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ETUC Project "Involving Trade Unions into adaptation policy"

Thematic workshop #5
Trade union strategies with regard to climate adaption policies

DISCUSSION PAPER prepared by Syndex

This document is part of the ETUC European project on adaptation to climate change. The three main objectives of this project are: (1) to inform European trade unions about the consequences of climate change on the world of work; (2) to prepare trade unions to play an active role in the design and implementation of the national strategies for adaptation; (3) to develop a tool kit for trade unions to bring adaptation on the agenda of industrial relations. The outcome of this project will be based on the results of 2 questionnaires sent to national and sectoral European trade unions as well as on 5 thematic workshops[1], each of them dedicated to a specific theme: adaptation and the world of work, sectors and regions at risk, working conditions and health and safety, emergency services, trade union strategies with regard to climate adaption policies. The present paper will be presented by Syndex during the last session (#6) of the seminar. The participants will be asked to comment on it and invited to discuss its' content and to reflect on the possible strategies that Trade Unions should put in place to address the consequences of climate change for workers. The outcome of these discussions will be integrated to the final study.

1. Introduction

Climate change is increasingly recognized as a major threat to the stability and prosperity of society. No matter what the climate change mitigation efforts are, unavoidable climate impacts (floods, droughts, heat waves, variations in precipitation levels, scarcity of natural resources, decline of biodiversity, etc.) will take place together with the economic, social and environmental costs coming along. The changes observed in climate are already having wide-ranging impacts on ecosystems, economic sectors, human health and well-being in Europe. The average temperature for the European land area for the last decade (2002- 2011) is 1.3°C above the preindustrial average, which makes the increase over Europe faster than the global average. According to the European Environmental Agency (EEA), the total reported economic losses caused by weather and other climate-related extremes in Europe amounted to over EUR 436 billion for the period 1980-2016[2].

According to the IPCC, climate change is expected to continue for decades, because of the delayed effect of past emissions. Even if all greenhouse-gas emissions were to stop today, we would still see major changes in the climate. Furthermore, even if at COP 21 in Paris, countries committed to keep global warming well below 2°C and to become carbon neutral by the end of this century[3], the actual collective mitigation efforts appear to be insufficient to limit global warming to the abovementioned extents. The USA have withdrawn from the Treaty. The Amazon forest has been burning thorough the autumn, while in Europe, several countries, including EU's biggest emitters France and Germany, have failed to meet their 2020 targets.

[1] The 5 selected themes are: adaptation and the world of work, sectors and regions at risk, working conditions and health and safety, emergency services, trade union's strategies.
[2] EEA Report No 15/2017, "Climate change adaptation and disaster risk reduction in Europe" (2017), updated in 2018
[3] https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement

From a workers' point of view, the effects of global warming raise several challenges and threats. Climate change is expected to seriously affect the European economy, bringing with it positive but also, and above all, negative effects over national and regional economies (see section 2 below). On the demand side, several economic sectors are highly vulnerable because of their dependence on regular climate conditions (see section 3 below). Global warming is also expected to have major impacts over human health[4] and therefore also over working conditions and health and safety at work (see section 4 below). The adoption of coherent adaptation policies, that consider the impacts of climate change over the world of work, is therefore key (see section 5 below). As in the case of climate mitigation and the development of the green economy, trade union action and the setup of trade union strategies are therefore needed in order to ensure an adequate protection of workers (see section 6 below).

2. Overall impacts of climate change over the EU economy

In 2012, the European Commission (EC) estimated that the economic, environmental and social costs of not adapting to climate change could range from EUR 100 billion a year in 2020 to EUR 250 billion a year in 2050 for the EU as a whole[5]. Due to climate change alone, annual damage to Europe's critical infrastructure could increase ten-fold by the end of the century. The average annual cost of flood damage alone across the European Union (EU) could rise from €4.5 billion to €23 billion by 2050. The latest EU Joint Research Centre (JRC) PESETA III report[6], commissioned by the European Commission and published in 2018, evaluates the total EU overall welfare loss under a high warming scenario at around 1.9% of GDP (€240 billion) per year at the end of the century.

Vulnerability is country-specific and derived from particular physical, social and economic features. Each Member State will experience different effects and impacts of climate change. The JRC report points out a clear geographical north-south divide: countries in Southern Europe, and especially the Mediterranean area, will be more affected than those in the north, as they appear to be more vulnerable to climate change, especially with regards to its effects over heat-related human mortality, water resources, habitat loss, energy demand for cooling and forest fires. This said it has however also to be mentioned that, beyond modelling and projections, no European country is protected from the consequences of climate change. Coastal and mountain areas are for instance particularly at risk[7].

3. Sectors considered as the most exposed

Although all the European economy is concerned, some sectors are considered to be particularly at risk.

- This is notably the case of sectors that are directly dependent on climatic conditions such as **agriculture** (e.g. exposure to natural disasters, impacts on productivity and spatial distribution of crops), **forestry** (e.g. diseases, droughts, storms and fires), **tourism** (e.g. variations in temperatures and precipitation levels), health (e.g. decline of biodiversity) and **fisheries** (e.g. displacement of fish stock).
- **Transport** and **major utilities**, such as **energy** (e.g. increased electricity demand for air-conditioning) and **water providers** (e.g. water scarcity), will also be affected.

[4] Recently, the World Health Organization (WHO) that 150 000 deaths worldwide were caused by climate change in 2000. The organization forecasts this number will increase and reach 250 000 deaths per year worldwide by 2040, source: https://www.who.int/news-room/fact-sheets/detail/climate-change-and-health

[5] European Parliament (2019), Resolution on climate change – a European strategic long-term vision for a prosperous, modern, competitive and climate neutral economy in accordance with the Paris Agreement, 2019/2582(RSP)

[6] European Commission Joint Research Center (2018), Climate impacts in Europe, Final report of the JRC PESETA III project, available at: https://ec.europa.eu/jrc/en/news/climate-change-human-and-economic-outlook-europeans

[7] It is for instance estimated that, by the end of the century, under a high warming scenario, about 200 airports (especially in the North Sea region) and 850 seaports of different size across the EU could face the risk of inundation due to higher sea levels and extreme weather events

- So as **public services**. As underlined by a recent EPSU study, central and local government, social services, education, **healthcare**, public transport, disaster management, and **emergency services** (e.g. firefighters) will be put under pressure[8].
- The **construction** sector is one the sectors that could benefit the most from the adoption of adaptation policies, but its' workers are going to be highly exposed to natural wizards. **Urban-planning**, investment in **resilient infrastructure** and **housing** will play a crucial role regarding disaster prevention.
- The probability of most types of extreme event is expected to change significantly, what can in turn affect the **banking** and **insurance** sectors.
- Last but not least, multiple indirect impacts are also expected and can touch sectors such as **manufacturing and industry** (availability of raw-materials, price hikes) through disruptions in logistic supply chains. All in all, climate change will also have an effect over global productivity. According to the JRC, under a high warming scenario and assuming no adaptation, daily average outdoor labor productivity could decline by 3.4% in the EU.

4. Impact of climate change over human health, health and safety and working conditions

Climate change is going to impact our economy but also human health. These impacts are often discussed as primary, secondary or tertiary, depending on the causal pathway through which that impact occurs[9]:

- **Primary effects** are those due to direct exposure to excessive heat or the physical hazards of extreme weather (like physical injuries during storms or flooding). Acute health effects of exposure to heat stress include heat exhaustion, heat rash (prickly heat), heat fatigue, heat syncope/fainting and heat stroke. It can also lead to complications of many chronic diseases, including chronic obstructive pulmonary disease, coronary artery disease, diabetes mellitus, and chronic kidney disease.
- **Secondary effects** are those resulting from disruptions of surrounding ecosystems in turn could lead to a modification of biological risks, such as the development of infectious, immuno-allergic and toxic diseases. Climate change is for instance broadening the range of disease vectors (such as ticks and mosquitoes) and favoring the development of pathogens out of areas usually recognized as contaminated. It is also said to increase pollen production and pollen seasons, thus leading to increases in allergic disorders among workers and others.
- **Tertiary effects** are those resulting from the disruption of social, political, and economic systems, producing dislocation or even violence. Furthermore, there are **additional health impacts** that are not necessarily the result of climate change, but that are closely associated with the physical and chemical processes of our fossil fuel-driven economy. These include greater health risks from higher air pollution levels (from burning of fossil fuels in many cases) as well as increased exposure to UV radiation.

Although it is very difficult to assess how many climate-related deaths have already occurred, climate change impacts over human health are already visible in Europe. According to the 2019 report of The Lancet Countdown on health and climate change[10], under a 3°C scenario, the number of deaths related to disasters associated with climate change in Europe could be multiplied by 50, from 3000 annual deaths between 1981 and 2010 to 152 000 at the end of the century.

All these risks will of course also impact workers' and their working conditions. Heat stress or extreme weather events for example will primarily affect outdoors workers and especially those which activity is physically

[8] https://www.epsu.org/article/epsu-feature-adaptation-climate-change

[9] S. Sweeney, J. Treat (2019), Nurses' Unions, Climate Change and Health: A Global Agenda for Action, available at : http://unionsforenergydemocracy.org/tued-bulletin-90/

[10] https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(19)32596-6/fulltext

demanding. Higher temperatures increase the risk of fatigue what can in turn lead to a potential "decline in vigilance" that can result in increasing the frequency of several types of work accidents, (tripping, bumping, falling from height, risks related to falling objects, etc.). The sectors which are considered to be particularly at risk include construction, agriculture, tourism, fisheries, forestry but also utility delivery and transportation sectors. Several categories of workers who work indoors may also be impacted, especially those who work in warm spaces that are not air-conditioned.

5. What about implementing adaptation policies?

Climate change adaptation can be defined as the process of adjustment of a society or a natural system to the evolution of weather conditions caused by global warming, aiming at lowering the risks caused by these evolutions and exploiting their potential beneficial opportunities. The primary objective of adaptation measures is of course to reduce climate vulnerability of specific regions, economic sectors or populations[11].

These measures can for example consist in investment in infrastructure to protect against natural disasters (urban and coastal planning, defenses against sea-level rise, improving the quality of road surfaces to withstand hotter temperatures, etc.), development of resource efficiency management systems (energy, materials, circular economy), behavioral shifts, (individuals using less water, increased use of air-conditioning, farmers planting different crops and more households and businesses buying flood insurance) or strengthening social protection systems and adopting of adequate prevention measures (e.g. Investments in firefighting equipment), etc. Adaptation policies help reduce the costs associated to climate change. According to the Commission, every euro spent on flood protection could save €6 in damage costs[12].

Adaptation measures can have positive effects over the economy and employment. First of all, adaptation measures contribute to preserving existing jobs through maintaining the viability and resilience of existing businesses. Furthermore, many adaptation measures will require substantial investments which can stimulate demand for labor. These investments can also stimulate the demand for new types of goods and services and thus create new market opportunities and increase innovation. A recent report made by Triple E Consulting[13] for the EC estimates that around 410 thousand jobs will be lost by 2050 due to climate change if no further adaptation is taking place. On the contrary, the report evaluates at around 1 million (direct + indirect) the number of jobs that could be created (+ 330 thousand saved jobs) in the same period if climate change adaptation expenditure increases up to 1% of GDP[9]. Despite this, almost none of the national adaptation strategies in place deal with employment or social issues.

6. What can trade unions do?

Climate change will profoundly impact workers and trade union action is needed in order to secure their interests, ensure an adequate protection as well as the adoption of coherent adaptation policies that consider the impacts of climate change over the world of work. The necessary mean of actions include Informing and raising awareness among trade unions at all levels (European, national, sectoral, regional), assessing the impacts of climate change at sectoral level and formulating concrete demands, protecting workers at their workplace through collective agreements and collective bargaining, participation to the elaboration, implementation and monitoring of national, regional and local adaptation strategies (or the adaptation parts of national climate strategies), developing

[11] IPCC (2019), Special Report: Global Warming of 1.5 ºC, available at : https://www.ipcc.ch/site/assets/uploads/sites/2/2019/06/SR15_AnnexI_Glossary.pdf
[12] https://ec.europa.eu/commission/presscorner/detail/en/IP_13_329
[13] https://trinomics.eu/about-us/

partnerships and alliances with other organisations, as well as promoting the allocation of EU and national funds for climate adaptation measures.

A. Inform and raise awareness among trade unions

The result of the ETUC survey carried out in the framework of this project show that national trade union are strongly aware of the potential negative effects of climate change: 100% of respondents have estimated that climate change, and especially extreme weather events (wildfires, droughts, storms, flooding) and heat waves, will have a significant impact over workers, what also include negative effects over working conditions (88%). Despite this, there is a feeling that the concrete impacts of global warming upon workers' (job destruction, impact on working conditions, health and safety, etc.) are not always known and understood, so as the possible adaptation measures and the benefits resulting from them. In many cases, there is a confusion between adaptation and mitigation policies. Furthermore, few adaptation strategies involving trade unions have been identified. In that regards, Trade union have a key role to play in raising workers' awareness. This can be done via several ways and actions, such as speeches of leaders, implementation of EU funded raising-awareness projects, organizing conferences or seminars, distributing information leaflets, launching communication campaigns (at sectoral or workplace level for instance) or conducting studies.

In September 2019, Trade unions for energy democracy (TUED)[14] and the American trade union National Nurses United[15] produced a major report titled, ***Nurses' Unions, Climate Change and Health: A Global Agenda for Action***[16], which provides nurses and their unions with important information regarding climate-related health risks. After a brief overview of current policies and energy and emissions trends, the report highlights the "gap between ambition and action," and the need for a different climate politics. It also takes up key issues raised by major recent reports that are relevant to understanding and addressing the health impacts of climate change. Finally, the report offers observations and suggestions for how healthcare workers and their unions, and the labor movement more broadly, can and must take up the struggle against the accelerating climate and health emergencies, and together formulate a bold agenda for global action—one that places workers and communities at the center, and that embraces the power of organized labor in fighting for the future. Although written for nurses' unions in particular, the report may be of interest to all climate, environmental, health and labor activists.

In Hungary, the **Hungarian Trade Union Confederation** has already started negotiations with experts to collect information about climate change, their effects on the world of work and to make a campaign and a strategy to draw attention the importance of this topic". In the **Netherlands**, the construction sector developed a heat stress application to organize workers to demand more breaks and other measures (water) when the weather is too hot. In **Spain**, ISTAS has carried out the **Salutdapt project**[17], which aimed to contribute to the development of territorial plans and strategies for adaptation and protection of health in the face of climate change. In this framework, the institute has elaborated a wide range of proposals aiming at improving the protection of workers' health. The final document targets public authorities as well as social partners and companies. Among other proposals, ISTAS proposes to improve the notification of professional contingencies related to high temperatures, by including them in occupational accidents categories, as well as to urge companies to adequately assess occupational hazards due to thermal stress and implement adequate action plans.

[14] http://unionsforenergydemocracy.org/about/about-the-initiative/
[15] https://www.nationalnursesunited.org/about
[16] http://unionsforenergydemocracy.org/wp-content/uploads/2019/09/Climate-Change-and-Health-GNU-2019.pdf
[17] https://istas.net/medio-ambiente/saludapt

B. Sectoral strategies

As mentioned above, climate change is expected to have severe impacts over specific sectors. These impacts have to be mapped and studied in order to setup adequate responses and strategies (need for investments, requalification of workers, additional health and safety rules, etc.).

In **Spain** again, the ISTAS institute[18] initiated, in September 2019, a project called "**Climate change and word of work" (Cambio climatico i mundo laboral)**[19], which objective is to promote the role of workers as agents of change in the definition of adaptation strategies within a range of sectors particularly vulnerable to climate change (forestry, chemical-paper, health, tourism, construction and water). The specific goals of this project, which has the support of the Ministry for Ecological Transition, are: (1) to develop a sociological analysis of the perceptions and behaviours of workers and their legal representatives in the face of climate change as well as of their levels of awareness and information in this regard, (2) Promote the development of proposals and strategies for adaptation to climate change, (3) Facilitate exchanges and debates between workers and their representatives but also with all other players (public administration, employers' organizations) involved in the design of climate change adaptation policies within the covered sectors, (4) Disseminate project results and promote the development of environmental competencies by workers and their representatives in the most affected sectors. Regarding the sociological analysis, ISTAS will conduct a quantitative investigation among at least 1,000 workers and union representatives from different economic sectors, in addition to conducting discussion groups and in-depth interviews with key informants and union cadres.

In 2010 the **UK Fire Brigade Union (FBU)** published, **Climate Change: Key issues for the Fire and Rescue Service**[20], setting out the risk of climate change for the firefighters' sector. The report, which is based on the outcome of an FBU conference policy, pointed out that climate change will increase the risk of grassland and forest fires; increase the risk of floods, including from surface water, rivers and from the sea; will affect the supply and availability of water and may give rise to more extreme weather events. The FBU stated that these hazards will have implications for the working conditions of firefighters. Climate change will require significant changes to appliances, to the equipment available to firefighters, to training, greater awareness of firefighters' health implications, to pumping capability and water use and increased call centre capacity. Following this, the FBU has published several other reports, including reports on flooding, indicating the extra work done by firefighters and the need for long term funding, in a context of important job cuts[21][22].

C. Collective agreements

Collective agreements define the working conditions that apply to workers in a specific industry or company. The signing of specific agreements relating to climate hazards and health and safety at work (or the inclusion of specific clauses into existing agreements) is for sure one of the most efficient way to ensure protection for workers.

In 2018, the construction sector federations of **French trade unions CFDT and CFTC** have negotiated and concluded an **agreement** in the Limousin region with the regional employers' 'Federation of Public Works (FRTP-EFPW) **on workers' rights regarding health, safety, working conditions in hot weather and heat waves**. The agreement

[18] ISTAS (Labor, Environment and Health Trade Union Institute) is an autonomous technical union foundation promoted by Comisiones Obreras (CCOO) with the general objective of promoting social progress activities for the improvement of working conditions, the protection of environment and the promotion of the health of workers. More information at: https://istas.net/istas/que-es-istas

[19] https://istas.net/noticias/istas-inicia-el-proyecto-cambio-climatico-y-mundo-laboral

[20] FBU, *Climate Change: Key issues for the Fire and Rescue Service* (2010), available at: https://www.fbu.org.uk/publication/climate-change-key-issues-fire-and-rescue-service

[21] https://www.fbu.org.uk/publication/inundated-lessons-recent-flooding-fire-and-rescue-service

[22] https://www.fbu.org.uk/publication/december-2015-floods-report

includes a set of prevention measures to be implemented on work sites when outside temperature reaches 30°C. Those measures include:

- the possibility of getting unemployment compensation for work interruption in case of hot weather;
- the obligation for employers to monitor weather forecasts, adapt workload, working conditions and working hours in case of heat wave;
- the provision of adapted work clothes and of a suitable room for the reception of workers in the event of climatic conditions likely to affect their health.

In June 2019, the FNCB-CFDT issued a press release asking the government and employers to generalize this type of agreements in all French regions because the national legislation on this issue has a constraining effect on workers' rights and their representatives[23]. Furthermore, since 2015, the FNCB-CFDT runs an information, awareness and training campaign for its members as well as a lobbying campaign called "the hidden face of the sun"[24].

The answers received to our questionnaire point out the existence of other collective agreements elsewhere in Europe. According to **Danish** FH trade union, "in the Danish building trades collective agreements, there are clauses which compensate workers for adverse weather. These might be used more frequently in the future. The past summers, there has been complaints over lack of air con in many Danish hospitals". In **Italy**, metalworkers have concluded so-called "Heat agreements", which allow workers to benefit from adapted working conditions that allow them to continue to perform their production activity even in situations of high heat within the plant. Also, at national level, the INPS (National Social Security Institute) message 1856/2017 clearly indicates that if the temperature (even perceived) rises above 35 degrees, companies can recur to the layoff fund. However, this possibility is not always used, and the interventions are almost always rather arbitrary. In **Germany**, a few operation agreements at company level focus on the safety of workers during heat waves especially in the construction sector. Other examples have also been reported in **Austria** (construction sector, protection against heat waves) and the **Netherlands**.

D. Participate to the elaboration, implementation and monitoring of national and local adaptation strategies

In April 2013, the European Commission adopted the EU adaptation strategy[25][26], which is based on 3 main objectives: promoting action by Member States, better informed decision making and promoting adaptation in key vulnerable sectors. Since then, 25 out of 28 of them had adopted NASs by early 2018[27]. Despite all the forthcoming challenges, the vast majority of climate adaptation strategy does not deal with employment issues neither with the potential risks faced by workers.

The participation of trade unions to the definition of adaptation strategies is crucial in order to ensure a just transition for workers. As indicated by the ILO guidelines on a Just Transition, "Sustainable development is only possible with the active engagement of the world of work. Governments, employers and workers are not passive bystanders, but rather agents of change".

[23] https://www.cfdt-construction-bois.fr/presse/1016-alerte-canicule-salaries-du-btp-8-morts-en-2018-10-en-2017-cela-doit-cesser.html

[24] https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=2ahUKEwi69_WAzbfnAhWHY1AKHWGbCcUQFjAAegQIAhAB&url=https%3A%2F%2Fwww.cfdt-construction-bois.fr%2Fimages%2Foutils%2Fcampagne_soleil_2013OK.pdf&usg=AOvVaw1RxxHQ72Wr2kW4kgXuHNJ2

[25] https://climate-adapt.eea.europa.eu/eu-adaptation-policy/strategy

[26] A review process has been launched in 2018 as adaptation is now more urgent than forecast in the EU's 2013 adaptation strategy

[27] Strategies are being developed in the remaining three Member States (Latvia, Bulgaria and Croatia) but have not yet been adopted.

Trade union participation in the policy-making process at national level has been made compulsory by the new rules on governance in relation to National Energy and Climate Plans (NECPs)[28]. At present however, there is no predefined institutional framework that would govern this participation. Forms of trade unions involvement widely vary between the different Member States. Furthermore, although this participation is on the rise, trade union involvement is still not as intense and effective as it could be and often depends of the national culture of social dialogue. Trade unions must act in order to make their participation more consistent and formalized.

In **Belgium**, in December 2010, the National Climate Commission adopted the National Adaptation Strategy. This strategy has synthesized the expected impacts of climate change in Belgium and served as basis for the National Adaptation Plan (2017-2020), which has been adopted on 19 April 2017 by the National Climate Commission. According to the FGTB, trade unions have been consulted during the elaboration process of the plan, among others through their participation to the Federal Council for Sustainable Development (FRDO-CFDD), a body which advises the Belgian federal government on sustainable development policies. In its' opinion from 13/2/2017, relating to the project of national adaptation plan, the Council underlines, at the request of the trade unions, "that a comprehensive analysis of the socio-economic impacts of climate change would be desirable to identify the sectors, firms and categories of workers that will be the most affected and how to anticipate this"[29]. The opinion also stresses, also under the impetus of the unions, the different elements missing in the draft, id. e. "the impacts of climate change on workers (especially with regard to their health), the other sensitive groups in our society (children, pensioners, vulnerable people) and more generally the necessity to maintain an effective health system for all". According to the FGTB, trade unions have also been involved in the definition of adaptation strategies set for the 3 Belgian regions: Bruxelles-Capitale[30], Wallonia[31] and Flanders.

France has drawn up its national adaptation strategy as early as in 2006. On its basis, the government adopted in 2011 a first five-year national adaptation plan (PNACC). The plan has been elaborated in consultation with a wide range of organizations (NGOs, administration, private actors and trade unions), organized in working groups (same structure as for the Grenelle de l'environnment). In 2014, an evaluation concluded that there is a need to strengthen the national adaptation strategy. This mission was entrusted to the General Council for the Environment and Sustainable Development (CGEDD) in June 2015. Its final report has been then submitted for opinion to the National Council for Ecological Transition (CNTE)[32], a forum for dialogue on ecological transition and sustainable development, chaired by the minister in charge of ecology, and which brings together NGOs, social partners, experts, regional authorities and parliamentarians[33].

The participation of trade unions to the definition of adaptation strategies is crucial at national level but also at the regional and local levels. Around three quarters of Europe's population lives in urban areas (EEA) and expert projections suggest that up to 80% of adaptation costs will emerge in cities. Across the EU, around 40 % of cities with more than 150 000 inhabitants are estimated to have adopted adaptation plans[34]. Climate impacts over the different European cities can be identified, among others, through the recently launched Urban Adaptation Map Viewer, developed by Climate-ADAPT, the EU platform on adaptation[35].

In **Catalunya**, **Clinomics** was a three years project (June 2016-June 2019), led by the Barcelona Provincial Council and partially funded by the European Union (60%), seeking to launch new investment processes of public bodies,

[28] https://ec.europa.eu/energy/en/topics/energy-strategy/national-energy-climate-plans#public-consultation-of-necps
[29] https://www.frdo-cfdd.be/fr/publications/advices/avis-sur-le-projet-de-plan-national-dadaptation-2016-2020-pour-la-belgique
[30] http://urbanisme-bruxelles.hsp.be/node/202
[31] https://energie.wallonie.be/fr/pace-2030.html?IDC=6238&IDD=127763
[32] https://www.lecese.fr/travaux-publies/ladaptation-de-la-france-au-changement-climatique-mondial
[33] The CNTE provides critical advice for policy-makers on draft legislation relating to environment and energy as well as on national strategies. It can take up any issue of national interest and related to the ecological transition and sustainable development. Finally, it also contributes to the preparation of international negotiations on the environment and sustainable development.
[34] https://ec.europa.eu/eurostat/statistics-explained/index.php/Urban_Europe_-_statistics_on_cities,_towns_and_suburbs_-_executive_summary
[35] https://climate-adapt.eea.europa.eu/knowledge/tools/urban-adaptation

especially municipalities and private companies of some representative sectors, in order to reduce their vulnerability, to anticipate climate impacts and to increase their resilience, improving competitiveness and increasing occupation. In particular, Clinomics aimed at increasing resilience of Mediterranean local authorities through intervention in three territories (Terres de l'Ebre, Alt Penedès and Montseny Natural Park – Biosphere Reserve) and in different economic activities (tourism, fisheries, agriculture and forestry). The project developed organs of territorial and socio-economic participation, studies and documents (action plans and adaptation strategies), tools for local authorities and socio-economic actors (methodologies and pilot tests). The project also generated knowledge, training and information for stakeholders, awareness raising for its members and society, as well as other elements that should facilitate adaptation action. **CCOO Catalunya and UGT Catalunya** have been members of the project.

Paris' green urban development plan (ECECLI): In 2007, the French region of Ile-de-France started the planning of the construction of a new transportation network for greater Paris. The project, known as "The Grand Paris project", was accompanied by an ambitious green urban development plan. In total, investments in transport infrastructures, buildings and rehabilitation works have been evaluated at 26 bln €. During the process, trade unions (CFDT, CGT) and employers' organizations, supported by expert team Syndex – Fondaterra, played an important role in the development of an employment and skills needs forecasting and management tool (GPEC) called ECECLI, which integrates the 2019 & 2030 policies and measures of the Ile de France region dedicated to climate change mitigation and adaptation (SRCAE Regional scheme climate, air, energy). The vulnerability and adaptation component were devoted to the needs of new jobs and competences in relation to investments in water management (small and large water cycle), biodiversity, energy, transports, waste and landscapes (development plans for revegetation, natural and landscaped areas and the fight against heat islands heat).

E. Building partnerships

Creating broader alliances, involving other trade unions, non-governmental organization and / or national and local public institutions (or even employers' organization), can help to pinpoint the effects of climate change, promote the adoption of adaptation policies and spread the trade unions perspective.

In **Belgium**, the **Climate Coalition** is a national nonprofit organization which brings together around 70 Belgian civil society organizations (environmental NGOs, development cooperation, youth councils, citizens' movements and trade unions including ABVV-FGTB, CSC, ACLVB-CGSLB) around climate justice[36]. The aims of the coalition are to lobby political decision-makers for the adoption of strong measures and to mobilize the largest possible audience around the idea of a fair and climate-friendly society. The organization exists since 2008 and has already been heard several times by resounding campaigns like "Sing for the climate", "Train on Tour" and "Bankruptcy"[37]. The Climate Coalition is composed of a board of directors and a general assembly and develop its campaigns through the work of thematic working groups.

In **Spain**, la **Alianza por el Clima**[38] is formed by more than 400 organizations that represent the environmental movement (Greenpeace, WWF and many more), trade unions (CCOO, UGT), development / cooperation, science and research institutes and consumers organizations. The Alliance promotes the transition towards a renewable, efficient, sustainable and fair energy model that guarantees universal access to energy, through the development of collective proposals and the organization of activities aiming at raising awareness among the citizens and the different political groups of the need to implement measures against climate change.

[36] http://www.klimaatcoalitie.be/fr/climatecoalition
[37] http://www.klimaatcoalitie.be/fr/acties
[38] http://alianza-clima.blogspot.com/

F. Social protection

Climate catastrophes and changing weather conditions can result in human casualties, displacement of populations, permanent or temporary business closures, unwanted relocation of businesses and displacement of workers, lower quality products or increased unemployment. In line with ILO guidelines on just transition[39], it is necessary to:

- promote the establishment of adequate social protection systems, based on the principles of universality, equal treatment and continuity, providing healthcare, income security and social services. This can include the promotion of EU minimum social protection standards.
- Promote the integration of adequate social protection measures into national climate adaptation policies, including measures specifically targeting those who are going to be negatively affected, and in particular workers largely dependent on natural resources or facing major structural changes.
- In regions that will be the most affected, promote the adoption of long-term economic diversification strategies and policies that will allow for a requalification and relocation of workers in growths sectors and include social protection measures for the ones that may be left behind.

G. European funds

Under the European Regional Development Fund (ERDF) and Cohesion Fund (CF), a substantial amount of funding can be directly tracked to adaptation-related investments. In addition, the current common agriculture policy includes a number of measures relevant for adaptation as well as for mitigation spread across several priorities. The implication of TU organisations in the management of these funds may have an important impact over the whole process and favor a just transition. Since 2013, article 5 of Regulation 1303/2013 containing common provisions on ESI Funds strengthen their role by involving them in all stages of the planning, implementation, monitoring and evaluation of projects financed by ESI funds.

In Germany, trade union organization have introduced a "good arbeit" criterion in the European projects' selection process. According to this criterion, businesses wishing to obtain funding have to meet certain conditions in terms of salaries, health and safety at work and ongoing training.

EU Structural and Investment Funds 2014-2020 - climate related allocations (in € billion and % of total)

	EU support	Climate-related	Of which		
			Direct mitigation	Direct adaptation	Supportive measures for both
ERDF and ETC[30]	196.7	**37.9**	30.8	3.4	3.6
		[19.3%]	[15.7%]	[1.7%]	[1.8%]
CF	63.4	**17.6**	13.4	3.0	1.3
		[27.8%]	[21.1%]	[4.7%]	[2.0%]
ESF[31] and Youth Employment Initiative	88.9	**1.2**	1.2	-	-
		[1.3%]	[1.3%]	-	-
EMFF[32]	5.7	**1.0**	1.0	-	-
		[18.2%]	[18.2%]		
EAFRD[33]	99.0	**56.5**	5.4	7.5	43.6
		[57.1%]	[5.5%]	[7.6%]	[44%]
Total	453.7	**114.2**	51.9	13.9	48.5
		[25.4%]	[11.4%]	[3.1%]	[10.8%]

Source: European Commission

[39] http://www.ilo.org/global/topics/green-jobs/publications/WCMS_432859/lang--en/index.htm

Conclusion

As shown in this report, climate change and adaptation measures are expected to have a wide range of effects over employment and working conditions. These effects include job destructions, job creations, impacts over competences and skills needs as well as concerns over health and safety at work. As in the case of climate mitigation and the development of the green economy, trade union action is therefore needed in order to ensure an adequate protection of workers and the adoption of coherent adaptation policies that consider the impacts of climate change over the world of work.

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