-digit sectors based on Fana, M. et al. (2020).

Figure 1 shows the employment distribution in the Member States and the EU average, categorised by essential, teleworkable, mostly essential, most non-essential, and closed employment. The data show high heterogeneity in the employment structure of the Member States: essential occupations in Romania represent 36 % of the employment market, compared to only 17 % in Luxembourg. These extremes are mirrored in the teleworkability of employment, which represents 48 % in Luxembourg, yet only 17 % in Romania.

3.1. General analysis of the impact of COVID-19: workplaces and remote working

The COVID-19 pandemic has had an undeniable impact on the working life of European workers, and

[3] Notably, entertainment, cultural events, gambling and betting, sports and recreation, food and beverage services, accommodation, retail, education, public administration and human health activities.

it is necessary to evaluate the effect on their health and safety, **both at their regular workplaces and remote working locations**, often their homes. At workplaces that were allowed to remain open, workers faced the risk of contracting the virus via physical contact with their colleagues, but also with customers and third parties (Section 3.1.1.). Remote workers could avoid infection at the workplace but were at greater risk of developing psychosocial illnesses and disorders, as well as MSDs (Section 3.1.2.).

Occupational risks directly linked to a pandemic can amplify or exacerbate existing risks. For example, a potential biological health threat at the workplace is most likely to affect the psychosocial well-being of workers and creates additional sources of stress (e.g. fear for oneself or for relatives, reinforced by the lack of PPE at workplaces, longer working hours for frontline workers).

3.1.1. Biological risk of COVID-19 infection within workplaces

The SARS-CoV-2 is transmitted primarily via respiratory droplets, spread via coughing and sneezing, and is fostered by the close interpersonal proximity of persons. A more indirect mode of transmission is through droplets landing on surfaces and spreading through touching the nose, eyes or mouth (European Centre for Disease Prevention and Control (ECDC), 2020a).

Exposure to biological agents such as COVID-19 at workplaces can occur directly, by the intentional use of biological agents for the needs of the economic activity, or indirectly via unintentional exposure resulting from activities that involve the presence of biological agents (Haagsma, 2012). Exposure to biological agents occurs primarily through contact with humans, animals, foods, or plants (EU-OSHA, 2019a). Exposure to the SARS-CoV-2 occurs at the workplace primarily due to unintentional physical proximity to other humans. Minor occurrences of contamination via animals were identified by authorities, in particular in mink farms, although they are not considered to have played a role in the evolution of the pandemic (French National Academy of Medicine, 2020).

Prior to the pandemic, measurement of exposure to biological agents was reported to be insufficient in the Member States. This was particularly due to difficulties caused by the variation in speed of development of biological agents such as viruses or microbes in different environments. However, methods do exist to assess the level of biohazard (EU-OSHA, 2019a).

3.1.2. Occupational risks generated or aggravated by compulsory remote work

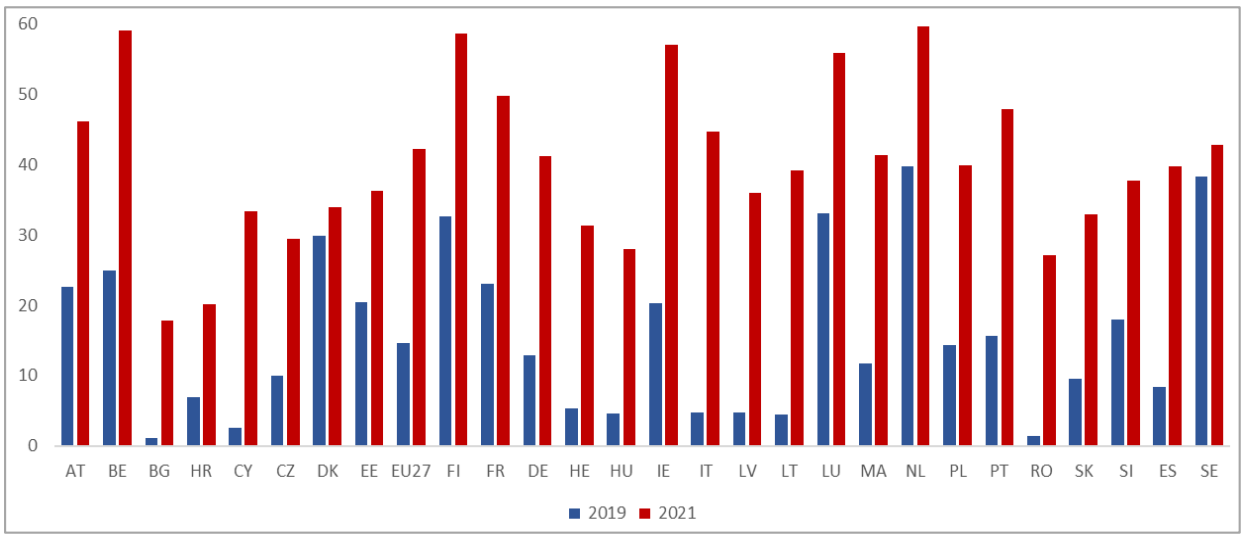
This study used the definition of telework adopted by the European social partners in 2002, as the general terms cover a wide range of practices (including working from home). They defined telework as '*a form of organising and/or performing work, using information technology, in the context of an employment contract/relationship, where work, which could also be performed at the employers' premises, is carried out away from those premises on a regular basis*' (Framework Agreement on Telework, 2002).

Preliminary observations on the extent of telework in the European Union in 2020/2021

According to a 2020 Eurofound survey, **48 % of employees** in the EU **worked exclusively or partially remotely** during the pandemic (34 % exclusively). The results show a strong correlation between the level of education and the possibility to work from home, with 74 % of employees with tertiary education working remotely, and an overrepresentation of workers in the services sector. Workers in sectors less likely to work remotely still reported working partially from home (e.g. for certain administrative tasks) (Eurofound, 2020a). In terms of work conducted, this represented 39.6 % of paid work by dependent employees (Eurofound, 2020a). The same data show a marginal impact of **gender, age, or the need to take care of a child** in the uptake of mandatory telework in 2020. However, the significance of telework during the pandemic varied significantly by Member State, with around 50 % of workers in Belgium, Ireland and Italy declaring themselves as working from home during the

pandemic, compared to less than 25 % in half of the Member States (Eurofound, 2020a). Interestingly, in certain Member States, such as Italy, the pandemic increased the uptake of telework to a level higher than prior figures in other Member States.

Figure 2: Share of people working from home, by Member State, 2019 and 2021



Source: Authors' own elaboration, on the basis of Eurostat and Eurofound data. 2019: Eurostat (LFSA_EHOMP, 2019). 2021: Eurofound (Living, working and COVID-19 data, February/March 2021).

Figure 2 shows the proportion of workers aged 20-64 who sometimes or often worked from home in 2019 (Eurostat) compared to the proportion of people teleworking in 2021 (Eurofound). The proportion of teleworkers dramatically increased in all Member States since the start of the pandemic. Bulgaria and Romania had the lowest proportion of teleworking in 2019, at 1.1 % and 1.4 %, respectively, with figures increasing to 17.8 % and 27.1 %, respectively, in 2021. Conversely, some Member States with high rates of working from home in 2019 did not observe such a stark increase, most notably Denmark and Sweden. Overall, Member States who had a lower proportion of teleworkers prior to the pandemic saw a much greater relative increase in people working from home in 2021.

One hypothesis for the differences across Member States could point to the prevalence of certain sectors in each Member State economy. However, variations were evident in the same sectors across Member States, highlighting the potential importance of other factors (qualifications, company size, rate of self-employment, digital skills) (Joint Research Centre (JRC), 2020a).

46 % of workers required to work remotely were **first-time teleworkers** (Eurofound, 2020a). This suggests that close to half of workers were not prepared for these new working conditions, while the others may never have had to telework full-time. These figures do not reflect the impact of **non-voluntary and non-intermittent remote work for a prolonged period of time** on workers' occupational risks. The findings of studies on telework pre-2020 should therefore be reflected, taking their context into account. For example, the specific conditions of telework associated with the pandemic were unlikely to have the same positive impact on work-life balance (European Parliament, 2021a).

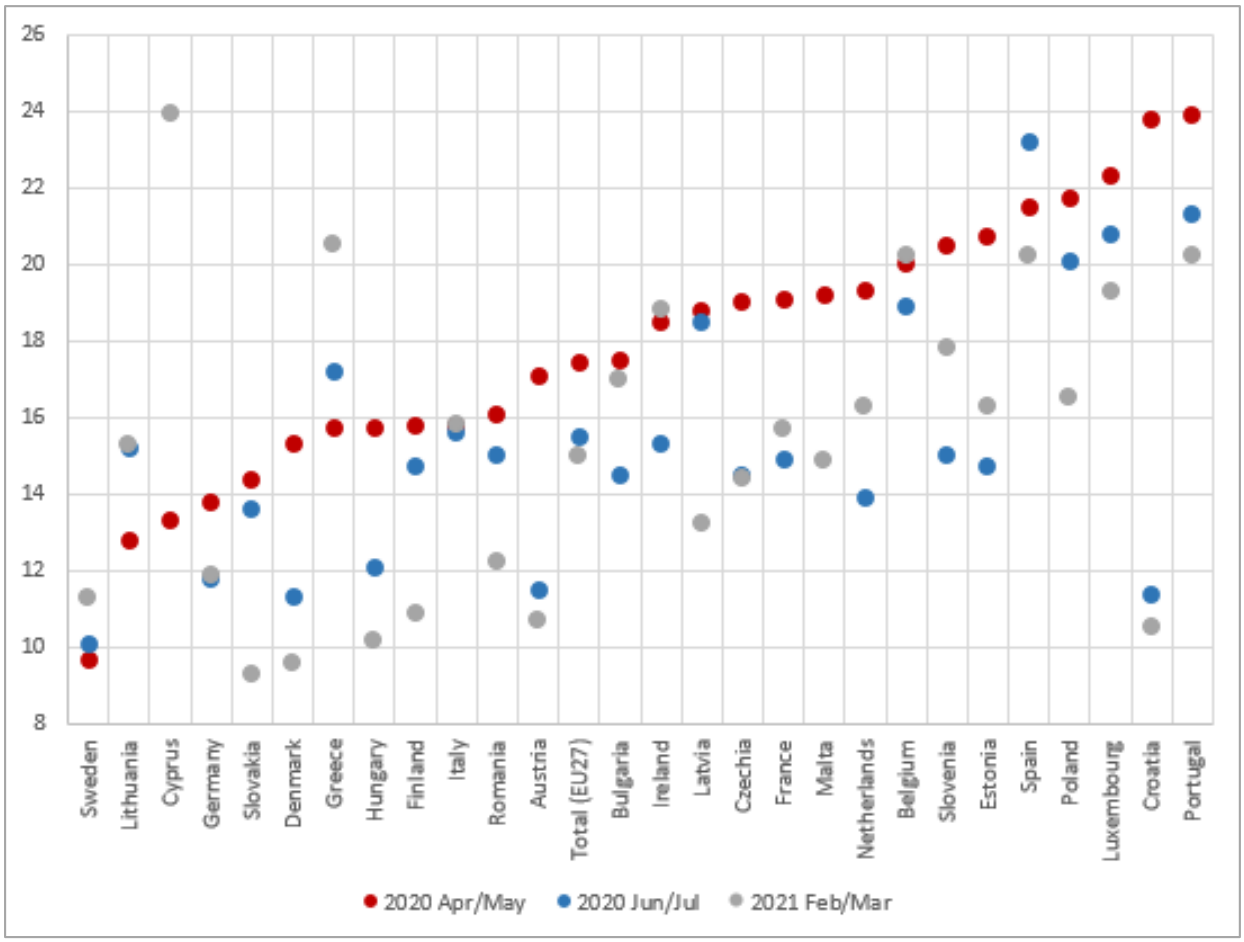
Occupational risks linked to teleworking during the pandemic

The indirect impacts of COVID-19 relate mainly to the **psychosocial risks** for workers, as well as ergonomic risks for teleworkers.

The **underlying causes** of psychosocial risks include the lack of delimitation of work/private life and

conflicting demands during working time, longer working hours (including at weekends, evenings or other free time, compensating for commuting time), presenteeism, and difficulties in having clear expectations on organisation and workload, leading to anxiety (EU-OSHA, 2021b). Besides, telework shifts management practices towards **results-oriented evaluation** of worker performance (Kniffin, 2020). The management style in the company (e.g. intrusive leadership) greatly influences remote workers' well-being (Magnavita, 2021a). The European Trade Union Institute for Research (ETUI) points to the importance of a culture of trust and compassion (ETUI, 2021).

Figure 3: Working during free time to meet work demands (%), either every day or every second day, during three periods in 2020-2021



Source: Eurofound (2020).

Figure 3 shows a higher likelihood of people working in their free time to meet work demands during the early months of the pandemic (April/May 2020). The likelihood of overtime work in the subsequent periods (June/July 2020 and February/March 2021) decreased in most Member States (except Lithuania, Cyprus, Greece and Spain). Overall, the number of respondents declaring that they worked in their free time varied significantly, almost threefold, across Member States, from 9 % in Sweden to 24 % in Portugal (April/May 2020).

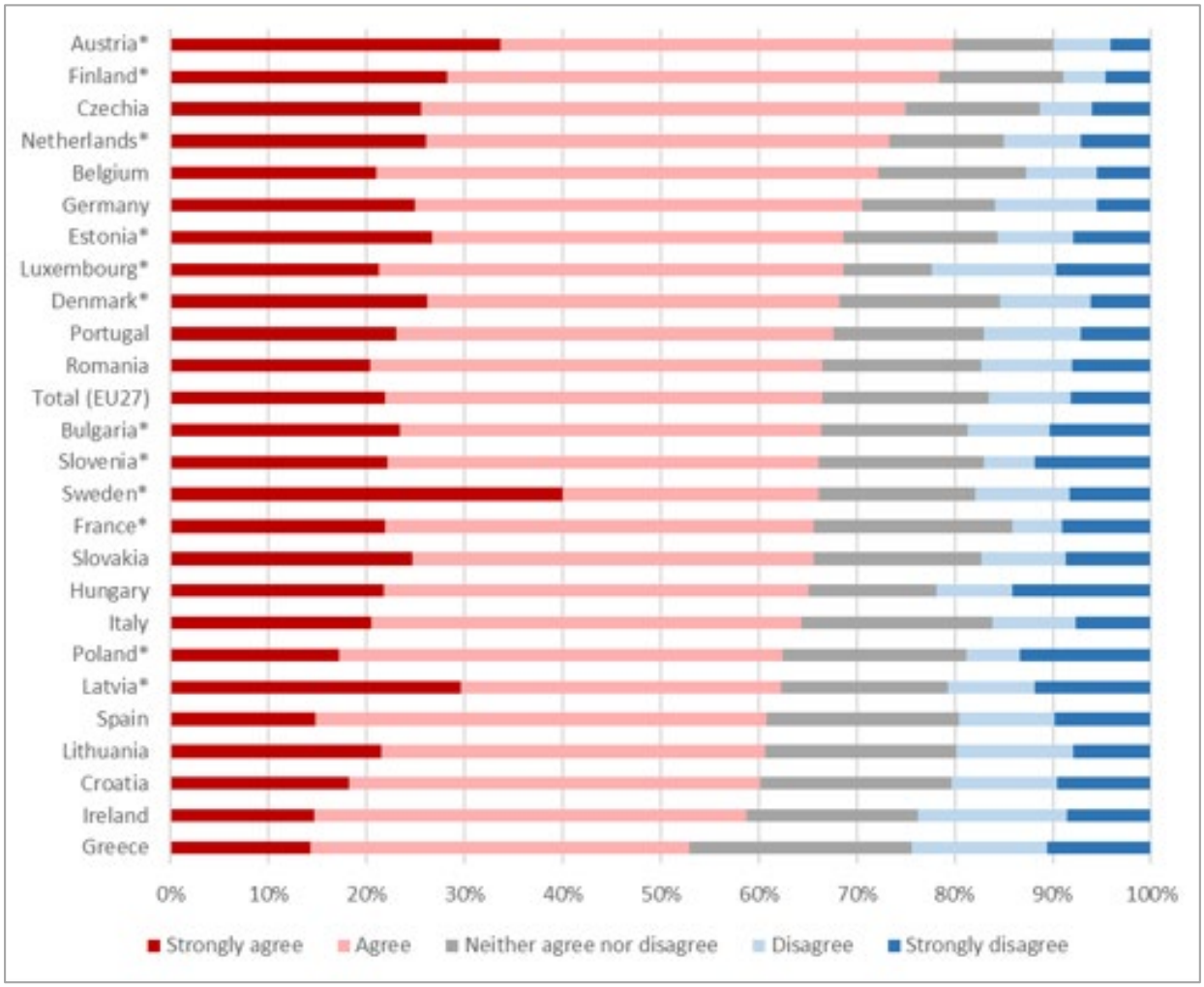
Important challenges are linked to the **use of ICT**. Even if devices are provided by the employer specifically for professional purposes, ICT has significant potential to blur the boundaries between professional and personal life. ICT can be perceived by workers as an invasion of their privacy (Kniffin, 2020), while the reliability of the equipment's proper functioning plays a role in work-related stress and psychosocial factors at work (Roquelaure, 2018). Potential technical issues with information technology (IT) and ICT tools, the reliability and speed of the internet connection, and the workers' level of

familiarity with the tools may negatively impact their mental well-being at work. Finally, virtual communication can lead to misunderstandings and difficulties in making professional requests and expressing emotions (Kniffin, 2020).

Examples of psychosocial risks to workers' mental health include increased anxiety, job burnout (Kniffin, 2020), post-traumatic stress disorders, psychological distress, major depression because of intense or continuous stress, addiction (Giorgi, 2020), and, in the worst cases, suicide (Hamouche, 2020). Compulsory full-time teleworking amplified **social isolation** (European Parliament, 2021b), which is an additional cause of increased psychosocial risk (Kniffin, 2020). During the pandemic, the absence of physical professional interactions reinforced the isolation created by other restrictions of social life (lockdown, curfew).

With high numbers of people working from home, the **ergonomic risks** linked to teleworking and improper working conditions (e.g. lack of dedicated workspace, sharing workspace with other family members) likely increased and may lead to more **MSDs** among workers (EU-OSHA, OSHwiki). MSDs were already well-known among teleworkers, and the significance of working with computers, laptops and smartphones has already been highlighted (EU-OSHA, 2019a). The increased number of people teleworking, and the high rate of new teleworkers created a higher risk of increased numbers of workers suffering from MSDs (EU-OSHA, 2020a). Research on the prevalence of MSD/ergonomic risks among teleworkers is insufficient to draw useful conclusions (EU-OSHA, 2021c), and it is possible that teleworkers' working conditions improved in the course of the pandemic, or that the duration of mandatory telework was insufficient to cause MSDs, which typically develop over prolonged periods of time.

Figure 4: Agreement with statement: 'With the equipment I have at home I could do my work properly', by country (%), June/July 2020



Source: Eurofound (2020).

Figure 4 presents the results of Eurofound's survey and shows EU workers to be quite satisfied with their ability to use their work equipment at home, with a satisfaction rate ranging from 53 % (Greece) to 80 % (Austria). Certain Member States show a correlation between worker satisfaction and high rates of telework prior to the pandemic (e.g. Finland, Netherlands, Belgium, Luxembourg), which may point to the importance of preparedness for working from home. Although this figure indicates how satisfied workers were with their teleworking equipment, it does not reflect the prevalence of occupational risks of home working in the different Member States. According to Eurofound's survey, dissatisfaction with the equipment provided for telework is higher among occasional teleworkers (Eurofound, 2021a).

Limitations in ergonomic conditions for workers are **environmental** (temperature, lighting, noise, disturbances), linked to the **safety of the workplace** (non-secure working arrangements, e.g. wires) and **ergonomic**, linked to the display, keyboard, desk and chair (eyestrain, poor settings, MSDs affecting the neck, wrists, fingers). Although not specific to telework, prolonged sitting positions can have a further negative impact on workers' health.

Despite the fact that the verification of proper working conditions for teleworkers remains the responsibility of employers, implementation of this obligation remains difficult both for employers and for labour inspectors, particularly during a pandemic. Pursuant to the European social partners' 2002

Framework Agreement on Telework, the control of teleworkers' working conditions is subject to national legislation (sometimes restricting controls at home due to privacy rules), national collective agreements, and the worker's consent. Remote workers have the right to request an inspection of their remote working stations, under the Framework Agreement (EU-OSHA, 2021b).

3.2. Specific impact of COVID-19 on workers in certain economic sectors

Considering the capacity of transmission with SARS-CoV-2 via respiration, workers in sectors requiring contact with the public, with colleagues, or with third parties (physical proximity) are at particular risk of infection. This risk was reinforced by the requirement for so-called frontline workers to be present at their workplace despite lockdown and curfew measures. This was the case in health and social care, production and distribution of food and medical devices, logistics and transportation, law enforcement, public administration, utilities, financial and ICT services (Lodovici et al., 2022).

In 2019, EU-OSHA found a link between certain professions and exposure to Severe Acute Respiratory Syndrome Coronavirus 1 (SARS-CoV-1), that is in occupations involving **live or dead animals** (abattoir workers, workers in animal agriculture, animal workers, pet shop workers, veterinarian and zoo personnel), **travel** (airline personnel, customs workers, global trade workers, journalist/media professionals, workers required to travel frequently by air, workers in war zones, **services** (professional drivers, food processing workers (preparation, serving), cleaners), and contact with biological agents in **human health** (epidemic control workers, funeral services workers, healthcare workers, laboratory workers). However, some of these connections are limited by the specificities of the current pandemic, where most contamination is between people (EU-OSHA, 2019b).

Essential workers were associated with a higher risk of contracting SARS-CoV-2 (ECDC, 2020a). This reflected the low rate of telework in health (30 %), retail (27 %), accommodation/food services (16 %) and manufacturing/construction (JRC, 2020b). The impossibility of working remotely reflected the high levels of human physical interaction in the health, retail, and accommodation/food sectors, which reinforced the risks of infection faced by workers.

A review of the situation in a selection of sectors is provided below, but clusters of COVID-19 were identified by the ECDC in various occupational settings: health and social care (hospital, long-term care, primary care), food packaging and processing, factory/manufacturing, building and construction sites, offices, educational facilities, sales and retail, military and law enforcement, mines, and other sectors (ECDC, 2021). EU and extra-EU migrant workers are highly represented among cleaners, personal care workers, mining, and construction workers (JRC, 2020c).

3.2.1. Healthcare workers (hospital, long-term care)

Prior to the pandemic, EU-OSHA had already identified a clear risk of exposure to biological agents for healthcare workers, a risk reinforced by contact. In 2019, it emphasised that '*novel viruses and prions, emerging in various parts of the world may pose a* ***threat to the health and life of healthcare workers****, food and agricultural workers, and veterinarians*', and that '*travelling, especially outside Europe, is generally assumed to increase the geographical spread of diseases not commonly encountered in Europe*' (EU-OSHA, 2019b). The current pandemic has proven the accuracy of that finding.

Despite a **higher level of awareness** among healthcare workers about exposure to biological risks, uncertainties stemming from the lack of knowledge of SARS-CoV-2, trial-and-error approaches to risk prevention, and PPE supply issues exposed those workers to COVID-19 (Standing Committee of European Doctors, CPME, 2021). Sector-specific contributing factors identified by the ECDC include contact with patients, incorrect or insufficient use of PPE, and working in confined or close spaces

(ECDC, 2020b).

The level of awareness and implementation of preventive measures were lower in long-term care settings and in smaller hospitals (EU-OSHA, 2019c). The ECDC reported that during the first phase of the pandemic (March to July 2020), close to 600 of the 1 266 COVID-19 clusters (almost half) were reported by Member States in long-term care facilities.

The CPME highlighted the **multiplication of risks for healthcare workers in intensive care units** (ICUs), particularly the risk of infection and psychosocial risks[4]. The study of prior epidemic events had already highlighted the adverse consequences on workers' mental well-being (Marvaldi, 2021), pointing to causes such as harsh working conditions, long working hours and repeated overtime, reorganisation of care units, new working methods and colleagues, urgency procedures, and ethical dilemmas like triage, among others. Many Member States also relaxed the rules on maximum working times. In Sweden, for example, 'crisis situation agreements' allow employers to freely dispense with the working time of health personnel (CPME, 2021).

In addition to the higher probability of infection, healthcare workers faced direct, long-lasting stress and psychological strain linked to psychological factors. These included repeated exposure to death (Krishnamoorthy, 2020), ethical dilemmas and uncertainty[5]. Facing such emergencies in difficult working conditions can lead to burnout or post-traumatic stress (Cyr, 2021). Certain issues increased both biological and psychosocial risks, such as the lack of PPE.

The severe **deterioration of healthcare workers' mental well-being** is well documented. A recent systematic review and meta-analysis highlighted a high prevalence of anxiety, depression, and sleep disorders among caregivers (Marvaldi, 2021). While it may be difficult to determine the pre-existing nature of these disorders (i.e., disentangling the effect of the pandemic from that of the many stressors already present at work), prospective studies show that the protraction of the pandemic led to an increase in mental health disorders (Magnavita, 2021b).

3.2.2. Food production and agricultural sectors

Many Member States declared workers in the food production sector to be essential workers. According to the ECDC, the food packaging and processing sector was the second-most affected by COVID-19 clusters after healthcare, possible due to confined and closed workspaces, shared accommodation of migrant workers, and shared transport (ECDC, 2021).

The 2019 EU-OSHA study on biological agents linked working in food processing, slaughterhouses, and animal agriculture with the risk of contracting SARS-CoV-1 (EU-OSHA, 2019b). That higher risk was linked to contact with animals, which has not been identified as a possible mode of contamination by SARS-CoV-2 (save in very exceptional cases). In the case of the SARS-CoV-2 pandemic, transmission occurs through contact between people.

Several instances of contamination of a great number of workers in slaughterhouses were reported across the globe (United States (US) Centers for Disease Control and Prevention (CDC), 2020)[6], in particular in France, Germany, the Netherlands and Ireland (National Academy of Medicine and the Veterinary Academy of France, 2020). In general, labour-intensive food processing plants appeared vulnerable to biological outbreaks.

[4] Interview with the CPME.

[5] In some cases, healthcare workers also faced an increase in stigmatisation and violence.

[6] US CDC reported cases in the US, Canada, Brazil, Europe.

The literature describes **underlying causes** as the labour-intensiveness and noisiness of **meat processing plants,** which require workers to be in close contact and to shout, expelling respiratory droplets (Aday, 2020; Hobbs, 2021). These workplaces are characterised by the absence of sunlight (exposure to UV light accelerates inactivation of SARS-CoV-2), cold temperatures (SARS-CoV-2 is most stable around 4^{0}C (Azuma, 2020), and infrequent aeration, necessary to disperse floating particles. In humid environments, SARS-CoV-2 may be more resistant, while the filtering capacity of respiratory protection (masks) is reduced (Middleton, 2020).

Socioeconomic factors may also be at play. In general, low-revenue occupations create a culture of worker presenteeism, even with illness symptoms, as their financial safety is not assured in the absence of salary or reduced state furlough. Hiring foreign nationals in slaughterhouses is common practice, and the difference in language and culture may hinder a full understanding and implementation of OSH rules. The living conditions of workers can also impact the propagation of SARS-CoV-2 within workplaces, e.g. dense housing shared with family or colleagues (National Academy of Medicine and the Veterinary Academy of France, 2020).

Employers tried to mitigate the impact on workers by implementing social distancing to the extent possible, creating working groups to restrict the circle of co-workers, or more drastic measures, such as quarantines and shutdowns (Luckstead, 2021).

The US reported that, as a direct consequence of the pandemic, the US Food Safety Inspection Service **relaxed the safeguards on processing speeds** for meat processing facilities in order to ensure the supply of meat products in the US (Hobbs, 2021). This likely worsened the safety and health of workers (particularly stress and MSDs) and reduced the attention given to COVID-19-specific prevention measures. No similar information is available for Europe.

Box 1: Case study on meat processing plants in Germany

Context of COVID-19 infection in German meat processing plants

Workers in the meat processing industry were particularly at risk of contamination, due to the conditions in these workplaces, such as low temperature and crowded working conditions, which favoured the spread of SARS-CoV-2 (WHO). This was particularly evident in Germany, which saw outbreaks of COVID-19 cases in meat processing plants across the country. The poor working conditions (e.g. insufficient ventilation), combined with workers' cramped living conditions, significantly contributed to contamination.

Outbreaks in meat processing plants were reported to be the determining factor in the adoption or prolongation of local lockdown measures. Infections of citizens not connected to the operations were also reported in the vicinity of the plant, pointing to the interplay between public health and occupational safety and health.

Measures adopted in Germany

Short-term response: In North Rhine-Westphalia, the authorities engaged in widespread testing of all 17 000-20 000 meat processing workers in the region. The literature suggests that distancing is insufficient, but that the use of respiratory protection (masks), improved ventilation and filtered airflow may significantly reduce the risk of infection.

Long-term solutions: the Federal Government of Germany adopted measures to prevent exposure in meat processing factories, showing that the mitigation of public health crises in workplaces depends on the underlying labour conditions. For many years prior to the pandemic, one of the main issues in the meat industry in Germany was the common practice of subcontracting workers.

In 2021, after the outbreak of a significant number of cases among workers in the meat processing industry, a new law was adopted, prohibiting the industry practice of subcontracting in the meat industry. That new law introduced a requirement for employers to hire workers involved in core operations and minimum standards for workers' housing within or outside the enterprises' premises, as well as obligations to record working hours and introduce a minimum workplace inspection rate. An evaluation of the new legislation is planned in 2023.

Current situation, as described by a trade union

Despite the legal developments, the German Food, Beverages and Catering Industry Trade Union (NGG) states that the living and transport conditions of migrant workers have improved only slightly since the introduction of the new legislative requirements. Migrant workers still use small minibuses for transport and still live in cramped accommodation provided by their employer or by the third party recruiter in the Member State of origin. More specifically, where accommodation is provided by the company, it is part of the employment contact and can be more easily controlled by the competent authorities, but the control of accommodation provided by the recruiting third parties is not the responsibility of the German companies. Inspections are affected by a lack of resources (financial and human) to implement the existing rules.

The NGG considers the reinforcement of workers' representatives crucial if conditions are to improve. The workers' representatives (i.e. workers' councils) could push for more inspections and controls, and request assistance from state organisations. In addition, the direct hiring of workers mandated by legislation allows participation in representation instances. However, organisation of the protection of workers remains weak in the sector.

European-level action

Despite the new legal developments, the possibility for companies in the meat processing sector to move their facilities to other Member States should also be considered. In September 2020, for example, there were reports that the biggest meat processing company based in Germany (Tönnies) was planning to establish a huge pork-processing industry in Spain.

The European Federation of Food, Agriculture and Tourism Trade Unions (EFFAT) has published 10 demands for action at European level, including regular subcontracting in the meat sector, a system of full chain of liability for both domestic and cross-border situations, and decent housing for all mobile workers. Other innovative proposals include a European Social Security Number. EFFAT is also calling for cross-border inspections to be enhanced.

Source: WHO Independent Panel for Pandemic Preparedness and Response, 2021, 'COVID-19: Make it the last pandemic'; Middleton, J., 2020, 'Meat plants – a new front line in the COVID-19 pandemic', BMJ; Azuma, K., 2020, Environmental factors involved in SARS-CoV-2 transmission: effect and role of indoor environmental quality in the strategy for COVID-19 infection control, Environmental Health and Preventive Medicine; ETUI, 2021, Special report: Workers in the food chain, HesaMag #23; Tönnies, 2020, History of pandemic protection measures at Tönnies; Interview with the NGG, 2022.

3.2.3. Construction sector

The construction sector is characterised by the **impossibility of implementing telework** in core activities and the labour intensiveness of the tasks. Construction sites have been described as epicentres for the spread of infectious diseases in general (Olanrewaju, 2020).

Several factors create favourable conditions for exposure to biological risks in the construction sector: the temporary nature of construction projects and related OSH measures; the involvement of many types of specialised workers; complex working arrangements, which mean that workers visit multiple workplaces (construction sites) and risk possible cross-contamination, the difficulty in maintaining social distancing for certain tasks (confirmed by European Trade Union Confederation's (ETUC) member organisations)[7], and the demographics of construction workers (primarily older men, two aggravating risks, see Section 4.3. below). Construction work has also been associated with the prevalence of respiratory conditions (UK Office for National Statistics, 2020). The ECDC points to similar factors identified in the agri-food sector, i.e., shared accommodation and transport, lack of facilities to wash hands, and language barriers hindering understanding OSH instructions (ECDC, 2020b).

The construction sector often suffers with **difficulties in implementing OSH policies** due to the involvement of enterprises of various types and organisation, and the split leadership between principal contractor and subcontractors, which may lead to varying instructions or ways of working on the same site. This has potential implications for the efficacy and uptake of the differentiated measures adopted by the respective employers.

[7] Interview with ETUC.

Finally, the focus on measures to fight the pandemic may weaken the measures to mitigate **traditional risks in the construction sector** (e.g. physical injury), particularly where management and human resources personnel were required to work remotely and were thus absent on-site (Stiles, 2021).

3.2.4. Platform workers (gig workers)

It is estimated that rapidly growing **short-term self-employment (the so-called gig work or gig economy)** increased still further during the pandemic in certain sectors (Kniffin, 2020), particularly on-location platform work. EU-OSHA's review of digital platform work and occupational safety and health defines digital platform work as 'all paid labour provided through, on or mediated by an online platform'. The employment status of platform workers is not decisive in the definition, but the review notes a prevalence of non-standard working arrangements and self-employment (EU-OSHA, 2021d).

These jobs comprise a three-sided contract, with the platform as the intermediary between customers and individual (self-employed) workers providing services. Self-employed platform workers, in particular, worked to provide both individual transport solutions and food and goods delivery to populations in lockdown or quarantine. Due to restrictions in the free movement of the population during lockdowns, platform workers constituted an important element in continued provision of essential goods and services.

Self-employed platform workers may have precarious employment conditions and they do not usually benefit from social security protection in case of social risks (e.g. disease, accident). This pushed workers to **sustain their activity** at the height of the pandemic in order to maintain their income, and to take bigger occupational risks, even if infected with the virus or fearing infection (**presenteeism**) (Kniffin, 2020).

The main occupational risks faced by these workers were exposure to the virus and the possibility of spreading it to others via physical proximity. In practice, exposure to SARS-CoV-2 can occur through physical contact with customers, but also between platform workers gathered in one place (Rani, 2020). Traditional risks linked to precarious work conditions worsened during the pandemic, including increased workload, and time pressure on deliveries and thus possible road accidents for couriers. Finally, additional psychosocial risks are linked to platform work: algorithmic management and digital surveillance, professional isolation, and difficult work-life balance (EU-OSHA, 2021d).

Beyond the lack of social protection inherent to their employment status, platforms workers had **reduced access to PPE** (which they must provide for themselves) and to **sanitary equipment**. Due to the closure of physical facilities such as restaurants, platform workers had reduced access to sanitary equipment, as defined in the Workplace Directive, and did not benefit from the protection.

Currently, (bogus) **self-employed workers remain responsible for their own OSH** (EU-OSHA, 2021d) and must therefore provide their own PPE and other protective measures. Platforms are under no obligation to provide for platform workers' safety and health. Additionally, platform workers are rarely organised collectively, which may impact the level of OSH information accessible (EU-OSHA, 2021d) - an analysis of the measures taken by the social partners (see below) shows that they played an important role in informing workers on OSH precautions during COVID-19.

Several platforms adopted some measures to increase the protection of platform workers. An Organisation for Economic Co-operation and Development (OECD) study on platforms' measures to protect workers found an emphasis on work organisation measures to protect platform workers against biological risks (social distancing, safe/contact-free provision of services). Only 25 % of platforms provided/reimbursed PPE (60 %, according to Fairwork (2020)) and 23 % provided full or partial pay for sick or isolating workers (OCED, 2020). The survey also found some complaints about the

availability, quantity and quality of the PPE provided.

3.3. Impact of COVID-19 on vulnerable groups of workers

Certain populations are more at risk of infection with COVID-19 because of their age, gender, health status and legal/employment situation. That increased worker vulnerability is characterised by unfavourable health conditions among certain groups and also by socioeconomic characteristics.

These vulnerability criteria potentially reinforce one another, e.g. migrant women with pre-existing conditions. Vulnerable groups are insufficiently covered by research on biological risks, in particular the association with particular sectors and occupations, with greater efforts made to protect younger workers, pregnant and breastfeeding workers, and workers with pre-existing medical conditions (EU-OSHA, 2019b).

3.3.1. Younger and older workers

Younger workers

Younger workers (in particular trainees) constitute a vulnerable group of workers and are more exposed to biological agents due to their lack of knowledge and experience of protection, and to the tasks assigned to them (EU-OSHA, 2019b)[8].

A recent EU OSHA study found that, in the EU, the proportion of young workers in occupations with high COVID-19 exposure risk represented close to 60 % for 15-19 years old native workers, and close to 50 % for 20-29 years old native workers. Among the over-30s, the proportion of workers involved in high exposure occupations decreased to around 40 % for native workers (EU-OSHA, 2021a). This criterion of exposure to SARS-CoV-2 is also observable among migrant workers, with an increase of 5 to 10 percentage points in each age group. Despite less occupational exposure, older workers faced higher fatality rates.

Older workers

Older age groups faced higher risks of fatality on infection with COVID-19, which may be explained by weaker immune systems and/or underlying medical conditions. Data collected by the US CDC shows a stark increase in fatality in populations over 50 years old compared to other age groups. This was also observed for fatalities caused by pneumonia and influenza (US CDC, 2022).

However, older workers adapt their behaviour to new workplace realities and requirements more effectively, via self-regulation strategies (Ghilarducci, 2020).

3.3.2. Workers with pre-existing conditions (disabilities, health conditions)

Some disabilities create a greater risk of contracting COVID-19, such as conditions affecting the immune system, the lungs, or other factors. These workers may face difficulties in following hygiene protocols (e.g. wearing PPE, availability of appropriate hygiene stations). Sensory impairments may limit access to information, while intellectual disabilities may limit understanding of hygiene rules (European Commission, 2021a). Disabilities are also likely to limit the possibilities of teleworking due to the lack of suitable equipment.

[8] During the focus group, SMEunited highlighted that employers provide information and training to younger workers. EU-OSHA raised concerns about the lack of training for young workers in vocational training, including on OSH rules and procedures. ETUC raised the importance of the (precarious) employment conditions of younger workers.

Nevertheless, the forced development of remote work opened up possibilities for certain workers with disabilities to work remotely, including in their homes, where working conditions were adapted to their specific needs (Schur, 2020), and difficulties linked to commuting were lifted (European Commission, 2021a). This included gig economy activities through self-employment (Harpur, 2020).

Workers with disabilities constitute a **heterogenous group of workers**, with mild to severe disabilities which are not always visible. As a result, the safety and health issues that workers with disabilities face can vary significantly. In order to protect these persons in the context of a pandemic, a disability sensitive risk assessment should be carried out by the employer (EU OSHA, OSHwiki) in light of the biological risk and its physiological impacts. The risk assessment should include a meticulous consideration of the worker, the work activities, as well as the working conditions.

Besides the implementation of EU OSH legislation, Member States are also required to adopt legislation to ensure the **equal treatment** of people with disabilities. The equal treatment legislation (Directive 2000/78/EC)[9] requires adaptations of work activities, as well as of the workplace, to address the needs of persons with disabilities. In this context and in order to guarantee compliance with the principle of equal treatment, reasonable accommodation should be provided to persons with disabilities. This legal framework can allow workers to continue working even in times of pandemic. The measures can include adjustments to:

- work organisation, e.g. telework, which can protect workers from risks of infection;
- physical features of the workplace, e.g. access to the workplace, rearrangement of furniture in the workplace, altering of the bathrooms;
- special work equipment, e.g. special keyboards and text to speech software;
- signs and emergency procedures, e.g. crisis communication strategies;
- work assistance, e.g. through communication materials; and
- OSH training (EU OSHA, OSHwiki; FRA, 2021).

According to the Support group of the European Parliament on Disability, in the context of the pandemic, policies protecting workers with disabilities should consider both workers with disabilities, and persons with caring responsibilities, either prior to the pandemic or as a result of the pandemic (parent of children with disabilities or developmental issues, spouses, partners, etc.).

3.3.3. Impact of gender on occupational risks

Women do not directly constitute a vulnerable group in view of the risk of infection or fatality linked to COVID-19, but, rather, via their representation in specific occupations. Although men suffer from higher rates of mortality due to COVID-19 (Global Health 5050), women are more likely to be employed in **frontline positions at higher risk of infection**. Women represent a very large proportion of the healthcare workforce, at 76% (European Parliament, 2021c) and are overrepresented in essential services in general (retail, childcare, domestic cleaning)[10]. This put women at the forefront of the COVID-19 pandemic (see Section 4.2.1. They also constitute 82% of cashiers and ticket clerks, 95% of workers in domestic cleaning and home help fields, and 65% of shop salespeople, occupations which in part (for goods of first necessity) were considered essential, allowing sales workplaces to open and

[9] Council Directive 2000/78/EC of 27 November 2000 establishing a general framework for equal treatment in employment and occupation.

[10] ETUC highlighted during the focus group that women are highly represented in sectors not covered by collective agreements.

receive clients (European Institute for Gender Equality (EIGE), n.d.).

Women were more severely affected by the **socioeconomic impact of the pandemic**. Although indirectly related to OSH, these impacts may have weakened women's resistance to psychosocial risks (Burki, 2020)[11]. A survey of remote workers found that women were more likely to find it hard to concentrate because of family (29 % of women compared to 16 % of men) (European Parliament, 2021d). Another trend potentially affecting women's psychosocial risk is the fact that, despite being less likely to work remotely prior to the pandemic, more women than men started teleworking during the pandemic (Eurofound, 2020b). It has been suggested that women were more likely to telework in order to care for children when education settings were closed during periods of lockdown and restricted movement.

In terms of vulnerability to the severe medical effects of COVID-19, **infection during pregnancy** was associated with a substantial increase in morbidity and mortality in postpartum mothers and their infants, especially where they were symptomatic or had comorbidities (Epelboin, 2021; Villar, 2021). An EU-OSHA study on biological agents points to the lack of information on the exposure of pregnant and breastfeeding women to biological agents (EU-OSHA, 2019b). In January 2021, the European Parliament requested the Commission to evaluate and take action in view of the prevalence of COVID-19 in essential sectors, in particular among women workers (including pregnant and breastfeeding women) and minority ethnic workers due to their high representation in these sectors (European Parliament, 2021a).

Finally, women faced a specific practical issue in the fight against COVID-19. Since 2015, trade unions have reported that **PPE was not appropriately fitted to women** (ETUI, 2015), an issue that took on particular importance during the pandemic. Although the PPE Directive requires equipment to be individually adapted, face masks provided to women during the pandemic were anecdotally reported as oversized, uncomfortable, and compromising women's ability to protect themselves against biological risks (European Parliament, 2020a).

With regard to telework, female teleworkers are more likely to face unfavourable working conditions in relation to their personal life, possibly creating higher psychosocial risks. Indeed, teleworkers can be responsible for the care of other members in their household, such as children, elder parents or relatives with disabilities. The burden of domestic activities and childcare affects women more significantly and has increased considerably more for women during the pandemic (EP, 2020a). This can constitute a strong disadvantage in their effort to work remotely. To mitigate this aggravating risk, **additional care-related initiatives** have been introduced during the pandemic (Tomei, 2021), e.g. parental allowances for parents who need to take care of children due to the closure of schools and kindergartens, or in case of mandatory quarantine (ISSA, 2021). Parental leave can be designed in a way that promotes the contribution of men in this process (Tomei, 2021). With the aim of achieving **work-life balance for teleworkers**, a fair division between domestic and care work should also be considered, rather than a lower workload for women with children (Çoban, 2021).

3.3.4. Migrant workers

Migrant workers (persons working in a different country to their country of birth) represented 13.5 % of the workforce in the pre-Brexit EU, comprising two-thirds of extra-EU migrant workers and one-third of workers working in another Member State (EU-OSHA, 2021a). The European Commission's 2021 report on employment and social developments in Europe (European Commission, 2021a) and other

[11] Reported socioeconomic impacts include higher chance of leaving employment during the pandemic, risks of domestic violence, unpaid care work, care for children deprived of schooling.

sources (EU-OSHA, 2021e) highlighted the important role of EU and non-EU mobile workers in European economies, in particular in **essential sectors** such as healthcare, but also in agricultural seasonal work and food processing. Migrant workers are overrepresented in essential occupations, but also in occupations where physical distancing is difficult (EU-OSHA, 2021a).

EU mobile workers were at slightly higher risk of exposure to COVID-19 compared to native workers - for migrants from outside the EU, the risk of exposure was seven points higher than for native workers. This is explained by the elevated proportion of migrant workers in high-risk occupations. The study also found that migrant workers had slightly **fewer opportunities to telework** (EU-OSHA, 2021a), while another analysis noted that the two categories of occupation where migrant workers are most represented - cleaners and helpers, and labourers in mining, construction, manufacturing or transport - provide almost no possibility to work remotely (JRC, 2020c). The gap in teleworkable employment is estimated to be around 5 percentage points. By contrast, the share of EU and extra-EU migrant workers in highly teleworkable occupations, teaching professionals and ICT technicians, is below 5 % (JRC, 2020c).

Mobile workers with atypical working arrangements may be overlooked by public health and OSH rules of the home or host countries. According to ETUI, the EU OSH acquis does not seem to take the needs of highly mobile workers into account sufficiently (in particular in transport), especially during the pandemic (ETUI, 2020).

A recent study analysed occupations where both a **higher risk of exposure to MSDs and to COVID-19** among migrant workers have been observed. The risk of infection with COVID-19 was particularly present in semi-skilled[12] professions (compared to skilled or unskilled professions) and was 10 percentage points higher for migrant workers (EU-OSHA, 2021a).

Several other issues in the OSH protection of migrant workers are noteworthy. The **language barrier** in their country of employment can limit migrant workers' full understanding and implementation of OSH rules established at workplaces. They may have less **access to health services** and thus may avoid testing or hospitalisation, creating risks for themselves and for their colleagues. Evidence in certain Member States highlighted a clear gap in the mortality of migrant vs native population in March and April 2020, being two to four times higher in France (European Commission, 2021a).

The **type of employment situation** also influences the risk of exposure to COVID-19, with temporary contract workers more exposed than open-ended contract workers. Migrant workers often work under fixed-term contracts, partly because these contracts are more prevalent in the younger population and migrant workers are often younger than national workers (JRC, 2020c). This is coupled with precarious and illegal working conditions in the agricultural sector[13].

Finally, the 2021 EU-OSHA study on the prevalence of MSDs among migrant workers during COVID-19 found that the **criteria of vulnerability can be cumulative**. For instance, migrant worker status and gender both interacted negatively with the risk of exposure to COVID-19. The authors estimated that 31.5 % of male native workers were employed in high-risk occupations, compared to 59.5 % of female third-country migrant workers (EU-OSHA, 2021b).

It has been found recently that migrant workers compared to native workers are **usually more exposed to physical factors**, such as vibrations and handling of heavy loads, as well as certain **psychological risk factors**, such as harassment, discrimination, or verbal abuse (EU OSHA, 2021a). In

[12] Semi-skilled professions defined according to the ILO's International Standard Classification of Occupations (ISCO-08 major groups 4, 5, 6, 7 and 8).

[13] Interview with the ETUC.

addition, migrant workers are more likely to deal with socioeconomic instability, which can become even more problematic during a pandemic (Berntsen, 2021).

Migrant workers' living conditions also affected their risk of exposure to COVID-19. Their **accommodation** is characterised by elevated density and the presence of at least one child[14]. This situation increases the risk of infection between household members (e.g. preventing isolation of infected workers) and exacerbates inadequate working conditions for those whose occupations allow remote work. The situation of seasonal workers is even more precarious. The ETUC reported that seasonal workers' accommodation in some cases lacks running water, electricity, and proper sanitation (Berntsen, 2021). Accommodation provided by the employer is often an integral part of the employment conditions and migrant workers may not have the financial capacity to find an alternative. These living conditions observed contravene Article 20 of the Directive on Third-Country Seasonal Workers, which prohibits direct deduction of rent from wages and requires employers to provide accommodation that satisfies the general health and safety standards in force in the Member State. It also contravenes the revised Posting of Workers Directive, which provides for equality of treatment of posted workers with other workers in the Member State of posting[15]. The scope of these provisions does not cover all seasonal workers and migrant workers, including intra-EU seasonal workers, and the Commission has called on Member States to take all necessary measures to ensure decent living conditions for seasonal workers (European Commission, 2020).

[14] One European Commission study refers to 'slum-like habitats where immigrant workers live segregated from the local population' (European Commission, 2021b).

[15] Directive 2014/36/EU of the European Parliament and of the Council of 26 February 2014 on the conditions of entry and stay of third-country nationals for the purpose of employment as seasonal workers.

4. MEMBER STATE MEASURES AGAINST OCCUPATIONAL RISKS DURING COVID-19

KEY FINDINGS

- Since the outbreak of COVID-19, national authorities have adopted measures to preserve and promote the well-being of the workforce. However, workers' occupational safety and health was the subject of a relatively low number of national measures in the 10 Member States reviewed.
- The first – essential – measures adopted by governments at various times related specifically to the provision of additional PPE, social distancing at work, and promotion of teleworking.
- Member States' measures relied on both hard and soft law. Considerable guidance and recommendations were provided to help employers with their pre-existing obligation to preserve the safety and health of workers, together with legal measures as part of public health policies.
- Member States adopted specific measures targeting the protection of workers against COVID-19 as a biological, MSD/ergonomic, psychosocial, and work organisation risk. Testing and vaccination strategies at workplaces varied between Member States.
- Among the general population, some categories of people (young and elderly employees, employees with disabilities, pregnant/breastfeeding women) are considered particularly vulnerable to occupational risks. Some Member States adopted specific measures to protect the OSH of these workers, particularly in terms of vaccination.
- Only two Member States covered by the study adopted measures to prevent the safety and health of workers not specifically covered by the provisions of EU OSH legislation (i.e. platform workers).
- While important in the uptake of OSH rules, the involvement of social partners in improving working conditions in various sectors varied between the Member States.
- Companies introduced practices to protect workers, including the requirement to self-test. The obligation to have a vaccination certificate in order to access the workplace remains within the framework of public health requirements adopted at national level. All of these measures were required to observe European data protection rules on health data.

In light of the urgency and severity of the situation, Member States' responses to the prevention of biological risks at the workplace saw the public health response to COVID-19 prevail over traditional OSH decision-making, with OSH playing only a minor role in the public discourse in several countries. OSH legislation complemented the public health measures at the workplace and offered practical guidance on biological and other pandemic-related risks, particularly psychosocial risks and remote work (EU-OSHA, 2021f).

4.1. Typology of protection measures adopted during the pandemic

Member States adopted different types of measures to address the occupational impact of COVID-19 on workers and ensure their OSH. Table 1 provides an overview of the main strategies and measures adopted to prevent occupational risks generated by COVID-19 at (remote) workplaces.

Table 1: Typology of worker protection measures adopted by Member States in response to the COVID-19 crisis

Protection of workers against biological risks via social distancing measures
Telework, as a way to reduce numbers of employees physically interacting at workplaces.
Workplace arrangements (e.g. shift work, limited number of workers at workplaces).
Physical distancing rules within workplaces.
Protection of workers against biological risks via hygiene measures
Requirements to regularly disinfect the workplace
Provision of PPE by employers, face masks, hand sanitiser.
Requirements to properly ventilate the workplace
Control of workers' health to protect co-workers and third persons at workplaces
Mandatory vaccination for certain sectors, such as the healthcare sector.
Limited access to workplaces for workers not fulfilling health conditions (vaccination, negative testing to COVID-19, or certificate of recovery), with variations in the powers of employers.
Testing policies within workplaces
Protection of workers against psychosocial and work organisation risks
Integration of psychosocial and work organisation risks in COVID-19 risk assessments.
Legislation or collective agreements on the right to disconnect.
Psychological support for workers (primarily via phone helplines).

Source: Authors' own elaboration.

4.2. Comparative analysis of Member States' measures

This analysis compares the measures adopted by 10 Member States in the field of OSH - Belgium, Bulgaria, Czechia, Denmark, France, Germany, Greece, Latvia, Spain and Sweden. The desk research was supported by national-level interviews with national competent authorities and social partners. Overall, in the 10 Member States reviewed, since the outbreak of COVID-19, only a few national measures have been adopted to specifically protect the health and safety of workers in comparison to measures of public health.

4.2.1. General measures for the safety and health during COVID-19

The 10 Member States reviewed by the study adopted a diverse range of measures to preserve the safety and health of the workforce against occupational risks linked with COVID-19. However, the measures adopted by governments at the beginning of the pandemic were quite similar in most Member States. The timing of adoption of the measures differed, but the following essential measures were introduced to protect the OSH of workers:

- Supply of additional **PPE** to employees;
- **Social distancing** rules for employees at the workplace;
- **Teleworking** introduced where possible, based on the nature of the occupation.

The measures adopted by Member States relied on both hard and soft law. Considerable guidance and recommendations were provided to help employers with their pre-existing obligation to preserve the safety and health of workers, together with several legal measures stemming from public health policy. Understanding of the measures described below relied on the OSH culture of the Member State. For example, despite relying on voluntary measures and recommendations, **Sweden** observed broad adherence to OSH rules during the pandemic.

Certain Member States adopted further general protective measures for their workforce. In **France**, a COVID-19 officer role must be appointed in each enterprise. This person (possibly the manager, in small companies) is responsible for ensuring that measures defined are implemented and that employees are informed. Their identity and mission are communicated to all employees. The French authorities organised screening campaigns for companies, while employers may also fully fund voluntary screening for their employees under strict medical confidentiality. **Germany** adopted a revised Law on Labour Inspection to combat the recent decline in labour inspections, with a quota due to be set for workplace inspections (5 % of enterprises annually).

4.2.2. Protection of safety and health in light of specific occupational risks

The new working conditions established since the outbreak of COVID-19 required additional protection of workers' health and safety against specific occupational risks (biological, MSDs/ergonomic, psychosocial, and work organisation risks). Although these occupational risks were already present at (remote) workplaces, COVID-19 increased their prevalence, prompting Member States to adopt specific measures (see Table 2).

Table 2: Adoption of measures to combat occupational risks, by Member State and category

	BE	BG	CZ	DK	FR	DE	EL	LV	ES	SE
Biological risks	x	x	x	x	x	x	x	x	x	x
MSDs/ergonomic risks	x			x	x	x		x	x	x
Psychosocial risks	x			x	x	x	x	x	x	x
Work organisation risks						x	x	x	x	x

Source: Country fiches prepared by national experts based on desk-research and national-level interviews.

Biological risks

According to Directive (EU) 2020/739 amending Annex III to Directive 2000/54/EC as regards the inclusion of SARS-CoV-2 in the list of biological agents known to infect humans, Member States must bring into force the laws, regulations and administrative provisions necessary to comply with the Directive by 24 November 2020 at the latest. COVID-19 was therefore recognised as a biological agent in all 10 Member States covered by this study.

National measures to protect workers against infection with SARS-CoV-2 included the supply of additional PPE, social distancing (implemented via telework and workplace arrangements), and workplace hygiene and ventilation requirements.

Specific examples of measures adopted by Member States to protect workers against COVID-19 as a biological risk included:

- **Belgium**: social distancing at the workplace and mandatory teleworking where possible.
- **Bulgaria**: proper ventilation and disinfection of the workplace, as well as the restriction of access to the workplace for persons exhibiting symptoms of acute respiratory diseases (e.g. fever, difficulty breathing); instructions and training for personnel on hand hygiene, together with provision of soap, water and disinfectant at the workplace.
- **Czechia**: employers can require employees to undergo an examination with an occupational health service provider or general practitioner (GP) when returning from a COVID-19 affected area if it is justified in relation to their work. The Act on the protection of public health (2000) regulates the procedure for detecting incidences of infectious diseases, including obligations affecting natural and legal persons, as well as natural persons running a business.
- **Denmark**: companies may require testing and presentation of the 'Corona passport' from their employees. The Danish authorities also required remote working, with public and private employers either mandating or encouraging employees to work from home to the extent possible.
- **France**: requirement to wear masks, along with the promotion of teleworking and compulsory vaccination for certain occupations ('sanitary pass').
- **Germany**: social distance of 1.5m between persons should be respected in all areas of workplaces, including restrooms, changing rooms, break rooms, canteens. The SARS-CoV-2 OSH regulation required employers to offer teleworking arrangements. Employers must provide medical face masks to employees.
- **Greece**: in the event of an emergency where the operation of a public service is suspended or restricted, the number of workers present in the service on a daily basis is determined at the discretion of the relevant Minister or the competent governing body, with a view to limiting the number of persons at workplaces. The number of persons allowed to be present, with the option of shift work or with the appointment of exceptional back-up personnel, is set out.
- **Latvia**: a COVID-19 contamination risk certificate was introduced - employees working on site (including those fully vaccinated and recovered) must, on arrival at the workplace, certify in writing the absence of signs of acute respiratory infection, of obligation to be in isolation or quarantine, and that they are not aware of a direct contact with an infected person within the last 10 days.
- **Spain**: the action procedure includes guidelines for companies on preventive measures, vulnerable workers and periods of isolation.
- **Sweden**: recommendations were adopted incentivising telework and limiting the use of public transport (for commutes). The qualifying day to obtain sickness benefits was removed to avoid presenteeism and infections at workplaces.

The suspension of employment for public sector workers who refuse to get vaccinated was introduced by Greece from September 2021 and France from October 2021. An obligation for vaccination of healthcare workers will enter into effect on 16 March 2022 in **Germany**. Testing and vaccination requirements were introduced to protect workers against the new biological agent (see below).

MSDs/ergonomic risks

A wide range of (largely) non-binding measures on MSDs and ergonomic risks were in place in the Member States before the pandemic. More specifically, guidance on the prevention of MSDs at work was published (**Belgium, Denmark, Germany**), together with studies (**France**) and the inclusion of MSD and ergonomic risks within employers' general obligation to preserve and protect the physical health of employees (**France**, **Czechia**). In 2021, **Spain** introduced new requirements to pay special attention to ergonomic factors in the evaluation of risks and planning of the preventive activity of remote working[16], while **Sweden** ensured that employers retain responsibility for assessing and addressing ergonomic risks faced by remote workers. It emphasised the dialogue between employees and employers (employers cannot visit their employees' homes) and made relevant guidance available on the Swedish Work Environment Authority (SWEA) website. In **Latvia**, information materials (booklets, posters, videos, educational seminars) were developed on risk assessments of teleworking, setting up a proper work environment in the office and at home, ergonomics, and other risks in the work environment.

Psychosocial risks

Member States adopted measures addressing the psychosocial impact of COVID-19 on the workforce. **Belgium**, **Denmark**, **Germany**, **Spain** and **Sweden** provided relevant guidance and recommendations on the psychosocial aspect of the pandemic. In **Germany**, the Federal Ministry of Health's coronavirus website posted information on psychological issues linked to COVID-19, and made hotlines available. The Statutory Accident Insurance Organisation provided a table listing the psychological risks and corresponding actions to protect workers. It also provided a webpage with frequently asked questions (FAQ) for employees, employers and the self-employed. The German OSH authority ran information campaigns for work planning, communication and personnel management for remote workers.

In **France,** studies were carried out to assess the impact of COVID-19 on the mental health of the population, including workers, while a special phone number was set up to support school personnel. In **Belgium**, a federal plan for the prevention of work-related stress is currently being prepared. Similarly, in **Spain** and **Latvia**, the risk assessment for workers must include psychosocial factors.

A circular (explanatory document published by the government with non-binding effect) published in **Greece** in 2020 stated that occupational health doctors are obliged to advise employers, employees and their representatives on the measures to be taken to protect the physical and mental health of employees. The circular also noted that employers should take special care to address work-related stress and mental health problems that may arise as a result of the pandemic. In **Denmark**, a psychosocial contingency was introduced for employees during the COVID pandemic.

Across all Member States of the EU, **Belgium**, **France**, **Italy**, **Portugal**, **Slovakia** and **Spain** all introduced the right to disconnect (see case study 4 in Section 6.2.4). According to information gathered by Eurofound, four of the Member States already had legislation in place on the right to disconnect: Belgium, France, Italy and Spain (Eurofound and European Commission Joint Research Centre, 2021), with Portugal adopting legislation more recently, and 10 others in discussions to prepare similar legislation, including the right for workers to request telework and the right to disconnect or digital rights.

[16] Article 16 of Law 10/2021 of 9 July, on remote work, establishes the need to pay special attention to ergonomic factors in the evaluation of risks and planning of the preventive activity of remote working. Available at: https://www.boe.es/buscar/act.php?id=BOE-A-2021-11472.

Work organisation risks

A limited number of Member States adopted measures specifically related to work organisation risks, such as changes in the organisation of the public sector. In **Spain**, organisational factors must be included in the risk assessment. More specifically, the legislation requires assessment of the distribution of the working day and availability times, as well as guaranteed breaks and disconnections, guaranteed privacy and data protection (use of telematic means, control of work through automatic devices). The right to digital disconnection is thus provided.

In **Germany**, the COVID-19 Working Time Regulation (COVID-19-ArbZV) set a limit of 12 working hours per day in essential sectors. German legislation explicitly requires employers to conduct a risk assessment of the place of telework and to take measures based on that evaluation. However, since the right of the employer to visit the worker's home is almost non-existent, the risk assessment is limited to information provided by the teleworker themselves. According to EU-OSHA, telework regulation at company level in Germany can be traced back to the 1990s and recent agreements have been established in certain important companies to regulate different aspects of telework, in particular the right to disconnect. Germany's Ministry of Health published a bill for a law on mobile work (i.e. remote work). The Federal Ministry of Labour and Social Affairs reported evidence of higher rates of work organisation risks, such as high workloads and self-imposed pressure, among remote workers. OSH organisations raised awareness of the prevention of work organisation risks through relevant information campaigns targeting decent work-life-balance among remote workers.

Sweden introduced specific provisions on the organisational and social work environment in 2016. These define victimisation, unhealthy workloads, and social work environment, and contain rules governing the systematic work environment management (risk assessment and corrective measures) required to pre-empt and address these risks.

Sectors at particular risk

Although the pandemic crisis affected the workforce generally, certain sectors were at particular risk of infection. Frontline healthcare workers were under extreme pressure, as well as being at increased risk of infection. Table 3 presents the Member States' sector-specific measures to limit the risk of infection at the workplace.

Table 3: Sector-specific measures adopted by Member States

Sector	BE	BG	CZ	DK	FR	DE	EL	LV	ES	SE
Healthcare	X		X	X	X	X	X	X	X	X
Long-term care							X		X	X
Agriculture	X						X		X	
Food industry	X							X		
Transport	X				X					X
Education and social workers	X				X				X	X
Meat processing industry						X			X	

Source: Country fiches prepared by national experts based on desk-research and national-level interviews.

4.2.3. Testing approaches at workplaces

Workforce testing was introduced to limit the spread of the virus and protect the health and safety of workers. In some cases, testing was introduced as voluntary and remains a choice (see Table 4).

Table 4: Member States' approaches to workplace testing

	Approaches to workplace testing in Member States
BE	Some Belgian **companies** took the initiative to test their employees during work
BG	Employers are obliged to pay for the cost of the test, when testing is required by law
CZ	Employees and the **self-employed** must be tested at least once a week, except for fully vaccinated workers and those who have recovered from COVID-19. This requirement does not apply to self-employed workers working alone
DK	A **company** may only order an employee to be tested for COVID-19 if it is objectively justified in order to limit the spread of infection, including working environment considerations, or specific significant operational considerations
FR	**Employees of certain establishments open to the public** (notably bars and restaurants) are required to present a 'health pass' (vaccination, PCR/antigen test, recovery). Employers are responsible for monitoring compliance by asking to see the relevant documents. Employees without a health pass may have their contract suspended In the education sector, testing campaigns were introduced in case of infection of pupils in a class
DE	Obligation for **companies** to provide tests twice a week, at their own costs. This is considered a measure of occupational health within the meaning of the German Occupational Safety and Health Act. Employees are free to take up testing offers based on the SARS-CoV-2 Occupational Health and Safety Ordinance
EL	The obligation for COVID-19 testing applies only to unvaccinated employees in the **private sector**. Those with a physical presence in the workplace are required to undergo a diagnostic test (rapid or molecular) at their own expense if they are not vaccinated
	Approaches to workplace testing in Member States
LV	Mandatory testing was introduced - employees who do not have an interoperable vaccination or recovery certificate can visit work premises only with a COVID-19 test certificate or an antigen test conducted by the employer
SE	From 2 March 2021, it was recommended that non-symptomatic co-workers be tested on Day 1 and Day 5 if a colleague had tested positive for COVID-19. This recommendation targets workplaces where remote working is not possible, e.g. building sites, armed forces establishments, pre-schools and elementary schools, and some industries. Testing is based on occupation rather than risk group. Some high-risk occupations – mainly within care and healthcare – receive more regular testing

Source: Country fiches prepared by national experts based on desk-research and national-level interviews.

4.2.4. Vaccination strategies at workplaces

Following the introduction of the testing procedure in each of the Member States, vaccination strategies also came in for scrutiny. Although testing could identify the employees infected with COVID-19, it was not considered a preventive measure. The national legal system in some Member States does not allow for mandatory vaccination (e.g. **Czech Republic**, **Denmark, Sweden).** The other

Member States covered by the study adopted different strategies for the vaccination of workers or at workplaces. A strong focus on the healthcare sector is clear in all cases, where mandatory vaccination of a wide range of personal is evident. A CPME survey found that all respondents stated that doctors were given priority in vaccination plans (CPME, 2021).

Table 5: Approaches to vaccination at the workplace

	Vaccination strategy
BE	**Mandatory vaccination** for healthcare workers applies since 1 January 2022. Starting from 1 April 2022, workers who are not vaccinated will lose their jobs or their contract of employment will be suspended for a period of their choice
BG	**Valid green certificates** (vaccination, recovery, negative test) are required to access workplace in hospitals and other health centres, oncology centres, dialysis centres, hospices and facilities for the elderly, and inspectorates that control the implementation of anti-epidemic measures
FR	**Vaccination campaigns** were launched in middle and high schools, as well as testing campaigns in case of infection in one class **Mandatory vaccination for healthcare workers**, including healthcare, administrative and technical staff. Those who refused had their employment contracts suspended without salary, but could not be dismissed (Constitutional Council). **Employees of service providers** working on a recurring and planned basis (secretarial, cleaning, laundry, waste management, etc.) in these establishments and services are also covered by the vaccination obligation. Employers are responsible for monitoring compliance by asking for the relevant documents (proof of vaccination or certificate of recovery) A **'health pass'** was introduced for employees of certain establishments open to the public, notably bars and restaurants. Enforcement is ensured by employers, who can suspend – but not dismiss - employment contracts for failure to comply
DE	**Workplace 3G regulations**: Employers and employees must carry either a vaccination certificate, a recovery certificate or a negative test when entering the workplace. Employers must check that workers comply with this obligation and document these checks **Mandatory vaccination of healthcare workers** will enter into effect on 16 March 2022. This is the only sector where vaccination is required by law
EL	Testing - at their own expense - is required for **unvaccinated workers** in the private sector. As in the **public sector**, the legislation provides for **mandatory vaccination** of all staff of private, public and municipal care units for the elderly and people with disabilities (medical, paramedical, nursing, administrative and support staff) for critical reasons of public health protection. The respective employer or head of unit must inform the employees of their obligations. Non-compliance incurs the following consequences: - employees in public sector bodies: **suspension** of duties for critical reasons of protection of public health -freelancers providing health services in public hospitals, professionals in private clinics and pharmacies, and students in education in hospitals and private health structures: limitations on activities

LV	**Introduction of the interoperability certificate** - a person shall certify full vaccination course, recovery from the illness, or valid COVID-19 test **at the request of their employer**, service provider, or the person designated by the educational institution, or the controlling authorities; a person is also obliged to show an identity document when presenting the relevant interoperable certificate **Mandatory vaccination** was introduced for certain professions - on-site staff at medical treatment facilities, including pharmacies; long-term social care and social rehabilitation facilities; staff in educational establishments, public servants, staff in contact with customers for a long time or with a large number of customers; staff ensuring the continuity of business. An employer may put an employee into downtime until they become vaccinated. If an employee refuses, the employer has the right to terminate their contract
ES	**Healthcare and long-term care workers in elderly and disabled people residences** were the first vaccination group, followed by front-line personnel in the health and social health field, and other healthcare personnel. Teachers were also a priority group. People (in general, not only workers) with very high-risk conditions were also included in the vaccination strategy
SE	No vaccination requirement

Source: Country fiches prepared by national experts based on desk-research and national-level interviews.

4.2.5. Protection of workers specifically vulnerable to occupational risks

Protection of vulnerable workers against COVID-19 occupational risks

Among the general population, some categories of people are considered particularly vulnerable to occupational risks. These categories include young and elderly employees, employees with disabilities, and pregnant/breastfeeding women. Member States adopted specific measures to protect the occupational health and safety of these workers:

- Prioritisation in the vaccination process for vulnerable workers (**Spain**, **Sweden**);
- Mental health support, based on a mental well-being plan for vulnerable workers, including young workers (**Belgium**);
- Financial support for vulnerable workers, in terms of paid or unpaid leave granted to pregnant workers, disabled workers and young workers, etc. (**Bulgaria**), system of compensation for vulnerable workers who may be exposed to virus contamination and who cannot benefit from reinforced protective measures (**France**), ensuring that vulnerable workers considered to be in a risk group will keep their position (**Sweden**), or inability to suspend the employment contract where remote working or working in a non-public-facing role is not feasible (**Greece**);
- Protection of sensitive information on employees' health and chronic diseases (**Germany**);
- Introduction of alternative methods of working for vulnerable workers, such as remote working, or ensuring that they do not come in contact with the public via organisational measures (**Greece**, **Latvia**, **Sweden**);
- Assistance for the specific management of COVID-19 prevention, i.e. compensation or coverage of the additional costs for risk prevention equipment provided by the Association for the Management of the Fund for the Integration of Disabled People (**France**).

Protection of the safety and health of workers not specifically covered by EU OSH legislation, e.g. gig/platform workers or so-called bogus self-employed

Only two of the 10 Member States reviewed adopted measures to protect the safety and health of workers not specifically covered by the provisions of EU OSH legislation, i.e., **platform workers**. No relevant measures were identified in the remaining eight Member States.

In **Germany**, a regulation for platform workers was announced by the Ministry of Labour in 2020. The measures include solo self-employed platform workers in the statutory pension insurance and involve platforms in the payment of contributions. They also examine how accident insurance coverage can be improved and open the possibility for solo self-employed platform workers to organise themselves and jointly negotiate basic conditions of their work with the platforms. Additionally, the measures shift the burden of evidence in lawsuits to clarify employee status before the courts and allow platform workers to transfer their ratings to another platform, thus limiting dependence on individual platforms. The new provisions prevent certain contractual practices by platforms, for example by setting minimum notice periods. Together with the Federal Ministry of Justice, the measures ensure that general terms and conditions that are unilaterally detrimental to platform users can be reviewed in court more easily.

In **Greece,** recent legislation introduced new rights for those employed under service contracts or project contracts, including delivery and courier workers. Prior to the introduction of this legislation, delivery and courier workers were not covered under specific legislation but had the right to contract with platforms as self-employed, based on general freedom of trade. In the context of the new provisions, digital platforms are companies that act either directly or as intermediaries and, through an online platform, connect service providers or companies or third parties with users or clients or consumers and facilitate transactions between them or are traded directly with them. Under the new legislation, employees in this sector acquired new rights:

- Trade union rights: incorporation of organisations, collective bargaining and agreement, strike;
- Their platform covers the costs of PPE;
- Digital platforms have the same welfare, health and safety obligations in respect of associates with independent service or project contracts as they would have if they were affiliated with dependent employment contracts.

4.2.6. Guidance on preventing risks of infection and other occupational risks

During the pandemic, competent authorities provided frequent useful guidance on protecting workers against COVID-19. Several types of guidance were identified across the 10 Member States reviewed, some of which are listed below[17].

- **Workplaces**: general guidance on COVID-19 at the workplace (Belgium, Czech Republic, Denmark, France, Germany, Spain, Sweden), including links to EU-OSHA, WHO and ECDC advice (Bulgaria); Hygiene, commuting, arrival at work, use of changing rooms, teleworking, and social distancing (Bulgaria); good practices in workplaces (Spain).
- **Risk assessment**: business self-evaluation form (Greece); guidance on the risk assessment procedure during the pandemic crisis (Sweden).

[17] A collection of sector-specific guidance documents developed by national institutions is available on the OSHWiki page 'COVID-19: Back to the workplace – Adapting workplaces and protecting workers'.

- **Biological risks**: guidance on disinfection of the workplace, including an algorithm providing requirements and advice on the choice of disinfectant (Bulgaria); guidance on the use of PPE specifically against COVID-19 in order to ensure the effectiveness of the protection (Greece).
- **Sector-specific** guidance in several sectors (Belgium), for example, schools (France, Spain), meat industry and farms (Spain).
- **Remote working**: guidance on remote working (Czech Republic, Germany, Spain).
- **Psychosocial risks**: guidance on work-related stress (Czech Republic, Spain).
- **Compensation schemes**: guidance on compensation schemes (Denmark).

4.2.7. Obligations towards third persons at the workplace

The majority of the Member States reviewed introduced workers' and/or employers' (beyond vaccination requirements) obligations towards third persons at the workplace, in line with OSH Framework Directive. The requirements included [18]:

- Social distancing to be ensured between customers (**Bulgaria, Sweden**, **Greece**);
- Obligation to provide disinfectant/hand sanitiser (**Bulgaria**, **Greece**);
- Mandatory controls at the entrance for tracking the number of people entering and wearing face masks (**Bulgaria**, **Greece**);
- Information boards on the obligations of customers to respect physical distancing, hand hygiene and the use of face masks (**Bulgaria**);
- Certificate of vaccination, recovery or negative testing must be presented by customers in order to protect workers (**Denmark**, **France**, **Greece**);
- Limited right to visit patients and residents of care institutions, ensuring that staff were vaccinated or tested before contact with residents, and isolating COVID-19-positive patients in separate wards (**Sweden**).

4.3. Role of social partners in COVID-19 policy responses

According to the EU-OSHA study on teleworking during the pandemic, the **role of worker representatives** is crucial in preparing measures to protect workers from psychosocial risks and teleworking, given their position to collect employee feedback and capacity to promote the measures agreed (EU-OSHA, 2021b). Taking into account the diversity of sectors, as well as the conditions in each workplace, *'the **central role of social partners in the negotiation, application and enforcement of rules related to telework**'* is highlighted in the Council conclusions on telework (Council of the European Union, 2021).

Preliminary research indicates that the pandemic **challenged national social dialogue** and had a significant impact on the involvement of social partners in policy-making. In several countries, a significant number of policy measures were adopted without proper consultation with social partners (Eurofound, 2021b). Time pressure was the main factor affecting the quality of the consultation with social partners during the pandemic. In fact, COVID-19 revealed the possible weaknesses of social dialogue in some industrial relation systems (Eurofound, 2021b). However, the social dialogue in some

[18] The measures included here are those in publicly available information from the Member States and international sources (Eurofound). They may not be an exhaustive list.

Member States (France, Luxembourg, Malta, Poland, Portugal, Slovakia) has gradually improved throughout the pandemic, while the social partners in several Member States (Belgium, Finland, Italy, Spain) took initiative to agree joint actions to support businesses and society (Eurofound, 2021b). In essence, in Member States where tripartite social dialogue is well established, the pandemic had a limited impact on the involvement of social partners. In other Member States, social dialogue was maintained during the pandemic, albeit in a limited way (Eurofound, 2021b).

European social partners defended their involvement in the adoption of measures to tackle the effects of the pandemic and handle crises. **BusinessEurope**, which represents enterprises of all sizes, highlighted that the European social partners were able to finalise the Framework Agreement on Digitalisation prior to the pandemic, which includes elements concerning connecting and disconnecting. This Agreement helped to provide a framework for remote workers during the pandemic and is implemented at national level. The Social Partners' work programme, including the mandate to revise the Framework Agreement, remains under negotiation. BusinessEurope considers the current Framework Agreement both appropriate and well-implemented in most Member States and believes that teleworking should remain in the hands of social partners in order to achieve a balance in negotiations.

According to **EuroCommerce**, the way in which social dialogue is carried out at national level depends heavily on the tradition of the individual Member State. In the Netherlands, for example, the exchange of information between employers and workers representatives in Dutch food retail (supermarkets) was frequent, up to once a week at the height of the crisis. Social dialogue is considered to have been an important instrument during the pandemic.

The **European Cleaning and Facility Services Industry** (EFCI) reported that trade unions and employers worked together in most Member States. A European-level joint statement was adopted on measures to mitigate the impact of COVID-19 on the industrial cleaning and facility services sector[19]. A number of joint communications were also published by the **European Transport Workers' Federation** (ETF) and the various sectoral social partners, predominantly addressing the impact of the various lockdowns on transport workers. Specific guidance for employers was also prepared by the ETF in collaboration with the Global Union Federation and the International Transport Workers Federation.

Looking at cooperation between the European social partners, **EFFAT** together with **FoodDrinkEurope** issued joint positions and guidelines on COVID-19 in the food and drink sector. They issued a call for worker support in March 2020[20], guidelines to protect the health and safety of workers in food business in April 2020[21], and a joint statement on the support needed for the hospitality/tourism sector in May 2020[22]. In April 2020, EFFAT and **HOTREC** (umbrella Association of Hotels, Restaurants, Pubs and Cafes) jointly issued a Roadmap towards lifting COVID-19 containment

[19] EFCI and UNI Europa, Joint Statement on the COVID-19 impact to the Industrial Cleaning and Facility Services sector and the necessary measures to protect it. Available at: https://www.efci.eu/wp-content/uploads/2020/04/Joint-statement-EFCI-%E2%80%93-UNI-Europe-on-the-impact-of-Covid-19-on-the-Cleaning-and-Facility-Services-Industry.pdf.

[20] EFFAT and FoodDrinkEurope, 'Food and drink trade unions and industry call for worker support'. Available at: https://www.effat.org/wp-content/uploads/2020/03/EFFAT-and-FoodDrinkEurope-joint-statement-on-coronavirus.pdf.

[21] EFFAT and FoodDrinkEurope, 'Guidelines to protect the health and safety of workers in food business during the COVID-19 pandemic'. Available at: https://effat.org/wp-content/uploads/2020/03/FoodDrinkEurope-EFFAT-Guidelines-to-protect-the-health-and-safety-of-workers-in-food-business-during-COVID-19-oubreak_EN.pdf.

[22] EFFAT, FoodDrinkEurope, FoodServiceEurope and HOTREC, 'Urgent support needed for hospitality-tourism sector in COVID-19 crisis'. Available at: https://www.hotrec.eu/wp-content/uploads/2020/05/Joint-Statement-SPs-Food-Industry-and-Hospitality-COVID-19-2020-05-11-final.pdf.

measures[23]. Together with **GEOPA-COPA**, in May 2020, EFFAT adopted a Joint Declaration on the deployment of seasonal workers from European countries in the EU[24]. In November 2020, HOTREC and EFFAT issued a joint statement on rebuilding the hospitality sector[25]. Finally, EFFAT together with FoodDrinkEurope, issued a specific position on vaccinations in December 2020, asking that the food sector be considered a priority group for vaccination[26].

The **ETUC** produced a regular **briefing note on the OSH agreements between social partners** at national level, focusing on the preventive measures adopted for those sectors that continued to operate throughout the crisis, as well as measures implemented to facilitate the return-to-work strategy after successive COVID-19 waves (ETUC, 2021c).

[23] EFFAT and HOTREC, Roadmap towards lifting COVID-19 containment measures: recommendations of the Social Partners of the European Horeca sector. Available at: https://effat.org/wp-content/uploads/2020/04/Joint-EFFAT-HOTREC-PR-Roadmap-towards-lifting-COVID-19-containment-measures-2020-04-27-1.pdf.

[24] GEOPA and HOTREC, Joint declaration of the European Social Partners of Agriculture (GEOPA-COPA and EFFAT) on the deployment of seasonal workers from European Countries in the EU. Available at: https://effat.org/wp-content/uploads/2020/05/EA202612EN1-Geopa-Copa-EFFAT-Declaration-signed-003.pdf.

[25] EFFAT and HOTREC, Joint Statement on Rebuilding the Hospitality Sector, 27 November 2020. Available at: https://www.europarl.europa.eu/cmsdata/215781/Joint-HOTREC-and-EFFAT-Statement-on-Rebuilding-the-Hospitality-Sector.pdf.

[26] EFFAT and FoodDrinkEurope, Joint Statement 'Only healthy workers can feed Europe', 15 December 2020. Available at: https://effat.org/in-the-spotlight/only-healthy-workers-can-feed-europe/.

Box 2: Case study on the implementation of the Framework Agreement on Telework

General principles of teleworking

In 2002, as part of European-level negotiations to modernise the organisation of work, the European cross-industry social partners concluded a Framework Agreement on Telework. The Agreement aims to promote the development of teleworking, ensuring the protection of workers and the interests of the employers. Point 2 of the Agreement states that: *'Telework is a form of organising and/or performing work, using information technology, in the context of an employment contract/relationship, where work, which could also be performed at the employers premises, is carried out away from those premises on a regular basis.'*

Point 3 addresses the voluntary character of teleworking: *'Telework is voluntary for the worker and the employer concerned. Teleworking may be required as part of a worker's initial job description or it may be engaged in as a voluntary arrangement subsequently.'*

Point 8 introduces the protection of health and safety of teleworkers: *'The employer is responsible for the protection of the occupational health and safety of the teleworker in accordance with Directive 89/391 and relevant daughter directives, national legislation and collective agreements. The employer informs the teleworker of the company's policy on occupational health and safety, in particular requirements on visual display units. The teleworker applies these safety policies correctly. In order to verify that the applicable health and safety provisions are correctly applied, the employer, workers' representatives and/or relevant authorities have access to the telework place, within the limits of national legislation and collective agreements. If the teleworker is working at home, such access is subject to prior notification and his/her agreement. The teleworker is entitled to request inspection visits.'*

Implementation of telework in the Member States

At the time of signing the 2002 Framework Agreement on Telework, very limited national regulatory systems were in place covering telework (Denmark, Ireland). Nevertheless, the Agreement was a significant influence on the implementation of relevant measures by the Member States during the pandemic. New legislation on telework took effect in **Portugal** on January 1, 2022. It provides:

- A new definition of telework, clarifying that hybrid or mixed regimes qualify as telework;
- The employer's obligation to refrain from contacting the employee during rest periods, except in situations of force majeure;
- New teleworking agreement establishing new terms and conditions for telework, e.g. ownership of the equipment and reimbursement of teleworking-related expenses. The implementation of the teleworking regime shall always be based on a written agreement, included in the initial employment contract or in an amendment to it;
- Teleworkers have the same rights and duties as other employees in the company with the same category or identical roles and are therefore also entitled to compensation for accidents at work;

- Privacy and data protection extend beyond the company premises. Additionally, the control of the teleworker through tools that may affect their privacy is prohibited (e.g. capture of images and sound);
- Teleworker's obligation to provide access to the workplace to the professionals designated by the employer responsible for the assessment of the safety and health conditions at (tele)work.

As noted by the Council of the European Union in the Conclusions on telework published in 2021, Member States shall consider adopting national plans and strategies on telework, as well as establishing or reinforcing initiatives to strengthen labour inspection and OSH in view of the risks arising from telework. The importance of the protection of workers' safety and health with specific focus on prevention, as well as adherence to working time rules in the context of teleworking, are also highlighted in the 2020 Framework Agreement on Digitalisation. The EU Strategic Framework on Health and Safety at Work 2021-2027 invites the social partners to agree solutions to address the challenges of telework, based on the provision of the 2020 Framework Agreement on Digitalisation.

Source: ETUC, 2002, Framework Agreement on Telework; Commission Staff Working Paper, COM(2008) 412 final, Report on the implementation of the European social partners' - Framework Agreement on Telework; Eurofound, 2010, Telework in the European Union; Council of the European Union, 2021, Draft Council Conclusions on telework; European social partners, 2020, Framework Agreement on Digitalisation; EU Strategic Framework on Health and Safety at Work 2021-2027, Occupational safety and health in a changing world of work, COM/2021/323 final; DCM and Littler, The new telework regime in Portugal, 2022; Labour Department Portugal, 2021, New rules on the teleworking regime and the right to disconnect.

At national level, the involvement of social partners in efforts to improve working conditions during the pandemic, varied between the 10 Member States reviewed. Agreements were adopted by the social partners, e.g. the cross-sectoral collective bargaining agreement on **telework**, as well as the joint position of social partners regarding **rapid antigen detection tests** adopted in 2021 in Belgium. In addition, the social partners of the Higher Council for Prevention and Protection at Work declared, in 2020, that measures such as the testing of employees was insufficient as a prevention if not accompanied by appropriate **preventive measures**. In France, in 2020, the social partners issued a new cross-sectoral agreement complementing pre-COVID-19 legislation on telework. In addition, the social partners have some involvement in the preparation of the **vaccination process**, the implementation of the control of the **health pass** or the vaccination obligation within companies, all of which require information and consultation of the social and economic committee and the company's staff representation body, except in emergency cases. In Germany, several agreements were concluded on **wages and compensation** during the COVID-19 crisis. In Spain and Bulgaria, social partners participated in the negotiations on the adoption of the **teleworking measures**. ETUC reported numerous sectoral agreements in Spain (ETUC, 2021a).

In several Member States, social partners participated in producing **guidance** for employers and workers. In Sweden, the social partners produced guidelines and checklists to help employers to navigate the pandemic and ensure that workplaces adapted to decrease the spread of infection. In Denmark and Germany, the social partners contributed guidance. By contrast, in Greece, the participation of social partners in measures to protect OSH of workers during the pandemic was considered weak.

4.4. Company practices developed by employers to protect workers

Several company-level initiatives were adopted to promote the safety and health of workers during the pandemic. The initiatives primarily related to facilitating teleworking (**Belgium**, **Bulgaria**, **Denmark**, **France**, **Germany**, **Spain**, **Sweden**), with the possibility to obtain temporary unemployment benefits where telework was not possible (**Belgium**), along with the coverage of telework expenses (**Bulgaria**, **France**, **Spain**, **Sweden**), or the direct supply of relevant equipment to adapt a home office (**Spain**, **Sweden**). Company initiatives related to the right to digitally disconnect after working hours were introduced in **Belgium** and **Spain**.

In terms of biological risks, companies initiated frequent testing for workers in slaughterhouses and food production industries (**Denmark**), paid specific attention to the mental well-being of employees (**Belgium**), adopted crisis-handling plans to promote health and safety, and work organisation in the hotel sector (**Greece**), and established a crisis management team and changes in working arrangements (shifts, flexible organisation of work) (**Germany**).

Employers' practices of testing workers, requiring them to self-test, or the obligation to be vaccinated must take place within the framework of public health requirements adopted at national level, as well as European data protection rules on health data. Consideration of pre-existing conditions or medical treatments in workplace risk assessments is also impacted by these limitations, and the role of the occupational physician is central (EU-OSHA, 2019b). Some Member States require certain workers to provide a negative test or to be vaccinated in order to be present at the workplace, while others prohibit employers making vaccination compulsory. The margin for employers to adopt mandatory vaccination or testing policies is very limited. However, voluntary rapid testing at the workplace can be incentivised by employers, as recommended by the ECDC (2021).

A significant company level initiative was adopted in the **meat processing industry in Germany**, in particular in the meat processing company Tönnies, where a campaign on hygiene and PPE was conducted as early as end-February 2020. That was followed by the establishment of an information hotline to answer workers' questions, teleworking where possible, adaptation of the canteen, multilingual information posters on COVID-19 at the company site, and body temperature scans at facilities' entry points. As an indirect measure to combat COVID-19 and in preparation for legislative changes, the company provided precarious workers with employment contracts and housing facilities[27] (Eurofound, 2020c).

[27] Tönnies, 2020, History of pandemic protection measures at Tönnies, COVID-19 news. Available at: https://www.toennies.de/en/covid/history-of-pandemic-protection-measures-at-tonnies/.

5. PREPAREDNESS OF THE EU OSH FRAMEWORK FOR PANDEMIC CRISES

KEY FINDINGS

- The European OSH acquis is generally flexible. It requires employers to take into account changing circumstances, which made quick adaptation possible during the COVID-19 crisis.
- The risk assessments required by the OSH directives were essential during COVID-19 to prevent and minimise health and safety risks, given the impossibility of eliminate those risks at source.
- The OSH directives stress the importance of correct and up-to-date information and training for workers and their representatives, in order to avoid or minimise risks to health and safety at work.
- The rise of telework during the COVID-19 crisis highlighted the need to modernise the OSH legislation to encompass the digitalisation of recent decades.
- COVID-19 highlighted the potential limitations of the existing OSH legislation, which exclusively consider risks generated within the workplace and not those introduced from outside.

COVID-19 highlighted the potential limitations of existing OSH legislation, which is solely concerned with the risk of exposure to dangerous agents (e.g. biological agents, such as COVID-19) at the workplace, and its effect on workers. However, with COVID-19 (and potential future viruses), workers were exposed both inside and outside the workplace. On the one hand, the traditional approach, which limits the concept of safety to elements originating in the production process, risks being insufficient. On the other hand, it is essential that this legislation is not diluted to the point where it becomes ineffectual and impossible to implement. In fact, only the traditional approach makes it possible to impose obligations on employers and ensure the existence of a defined authority competent to check implementation and compliance. If this link is lost, it will be difficult to ensure a coordinated level of control.

This study did not find sufficient European-level data on the implementation of OSH directives to supplement the legal analysis of the directives' performance in 2020 and 2021. In particular, the latest European Survey of Enterprises on New and Emerging Risks (ESENER 3) dates from 2019, prior to the pandemic.

5.1. Biological Agents at Work Directive and classification of COVID-19

5.1.1. Relevant provisions of the Biological Agents at Work Directive

The **Biological Agents at Work Directive 2000/54/EC** sets out the rules for the protection of workers against risks related to exposure to biological agents at work.

Article 3 states the requirement for employers to conduct a **risk assessment** of workers' exposure to biological agents when the risk of exposure cannot be avoided. It adds that 'the assessment must be

renewed regularly and, in any event, when any change occurs in the conditions which may affect workers' exposure to biological agents'. Where this assessment reveals a risk to workers' health or safety, the employer must first attempt to **prevent** workers' exposure. Only when this prevention is not technically practicable should they seek to guarantee that the risk is **kept to a minimum** (Article 6). For COVID-19, it was not possible to eliminate the risk, meaning that 'the only and challenging option for a wide range of activities is to adapt workplaces and work processes and practices (collective and individual control measures) to minimise contamination' (Carvalhais, 2021).

Article 6(2) sets out a general list of measures to be adopted in this situation. The employer may: limit the number of workers exposed; control the release of agents into the workplace, using technical procedures; organise collective and/or individual protection measures; prevent or reduce accidental release outside the workplace, using hygiene measures; install risk warning signs; draw up plans to deal with accidents; provide for the collection, storage and disposal of waste; and arrange for safe handling conditions and transport of biological agent.

Employers are also obliged to '**replace the harmful agents** with agents that are not dangerous or are less dangerous, considering their conditions of use and the level of scientific knowledge thereof' (Article 5). According to Article 8, employers must ensure **hygiene and individual protection** by prohibiting eating or drinking in working areas, maintaining protective equipment properly, providing protective clothing, and providing appropriate toilet and washing facilities. Employers are responsible for ensuring that employees and/or their representatives are adequately **informed and trained** about potential risks to health (Article 9) and, in case of **accident or incident,** they must inform workers as soon as possible about the causes, risks and measures to be taken (Article 10). No information was available on how to detect health effects of exposure, as observed in the evaluation of the Directive (European Commission, 2015).

Article 2 of the Directive classifies biological agents into **four risk groups**, according to their level of risk of infection:

1. Group 1: unlikely to cause human diseases;
2. Group 2: can cause human disease but are unlikely to spread to the community and effective treatment is available;
3. Group 3: can cause human disease and may spread to the community and there is usually effective treatment available;
4. Group 4: cause severe human disease and present a high risk of spreading to the community, usually with no effective treatment.

The classification happens through the inclusion of the biological agent in **Annex III** to the Directive. According to Article 19, biological agents' classification is adjusted for new scientific findings, technical progress and changes in international regulations.

According to EU-OSHA's literature review on Directive 2000/54/EC, the Directive experienced some implementation limitations. It notes that the Directive is inflexible, difficult to adhere to, that risk assessment is difficult, and that the classification of biological agents is too broad, making it too general to address the risks caused by specific biological agents (EU-OSHA, 2019b). By contrast, the 2020 EU-OSHA report found that detailing the biological agents susceptible to affect workers would be impracticable. Rather, the broad nature of the classification meant that COVID-19 and any future related pandemic associated viruses could be easily classified under the Directive (EU-OSHA, 2020b).

That report also highlighted the importance of **general prevention measures.** It stated that they should be required, particularly workplace ventilation, avoiding contact with contaminated surfaces, regular cleaning and maintenance, closed systems or vehicles, and appropriate PPE. Nevertheless, general prevention must be based on a risk assessment relevant to the specific workplace, in order to allow site-specific nuances (e.g. ventilation by opening windows would not be appropriate in most hospital environments). The implementation of risk assessment and emergency plans should be facilitated by authorities and via professional organisations, as prevention of biological risks was not considered a priority in OSH policies (EU-OSHA, 2020b) in the last century.

The Directive focuses on containment measures for sectors with intentional exposure as a primary process or workers in contact with humans or animals. Although this has increased the level of awareness and prevention measures in these sectors, particularly in healthcare, it does not apply to the whole range of workers exposed to biological agents in the context of a pandemic (EU-OSHA, 2019b). A practical example is useful here: across all the different tasks of health professionals, the deliberate use of microorganisms occurs only in research laboratories and in the preparation of vaccines. A constant exposure to the microorganism can only be hypothesised for those staff who assist patients at COVID-19 centres. Therefore, for all other workers, including hospital wards, emergency rooms or other laboratories' workers, exposure is occasional.

Finally, a 2018 EU-OSHA stakeholder workshop recommended 'that the annexes to the Directive be made **context-specific** for jobs and sectors', with a view to better cover for workers exposed unintentionally (EU-OSHA, 2020b). The inclusion of a reference to vulnerable groups and the development of a European warning system that 'would make it possible to respond more quickly and in a more structured way to emerging biological risks' was also discussed. The analysis of the impact on certain workers highlights the need for further categories covering more professions than those currently covered by Annex I to the Directive, such as workers in contact with customers. This view was supported by several stakeholders consulted[28].

In 2020, the European Commission acknowledged the need to assess whether a general amendment of the Biological Agents at Work Directive is required to improve the preparedness and response planning in European workplaces[29]. This came a few weeks after the modification of the Biological Agents at Work Directive by Commission Directive (EU) 2020/739.

5.1.2. Classification of SARS-CoV-2

On 3 June 2020, under an urgency procedure, the European Commission adopted Commission Directive (EU) 2020/739, classifying the **SARS-CoV-2 virus as a group 3** human pathogen (category virus) under the Biological Agents at Work Directive. This quick adaptation was welcomed by stakeholders because it provided rapid protection for workers. This was made possible by the legal architecture of the Directive, divided between legal rules and principles, and technical annexes that could be revised through the Committee procedure[30].

One of the important questions debated at the European Parliament at the time was whether COVID-19 should have been classified as a group 4 rather than a group 3 biological agent. The consequences of a group 4 classification would have been:

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[28] Interview with EFFAT.

[29] European Commission, 2020, Commission Statement following the presentation of Commission Directive (EU) 2020/739 to the European Parliament and the Council in respect of the prevention and protection of the health and safety of workers that are or can be occupationally exposed to SARS-CoV-2 (2020/C 212/03), 26 June 2020, OJ C 212.

[30] Interviews with SMEunited and BusinessEurope.

- Obligation for employers to provide written instructions and display notices for workers handling group 4 agents;
- Prior notification to the competent authority for the use of group 4 biological agents;
- Containment requirement in laboratories handling group 4 biological agents.

The main arguments in favour of the classification into group 4 of biological agents were the **high infectiousness** of the Coronavirus, the **absence of treatment** or vaccine at the time, the requirement of Article 18(3) Biological Agents at Work Directive to classify an agent in the **most stringent category if an agent cannot be classified into one of the four categories,** and the **precautionary principle** (European Parliament, 2020b). Following similar arguments, the classification into group 4 was also supported by some social partners, such as ETUC and the European Confederation of Independent Trade Unions (CESI)[31].

During the meeting of the Committee on Employment and Social Affairs (EMPL) of 11 June 2020, 'Commissioner Nicolas Schmit addressed the concerns raised by [Members of the European Parliament] MEPs and declared that the Commission will strongly encourage Member States to ensure that written instructions are provided to all workers exposed to COVID-19, as also recommended in the EU guidance on protecting workers' (European Parliament, 2020c). The Commission added that it would 'assess the need to amend the Biological Agents Directive following the lessons learned during the pandemic to ensure better preparedness and response planning in all workplaces'. Some of the groups removed their objections to SARS-CoV-2 being classified in risk group 3 because of these additional safeguards to protect workers' health.

From a scientific perspective, SARS-CoV-2 is similar to SARS-CoV-1 and Middle East Respiratory Syndrome–related coronavirus (MERS-CoV), which are classified as group 3, even in the absence of effective treatments and vaccines (Schröder, 2020). Other Coronaviruses are currently classified in group 3 because they are responsible for diseases of the upper respiratory tract of limited importance, but SARS-CoV-1 and MERS-CoV produce very serious disease and have shown the possibility of being transmitted remotely by aerosols, including through air conditioning systems (Chirico, 2020). SARS/MERS infected patients emit viral particles only a few days after the onset of symptoms, allowing effective isolation measures to be implemented to prevent the spread of epidemics, even in the absence of specific treatments. Patients infected with SARS-CoV-2 may shed the virus a day or two before symptoms appear, making timely isolation difficult. This explains why many were asking to classify SARS-CoV-2 in group 4 before the vaccine and treatments were available.

Although classification under group 4 was supported by some, that classification could have had unfortunate consequences, such as the prohibition for certain laboratories to manipulate the SARS-CoV-2, slowing the research on essential vaccines.

The discussion on classification lost its importance due to the availability of 'effective prophylaxis' and 'treatment', an element that distinguishes group 3 and group 4 agents (Article 2 of the Directive). In conclusion, the classification under group 3 seems appropriate in light of the authorisation and widespread distribution of vaccines against severe forms of COVID-19 in Europe since January 2021 and the availability of effective therapies in late 2021/early 2022. Annex III has not yet been amended

[31] 'Call to Action: For information: ETUC letter and ETUI note ahead of EMPL Committee today on SARS-CoV-2 categorization', available at: https://www.etuc.org/fr/node/19047; 'CESI urges European Parliament to push for a classification of COVID-19 as a highly dangerous group-4 virus under EU health and safety law', available at: https://www.cesi.org/posts/cesi-urges-european-parliament-to-push-for-a-classification-of-covid-19-as-a-highly-dangerous-group-4-virus-under-eu-health-and-safety-law/.

to reflect the existence of a vaccine against SARS-CoV-2. The classification of SARS-CoV-2 under the Directive was welcomed by the CPME, which considers it an effective measure in offering additional protection to workers, particularly those working in direct contact with the virus in hospitals and laboratories[32].

5.1.3. Links with other European OSH legislation

A specific risk assessment is necessary for **pregnant workers and workers who have recently given birth or are breastfeeding**, according to Article 4 and Annex I of Directive 92/85/EEC, where their work activities are liable to involve a specific risk of exposure to biological agents of risk groups 2, 3 and 4 of Directive 2000/54/EC (including COVID-19). Where risks are identified, employers must act to protect the female workers concerned, for instance by moving them to another position or granting leave (Article 5).

The Directive contains a specific protection from biological agents for **young people at work** (Council Directive 94/33/EC). According to Article 7, Member States shall ensure that young people are protected from any specific risks to their safety, health and development as a consequence of their lack of awareness of existing or potential risks. Work that is likely to entail specific risks for young people includes work involving harmful exposure to biological agents belonging to groups 3 and 4 (Directive 2000/54/EC), including COVID-19.

5.2. OSH Framework Directive

5.2.1. Relevant provisions of the OSH Framework Directive

Directive 89/391/EEC introduced measures to improve the health and safety of workers at work. It sets out **obligations** for employers and employees to reduce occupational risks, including accidents and occupational diseases at the workplace, in all sectors of activities, and in every aspect related to work[33].

The Directive is the basic safety and health legal act, without prejudice to individual OSH directives setting out *lex specialis* obligations. 'It focuses on a risk prevention culture and lays down employers' obligations on: (i) risk assessments; (ii) preventive measures; (iii) giving OSH information to workers; (iv) training; (v) consultation; and (vi) balanced participation' (European Commission, COM(2021) 323). It is the **employer's obligation** to ensure the safety and health of workers in every aspect related to their work. However, Article 5(4) states that Member States can exclude or limit employers' responsibility 'where occurrences are due to unusual and unforeseeable circumstances, beyond the employers' control, or to exceptional events, the consequences of which could not have been avoided despite the exercise of all due care', such as COVID-19 at the beginning of the outbreak. While Article 5(4) is potentially relevant, it could be difficult to apply in the future, as such outbreaks could no longer be considered 'unforeseeable' or even 'unusual'.

According to Article 6, 'the employer shall be alert to the need to **adjust these measures** to **take account of changing circumstances** and aim to improve existing situations'. The emergence of occupational risks related to pandemic crises (such as COVID-19) can be categorised as such changing circumstances. Employers must implement the measures necessary to protection the safety and health of workers, following the general principles of prevention set out in Article 6(2). Although some principles are more easily applicable, such as 'adapting to technical progress' and 'giving appropriate

[32] Interview with the CPME.

[33] European Commission, Health and safety at work is everybody's business – Practical guidance for employers, 2017, available at: Health and safety at work is everybody's business - Publications Office of the EU (europa.eu).

instructions to the workers', others may be difficult to put into practice, such as '**combating the risks at source**'. Of interest here is Article 6(5), which states that OSH measures applied at the workplace 'in no circumstances involve the workers in financial cost'. From a pandemic perspective, that applies to the provision of masks, tests and other PPE.

According to Article 8, employers shall take the necessary measures for first aid, firefighting and evacuation of workers. More precisely, they coordinate the actions required in the event of **serious, imminent and unavoidable danger,** such as: informing workers about the danger and the protection steps; giving instructions to enable workers to stop work and/or immediately leave the workplace; and refraining from asking them to return while the danger is still present. Workers who leave their workstation because of that danger cannot bear any disadvantage or unjustified consequence for their actions. During a pandemic, first aid and emergency procedures needed to be changed, implying a need for employers to inform and retrain workers on the new procedures (Magnavita, 2020). Nevertheless, it is uncertain whether the notion of serious, imminent and unavoidable danger covers a pandemic situation, as it is not clearly imminent or unavoidable.

According to Article 13, **workers are obliged** to take care of their own and their colleagues' health and safety to the extent possible, by acting in accordance with their training and the instructions given by their employer. The following obligations are relevant here: make correct use of the PPE supplied to them; immediately inform the employer and/or workers with specific health and safety responsibility of any work situation they have reasonable grounds to think represents a serious and immediate danger to OSH, and any shortcomings in the protection arrangements; cooperate with any tasks or requirements imposed by the competent authority to protect the OSH of workers at work and to ensure that the working environment and working conditions are safe and pose no risk to safety and health.

While it is not possible for employers to require their employees to get vaccinated, it could be important that they can record vaccination status in order to prove that the vaccination was offered, but the employee refused. Employers will then need to demonstrate that COVID-19 is, or could be, a risk to health and safety within the workplace. Where employees decline to be vaccinated, employers must consider the work activities with lower risk of exposure they may perform.

During consultations, employers' representatives praised the Framework Directive's flexibility, clarity and comprehensive nature, which required workers to be protected from the risks generated by COVID-19, in particular via specific risk assessments, and appropriate prevention and mitigation measures[34].

Some critical issues could still be improved. The Interpretative Document of the Commission of November 2014 specifies that, 'as regards the **mental health** of workers and in particular when it comes to taking any necessary risk prevention measures specific to this type of issue, the provisions of Council Directive 89/391/EEC are applicable'[35]. Recently, the Commissioner for Jobs and Social Rights, Nicolas Schmit affirmed that 'Being healthy at work is not only about our physical state, it is also about our mental health and well-being' (European Commission, 2021c). Nevertheless, the teleworking conditions imposed during the pandemic blurred the boundaries between work and private life and have given 'an additional rise to psychosocial and ergonomic risks'[36]. Rules specifically requiring assessments of psychosocial risks and occupational risks specific to **teleworkers** are not defined in OSH

[34] Interviews with SMEunited and BusinessEurope.

[35] European Commission, Interpretative Document of the Implementation of Council Directive 89/391/EEC in relation to Mental Health in the Workplace. Available at: https://ec.europa.eu/social/BlobServlet?docId=13880&langId=en.

[36] European Commission, SWD(2021) 148 final, accompanying Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of Regions EU strategic framework on health and safety at work 2021-2027 Occupational safety and health in a changing world of work, {COM(2021) 323 final}.

directives, although they are recommended by EU-OSHA, in particular in COVID-19 guidance for employers (EU-OSHA, 2020c). Even if psychosocial risks and MSDs are included within the general obligation of prevention of occupational risk, they could be specifically addressed in new pieces of legislation or amendments so as to better protect EU workers.

The European Parliament Resolution on a strong social Europe for just transitions (November 2020) (European Parliament, 2020d) took full account of the occupational risks generated by the COVID-19 pandemic affecting Europe, calling for a revision of the OSH Framework Directive and urging the Commission to propose a new OSH strategy. The OSH Strategic Framework for 2021-2027 was subsequently published by the European Commission on 28 June 2021 (see Section 6.2.2).

5.2.2. COVID-19 as an occupational disease or accident

EU-OSHA defines an '**occupational disease**' as 'any disease caused primarily by exposure at work to a physical, organisational, chemical or biological risk factor or to a combination of these factors'. If a causal link between an occupation exposure and the disease is demonstrated, compensation must be paid[37]. According to a Eurostat survey, all 27 EU Member States considered the occupational risk of COVID-19, even if 'there are differences in how the file will be investigated (accident at work and/or an occupational disease) and which sectors and occupations are included in this possible recognition (limited to the health sector or extended to other sectors)' (Eurostat, 2021).

Despite strong demands from trade unions[38], which want COVID-19 included in the recommendation as applying to all workers exposed to infection without adequate protection, COVID-19 has not yet been recognised as an occupational disease at European level (ETUC et al., 2020). Commissioner Schmit recently affirmed that 'the COVID-19 pandemic has shown how crucial health and safety at work is for protecting workers' health, for the functioning of our society, and for the continuity of critical economic and social activities' and that it is therefore necessary to renew the commitment to keep occupational safety and health at the forefront[39]. In describing the measures envisaged to respect this commitment, he added that the Commission will update the **Commission recommendation on occupational diseases** by 2022 to include COVID-19[40]. Unlike trade unions, employers' representatives believe that this recognition should be done carefully and require the establishment of a clear causal link between work activities and infections[41]. While the categorisation may appear straightforward for some sectors, such as the healthcare sector, this is not always the case for others (e.g. food service, hotel industry). EU-OSHA confirmed that discussions around the recognition of COVID-19 as an occupational disease are ongoing at European level[42].

5.3. Workplace Directive

Directive 89/654/EEC establishes minimum requirements for the protection of workers' health and safety at the workplace. According to Article 2, a **workplace** is 'the place intended to house

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37 EU-OSHA, 'Work-related diseases', definitions and regulations. Available at: https://osha.europa.eu/en/themes/work-related-diseases#:~:text=An%20'occupational%20disease'%20is%20any,to%20risk%20factors%20at%20work.

38 Confirmed in the interview with ETUC and during the focus group. They support a low burden of proof for workers to confirm the link of the infection to COVID-19 with exposure at work, as it is necessary to obtain social security compensation.

39 European Commission, 2021, Remarks by Commissioner Schmit on the new occupational safety and health strategy in a changing world of work. Available at: https://ec.europa.eu/commission/presscorner/detail/en/SPEECH_21_3296.

40 Commission Recommendation of 19 September 2003 concerning the European schedule of occupational diseases (notified under document number C(2003) 3297), OJ L 238, 25.09.2003, pp. 28-34.

41 Interviews with SMEunited and BusinessEurope.

42 Interview with EU-OSHA.

workstations on the premises of the undertaking and/or establishment and any other place within the area of the undertaking and/or establishment to which the worker has access in the course of his employment'.

The definition **does not take into account working from home or remote work** and is limited to premises of undertakings. The Commission is aware of this limitation, and even before the pandemic affirmed that 'modern IT technologies and new forms of work such as platform work mean that an increasing number of workers occasionally or regularly work outside of the employers' premises. In this context, the findings of the evaluation exercise indicate that a shift towards a more dynamic notion of 'workplace' seems to be needed'[43]. In addition, 'many Member States stated their belief that this Directive should be reviewed, considering the increasing extent of employment relationships with flexible working conditions (e.g. teleworking, platform working), as well as the rapid changes in the labour market, technological developments and a range of employment types to which traditional OSH requirements do not properly apply' [44].

The Directive and its annexes are currently being reviewed in light of the digitalisation that occurred in recent decades, with a particular focus on whether the definition of 'workplace' should be updated to reflect new working realities (platform working, teleworking etc.)[45]. However, some social partners stressed that in the context of teleworking, employers do not have control over the workplace, making it difficult to ensure that the safety rules are respected[46]. An excessively broad definition of a workplace could risk imposing unreasonable obligations on employers, meaning that it will be necessary to clearly delineate employers' and employees' obligations[47].

Article 6 establishes **general obligations** for the employer. Of note here is the requirement for employers to verify that the workplace, equipment and devices are regularly cleaned to an adequate level of hygiene.

According to Article 9, the European Commission has the power to adopt **delegated acts** to make technical amendments to the annexes, which constitute the substance of the Directive. Annex I sets out the minimum safety and health requirements for workplaces used for the first time from 1 January 1993, while Annex II sets out the rules for workplaces already in use before that date. Any workplace modification of older workplaces must comply with the more extensive requirements of Annex I. The difficulty arising with this Directive is that the prescriptive controls listed in either Annex I and Annex II relate to traditional workplaces, which allow for control measures to be installed and implemented. That implementation is more complicated for remote work, particularly for workers who did neither planned nor requested to work from home, but were forced to do so under nationally imposed COVID-19 strategies and polices. It was impossible to check in advance if all the requirements were respected (lack of time, material impossibility to check workers' private homes).

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43 Communication from the Commission to the European Parliament, the Council, the Economic and Social Committee and the Committee of Regions, 'Safer and Healthier Work for All – Modernisation of the EU Occupational Safety and Health Legislation and Policy', COM(2017)12 final.

44 European Commission, SWD(2021) 148 final, accompanying Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of Regions EU strategic framework on health and safety at work 2021-2027 Occupational safety and health in a changing world of work, {COM(2021) 323 final}.

45 European Commission, SWD(2021) 148 final, accompanying Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of Regions EU strategic framework on health and safety at work 2021-2027 Occupational safety and health in a changing world of work, {COM(2021) 323 final}

46 Interview with BusinessEurope.

47 Interview with SMEunited and BusinessEurope.

The Member States and the Commission all agree that maintaining two annexes has become obsolete and is no longer necessary[48].

Some of the requirements in the annexes are relevant to COVID-19. Annex I, point 6, relates to **ventilation of enclosed workplaces**, an aspect that was essential during the pandemic. Nevertheless, more importance is given to pollution risk than to biological risk, and **there is no clear interlinkage between the Workplace Directive and the Biological Agents at Work Directive**. Annex I, Point 15, adds the necessity of sufficient area, height and air space in workrooms and, while it can be considered a starting point to ensure **distance between workers,** is too broad to ensure that work is performed without risk to safety, health and well-being during pandemic crises (such as COVID-19). Finally, Annex I, point 18, concerns **sanitary equipment**, which was extremely relevant during the pandemic. It requires the provision of appropriate changing rooms in case of special work clothes, and separate lockers for work clothes and ordinary clothes if circumstances so require (e.g. dangerous substances). This provision was very relevant to the protection of healthcare workers during the pandemic. The same point specifies the need to provide adequate and suitable showers if required by the nature of work or, alternatively, washbasins, both important instruments to maintain high levels of hygiene.

5.4. Personal Protective Equipment Directive

Directive 89/656/ECC establishes minimum requirements for the assessment, selection and correct use of **PPE** at work. Article 2 defines PPE as 'all equipment designed to be worn or held by the worker to protect him against one or more hazards likely to endanger his safety and health at work, and any addition or accessory designed to meet this objective'. Article 3 states that priority must always be given to **collective safety measures**, thus PPE must be used 'when the risks cannot be avoided or sufficiently limited by technical means of collective protection or by measures, methods or procedures of work organisation'. However, in certain work situations, PPE has always been used as a definitive, necessary and sometimes only means of protection against exposure to biological agents (e.g. healthcare, accident and emergency, ambulances).

The provision of PPE to workers is the lowest action in the OSH hierarchy of controls in accordance with the OSH Framework Directive. It comes after avoidance, substitution, and adoption of collective protection strategies. However, in the case of COVID-19, avoidance and substitution were not possible (without shutting down the activities). Collective adaptations of the workplace were observed, for example the installation of transparent screens between workers and customers or patients (and sometimes between workers themselves). However, collective measures need to be complemented by PPE, given the possibility of transmission between colleagues.

In the **context of the COVID-19 pandemic**, the notion of PPE encompasses equipment meant to protect against biological risks, in particular facial surgical masks or particulate respirators, but also gloves, goggles, face shields, scrubs, aprons and alcohol-based hand rub (WHO, 2020a)[49]. PPE against airborne diseases (e.g. influenza) should include N95 or surgical masks, as well as ocular protection in light of possible infection via the membranes of the eye. PPE and medical devices were severely lacking

[48] European Commission, SWD(2021) 148 final, accompanying Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of Regions EU strategic framework on health and safety at work 2021-2027 Occupational safety and health in a changing world of work, {COM(2021) 323 final}; see also Communication from Commission to the European Parliament, the Council, the Economic and Social Committee and the Committee of Regions, 'Safer and Healthier Work for All – Modernisation of the EU Occupational Safety and Health Legislation and Policy', COM (2017)12 final.

[49] For a complete list of PPE used in the context of COVID-19, see WHO, Technical specifications of personal protective equipment for COVID-19.

during the early months of the pandemic[50].

Looking at **employers' obligations**, Article 4 establishes that PPE must comply with the relevant Community provisions on design and manufacture with respect to safety and health. It adds that PPE shall be provided free of charge by the employer, who shall also ensure its good working order and satisfactory hygienic condition. During the pandemic, the WHO warned that shortages of PPE was 'leaving doctors, nurses and other frontline workers dangerously ill-equipped to care for COVID-19 patients', putting their lives and those of their patients at risk (WHO, 2020b). The impossibility of obtaining PPE meant that **employers did not have the technical capacity to fulfil their obligations**. In response, the Commission issued a recommendation on 13 March 2020[51] to speed up the uptake of new products not based on harmonised standards.

In order to facilitate the **timely availability of the medical supplies** needed to fight the virus, the Commission created the **COVID-19 Clearing House for medical equipment**, which operated from 1 April 2020 for a period of six months. 'It served as a platform for dialogue and sharing of information with Member States' representatives in the areas of health and economics on the demand and supply of medical equipment at EU level and on means to overcome shortages and build capacity. Through dialogue with industry representatives, the Clearing House pooled and supported the exchange of information on evolving demand and supply patterns for key medical products'[52]. As of September 2021, the supply of PPE to the EU appears stable, without the shortages evident in the first half of 2020. The Commission will continue to monitor the supply of critical PPE in the EU[53].

Before choosing PPE, the employer is required to undertake a **risk assessment** to understand whether it complies with the conditions set out in the Directive. That risk assessment should be adjusted if any changes are made. For example, indoor jobs with a high potential for exposure to known or suspected sources of COVID-19 (e.g. research in laboratories that handle COVID specimens, or cleaning/disinfection personnel of contaminated spaces) need specific PPE. Other jobs had to take into consideration the presence of customers and clients, such as restaurants and shops. In 2020, EU-OSHA developed a tailored **Online interactive Risk Assessment tool OiRA)** to support safe working conditions under COVID-19 restrictions[54]. It covers a broad range of activities and includes more information on testing and vaccination. It also emphasises the need to assess potential health and safety effects when implementing COVID-19 measures, e.g. changing work processes to ensure sufficient physical distance may lead to new risks, such as lone work or MSD risks.

Article 7 sets out the importance of **providing information to workers and/or their representatives** on all health and safety measures to be taken when PPE is used. Again, an example is useful here: masks were (and are) essential PPE during the COVID-19 crisis. Unfortunately, masks are often misplaced, used several times even if intended for a single use, and stored in unhygienic locations to be reworn (e.g. pockets, bags, car compartments). There is a high probability that workers who do not care for PPE outside the workplace may similarly not continue to implement the correct measures within the workplace, endangering their health and that of their colleagues. Correct information from the

[50] Interview with the CPME.

[51] Commission Recommendation (EU) 2020/403 of 13 March 2020 on conformity assessment and market surveillance procedures within the context of the COVID-19 threat, OJ L 79I, 16.3.2020, pp. 1-5.

[52] European Commission, COVID-19 Clearing House for medical equipment. Available at: https://ec.europa.eu/info/live-work-travel-eu/coronavirus-response/emergency-support-instrument/covid-19-clearing-house-medical-equipment_en.

[53] European Commission, Personal protective equipment (PPE). Available at: https://ec.europa.eu/growth/sectors/mechanical-engineering/personal-protective-equipment-ppe_en.

[54] European Agency for Safety and Health at Work, OiRA tools COVID-19. Available at: https://oiraproject.eu/en/oira-tools?search_api_fulltext=covid&sort_by=field_publication_date.

employer could avoid these risks. From a pandemic perspective, it was (and still is) important to provide COVID-19 clear and specific training on the use and care of PPE.

5.5. Display Screen Equipment Directive

Directive 90/270/EEC establishes minimum safety and health requirements for workers using display screen equipment at their workstation. Article 2 defines display screen equipment as 'an alphanumeric or graphic display screen, regardless of the display process employed', and defines a workstation as 'an assembly comprising display screen equipment, which may be provided with a keyboard or input device and /or software determining the operator/machine interface, optional accessories, peripherals including the diskette drive, telephone, modem, printer, document holder, work chair and work desk or work surface, and the immediate work environment'.

Recently, Member States suggested that **the Directive** '**needs to be updated** to take into account recent technological developments'[55]. In 2017, the Commission affirmed the obsolete nature of this Directive, which was adopted in the early nineties and 'some technology referred to in the Directive is no longer in use'. The Commission added that technical updates were needed to some of the definitions included in the Directive, such as the definition of workstation[56]. The Commission resumed that discussion recently. In the Communication on EU strategic framework on health and safety at work 2021-2027, it affirmed that it will 'modernise the OSH legislative framework related to digitalisation by reviewing the Workplaces Directive and the Display Screen Equipment Directive by 2023'[57]. Some stakeholders stated that the outdatedness of the Directive justifies its repeal and its integration in other individual Directives (e.g. Workplaces or Machinery Directive)[58]. It should also be added that the Directive's requirements relate to 'normal' workplaces and to planned teleworking scenarios. However, under COVID-19, where workers and employers were suddenly asked to work from home, it was difficult to implement some of the display screen equipment specifications before commencing remote working.

According to Article 3, employers must 'perform an analysis of workstations in order **to evaluate the safety and health conditions** to which they give rise for their workers, particularly as regards possible risks to eyesight, physical problems and problems of mental stress', and take appropriate measures to remedy the risks found. The **daily work routine** is specified in Article 7: the employer must plan the worker's activities in such a way that daily work on a display screen is periodically interrupted by breaks or changes of activity, reducing the workload at the display screen. Again, these obligations become more difficult to fulfill under telework and increased exponentially during the COVID-19 pandemic. Display screen equipment assessments should also be conducted at the 'home' workstation in order to comply with the legislation (Rudnicka, 2020).

Finally, Article 6 addresses **information and training** for workers. It stipulates that workers and their representatives shall receive information on all aspects of safety and health relating to their workstation and they shall be informed of any health and safety measure taken in compliance with this

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55 European Commission, SWD(2021) 148 final, accompanying Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of Regions – EU strategic framework on health and safety at work 2021-2027, Occupational safety and health in a changing world of work, {COM(2021) 323 final}.

56 Communication from the Commission to the European Parliament, the Council, the Economic and Social Committee and the Committee of Regions, 'Safer and Healthier Work for All – Modernisation of the EU Occupational Safety and Health Legislation and Policy', COM(2017)12 final.

57 European Commission, COM(2021) 323 final, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions – EU strategic framework on health and safety at work 2021-2027, available at EUR-Lex – 52021DC0323 – EN – EUR-Lex (europa.eu).

58 Interview with BusinessEurope.

Directive. From a pandemic perspective, this training needs to emphasise the need for workers to regulate their time away from their designated workstation (particularly during telework) and to allocate the correct working day/schedule (with breaks). They should avoid the temptation to revisit the workstation later in the evening/at night in order to avoid over-connection to the display screen.

5.6. Working Time Directive

Directive 2003/88/EC (the Working Time Directive) lays down minimum safety and health requirements for the organisation of working time. It sets minimum periods of daily rest, weekly rest and annual leave, breaks and maximum weekly working time. It also aims to protect workers from negative health effects due to shift and night work, as well as certain patterns of work[59].

Chapter 5 concerns derogations and exceptions due to specific characteristics of an activity. Article 17(3) is particularly relevant in a COVID-19 context, as it sets derogations (daily rest, breaks, weekly rest period and length of night work) for activities involving the **need for continuity of service or production** (e.g. reception, treatment and/or care provided by hospitals or similar establishments; gas, water and electricity production, transmission and distribution, household refuse collection and incineration plants; workers concerned with the carriage of passengers on regular urban transport services). Such derogations can cause overload in crucial emergency response sectors (e.g. Magnavita et al., 2021b). Finally, implementation of the Directive becomes more difficult in respect of teleworking. Many of the risks associated with telework were known before the pandemic (long working hours, constant availability, blurring of boundaries between work and home life, work–life balance), but the COVID-19 crisis made these challenges more common and frequent (Eurofound, 2021a).

[59] Summary of EU-OSHA available at: https://osha.europa.eu/en/legislation/directives/directive-2003-88-ec.

6. CONCLUSIONS, CURRENT POLICY DEVELOPMENTS AND RECOMMENDATIONS

Section 6.1 presents some conclusions on the impact of COVID-19 on workers' safety and health, both at workplaces and for teleworkers, and the specific impact on selected sectors, occupations, and vulnerable groups of workers. Section 6.2 assesses relevant policy developments at EU level, while Section 6.3 presents the policy recommendations to improve the European OSH legislation during pandemic crises, in light of the occupational risks identified here.

6.1. Conclusions

6.1.1. Impact of COVID-19 on the safety and health of workers

It is clear that the OSH of European workers has been impacted by the COVID-19 pandemic, with comprehensive epidemiological studies likely to provide useful additional information on the increased frequency of certain occupational diseases, detailed data on sectors, occupations and evolution over the course of the pandemic. This study distinguished between workers facing occupational risks at their workplaces (or outdoors, e.g. couriers) during the pandemic, and teleworkers, who are exposed to different occupational risks. The issue of long-COVID among workers fell outside the scope of the study, but further research will be needed to characterise this issue and to evaluate its impact on workers[60].

The analysis of the employment distribution on the basis of EU-LFS data shows major differences across Member States in the share of workers considered 'essential' and those required to telework. The significance of certain occupational risks and the priority given to certain policies varies accordingly between Member States.

Biological risks at the workplace during COVID-19

The main characteristic of the occupational risk of SARS-CoV-2 as a biological agent is that it can be transmitted by physical proximity between co-workers, patients, customers or third parties at the workplace.

The literature review identified the prevalence of infections among **essential workers**, whose roles are associated with a low level of teleworkability and high levels of physical interaction. Clusters of COVID-19 at workplaces were most important in health and social care, food packaging and processing, factory/manufacturing, building and construction sites, offices, educational facilities, sales and retail, military/law enforcement, and mines.

Healthcare workers faced several occupational risks: they were the most at risk of infection and faced serious psychosocial risks due to harsh working conditions, long working-hours/overtime, difficult work organisation, and ethical dilemmas. Healthcare workers saw their level of working time protection reduced in some Member States. Workers in the **food production sector** were strongly affected by biological risks, with several clusters of COVID-19 reported in meat processing plants across the globe and in the EU. This was primarily due to their working environments, characterised by noise, absence of sunlight, cold, humidity and infrequent aeration, as well as socioeconomic factors.

Specificities of the **construction sector** increased the risks of infection with COVID-19. Construction is not a highly teleworkable occupation, and the temporary nature of construction sites, the involvement

[60] Participants in the focus group highlighted long COVID-19 as a matter that will gain importance in occupational settings.

of various companies and workers, and the difficulty in maintaining physical distancing increased the risk of site (cross-) contaminations. **Platform workers** were also required to work during the pandemic, with couriers (for food or products) classified as essential in some Member States. These roles are characterised by a low level of social protection (creating presenteeism) and a low level of access to PPE and sanitary equipment. As self-employed workers, they could only rely on platforms' voluntary actions for their protection.

Vulnerable workers include younger workers, older workers, workers with disabilities or pre-existing health conditions, pregnant or breastfeeding female workers, and (EU and extra-EU) migrant workers. The higher impact on younger workers is explained by their lack of knowledge and experience of protection, as well as high representation in occupations at risk of exposure. Older workers faced higher rates of fatality in case of infection. Workers with disabilities could face difficulties in accessing information and implementing OSH practices. Depending on their disability and sometimes underlying diseases, they were more easily affected by infection and/or had a greater risk of mortality or permanent disability. Pregnant workers had a high risk of mortality and adverse effects on the foetus. Migrant workers are highly represented in essential sectors, with fewer opportunities to telework. They were found to be more exposed to MSDs and COVID-19. Beyond workplace exposure, migrant workers may have poor living conditions, lessening the possibility of physical distancing and hygiene. Finally, vulnerability criteria may be cumulative for certain populations of workers.

Occupational risks linked to teleworking during COVID-19

The significance of telework prior to and during the pandemic varied greatly across Member States. Nevertheless, it is desirable that teleworkers across the EU should be granted a similar level of protection, as highlighted by a report by the European Parliament[61].

Teleworking during the COVID-19 pandemic displayed several specific characteristics: novelty (close to half were first-time teleworkers), forced nature, and non-intermittence of telework for a prolonged period of time. These characteristics may not be observed in a regular (non-pandemic) situation in companies.

The main occupational risks of telework during COVID-19 included **psychosocial risks** caused by a blurred distinction between work/private life and conflicting interests at the home workplace, long working hours, and issues with work organisation. The consequences were serious illness, ranging from anxiety to burnout, depression or even suicide, coupled with a general feeling of isolation. Many European workers declared that they regularly worked in their free time during the pandemic. The literature points to the importance of company telework culture in promoting workers' well-being. The use of ICT brings specific risks that are often reinforced in a teleworking setting.

The risk of **MSDs** was identified among teleworkers prior to the pandemic and it is expected that the causal link may also appear for teleworkers during COVID-19. The main causes are a poor work environment, limited safety measures, and poor ergonomics at the home workplace. The lack of preparedness for teleworking conditions meant that companies and teleworkers could not set up their home workplaces properly. In addition, the living conditions of teleworkers are not always adapted to this work arrangement, which may increase the prevalence of environmental factors of risks. Eurofound data highlighted the variable satisfaction of home workers with their equipment across the Member

[61] The Vind report on a new EU strategic framework on health and safety at work post-2020 (including better protection of workers from exposure to harmful substances, stress at work and repetitive motion injuries) (2021/2165(INI)) calls on the Commission to 'propose a legislative framework with a view to establishing minimum requirements for telework across the Union'. The report refers to the principles laid down in the European social partners' Framework Agreement.

States, which may be explained by the level of uptake of telework prior to the pandemic (see Figure 4).

6.1.2. Conclusions on the robustness of the current EU legal framework

The **European OSH acquis is generally flexible** and requires employers to take into account changing circumstances, facilitating quick adaptation of workplace OSH practices during the pandemic. Some stakeholders interviewed praised the flexibility and adaptiveness of the OSH Framework Directive and the rapid integration of SARS-CoV-2 as a biological agent under the Biological Agents at Work Directive. The **risk assessments** required by the OSH Framework Directive were essential during the COVID-19 crisis to identify sources of risk, and to prevent and minimise health and safety risks, given the impossibility of eliminating them at source. However, the nature of OSH legislation intrinsically limits its role in the pandemic, as it focuses on risks generated at the workplace, whereas COVID-19 may arise in all social interactions.

Despite the applicability of the rules of the OSH Framework Directive on mental health, no specific provision gives shape to the legal protection of workers in respect of psychosocial risks[62]. The adoption of a legal framework on psychosocial risks is a long-standing demand of European trade unions (via ETUC) to fight the 'pandemic of psychosocial diseases'[63], an approach supported by two recent draft reports of the European Parliament[64]. Nevertheless, the opportunity for a policy intervention against these occupational risks needs to be carefully considered. The adoption of legislation on the matter may circumscribe the protection provided to workers to specific occupational risks and, consequently, not provide sufficient protection for the risks that remained unidentified at the time of the adoption[65]. The rise of telework during the COVID-19 crisis drew attention to the **need to modernise OSH legislation** to reflect the digitalisation process, in particular telework, in recent decades. The practical and legal limitations on the enforcement of employers' obligation in teleworkers' home workplace have been highlighted, with a particular impact on the protection of workers against ergonomic risks and MSDs[66].

The **Biological Agents at Work Directive** is an interesting instrument in the protection of workers against biological risks but could be improved in several respects. It primarily contains limited, general prevention measures against biological risks and could be extended (e.g. ventilation, avoidance of contact with contaminated surfaces, cleaning and maintenance), while remaining flexible enough to adapt to a variety of workplaces. The Directive is limited in terms of sector and job specific provisions outside the intentional use of biological agents, and the annexes to the Directive could be made more context-specific, although this needs to be carefully balanced as it may prove impractical.

The Directive on the protection of **pregnant workers** and workers who have recently given birth or are breastfeeding, as well as the Directive on **young workers**, provide specific protection for these vulnerable workers - risk assessment and related preventive measures, and special protection against OSH risks. However, no information could be found on the practical implementation of this specific

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62 A report of the EMPL Committee on health and safety at work post-2020 (including better protection of workers from exposure to harmful substances, stress at work and repetitive motion injuries) underlines the limitations of the OSH Framework Directive in assessing and managing psychosocial risks (2021/2165(INI)).

63 Representative of ETUC, focus group, February 2022, available at: https://www.etuc.org/en/document/etuc-resolution-actions-combatting-stress-and-eliminating-psychosocial-risks-workplace. Member States where legislation has been adopted have observed a reduction in the prevalence of psychosocial diseases.

64 Report on a new EU strategic framework on health and safety at work post-2020 (including better protection of workers from exposure to harmful substances, stress at work and repetitive motion injuries), (2021/2165(INI)); Draft report on Mental Health in the Digital World of Work (2021/2098(INI)).

65 Senior expert in OSH, focus group, February 2022.

66 The report on a new EU strategic framework on health and safety at work post-2020 calls for the adoption of a specific OSH directive on work-related MSDs.

protection via risk assessments and related prevention measures during the pandemic. No similar protection is granted to the other categories of vulnerable workers, although the conduct of risk assessments for particularly sensitive risk groups enables the identification of specific vulnerabilities and adoption of adapted prevention measures.

Despite providing interesting measures of protection to workers at workplaces, the **Workplace Directive** does not apply to teleworkers, due to the current definition of a workplace. The opportunity to extend that definition beyond the employers' premises should be carefully considered in view of the implications for employers' responsibilities. The implementation of the Directive's obligation in workers' homes presents a clear challenge. For on-site workers, the provisions of the Directive provide limited benefits to fight biological risks, e.g. sufficient area, height and air space in workrooms. However, the requirements of sanitary equipment in all workplaces have contributed to the possibility of ensuring high levels of hygiene among workers.

The **Directive on PPE** did not fulfil its potential during the pandemic, when its importance was heightened (it is a measure of last resort in the OSH hierarchy). Despite requiring employers to provide PPE free of charge to employees, employers lacked the technical capacity to procure the relevant equipment (in particular respiratory masks) at the beginning of the pandemic. The establishment of contingency plans in companies for possible pandemic outbreaks could limit issues with the supply of sanitary equipment (increasing the supply of disinfectants, masks and other safety devices). In the wider context of preparation, the WHO has encouraged the preparation of national pandemic plans (against influenza) since 2009, where the role of companies in the stockpiling PPE could be clearly set out (WHO). Considering the versatility of these protections against different biological risks and the foreseeability of future pandemics, this requirement appears highly appropriate.

The **Display Screen Equipment Directive** was considered obsolete prior to the pandemic. In the context of COVID-19, its provisions were not fully implemented for teleworkers, as it requires periodic interruption to reduce the workload at the display screen, going against the growing reliance on computer and phone-based activities, and the lower extent of non-display screen work. The implementation of this obligation is difficult in practice, exacerbated by companies' lack of preparedness to telework. It is increasingly necessary to train workers and employers on the unchanged medical necessity for breaks and adequate exercise to prevent visual difficulties and MSDs.

The **Working Time Directive** has the potential to provide a framework for limiting the psychosocial and work organisation risks faced by all workers during a health crisis. If implemented correctly, the national transpositions of the Directive could provide a solid framework to protect teleworkers against excessive working hours, thereby providing an alternative to the right to disconnect. This could be achieved by an obligation to record working hours, accessible to labour inspectors and possible employee representatives (see Spanish case study, on the right to disconnect), and by increasing awareness and training on the importance of these provisions for workers' physical and psychological health. Several Member States used the derogations available in the Directive for essential workers in order to ensure the continuity of essential services (e.g. healthcare workers). The necessity of derogating from minimum periods of rest or maximum working hours is beyond the scope of this study, but it negatively impacted certain categories of workers' safety and health.

6.2. Current and future policy developments at EU level

Several policy developments are underway to improve the safety and health of European workers. Section 6.2.1 develops the policy developments specific to the COVID-19 pandemic. Section 6.2.2 reports on the consideration of the occupational risks of the pandemic in the EU OSH Strategic

Framework for 2021-2027. Section 6.2.3 focuses on the recent Commission proposal for a Directive on improving the working conditions of platforms workers, and Section 6.2.4. develops the European Parliament Resolution on the right to disconnect in the context of telework.

6.2.1. Policy developments with regard to COVID-19

The European Commission's **communication on short-term EU health preparedness for COVID-19 outbreaks** recognised the importance of ensuring that workplaces must be safe places[67], based on the need to ensure continuity of work and economic activity. The communication relies on OSH legislation, including updated risk assessments, to protect workers against this specific biological risk at the workplace.

The European Commission detailed its plans for action in the April 2020 **Communication on the Global EU response to COVID-19**, where it referred to upholding decent working conditions, special funding to ensure the availability of PPE for health workers, and protection of workers in the workplace. The funding could also support training employers and workers on the correct implementation of existing practices (e.g. use of PPE, hygiene measures, implementation of legal protection provided by the Working Time Directive).

EU-OSHA carried out a **campaign 'COVID-19 – Back to the workplace'** (EU-OSHA, 2020c) and developed non-binding guidelines for workers and employers on risk assessment and measures to minimise the risk of exposure to the virus and ensure a smooth return to work. The campaign included a list of the **national guidance documents** by each Member State, categorised by occupational sector. EU-OSHA published several other guidance studies and documents to help workers and employers to protect health and safety at the workplace (e.g. teleworking during the pandemic; risks of MSDs for migrant workers; working conditions for workers infected with COVID-19 and long-COVID; adaptation of work for workers suffering from long-COVID), as well as pre-pandemic publications on exposure to biological agents at workplaces (December 2019). EU-OSHA is currently working on **digitalisation of work**, including the risks of MSDs and psychological disorders, and their interlinkage among teleworkers, with a campaign due to roll out between 2023 and 2025. A three-four-year research project is also starting, with a view to providing an OSH overview of the healthcare sector. Finally, EU-OSHA has worked with the ECDC to set out conditions for and the role of rapid antigen detection tests for SARS-CoV-2 in occupational settings (EU-OSHA, 2021e).

[67] Communication from the Commission of 15 July 2020 to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on short-term EU health preparedness for COVID-19 outbreaks, COM(2020) 318.

Box 3: Case study on initiatives to promote the mental health of workers

Background and status on the promotion of workers' mental health in the EU

According to the EU Strategic Framework on Health and Safety at Work 2021-2027, 'already before the pandemic, mental health problems affected about 84 million people in the EU. Half of EU workers consider stress to be common in their workplace, and stress contributes to around half of all lost working days. Nearly 80% of managers are concerned about work-related stress.' The outbreak of COVID-19 therefore added further psychological pressure to workers' existing mental health issues. In this regard, recommendations and guidance on workers' mental health were published by the United Nations (UN), the WHO, the OECD and the European Commission.

The European Parliament Resolution of 10 July 2020 on the EU's public health strategy post-COVID-19 recognises mental health as a fundamental human right. The Resolution refers to the long-term health effects of COVID-19, including on mental health, and calls for an EU Action Plan 2021-2027 on mental health, with equal attention paid to the biomedical and psychosocial factors of mental ill-health. The EMPL Committee held a workshop on 2 December 2021 on the 'Mental health and well-being in the digital world of work post COVID', focusing on:

- The **cost of poor mental health** and the cost of inaction. Vulnerable groups of workers (migrant workers, those working in the gig economy, people with disabilities, LGBTQ+ persons and young people) are at increased risk for psychosocial issues.
- The **key impacts of digitalisation in the world of work**. The 'autonomy paradox' illustrates the high levels of flexibility and independence associated by intensive work with IT tools, as well as the negative effects, such as 'technostress'.
- Best practice examples on innovative and practical ways to **create a resilient workplace**, including diversified private healthcare packages and ergonomic furnishing of workplaces at home.
- The **role of legislation at European and national level**, suggesting that terms like psychosocial risks and work-related stress should be defined at European level.

Current developments on European workers' mental health

The draft own-initiative report (INI) on 'Mental Health in the Digital World of Work' by rapporteur Maria Walsh for the EMPL committee calls on the European Commission to put forward a **legislative proposal on mental health in the digital world of work**. The votes in committee and in the EP plenary have still to take place.

Additionally, a Technical Advisory Group on the mental health impacts of COVID-19 was established in February 2021 in the WHO Regional Office for Europe. The group mandate was to 'review available evidence on the mental health impacts of the COVID-19 pandemic in the WHO European Region', as well as to 'identify remaining gaps in the evidence base and key emergent needs and implications for mental health service development and system strengthening as an integrated component of COVID-19 response and recovery', as prescribed in the Recommendations from the Technical Advisory Group on the Mental Health Impacts of COVID-19 in the WHO European Region (June 2021).

More specifically, in June 2021, the Technical Advisory Group published a document on the actions required to address the impacts of the COVID-19 pandemic on mental health and service delivery systems in the WHO European Region, including the following recommendations for the countries of the WHO European Region:

1. On mental health impacts of COVID-19 and needs related to the general population and communities, countries should:

- Promote and enable access to culturally adapted evidence-based interventions for mental health and psychosocial support through digital and other means, including interventions to increase resilience and help people to cope with stress and loneliness;
- Promote, support and embed psychological support initiatives in the workplace, and provide occupational and/or financial support to those prevented from/not working, or in the process of returning to work;
- Address the social determinants of mental health (poverty, unemployment, socioeconomic inequality) through targeted actions to provide financial support to households in/at risk of poverty as a result of income loss/unemployment, including sickness absence payments for those temporarily unable to work;
- Monitor changes in mental health at population level through valid, standardised and comparable measures and instruments.

2. For groups particularly affected by the mental health impacts of COVID-19, countries should:

- Promote, communicate and increase access to socioemotional learning, educational support for learning loss/mental health/psychosocial support in schools and universities, and provide more community support for adolescents and young adults;
- Promote and enable access to mental health and psychosocial support for individuals directly affected by COVID-19 infection;
- Develop, communicate and put in place emergency preparedness guidance for people with disabilities and in long-term care, and ensure continued access and facilitated provision of quality care and support.

3. For impacts on (and needs related to) mental health services, countries should:

- Strengthen and develop mental health and psychosocial support services as an integral component of preparedness, response and recovery from COVID-19 and other public health emergencies;

Ensure that mental health services are legally, operationally and financially safeguarded, and oversee scaled-up provision of person-centred, community-based services with innovative modalities of care.

4. On mental health impacts of COVID-19 on the health and social care workforce, countries should:

- Ensure safe, fair and supportive working conditions for frontline health and care workers, including the provision of **appropriate PPE**, **revised pay and working conditions**, and access to mental health and psychosocial training and support;

- Provide mental health workers and frontline responders with capacity-building opportunities and training in preparedness and response to infectious disease and other public health emergencies, basic psychosocial skills and other tools to mitigate the psychological impacts of COVID-19, both for their clients and themselves.

In March 2021, the European Commission answered a parliamentary question on the development of a possible EU mental health strategy, stating that: 'The promotion of good mental health will be part of the Commission's work on health in the coming years, but the Commission does not intend to develop a strategy leading to legislation on this issue.' According to the EU Strategic Framework on Health and Safety at Work 2021-2027, the European Commission has committed to prepare, in cooperation with the Member States and social partners, a non-legislative EU-level initiative on mental health at work that assesses emerging issues related to workers' mental health and put forward guidance for action before the end of 2022.

Source: WHO Regional Office for Europe, 2021, Action required to address the impacts of the COVID-19 pandemic on mental health and service delivery systems in the WHO European Region - Recommendations from the Technical Advisory Group on the Mental Health Impacts of COVID-19 in the WHO European Region; European Parliamentary Research Service, 2021, Mental health and the pandemic; OECD Policy Responses to Coronavirus (COVID-19), 2021, Supporting young people's mental health through the COVID-19 crisis; EU Strategic Framework on Health and Safety at Work 2021-2027; Answer to parliamentary questions, 2021 (https://www.europarl.europa.eu/doceo/document/E-9-2020-006708-ASW_EN.html); European Parliament Resolution of 10 July 2020 on the EU's public health strategy post-COVID-19; EMPL Committee workshop on mental health and well-being in the digital world of work post-COVID, 2021; UN, 2020, policy brief on 'COVID-19 and the need for action on mental health'; WHO, 2020, Mental health and psychosocial considerations during the COVID-19 outbreak; European Parliament, 2021/2098(INI), Mental Health in the Digital World of Work; Eurostat, 2021, Persons reporting a chronic disease, by disease, sex, age and educational attainment level.

6.2.2. EU Strategic Framework on Health and Safety at Work 2021-2027

In June 2021, the European Commission communicated the **EU Strategic Framework on Health and Safety at Work 2021-2027, '**Occupational safety and health in a changing world of work', to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. The Strategic Framework was partly developed during the COVID-19 pandemic. The Communication aims to **integrate preparedness for public health crises in occupational health and safety policies** and to promote increased **synergy between public health and OSH**, in close cooperation with the European Parliament, the Advisory Committee for Safety and Health at Work (ACSH), and the Senior Labour Inspectors Committee (SLIC)[68]. Public health is indispensable and complementary in protecting workers' health, such as lockdown measures protecting healthcare workers from additional pressure in ICUs and implementing telework to avoid clusters in workplaces[69]. The pandemic exacerbated the growing complexity of the 'changing world of work', in particular the evolution in forms of labour and workplaces.

This new strategy focuses on three cross-cutting objectives: managing **change** brought by green, digital and demographic transitions, as well as changes to the traditional work environment; improving **prevention** of accidents and illnesses; and increasing **preparedness** for any potential future crises (European Commission, 2021c). Drawing lessons from the current pandemic, 'the Commission will

[68] European Commission, Commission Statement following the presentation of Commission Directive (EU) 2020/739 to the European Parliament and the Council in respect of the prevention and protection of the health and safety of workers that are or can be occupationally exposed to SARS-CoV-2 (2020/C 212/03), 26 June 2020, OJ C 212.

[69] National member of SLIC, focus group, February 2022.

develop emergency procedures and guidance for the rapid deployment, implementation and monitoring of measures in potential future health crises, in close cooperation with public-health actors' (European Commission, 2021c).

Table 6: Actions proposed in OSH Strategic Framework 2021-2027

Actions proposed in OSH Strategic Framework 2021-2027		Timeline
Past actions	Biological Agents at Work Directive: Classification of SARS COV-2 as a biological hazard	2020
	Guidelines on seasonal workers in the EU in the context of the COVID-19 outbreak	2020
European Commission Legal initiatives	Review of the Workplaces Directive	2023
	Review of the Display Screen Equipment Directive	2023
European Commission Policy initiatives	In-depth assessment of the effects of the pandemic and the efficiency of the EU and national OSH frameworks to develop emergency procedures, guidance for the rapid deployment, implementation and monitoring of measures in potential future health crises, in close cooperation with public-health actors	2021
	Opinion of the expert panel on effective ways of investing in health to support mental health of [healthcare workers] HCWs and other essential workers	End-2021
	Update of the Commission Recommendation on occupational diseases to include COVID-19	2022
	Guidance for labour inspectors on assessing the quality of risk assessments and risk management measures under the Biological Agents at Work Directive	2022
	Non-legislative EU-level initiative on mental health at work (assessment of emerging issues) and guidance for action	End-2022
	EU-OSHA healthy workplaces campaign 2023-2025, on safe and healthy digital future (psychosocial and ergonomic risks)	2023-2025
	OSH overview of the health and care sector, in cooperation with EU-OSHA	Q1 2024
	Green and digital jobs: development of 2021-2024 OSH overviews on digitalisation and psychosocial risks (psychosocial, ergonomics), in cooperation with EU-OSHA, e-tools and guidance for risk assessments	N/A
	Appropriate follow-up to the European Parliament Resolution on the right to disconnect (legislative proposal)	N/A

Actions proposed in OSH Strategic Framework 2021-2027		Timeline
Member States	Draw up preparedness plans for future crises in the national OSH strategies, including implementation of EU guidelines and tools	2021
	Coordination mechanisms between public health and OSH authorities	2023
	Assess and address risks with a particular focus on groups most affected by the pandemic, such as people with disabilities	N/A
Social partners	Update existing agreements at cross-industry and sectoral level to address new OSH issues related to the digital labour market, particularly psychosocial and ergonomic risks	2023
	Find commonly agreed solutions to address the challenges raised by telework, digitalisation, and the right to disconnect, building on the European Social Partners Framework Agreement on Digitalisation	N/A

Source: Authors' own elaborations on the basis of the EC's Strategic Framework 2021-2027.

Overall, the OSH Strategic Framework for 2021 **covers most of the issues identified in this study**. Two actions address better coordination between public health and occupational safety and health at Member State level (assessment and establishment of coordination mechanisms). On the **revision of EU OSH legislation**, the European Commission envisages the revision of the Workplace and Display Screen Equipment Directives. The observations in Section 5 of this report do not point to a need to revise the OSH Framework Directive, PPE Directive, or the Working Time Directive. A shortcoming observed in the Strategic Framework is the absence of consideration of the Biological Agents at Work Directive (see below) and future action on biological agents in general (in addition to the recognition of SARS-CoV-2 as a biological agent and occupational disease). The issues linked to the procurement of PPE do not require amendments to the PPE Directive and are addressed by the Commission in the context of joint procurement initiatives and the Health Emergency Preparedness and Response Authority (HERA).

The Strategic Framework considers **vulnerable groups of workers**, namely healthcare workers and essential workers, workers with disabilities and seasonal workers (*not* migrant workers). Implementation of the Framework requires considering the circumstances of each worker (e.g. on the basis of gender, youth, disabilities and older age). The **OSH of teleworkers** is addressed by inviting the European social partners to further the rules of the Framework Agreements on Telework and Digitalisation, including the right to disconnect, and by the Commission's commitment to ensure appropriate follow-up to the European Parliament Resolution. A large gap is evident in the lack of action to implement the Working Time Directive, including via non-legislative initiatives such as guidance or research.

Three key gaps persist in the Strategic Framework: the absence of revision of the Biological Agents at Work Directive, although its fitness has been called into question; the absence of action to implement the Working Time Directive to better accommodate telework realities; and action at European level on the accommodation and transport conditions of migrant and seasonal workers. Finally, considering the programmatic nature of the Strategic Framework, the implementation and follow-up given to each action will need to be carefully scrutinised.

In the wider context of public health, the European Commission proposed the establishment of a **European Health Union,** in a Communication of November 2020[70], focusing on preparing responses to potential future crises via better rules on the surveillance of cross-border threats to health and reinforcing the role of European agencies, the ECDC and the European Medicines Agency (EMA). These are seen as positive development by the CPME[71]. A relevant element of the proposal for OSH matters is the reinforced requirement for Member States to set out pandemic preparedness and response plans that are coherent with an **EU pandemic preparedness plan**. Such plans were already requested at international level in response to the SARS-CoV-1 and MERS-CoV epidemics, but were not in place at the beginning of the COVID-19 pandemic, with related deficiencies observed in stockpiling PPE, for example[72]. The development of crisis-proof European OSH legislation could be further coordinated with pandemic preparedness plans and linked to the development of pandemic planning scenarios. Finally, the European Commission established HERA on 16 September 2021, tasked with the prevention, detection, and rapid response to health emergencies. This includes procedures for efficient procurement of medical countermeasures at European level, including respiratory masks.

6.2.3. Proposal for a Directive on improving working conditions in platform work

On 9 December 2021, the European Commission presented a **Proposal for a Directive on improving working conditions in platform work**[73], aiming to combat bogus self-employment and providing improved working conditions to platform workers. European Commission figures suggest that 28 million people work through platforms, with an estimated 5.5 million misclassified as self-employed[74]. This proposal was outlined in the European Pillar of Social Rights Action Plan and responds to the European Parliament Resolution of 16 September 2021 on fair working conditions, rights and social protection for platform workers, which called for a legal framework in the face of the legal uncertainties faced by platform workers[75].

Across the EU, **court decisions have requalified the status of platform workers from self-employed workers to employees** under the supervision of digital labour platforms, in light of the subordination relationship between workers and the platform (including via algorithmic management that conceals the actual subordination). This automated monitoring and decision-making can have severe consequences for the health and safety of workers (primarily physical safety, psychosocial and MSD risks).

The proposal requires Member States to have appropriate procedures in place to verify and ensure the **correct determination of the employment status** of those performing platform work, regardless of the contractual agreement, and sets out a rebuttable presumption of employment relationship. These requalified platform workers would thus fall under the scope of OSH provisions (including risk assessment and prevention/protective measures specific to platform work) and under Member States' social security systems, allowing them to obtain the payment of social contributions (ETUC, 2021a).

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70 European Commission, Communication of 11 November 2020, *Building a European Health Union: Reinforcing the EU's resilience for cross-border health threats* (COM(2020) 724 final).

71 Interview with the Standing Committee of European Doctors.

72 EU OSHA, focus group, February 2022.

73 European Commission, Proposal for a Directive of the European Parliament and of the Council on improving working conditions in platform work, COM(2021) 762 final.

74 Commission Staff Working Document, Executive Summary of the Impact Assessment Report Accompanying the document Proposal for a Directive of the European Parliament and of the Council on improving working conditions in platform work, SWD/2021/397 final.

75 European Parliament Resolution of 16 September 2021 on fair working conditions, rights and social protection for platform workers – new forms of employment linked to digital development (2019/2186(INI)).

In the context of COVID-19, this would mean offering more protection to workers, in particular providing PPE, safety instructions, conducting risk assessments and adopting protective/preventive measures. During the pandemic, the protection of platform workers against biological risks was at the discretion of platforms or public institutions (European Parliament, 2020e), providing a variable degree of OSH to EU platform workers.

A deliberate policy choice was made **not to encompass genuinely self-employed platform workers** under OSH legislation. These workers are explicitly excluded from the scope of OSH rights for employees in the proposed Directive. The European Parliament pointed out that workers performing medium to high-skilled work are more aware of risks than low-skilled workers (European Parliament, 2020e).

Beyond the usual occupational risks (e.g. risks to physical safety due to time pressure and competitive working environment), (bogus) self-employed were pressured to work during the pandemic in the absence of appropriate preventive/protective measures, or while being ill, in light of the uncertainty of the revenues and the safety net of social security (ETUC, 2020). They are also excluded from the scope of Directive (EU) 2019/1152 on transparent and predictable working conditions in the EU.

6.2.4. European Parliament Resolution on the right to disconnect and remote work

The European Parliament **Resolution of 21 January 2021 on the right to disconnect**[76] calls on the Commission to evaluate and address the risks of not protecting the right to disconnect, and to publish a Proposal for a Union directive on minimum standards and conditions on the right to disconnect, the use of digital tools for work purposes, and minimum requirements on remote work, based on the draft Directive prepared by the Parliament.

In the OSH Strategic Framework 2021-2027, the **European Commission pledges to ensure appropriate follow-up** to the European Parliament Resolution and invites the social partners to find a common solution to the matter, possibly in the form of a framework agreement. The social partners have yet to report any progress, as they are currently negotiating the work programme for the coming years. The right to disconnect is not addressed in the 2002 Framework Agreement on Telework concluded by the European social partners, but the 2020 **Agreement on Digitalisation** contains guidelines on the 'modalities of connecting and disconnecting' and recognises the risks and challenges created by digitalisation in respect of the delineation of work and personal time.

[76] European Parliament, Resolution of 21 January 2021 with recommendations to the Commission on the right to disconnect (2019/2181(INL)).

Box 4: Case study on the right to disconnect

Background and status

The significance of the right to disconnect has been recognised since the introduction of teleworking rules at various workplaces. The main legal instrument related to the right to disconnect is the Working Time Directive, which provides for a number of rights related to the minimum daily and weekly rest periods that are required to ensure workers' occupational health and safety. According to the Court of Justice of the European Union (CJEU), working time and rest time are mutually exclusive. Therefore, connectivity to work via ICT tools, such as reading and responding to an email, should be considered working time and cannot be considered rest time. The right to disconnect is closely related to the issue of attaining a better work-life balance, an objective highlighted in Principle 9 (Work-life balance) and Principle 10 (Health, safe and well-adapted work environment and data protection) of the European Pillar of Social Rights, as well as the Work-Life Balance Directive. As yet, there is no European legal framework to define and regulate the right to disconnect.

On 21 January 2021, the European Parliament approved the Resolution on the right to disconnect, defined as 'the right to disconnect from digital tools, including information and communication technology (ICT), for work purposes […] outside their working time […] without facing any adverse consequences'. The Resolution also provides that 'the right to disconnect is a fundamental right which is an inseparable part of the new working patterns in the new digital era.'

National initiatives

Six Member States have adopted legislation on the right to disconnect since 2016 (Belgium, France, Italy, Portugal, Slovakia, Spain). Certain Member States adopted specific legislation on working time for teleworkers, either providing for the mandatory recording of working hours (Spain) or the need for an agreement prior to overtime. Others consider their working time legislation sufficient to cover the right to disconnect.

Future developments

The European Parliament Resolution is accompanied by recommendations to the European Commission on the text of a directive on the right to disconnect. The Council of the European Union, in the Conclusions on telework published in 2021, invited the European Commission to 'analyse the context and implications of telework in the EU during and after the pandemic […], including as regards the right to disconnect.' The Commission has commissioned a study exploring the social, economic and legal context and trends of telework and the right to disconnect, during and beyond the COVID-19 pandemic. The study will gather in-depth information on telework and the right to disconnect in the EU, identify current and future advantages/disadvantages of digitalisation for working conditions, and map interesting initiatives adopted by Member States and companies.

Both the European Parliament Resolution and the Council Conclusions highlight the need for social partners to participate in the development of European policies on telework and the right to disconnect. The European Commission has responded to these calls in the Strategic Framework on Occupational Safety and Health 2021-2027, as well as the Action Plan implementing the European Pillar of Social Rights of March 2021. In both documents, the European Commission commits to respond appropriately to the European Parliament's Resolution and encourages social partners to initiate negotiations to further address the challenges raised by telework, digitalisation and the right to disconnect.

Source: Directive 2003/88/EC of the European Parliament and of the Council of 4 November 2003 concerning certain aspects of the organisation of working time, OJ L 299, 18.11.2003, pp. 9-19; Directive (EU) 2019/1158 of the European Parliament and of the Council of 20 June 2019 on work-life balance for parents and carers and repealing Council Directive 2010/18/EU, OJ L 188, 12.7.2019, pp. 79-93; European Pillar of Social Rights in 20 principles; Strategic Framework on health and safety at work 2021-2027, Occupational safety and health in a changing world of work, COM/2021/323 final; European Parliament Resolution on the right to disconnect, 2021; Council of the European Union, 2021, Draft Council conclusions on telework; Trinity College Dublin, A Right to Disconnect: Irish and European Legal Perspectives; Eurofound, 2019, Right to disconnect in the 27 EU Member States; Eurofound, 2020, Regulations to address work–life balance in digital flexible working arrangements; EU-OSHA, 2021, Regulating telework in a post-COVID-19 Europe; CJEU Case C-55/18; European Pillar of Social Rights Action Plan, March 2021.

6.3. Policy recommendations to the European Parliament

KEY FINDINGS

General recommendations

- A focus on coordinating public health and OSH policies is essential, as it can ensure synergies in the protection of workers and the general population and prevent conflicting instructions at workplaces.
- Support to training of employers and workers on the implementation of OSH legislation (e.g. rules of hygiene, display screens, psychosocial risks), and for the development of digital skills of workers, will benefit preparedness in similar crises.

Biological risks

- Risk assessments should remain the main tool and basis to protect workers and adapt workplaces to biological risks during pandemics. The protection of vulnerable workers against biological risks can also be ensured via risk assessments.
- The adoption of specific requirements for occupations and workers where exposure to biological agents is non-intentional (especially occupations listed in Annex I to the Biological Agents at Work Directive) could provide stronger legal safeguards and increase awareness of biological risks, thereby increasing companies' preparedness for pandemics.
- The Workplace Directive contains relevant provisions that could be linked to the Biological Agents at Work Directive, with a set of reinforced measures in the event of a pandemic.

Occupational risks of telework during a pandemic

- COVID-19 showed that regulating telework requires careful consideration of the factors affecting safe working conditions, both directly related to the employment relationship and outside work.
- The adoption of a more comprehensive legal framework for teleworkers can ensure better preparedness for these working conditions and foster the adoption of procedures applicable in future public health crises requiring telework as a public health measure, thus creating the conditions for a controlled impact on workers' health.
- Risk assessments should be carried out prior to teleworking, while regular inspections and/or informal verifications of OSH adherence by teleworkers should be strongly incentivised and supported within Member States. Remote inspections can ensure control in situations where physical visits are not possible.
- Providing a framework for labour inspectors' inspections, including remote access to company information, should be considered in the implementation of OSH legislation for teleworkers (particularly for risk assessments and for implementing the Working Time and Display Screen Equipment Directives).

EU OSH legislation has the potential to limit occupational risks linked to exposure to biological agents such as viruses and to ensure that workers can work in safe conditions. As pointed out by EU-OSHA, expertise and know-how in OSH is very high, for example in the implementation of protective measures[77]. In 2020, the Director-General of the ILO highlighted the dual importance of OSH to protect workers against infection and to preserve economic activity (ILO, 2020). Based on these considerations and the findings under this study, some recommendations can be made to ensure better responsiveness of EU OSH legislation and policy to biological and other occupational risks during pandemic crises, as well as to protect workers in ordinary circumstances.

6.3.1. General remarks on the role of OSH in pandemic crises

Like all occupational risks, the COVID-19 pandemic was a reminder that that the solution is never the removal of workers from their occupation, but, rather, the development of effective personalised safety measures. All categories of workers (elderly, pregnant, minors, migrants, minorities) must be placed in safe working conditions. Several participants in the focus group highlighted the rapid and changing nature of pandemics in terms of infection vectors, rates and fatality, as well as adaptations of the work environment to the situation. Flexible legal frameworks and guidance are a cornerstone of effective adaptation.

Better coordination of public health and OSH policies, including information sharing, is crucial during pandemic crises. This recommendation was made by EU-OSHA prior to the COVID-19 pandemic (EU-OSHA, 2020b), and could assist in detecting potential epidemic/pandemic situations originating or appearing in Europe. It is expected that European initiatives to improve the prevention and control of diseases in Europe and neighbouring countries (e.g. Programme for the Union's action in the field of health[78], extension of the mandate of the ECDC[79], HERA[80]) will ensure better preparedness, particularly if they are coordinated with OSH. The European Commission Communication introducing HERA stipulated that the Agency will draw on the expertise of EU-OSHA to provide guidance for work environments. Coordination is crucial, with EU-OSHA pointing out that instructions mandated by public health bodies during pandemics may conflict with OSH principles and procedures, limiting workers' protection against regular occupational risks[81].

Training within companies is central to overcoming challenges in the implementation of OSH legislation by providing employers and workers the tools to correctly implement OSH measures. Training in ICT to develop workers' digital skills can facilitate remote working during times of crisis and alleviate certain stress-related psychosocial risks. Strong OSH policies require financial support and should be seen as an investment, as emphasised by ETUC[82].

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77 Interview with the EU-OSHA.

78 Regulation (EU) 2021/522 of the European Parliament and of the Council of 24 March 2021 establishing a Programme for the Union's action in the field of health ('EU4Health Programme') for the period 2021-2027 and repealing Regulation (EU) No 282/2014 (Text with EEA relevance). Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2021.107.01.0001.01.ENG.

79 European Commission, Proposal for a Regulation of the European Parliament and of the Council amending Regulation (EC) No 851/2004 establishing a European Centre for disease prevention and control, COM(2020) 726. Available at: https://www.europarl.europa.eu/RegData/docs_autres_institutions/commission_europeenne/com/2020/0726/COM_COM(2020)0726_EN.pdf.

80 Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions introducing HERA, the European Health Emergency preparedness and Response Authority, the next step towards completing the European Health Union, COM(2021) 576. Available at: https://ec.europa.eu/health/system/files/2021-09/hera_2021_comm_en_0.pdf.

81 Interview with EU-OSHA. For instance, distancing between workers on a production line may not be appropriate, or the instruction to open windows to ventilate workplaces may conflict with procedures to protect workers against exposure to chemical agents.

82 Interview with the ETUC.

Analyses of the prevention and mitigation strategies against biological agents in literature highlight that **integration with pre-existing policies and protection practices** can provide synergies (Stiles, 2020), such as linking prevention against biological agents with measures in place to reduce the risk of exposure to chemical agents (combined risk approach) (EU-OSHA, 2020b).

ETUC highlighted the importance of adopting a gender approach to OSH policies, recognising that women are overrepresented in categories of workers and sectors exposed to infection to COVID-19[83]. In addition, a systematic review of epidemiological data showed that men were more likely to face severe forms of COVID-19 (Fang, 2020) and recommended a focus on occupations rather than gender (with the exception of pregnant and breastfeeding women).

The fundamental principle of basing prevention on risk assessment must be applied to all categories of **vulnerable workers**. Correct risk assessment under normal operating conditions and in the case of extraordinary situations (such as the pandemic) must be the driving force behind the actions. Defining workers as 'vulnerable' need not be a restriction, but, rather, the risk should be assessed dynamically, and safety measures adapted to the environmental conditions.

Baruch and Nicholson (1997) prompted ETUI to emphasise the importance of **four factors in successful uptake of telework**: individual fit (willingness of workers to work remotely); organisational fit (work organisation adapted to teleworking and prevention of related occupational risks); fitness to home and family settings (correct work-life balance and appropriate equipment); and fitness of the job for telework (teleworkability) (ETUI, 2021). These factors should be borne in mind when designing telework policies.

Finally, the study highlights that the working conditions of migrant workers (e.g. in the food processing industry, such as meat processing) and seasonal workers (e.g. in agriculture) are sometimes linked to their **living conditions** when provided by the employer. Although the socioeconomic aspects of employment are outside the scope of OSH legislation, the living conditions of European workers warrant attention in policies aiming to combat occupational risks.

6.3.2. Increased protection of workers against biological agents at their workplace

The Biological Agents at Work Directive was not designed to provide a legal framework to protect workers against biological risks in the context of a pandemic. It is uncertain whether OSH legislation should integrate public health considerations during a pandemic, but improvements to certain aspects of the Directive could contribute to mitigating the risks for workers and for the public at large.

Scope of the Directive's provisions and obligations

The Biological Agents at Work Directive **lacks specific instructions for certain categories of workers**, due to the initial focus on intentional exposure at the workplace. A broader coverage of professions for which the exposure to biological agents is potential has received support, in particular for respiratory diseases (EU-OSHA, 2019b). The 2020 EU-OSHA report proposed the implementation of proven prevention measures for workers facing unintended exposure to biological agents. These include improved ventilation systems, measures to avoid dust and aerosols, measures to avoid contact with contaminated surfaces, regular cleaning and maintenance, and the provision of adequate PPE (EU-OSHA, 2020b).

[83] Interview with the ETUC.

These general measures are effective against a **wide range of biological agents** and allow preparedness for future pandemic crises which may be caused by agents dissimilar to SARS-CoV-2. Such future-proof amendments to the Biological Agents at work Directive would mitigate the need for regular amendments. Furthermore, setting up these provisions in Annexes enables a more flexible amendment process. The establishment of **specific obligations for a wider scope of workers** against (non-pandemic specific) biological agents could increase the preparedness of a wider range of companies for such risks, including in times of health crisis. Several sources highlighted the importance of sector, workforce and occupation-specific measures to enhance the protection of all workers (ILO, 2020; EU-OSHA, 2020b).

Furthermore, exposure to biological agents at the workplace could be more precisely categorised (Makison, 2020). This would allow the degrees of intentional or unintentional nature of the exposure to be defined and gradual measures to be implemented:

- Exposure through **deliberately working with biological agents**. This type of exposure is widely covered by the provisions of the Directive and includes laboratories and biotechnology;
- Exposure through **biological agents present in the workplace** materials handled, such as workplaces involving animals, waste, or sewage;
- **Indirect exposure**, which is not part of the risks generated by the work process. This was the case in exposure to COVID-19 (contamination between colleagues or present in the workplace infrastructure).

These distinctions could be better reflected in the Biological Agents at Work Directive in order to adopt a progressive approach to prevention and mitigation measures in accordance with the risks faced by workers depending on their occupation, but also considering the possibility for a biological agent to virtually contaminate most workplaces, as in the case of a pandemic.

While legislation can provide a strong protection framework in all Member States and enhance the creation of a **prevention culture** around biological risks in more workplaces, it should be highlighted that **European and national guidance** somewhat mitigate this shortcoming in the Directive. A focus on workers in occupations involving close physical proximity (as a source of occupational risk) could ensure more protection for the most vulnerable workers.

Risk assessment

As early as 2020, the ILO highlighted the importance of conducting COVID-19 specific risk assessments in workplaces (ILO, 2020). The COVID-19-specific **risk assessment** to be undertaken by employers requires the identification of workers' contact with co-workers and third persons, including the public, and identification of vulnerable workers or those with a high-risk linked to exposure to SARS-CoV-2. Specific requirements include the preparation of a contingency plan, instructions on the adaptation of the workplace, and the provision of good conduct and hygiene procedures (including access to facilities, canteens and rest areas) (Carvalhais, 2021). The European social partners interviewed did not raise specific issues in respect of the implementation of the risk assessment. They welcomed EU-OSHA's OiRA tool on COVID-19[84] and would have liked more tailored guidance[85]. As risk assessment can and must be adapted to new risks and new circumstances, no recommendation is made here.

[84] Interviews with Business Europe and SGIeurope.

[85] Interviews with Business Europe.

Protection of vulnerable groups of workers

Workers considered vulnerable in the context of a pandemic caused by a biological agent are of two types: workers identified as vulnerable in light of the more severe consequences that the biological agent has on their health, and those more at risk of exposure to biological agents by virtue of their socio-economic situation.

Older workers as wells as **workers with certain pre-existing conditions** are characterised by elevated risks in case of infection with COVID-19. Workers with health vulnerabilities should be identified via risk assessments and priority could be given to the protection of these workers when setting out the actions pursuant to a risk assessment but also when drafting pandemic preparedness plans. In this regard, it is essential that public health and OSH authorities relay up-to-date information regarding the extent to which age and pre-existing conditions represent aggravating factors, regularly updated in light of the evolution of the pandemic's characteristics (e.g. mutation of the underlying virus).

The **protection of persons with a disability** in times of pandemics (and generally) must be adapted to the specific needs and situation of each worker, to be identified on the basis of the updated risk assessment, including for the return to work. In this regard, an explicit reference to the specific protection to be provided to persons with a disability in the relevant OSH legal instruments (beyond the general requirements of the Directive regarding equal treatment in employment and occupation) could bring added value and shed light on the importance of designing adapted preventive actions. Such specific consideration could in particular enhance the access of persons with a disability to information produced by employers on the management of pandemics at the workplace, provide adequate facilities and (IT) equipment for remote work, and require action regarding the accessibility and inclusiveness of technology when telework becomes mandatory.

The fact that **younger workers, migrant workers** and **female workers** hold positions in sectors putting them more at risk of infection with human-transmitted biological agents highlights the need to focus on a sector-specific protection of workers in these occupations, as emphasised in our recommendations above, rather than considering women, migrant and younger workers as vulnerable populations. The improvement of the safety and health in these workplaces will thus benefit all workers more at risk of infections. Nevertheless, these categories of workers should benefit from targeted actions in the wider context of employment and social policies to counter the root causes of their socio-economic disadvantages in times of pandemics.

The protection against biological agents beyond the Biological Agents at work Directive

The research and interviews highlighted three further points of discussion in indirect relation to the Biological Agents at Work Directive and the protection of workers against biological agents.

The **Workplace Directive** is the most relevant instrument to ensure preparedness of employers' premises against pandemics and to establish essential preventive measures. The Directive's Annexes lay down measures to ensure that minimum hygiene requirements can be observed by workers, that sufficient space is granted to workers and that proper ventilation is in place in workplaces where this is relevant. The preparation of an Annex containing reinforced measures to be triggered in the event of a pandemic (or preventively, when the risk of a pandemic is identified in Europe, e.g. by the ECDC) could ensure that an immediate response is available and can be immediately activated to protect workers in workplaces and possibly reduce the speed of spread of a potential pandemic. In addition, the knowledge built for more than 30 years in implementing this Directive would allow employers and OSH specialists to make the necessary adaptations of the pandemic-preparedness rules to each workplace.

Employers played a major role in the prevention of biological risks during the pandemic, via testing obligations and monitoring of the health status of workers. The adoption of such obligations, either under the scope of public health in response to a pandemic crisis or OSH, is not uniform across all Member States, making it difficult to categorise them clearly. EU-OSHA pointed out that careful coordination of public health and OSH is necessary to avoid detrimental effects on either set of policies[86].

If these obligations fall under the scope of OSH legislation, they must be carefully articulated with the traditional OSH structures of medical screening at work. Interviews with cross-sectoral European social partners emphasised difficulties in handling workers' medical data. Indeed, certain barriers exist in relation to the privacy and protection of employees' personal data (General Data Protection Regulation (GDPR): special categories of data (e.g. health data)), which must be taken into account by employers. The inclusion of these obligations in traditional procedures for medical screening, together with the involvement of the occupational health physician, can help to alleviate these barriers.

More broadly, the **use of robotics** has the potential to reduce the transmission of biological agents between workers by increasing physical distancing, in particular in the agri-food sector (Aday, 2020 and Weersink, 2021). Coordinating the legislation on the robotisation of work and digitalisation of commercial transactions with the prevention of biological risks could create useful synergies for the protection of workers.

6.3.3. Safety and health of teleworkers in the context of OSH legislation

The public health obligations for workers to work remotely (to the extent possible) in many Member States raised the **question of the efficiency of the current regulatory framework** to protect remote workers against psychosocial risks, MSDs, and work organisation risks in times of public health crises.

Opportunity for European legislation on teleworkers' safety and health

Arguably, the protection of remote workers against occupational risks should be developed independently of the pandemic crisis. The current situation might present an opportunity to consider the effectiveness of the European legal framework for teleworkers in general, which will provide better preparedness to remote work situations during future crises[87]. In addition, establishing prevention and mitigation measures for remote workers benefits public health objectives overall, given that the OSH-related impact of lockdown measures will be anticipated and appropriately prevented/mitigated.

The current developments linked to the European Parliament Resolution on the right to disconnect, the Council Conclusions and follow-up by the European Commission all indicate an ongoing process of creating a legal framework fit for the digital world of work. This will lead either to enhanced Framework Agreements on Telework and Digitalisation with the European social partners, or a legal proposal by the European Commission. Such developments should **address the occupational risks faced by teleworkers** in-depth (in particular **psychosocial risks** and **MSDs**) and be flexible to encompass various teleworking arrangements to protect occasional teleworkers/mobile workers. The upcoming European Commission study on telework in the EU should investigate these aspects further to provide the basis for robust and future-proof legislation.

Establishing European minimum standards **improving the work-life balance** of teleworkers, either via an adaptation of the rules and enforcement of the **Working Time Directive**, or by enshrining the right to disconnect, could provide increased and consistent protection of workers across the EU (current

[86] Interview with EU-OSHA.

[87] The European Commission will lead an evaluation of the current situation for teleworkers in 2022.

studies and surveys show that the burden of overtime work and satisfaction with telework diverges across Member States). It is recommended to ensure that the provisions of the Working Time Directive are correctly and fully implemented in telework settings, as controls and inspections by labour inspectors depend on the availability/accessibility of reliable sources of information on workers' working hours.

The incorporation of all self-employed workers under OSH legislation, as advocated by trade unions, is challenged by the variety of self-employment situations, and the Commission proposal on platform workers appropriately targets bogus self-employment.

The establishment of a broader and dynamic notion of 'workplaces', with a view to encompass teleworkers more specifically, would require an in-depth overhaul of the **Workplace Directive**. Several requirements of the Directive appear challenging to apply to remote workplaces, in particular homes (e.g. rules for electrical installations requiring the intervention of the teleworkers' landlord). Additionally, employers' decisions establishing precise obligations on remote workplaces may conflict with teleworkers' right to respect for their private and family life. In this context, the balance of responsibilities between employers and workers needs to be carefully considered and clearly delimited to avoid an unreasonable burden onto employers in areas where they are not in control, while providing teleworkers with the means to set up safe and healthy working conditions. Therefore, distinct principles and requirements adapted to teleworkers appear desirable.

The immediate recommendation is to enforce the current obligations of employers to conduct risk assessments for teleworkers in accordance with the legislation of each Member State, via *in-situ* visits to workers' remote workplaces, or via self-assessment. EU-OSHA pointed out that the digitalisation of work can assist labour inspectors to remotely verify the implementation of these obligations (e.g. verifying the existence of risk assessment and action plans, remote visits), provided that they are given the legal framework to do so, particularly in terms of access to personal or anonymised data. Employers can rely on checklists and self-administered surveys or questionnaires (e.g. set-up of the workstation, feelings of isolation, overload, lack of contact with supervision). These specific risk assessments will allow the adoption of a wide range of possible solutions in terms of work arrangements, work practices, and equipment.

Finally, the importance of **company culture and practice** in successful uptake of telework should not be overlooked. A culture of prevention could be further supported by non-legislative instruments (e.g. EU-OSHA Healthy Workplaces campaigns).

Ergonomic and MSD risks

With regard to the **ergonomic/MSD risks**, the employer remains, in principle, responsible for the safety of the workplace chosen by teleworkers. However, national laws on the **inspection of remote workplaces chosen by teleworkers** (employer must prepare a risk assessment and related prevention measures, while labour inspectors engage in controls) vary significantly, and the Framework Agreement on Telework requires on-site visits only within the limits of national legislation and collective agreements. The development of telework as a normal working arrangement highlights the need for stronger enforcement of OSH legislation in teleworking spaces, and a clarification of the (geographical) limits of employers' responsibilities in order to improve predictability and control over occupational risk. The determination of the responsibility for the costs incurred to provide appropriate work equipment can be defined at company, sectoral or national level (including state financial support), but these arrangements should ensure that workers use equipment that guarantees a high level of protection of their safety and health.

As policymakers seek to strengthen the preparedness of European legislation to cope with future pandemics, lessons can be learned from this unprecedented experience for European workers and employers, and from the research on its impacts. The COVID-19 crisis has particularly highlighted the significance of shaping a legal framework which preserves workers' safety and health more specifically in times of pandemics, while achieving a synergy with public health, and also the decisive role that workplaces can have in mitigating the transmission of biological agents.

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ANNEX 1 - SELECTED REQUIREMENTS OF THE WORKPLACE DIRECTIVE

Sections of the Annexes	Requirements of the Annexes
Annex I workplaces	
Annex I, Point 6 – **Ventilation of enclosed workplaces**	Requirement to implement measures to ensure sufficient fresh air in enclosed workplaces, having regard to the working methods used and the physical demands placed on the workers Obligation of maintenance of forced ventilation systems Requirement to have a control system to indicate breakdowns where ventilation is necessary for workers' health Additional measures: protection against pollution of the atmosphere and discomforting draughts
Annex I, Point 15 – **Room dimensions and air space in rooms – freedom of movement at the workstation**	Sufficient surface area, height and air space in workrooms to perform work without risk to safety, health and well-being
Annex I, Point 18 – **Sanitary equipment**	Changing rooms and lockers Appropriate changing rooms to be provided in case of special work clothes If circumstances require (contact with dangerous substances), lockers for work clothes must be separate from ordinary clothes Showers and washbasins Requirement for adequate and suitable showers if the nature of the work so requires or for health reasons. Alternatively, requirement for washbasins
Annex II workplaces	
Annex II, Point 6 – **Ventilation of enclosed workplaces**	Requirement to implement measures to ensure sufficient fresh air in enclosed workplaces, having regard to the working methods used and the physical demands placed on the workers Obligation of maintenance of forced ventilation systems Requirement to have a control system to indicate breakdowns where ventilation is necessary for workers' health
Annex II, Point 13 – **Sanitary equipment**	Changing rooms and lockers Appropriate changing rooms to be provided in case of special work clothes If circumstances require (contact with dangerous substances), lockers for work clothes must be separate from ordinary clothes Requirement for showers if required by the nature of the work, and lavatories/washbasins in general.

ANNEX 2 – EU-LEVEL AND NATIONAL INTERVIEWS

European-level stakeholders	Type of stakeholder	Date of interview or receipt of written contribution
European Trade Union Confederation (ETUC)	Trade union	Written contribution received
Confederation of European Business (BusinessEurope)	Representative organisation	Interview on 17 December 2021
European Association of Craft, Small and Medium-Sized Enterprises (SMEunited)	Representative organisation	Interview on 16 December 2021
European Centre of Employers and Enterprises providing Public Services and Services of general interest (SGI Europe)	Representative organisation	Interview on 27 January 2022
European Agency for Safety and Health at Work (EU-OSHA)	EU Agency	Interview on 28 January 2022
Senior Labour Inspectors Committee (SLIC)	EU body	Planned but not conducted
European Commission, Directorate General for Employment, Social Affairs and Inclusion (DG EMPL)	EU Institution	Interview on 3 February 2022
Standing Committee of European Doctors (CPME)	Sectoral representative organisation	Written contribution received on 8 December 2021
FoodDrinkEurope	Sectoral representative organisation	Joint statement (FoodDrinkEurope and EFFAT) received on 10 January 2022 Written contribution received on 3 February 2022
European Federation of Food, Agriculture and Tourism Trade Unions (EFFAT)	Sectoral representative organisation	Interview on 5 January 2022
EuroCommerce	Sectoral representative organisation	Interview on 7 February 2022
European Cleaning and Facility Services Industry (EFCI)	Sectoral representative organisation	Interview on 11 January 2021

European Transport Workers' Federation (ETF)	Sectoral representative organisation	Written contribution received on 14 January 2022
European Federation of Nurses (EFN)	Sectoral representative organisation	No reply received
Umbrella association of Hotels, Restaurants, Bars and Cafes (HOTREC)	Sectoral representative organisation	No reply received
European Livestock and Meat Trades Union (UECBV)	Sectoral representative organisation	No reply received
Liaison Centre for the Meat Processing Industry in the European Union (CLITRAVI)	Sectoral representative organisation	No reply received

National-level stakeholders	Type of stakeholder	Date of interview or receival of written contribution
Belgium		
Confédération des Syndicats Chrétiens (CSC/ACV)	Union/ Representative of workers	Interview on 21 December 2021
Belgian Safe Work Information Centre (BeSWIC)	SPF Emploi (Service of the Ministry of Labour)	Interview on 21 December 2021
Fédération Générale du Travail de Belgique (FGTB/ABVV).	Union/ Representative of workers	No reply received
Fédération des entreprises de Belgique (FEB)	Representative of employers	No reply received
Contrôle du bien-être au travail Direction de Bruxelles-Capitale	Labour inspection	No reply received
Bulgaria		
Chief Labour Inspectorate	Labour inspection	Written contribution received
Bulgarian Industrial Association (BIA)	Representative of employers	Written contribution received
Confederation of Labour Podkrepa (KT Podkrepa)	Union/ Representative of workers	No reply received

Confederation of Independent Trade Unions of Bulgaria (KNSB/CITUB)	Union/ Representative of workers	No reply received
Bulgarian Industrial Capital Association (BICA)	Representative of employers	No reply received
Czechia		
State Institute of Health	State organisation	Written contribution received/interview
Occupational Safety Research Institute (VÚBP)	State organisation	Written contribution received/interview
Czech-Moravian Confederation of Trade Unions	Trade union	Written contribution received/interview
Confederation of Industry and Transport	Representative of employers	Written contribution received/interview
Ministry of Labour and Social Affairs	Ministry	Written contribution received/interview
Denmark		
Danish Trade Union Confederation (*Fagbevægelsens Hovedorganisation*)	Trade unions	No response
Confederation of Danish Employers (*Dansk arbejdsgiverforening*)	Representative of employers	No response
Danish authority on work environment (Arbejdstilsynet)	OSH authority	No response
France		
MEDEF – *Mouvement des entreprises de France*	Representative of employers	13 January 2022
Ministry of Work – EU-OSHA Point of contact	Labour inspection	Written contribution received on 22 December 2021
CGT - *Confédération générale du travail*	Union/ Representative of workers	No reply received

Confédération française démocratique du travail (CFDT)	Union/ Representative of workers	No reply received
U2P – *Union des entreprises de proximité*	Representative of employers	No reply received
CPME – *Confédération des petites et moyennes entreprises*	Representative of employers	No reply received
DGT *Direction Générale du Travail*	Labour inspection	No reply received
Germany		
Ver.di	Trade union	Written contribution received on 31 January 2022
Federal Ministry for Labour and Social Affairs	Ministry	Written contribution received on 5 January 2022
German Trade Union Confederation (DGB)	Trade union	No reply received
Confederation of German Employers' Associations (BDA)	Representative of employers	No reply received
Greece		
ΓΣΕΕ – Γενική Συνομοσπονδία Εργατών Ελλάδος (General Confederation of Greek workers)	Representative of workers	No reply received
ΓΣΕΒΕΕ – Γενική Συνομοσπονδία Επαγγελματιών Βιοτεχνών Εμπόρων Ελλάδος (General Confederation of Professionals, Craftsmen and Traders of Greece)	Representative of employers	No reply received
ΣΕΒ - Σύνδεσμος Ελλήνων Βιομηχάνων (Hellenic Federation of Enterprises)	Representative of employers	No reply received
ΕΣΕΕ - Ελληνική Συνομοσπονδία Εμπορίου και Επιχειρηματικότητας	Representative of employers	No reply received
ΣΕΠΕ – Σώμα Επιθεώρησης Εργασίας (Labour Inspectorate)	Labour inspection	No reply received

Latvia		
Free Trade Unions Confederation	Trade union	Written contribution received
State Labour Inspectorate	Labour Inspectorate	Written contribution received
Health Ministry Ministry of Welfare Institute of Occupational Safety and Environmental Health	Ministries and state organisation	Written contribution received
Spain		
Spanish Confederation of Employers' Organizations (Confederación Española de Organizaciones Empresariales)	Employers' organisation	No response
General Union of Workers (*Unión General de Trabajadoras y Trabajadores*)	Trade unions	Written contribution on 21 January 2022
Directorate-General for Labour (*Dirección General de Trabajo*)	Ministry	No reponse
Sweden		
Confederation of Swedish Enterprise (*Svenskt Näringsliv*)	Employers' organisation	Interview on 21 December 2021
Swedish Work Environment Authority (SWEA) (*Arbetsmiljöverket*)	Labour inspection	Interview on 6 December 2021
Swedish Trade Union Confederation (*Landsorganisationen i Sverige*, LO)	Trade unions	Interview on 14 December 2021

ANNEX 3 – MINUTES OF THE FOCUS GROUP

A focus group was held on 15 February 2022, gathering representatives of the European Parliament, EU OSHA, the SLIC, and of the cross-sectoral European Social Partners[88]. The study team and the Senior Experts supporting this study could present their conclusions and policy recommendations with a view to validate and refine them.

The Policy Department for Economic, Scientific and Quality of Life Policies from the European Parliament presented the background and objectives of the study to the participants.

1 – Conclusions on the impact of COVID-19 on workers (biological risks)

- **Milieu presented the main conclusions of the study on the impact of COVID-19 on workers in terms of biological risks.**

European Agency for Safety and Health at Work

The unexpected cases of infection with COVID-19 of workers in contact with animals was raised, e.g. mink farms in Denmark. These exploitations have been closed down.

Representative of SMEunited

SMEunited stressed the need to clearly distinguish in the study between vulnerability linked to the health effects of COVID-19 and vulnerability in terms of socio-economic impacts. For instance, young workers cannot be considered vulnerable in terms of health. SMEunited also considered that younger workers are protected, informed and trained by employers and that the fact that younger workers have a lower level of knowledge of OSH rules and practices is not always true. In this sense, more can be done on guidance.

Representative of the European Trade Union Confederation

The wording chosen must be carefully considered when it comes to '**essential workers'** and **'frontline workers'**. The term 'frontline worker' should be favoured, as the definition is more factual. The notion of 'essential worker' creates more problems than solutions.

The question was also raised, whether the study covered **long-COVID** [also requested by SLIC].

ETUC welcomes the analysis of the **impact on populations of workers** (vulnerable workers) and added that the health of younger workers is also impacted by their precarious situation. Therefore, solutions should also look at the conditions of employment.

Finally, ETUC recalled that according to the EU OSH acquis, it is primarily the **responsibility of the employer** to adopt the necessary preventive measures, as well as to adopt a **collective approach** to the measures rather than an individual approach.

Regarding the **impact of COVID-19 on women**, ETUC has observed that women are overrepresented in sectors which are not covered by collective agreements. Many **collective agreements** have been concluded in the different waves of the pandemic and for the return to workplaces, and further efforts should be made to foster collective bargaining.

[88] Committee on Employment of the European Parliament; European Agency for Safety and Health at Work; Senior Labour Inspectors Committee; European Trade Union Confederation; BusinessEurope.
Note: Representatives of the European Commission and of SGIeurope have been invited to participate.

Policy Department for Economic, Scientific and Quality of Life Policies

Questions were asked about the case study conducted by Milieu on the meat processing industry, specifically regarding the existence of issues in other Member States, and whether the legal changes operated in Germany can solve the situation in meat processing plants which existed prior to the pandemic.

Milieu confirmed the existence of clusters in several Member States of the European Union (e.g. France, Portugal) and beyond Europe. The legislation adopted in Germany required the employment of workers directly by companies, which allowed better representation and better control of the working and employment conditions, including accommodation. An evaluation of the German legislation will be available in the coming years.

Senior expert 1

The senior OSH expert emphasised the rapid evolution of the pandemic, as well as the impact of COVID-19 along the different 'waves'. For instance, at the beginning of the pandemic, the main risk was linked to patients with COVID-19 in the healthcare sector, and to the absence of appropriate protective equipment, whereas now, the risk is more linked to the physical contacts with colleagues, or with children in the education sector.

The situation in workplaces is also evolving. As a result, it is difficult to provide a legal framework in legislation or guidance which remains relevant over time.

Other points raised concerned the difficulty in the healthcare sector of treating persons who refuse vaccination and treatments, creating psychological pressure for healthcare workers.

Representative of the Senior Labour Inspectors Committee

The representative highlighted that the adoption of measures by the public health authorities has been fundamental, considering that the absence of e.g. lockdown measures could have had a significant impact on the healthcare system and healthcare workers. The absence of lockdown measures could also have impacted a wide range of other workers, including office workers. Dependence on public health policies exist, as we see for instance that the fourth wave does not have the same consequences as the first which required lockdowns.

European Agency for Safety and Health at Work

National pandemic preparedness plans exist in nearly all Member States and were developed back in relation to SARS-CoV-1 and MERS-CoV epidemics. Some of these plans identify the importance of protecting essential workers (frontline healthcare workers, but also those involved in maintaining essential services e.g. food or transport). However, at the beginning of the pandemic, there was a complete lack of implementation of those pandemic plans, at least on the provision of PPE (example of workers putting on black plastic bin liners as protections or inappropriate face masks). Stockpiling has been deficient.

The pandemic has highlighted some built-in vulnerabilities. A paper was published just recently in Canada, comparing the infection rates in different occupations and highlighting a remarkable difference in infection rates between occupations. But in the meat processing sector, the infection rates were far higher. This probably relates to their working contract and conditions, as they are mainly vulnerable migrant workers in collective accommodation, using collective transport. Furthermore, meat processing is carried out in a cold, damp environment which is also more favourable to transmission of the virus.

Senior expert 2

The knowledge on COVID-19 has changed quite dramatically, both on a science basis and on a medical basis (from the original strand, to Delta, and Omicron). We have now learned from the past. The reduced number of deaths isn't just due to improvements of OSH but to evolution of the virus. This thus requires a flexible approach, which must be borne in mind when considering changes to OSH legislation. Once legislation is adopted, it is difficult to modify, whereas it must be fit for future different types of pandemics.

European Agency for Safety and Health at Work

Beyond issues linked to access to education, vocational training has been disrupted by the closure of workplaces, including education on occupational safety and health. No data is found on this topic.

Representative of BusinessEurope

BusinessEurope supported the idea that the pandemic is constantly evolving, and that legislation or regulation should be flexible.

Elements on the recognition of COVID-19 as an occupational disease

Representative of the European Trade Union Confederation

ETUC recalled the long-standing demand of the trade union movement at European level to recognise COVID-19 as an occupational disease, as it is happening in many Member States, and mentioned in the EC's OSH Strategic Framework.

Representative of BusinessEurope

BusinessEurope emphasised the necessity to establish a causal link between the infection and the tasks at the workplace must be established, in light of the evolution of the circumstances of infection. Careful consideration should be given to the way in which it will be integrated into the Commission Recommendation. Furthermore, BusinessEurope highlighted that most Member States did not adopt a blanket approach and limited the automatic recognition to certain sectors. Certain Member States use criteria to determine the existence of an occupational disease or accident. The causal link must be very clear.

2 - Conclusions on the impact of COVID-19 on workers (telework)

- **Milieu presented the main conclusions of the study on the impact of COVID-19 on workers in terms of telework.**

Senior expert 1

Differences exist between companies who already had used teleworking before the pandemic and other companies. For companies which already had experience in the implementation of telework, the impact of COVID-19 was less heavy, although there could be issues, in particular in the management of work. Another situation is that of the companies with no previous experience in telework.

Musculo-skeletal disorders may not be a significant issue, considering the companies are required to provide for the adequate conditions.

An additional problem was the interface between occupational problems and personal problems.

Telework may lead companies and managers/leaders to engage into intrusive activities. Another issue raised is the existence of workaholism as an occupational disease, which has impacts on the physical and mental health of workers. The solution is countering intrusive leadership.

Some companies try to take advantage of this new situation and modified their approach to workplaces: suppression of individual rooms for workers, development of open spaces, rotating desks (which also creates risks of infection). These could create OSH issues in the future.

Representative of SMEunited

SMEunited emphasised the need to distinguish between telework in normal times and telework during a pandemic [view also supported by BusinessEurope and SLIC]. Some of the issues highlighted in the study may also relate to aspects outside the working environment and actually related to the pandemic situation itself.

Telework has been an opportunity for many workers to keep their jobs and for companies to continue their operations. The pandemic has accelerated some of the changes observed in the job market.

The issue of telework can be fully dealt with by social partners.

Representative of the European Trade Union Confederation

The question was raised whether a gender approach to telework in the study, considering the higher allocation of unpaid care work to women, which may have aggravating effects.

Representative of BusinessEurope

BusinessEurope supported the view that social dialogue was the best instrument to move forward on telework (flexible, fast and result of a negotiation between the parties involved). To the contrary, legislation may only create obligations for employers and workers rather than encouraging collaboration to manage issues. The Framework Agreement on telework works and has been implemented. During the pandemic, the Agreement provided solutions to a lot of the problems.

Milieu stressed in this regard that preparedness for telework in general is a primary approach to ensure that telework is successfully implemented during pandemics. This can create the conditions needed for a successful telework in normal times, which can be extended to other workers if need be. The study commissioned by the European Commission on telework and the right to disconnect will shed light on this matter.

Representative of the Senior Labour Inspectors Committee

Telework entails complexities and difficulties, both inside and outside work. The distinction between telework during a pandemic and in normal times has been supported. Furthermore, the notion of workplace entails difficulties (boundaries of the notion).

3 - Conclusions on the measures adopted by Member States to protect workers' safety and health

- **Milieu presented the main conclusions of the study on the measures adopted by Member States to protect workers.**

Representative of the European Trade Union Confederation

Social partners have adopted agreements at sectoral and national levels, e.g. on the provision of PPE, social distancing in the context of return to work. ETUC has worked on a collection of these agreements.

Senior expert 2

Regarding the vaccination of workers, the legislation requires employers to make it available but don't allow them to make it mandatory.

Representative of SMEunited

SMEunited highlighted the best practice of adopting collective agreements. Protocol for the safety and health were negotiated. In Italy, for example, the collective agreements were immediately endorsed and adopted by the government.

Representative of the Senior Labour Inspectors Committee

Significant successes in Ireland resulted from true social dialogue and agreements with the social partners, and it is necessary to emphasise the role of social dialogue.

European Agency for Safety and Health at Work

EU OSHA has developed a 'back to work' guidance and collected information on the numerous sector- and occupation-specific guidance complementary to public health guidelines, which was produced by Member States and developed rather quickly. The guidance was very specific and practical (e.g. dealing with clients, sharing tools with colleagues, organisation of break rooms and changing rooms).

Guidance has been developed by all Member States, but their extent depends on the resources of the Member States' authorities to develop these documents.

4 – Conclusions on the robustness of the EU OSH legal framework against pandemic crises

- **Milieu presented the main conclusions of the study on the robustness of the EU OSH legal framework against pandemic crises.**

Senior expert 2

The senior expert highlighted that the absence of legislation on psychosocial issues is not necessarily a bad thing, as OSH Framework Directive requires a risk assessment. The development of a specific piece of legislation on the matter has the potential of ringfencing the issue and limit the protection for unidentified issues at the time of adoption of the legislation. The adoption of a specific piece of legislation per topic is limiting.

Policy Department for Economic, Scientific and Quality of Life Policies

Maria Walsh, MEP, is drafting an own initiative report on Mental Health in the Digital World of Work. In this context, an expert pointed out that the Working Time Directive is highly based on fixed workplaces and fixed working hours. The current working environment allows more flexibility in working hours and it may become difficult to measure workers' working hours. The idea was thus suggested to move to a system based on workload of workers, where the employer shall manage the workload and verify whether is it doable within the working hours. Regarding psychosocial risks, the same expert suggesting inserting the word 'psychosocial' in legislation to avoid it being forgotten.

Representative of SMEunited

SMEunited considers the EU OSH legal framework very comprehensive already. The OSH Framework Directive of 1989 is a flexible piece of legislation that allows flexibility. They do not consider that there is a need to adopt new legislation.

The Biological Agents at work Directive seems to have worked perfectly and the introduction of COVID-19 was timely using the usual procedures. Implementation could be reinforced, as is always the case with EU legislation.

Representative of the European Trade Union Confederation

ETUC defends the adoption of a Directive on psychosocial risks and of a Directive on MSDs. Studies report a 'pandemic of psychosocial diseases'.

The European Trade Union Institute (ETUI) has conducted a study which proves that in countries with legislation, fewer cases of depression, anxiety and other related diseases are reported. This shows that legislation works.

Another point raised in relation to workers' rights is the individual right for workers facing an immediate risk to withdraw labour. Cases have been reported in Belgium, France or Italy.

Senior expert 1

The senior expert underlined the weakness of the Directive on biological agents, regarding the risk assessment. The conduct of a risk assessment is not easy and requires a quantitative assessment of the risk, a term which is never used in the Directive. Therefore, only a qualitative assessment of the risks is conducted.

Measurement of the biological risks is possible via algorithms and the senior expert supported the idea that employers should be required to quantify this risk beyond the identification of the existence of a risk.

European Agency for Safety and Health at Work

EU OSHA mentioned the review which had been conducted by the Agency on biological agents and diseases related to exposure to biological agents before the pandemic, which included warnings about possible pandemics. One of the main conclusions of this report was that rather than legislation not being adequate, there was very little awareness, especially in sectors where the use of biological agents is not intentional.

EU OSHA found worrying the focus on individual measures (in particular the use of PPE) over the adoption of collective protective measures (e.g. plexiglass separations, work organisation measures). This may be linked to the focus on public health measures and coordination of public health and OSH may allow a full implementation of the OSH principles in exceptional situations such as a pandemic.

Quantification of biological agents may be difficult, in particular with the existence of growing micro-organisms.

European Agency for Safety and Health at Work

The approach based on the workload of employees faces the issue of quantification of the workload. When talking about information-based jobs, it becomes difficult to quantify and it is also going to depend on the individual capacities of workers, which requires tailoring.

Regarding the monitoring of working conditions at remote workplaces, employers can rely on checklists and self-administered surveys (e.g. on set up of the workstation, sense of isolation, overload, lack of contact with supervision). There are also more sophisticated questionnaires.

The role of labour inspectors does not necessarily involve the verification of each workplace but could rather involve a control of the procedures in place, the conduct of a risk assessment.

5 - Policy recommendations (general)

- **Milieu presented the general policy recommendations made to the European Parliament.**

European Agency for Safety and Health at Work

EU OSHA recommended avoiding reference to 'integration of OSH into public health policies'. The lack of data throughout the pandemic has also been highlighted (infection and mortality by occupation). This can help public health authorities monitor.

Representative of SMEunited

SMEunited emphasised the importance of training for employer and workers, in particular in MSMEs, which may be more represented in the sectors most affected by the biological risks generated by COVID-19.

European Agency for Safety and Health at Work

COVID-19 has also been recognised as an occupational accident in certain Member States. For instance, Italy publishes a lot of information via INAIL. Not only the healthcare sector is concerned. The monitoring of occupational diseases needs to be improved and could benefit public health authorities. A lot of data was collected by public health authorities, whereas this was less the case for OSH authorities.

Regarding long-COVID, EU OSHA has published two guides on the matter. This issue will need to be addressed in the coming years.

Senior expert 2

The benefits of mixing public health and OSH legislation is essential. Caution must be made not to muddy the waters of workplace vs non-workplace situations.

European Agency for Safety and Health at Work

EU OSHA provided inputs to the guidance developed by the ECDC to include consideration of the existing OSH legislation to avoid additional workload on workers. The idea is to foster increased coordination.

6 - Policy recommendations (biological risks)

- **Milieu presented the main policy recommendations on the protection of workers against biological risks.**

Representative of the European Trade Union Confederation

ETUC suggested referencing tools provided by EU OSHA, e.g. OiRA and guidelines.

Senior expert 2

The senior expert suggested the addition of a reference to pandemic crises in Annex I to the Directive on Biological Agents at work on non-intentional exposure. The generic term would allow adaptation to all types of pandemics.

The current list of Annex I was based on consideration of potential exposure for all biological agents (mostly Group 3).

European Agency for Safety and Health at Work

The Biological agents Directive is a goal setting legislation. The development of measures tailored to a specific biological agent (i.e., COVID-19) is not recommended. The framework can be more detailed at national level depending on the specific realities.

If definitive provisions are set in a Directive, then it requires updating.

7 - Policy recommendations (telework)

- **Milieu presented the main policy recommendations on the protection of workers against the risk linked to teleworking during a pandemic.**

Representative of SMEunited

SMEunited pointed out that many of the policy recommendations are not specifically linked to pandemic situations. Many issues mentioned go beyond pandemic crises [view also supported by SLIC and ETUC].

Social partners are currently working on teleworking.

Milieu specified that the idea behind these recommendations is that general preparedness and pre-existing procedures to implement telework within companies will help ensure safer teleworking conditions in pandemic situation. The occupational risks of telework are not inherently different during a pandemic but worsened and amplified. Milieu welcomed the comment and agreed to clarify this point in the study.

Representative of Senior Labour Inspectors' Committee

A lot of issues of telework became central because of the pandemic but pre-existed, so it is going to be difficult to separate recommendations.

Representative of the European Trade Union Confederation

ETUC recalled the need for a joint approach between social partners.

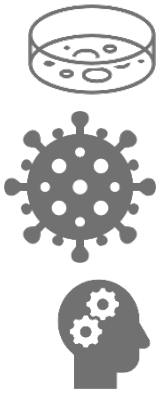
ANNEX 4 – TOPIC FICHES

Overview of the occupational risks faced by workers during the COVID-19 pandemic

The occupational safety and health of workers has been affected in virtually all workplaces.

On the one hand, **workers who are required to be present at the workplace** encounter the risk of contracting the virus via physical contact with their colleagues, but also with patients, customers and third persons.

The SARS-CoV-2 is transmitted primarily via respiratory droplets, spread via coughing, sneezing, and fostered by the close interpersonal proximity of persons. An indirect way of transmission is the landing of these droplets onto surfaces, which can be spread by touching one's nose, eyes or mouth. Exposure to the SARS-CoV-2 occurs at the workplace primarily due to unintentional physical proximity to other humans.



Exposure to biological agents, such as COVID-19, at workplaces, can occur either directly, by the intentional use of biological agents for the needs of the economic activity, such as in laboratories manipulating the virus, or indirectly, via unintentional exposure resulting from activities that involve the presence of biological agents at the workplace.

Occupational risks directly linked to a pandemic can **amplify or exacerbate already existing occupational risks**. For instance, the presence of a biological health threat at the workplace has the potential to affect the psychosocial wellbeing of workers and creates additional sources of stress (e.g. fear of the biological risk for oneself at the workplace, or for relatives, reinforced by the lack of personal protective equipment at workplaces, longer working hours for frontline workers).

Psychosocial impacts also affected the 'essential workers' required to be physically present at work during the heights of the pandemic, in particular healthcare workers due to the particularly harsh working conditions, the long working-hours and repeated overtime, the reorganisation of care units, new working methods and colleagues, urgency procedures, ethical dilemmas, repeated exposure to death, etc. The main psychosocial impacts on healthcare workers include burnout or post-traumatic stress, high prevalence of anxiety, depression, and sleep disorders among caregivers. Certain issues increased both biological and psychosocial risks, for instance the lack of personal protective equipment. While it may be difficult to understand how many of these disorders pre-existed, prospective studies show that the protraction of the pandemic leads to an increase in mental health disorders.

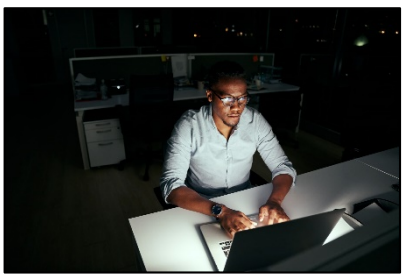
On the other hand, **teleworkers** have faced risks of developing psychosocial illnesses and disorders, as well as musculoskeletal disorders, as indirect impacts of COVID-19.

Examples of **psychosocial risks** on teleworkers' mental health increased anxiety, job burnout, post-traumatic stress disorders, psychological distress, major depression because of intense or continuous stress, addictions, and in worst cases, suicide. Social isolation has also been amplified through compulsory full-time teleworking, which can be seen as an additional cause of increased psychosocial risks. In times of pandemic, the absence of physical professional interactions reinforces the isolation created by other restrictions of social life (lockdown, curfew).

The **underlying causes of psychosocial risks** identified include the lack of delimitation of work/private life and conflicting demands during working times, longer working hours (including during weekends, evenings or other free time, compensating commuting time), presenteeism, difficulties in having clear expectations regarding organisation and workload, leading to anxiety.

Challenges are also linked to the use of **information and communication technologies** (ICT).

- Even if ICT are provided by the employer specifically for professional purposes, ICT can have a high potential to blur the boundaries between professional and personal life.
- ICT can be perceived by workers as an invasion into their privacy, while potential technical issues with IT and ICT tools, the reliability and speed of the internet connection, and the workers' level of familiarity with the tools may negatively impact their mental wellbeing at work.
- Virtual communications can also lead to misunderstandings and the impossibility to make professional requests and express emotions.



Regarding the **ergonomic risks** linked to teleworking and improper working conditions (e.g. lack of dedicated workspace, sharing of the workspace with other family members), these have most likely increased and may lead to more musculoskeletal disorders (MSDs) amongst workers. MSDs were already well-known among teleworkers, and the significance of working with computers, laptops and smartphones has been highlighted. The significant number of persons teleworking during the pandemic, including new teleworkers, may lead to a higher proportion of workers suffering from MSDs.

The sources of risks for workers are linked to the following ergonomic conditions:

- Environmental conditions (temperature, lighting, noise, disturbances);
- Safety of the workplace (unsecure working arrangements, e.g. wires);
- Ergonomic conditions linked to the work equipment: in particular visual display, keyboard, desk and chair (eyestrain from displays, including due to bad settings, MSDs on the neck, wrists, fingers). Although not specific to telework, prolonged sitting positions can further impact workers' health negatively.

The differentiated impact of COVID-19 based on the economic sector and employment conditions of workers

Essential workers have been associated with a higher risk of contracting an infection with SARS-CoV-2. This is particularly linked to the fact that the use of telework in health (30 %), retail (27 %), accommodation/food services (16 %) and manufacturing/construction remains low.

Clusters of COVID-19 in an occupational setting have been identified by the European Centre for Disease Control and Prevention (ECDC) in health and social care (hospital, long-term care, primary care), food packaging and processing, factory/manufacturing, building and construction sites, offices, educational facilities, sales and retail, military and law enforcement, mines, and other sectors.

Healthcare workers (hospital, long-term care)

Prior to the pandemic, a clear risk of exposure to biological agents for healthcare workers had been identified. The sector-specific contributing factors are contacts with **patients**, the possible **incorrect or insufficient use of personal protective equipment** (PPE), and the **confined nature of workplaces**. Despite a higher level of **awareness** among healthcare workers about exposure to biological risks, the uncertainties due to the lack of knowledge on SARS-CoV-2 and short supplies of PPE have exposed these essential workers to contracting COVID-19. The level of awareness and implementation of preventive measures is lower in long-term care and in smaller hospitals. Furthermore, there is a multiplication of the types of risks faced by healthcare workers in intensive care units (ICUs), particularly affected by the risk of infection but also psychosocial risks and work organisation risks.

Construction sector

The construction sector is characterised by the **impossibility to implement telework** in the core activities, and the labour intensiveness of the tasks. Construction sites have been described as **epicentres for the spread of infectious diseases** in general. Several **factors** create favourable conditions of exposure to biological risks in the construction sector, i.e. the temporary nature of construction projects and related OSH measures, the involvement of many types of specialised workers, and the complex working arrangements, which lead to the visit of multiple workplaces (construction sites) and possible cross-contaminations, as well as the difficulty to maintain social distancing for certain tasks. Construction works have also been associated with the prevalence of pre-existing respiratory conditions. Similar factors have been identified in the agri-food sector, i.e. shared accommodation and transport, but also lack of facilities to wash hands and language barriers hampering understanding of OSH instructions.

Food production sector

Many Member States have declared workers in the food production sector to be essential workers. According to the ECDC, the food packaging and processing sector was the **second most concerned by COVID-19 clusters after healthcare**. The sector-specific possible contributing factors are inherent to the workplaces, e.g. confined and closed spaces, but links exist with workers' socio-economic context, e.g. shared accommodation of migrant workers, shared transport. In particular, several events of **contamination of a large number of workers in slaughterhouses** have been reported across the globe, in particular in France, Germany, the Netherlands and Ireland. The **underlying causes** are that meat processing plants are labour intensive and require workers to be in close contact, noisy which requires workers to shout and expel respiratory droplets. These workplaces are characterised by the absence of sunlight, by cold temperatures, and by infrequent aeration. **Socio-economic factors** have also been highlighted, for instance, low revenues and precarious working conditions lead workers to work even in the occurrence of symptoms. Furthermore, the hiring of non-nationals in slaughterhouses is common and the difference in language may hamper the full understanding and implementation of OSH rules.

Platform workers (gig workers)

It is estimated that short-term self-employment (the so-called gig work or gig economy) **increased during the pandemic** for certain specific sectors, in particular on-location platform work. The **three-sided contractual relationship** of these jobs consists in the intermediation of the platform between customers and individual (self-employed) workers providing services. The situation is particularly visible for **self-employed platform workers**, who have been working to provide both individual transport solutions and **food and goods delivery** to populations in lockdown or quarantine constituting an important chain in the continuation of the provision of essential goods and services. The **main occupational risk** faced by these workers are exposure to the virus and the possibility of spreading it to others, via physical proximity with other workers, as well as traditional risks linked to their precarious work conditions, i.e. the increased workload due to the pandemic, time-pressure on deliveries and thus possible road accidents for couriers. Beyond the **lack of social protection** inherent to their employment status, platforms workers have **reduced access to PPE** and to sanitary equipment, e.g. possibility to wash their hands. Currently, (bogus) self-employed workers remain **responsible for their own occupational safety and health**. Additional psychosocial risks are also linked to platform work: algorithmic management and digital surveillance, professional isolation, difficult work-life balance. Finally, platform workers are **rarely organised collectively**, which may impact the level of OSH information specific to their occupation that they have access to. Some platforms have adopted measures to increase the protection of their platform workers, although they appear insufficient.

The differentiated impact of COVID-19 on certain categories of workers (age, pre-existing conditions, gender, employment conditions)

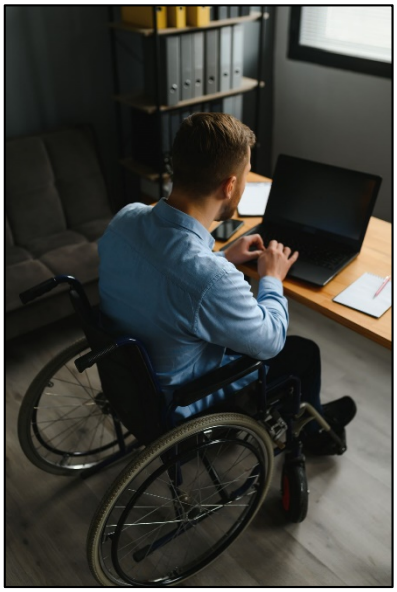
There are specific factors explaining why certain populations, on the basis of age, gender, health status and legal/employment situation, are more vulnerable to biological risks, including in times of a pandemic. However, according to EU OSHA, **vulnerable groups are insufficiently covered** by research on biological risks, in particular on the association of particular sectors and occupations.

Younger and older workers

According to a literature review conducted by EU-OSHA in 2019 on biological agents, **younger workers** (in particular trainees) constitute a vulnerable group of workers and are more exposed to biological agents due to the lack of knowledge and experience on protection and due to the tasks given to them. In the EU, the proportion of young workers in occupations with high COVID-19 exposure risk represents close to 60 % for 15-19 years old native workers, and close to 50 % for 20-29 years old native workers.

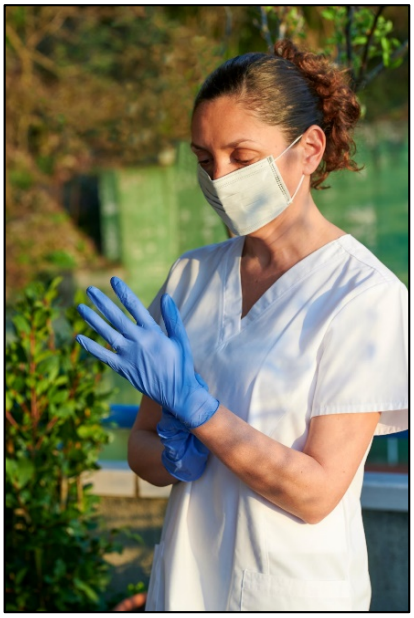
After 30 years old, the proportion of workers involved in high exposure occupations decreases to around 40 % for native workers. This criterion of exposure to SARS-CoV-2 is also observable amongst migrant workers, with an increase of 5 to 10 points in each of the age groups. Despite being less exposed to COVID-19 due to their occupation, **older workers face higher fatality rates** upon infection with COVID-19, which may be explained by a weaker immune system and/or underlying medical conditions.

Workers with pre-existing conditions (disabilities, health conditions)



Some **disabilities**, such as conditions affecting the immune system, the lungs, or other factors may create a greater risk of contracting COVID-19 amongst workers concerned. There might also be **difficulties in following hygiene protocols** such as difficulties in wearing PPE and applying hand hygiene protocols due to lack of appropriate wash basins. Equally, **sensorial impairments** may limit access to information and intellectual disabilities may limit understanding of hygiene rules. Disabilities are also likely to limit the **possibilities of teleworking** due to the lack of suitable equipment. However, the pandemic has opened up horizons for certain disabled workers to work remotely, including in places such as homes, where working conditions are adapted to their specific needs, and where difficulties linked to commuting are lifted, including self-employed activities in the gig economy.

Female workers in specific occupations



Women do not directly constitute a vulnerable group in view of the risk of infection or fatality to COVID-19, but by virtue of their **overrepresentation in specific occupations**, for example the healthcare sector, where women represent a very large proportion (76 %) of the workforce. They are also highly represented in essential services in general (sales, childcare, domestic cleaning). This has put women at the forefront of the COVID-19 pandemic. It has also been observed that women were more severely affected by the **socioeconomic impact of the pandemic**. In terms of **vulnerability** to the severe medical effects of COVID-19, infection during the **pregnancy** is associated with a substantial increase in morbidity and mortality in postpartum mothers and their infants, especially if these persons were symptomatic or have comorbidities. EU OSHA's study on biological agents points to the **lack of information** on the exposure of pregnant and breastfeeding women to biological agents in literature. Finally, it has been reported by trade unions since at least 2015 that **personal protective equipment was not fitted to women**, although the EU Directive on PPE requires the equipment to be individually adapted, and this has taken on particular importance during the pandemic.

Migrant workers and employment conditions

The risk of exposure of EU migrant workers to COVID-19 compared to native workers is slightly higher. For migrants from outside the EU, the risk of exposure is seven points higher than for native workers. This is explained by the elevated proportion of migrant workers in **high-risk occupations**. The study has also found that migrant workers have slightly **less opportunity to telework**, since the two categories of occupation where migrant workers are most represented, cleaners and helpers and labourers in mining, construction, manufacturing or transport, provide almost no possibility to work remotely. Other issues in the OSH protection of migrant workers include the **language barrier**, as well as the **limited access to health services**. The type of employment situation also influences the risk of exposure to COVID-19, and temporary contract workers are more exposed than open-ended contract workers. This situation can be worsened by precarious and sometimes illegal working conditions in the agricultural sector. It has been recently found that migrant workers compared to native workers are more frequently exposed to **physical factors**, such as vibrations and handling of heavy loads, as well as certain **psychological risk factors**, such as harassment, discrimination or verbal abuse. In addition, compared to native workers, migrant workers are more likely to deal with **socio-economic instability**, which can become even more problematic in the period of a pandemic. Beyond workplaces per se, migrant workers' **living conditions**, such as their accommodation, are often characterised by an elevated density of human population and the presence of at least one child in the household, can also increase the risks of exposure to COVID-19.

The outbreak of COVID-19 has had a marked impact on workplaces and reshaped working conditions in the EU. The study explores the impact of COVID-19 on the occupational safety and health of European workers. It presents a review of the measures adopted by 10 selected Member States and an evaluation of the preparedness of the European OSH legal framework for pandemic crises. Based on these findings, the study presents conclusions and policy recommendations.

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