

Alternative futures for the Circular Economy and its effects on Occupational Safety and Health in 2040

Workshop 4: Cross-cutting implications & regional perspectives
13 October 2022

Summary Report

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Introduction

The European Agency for Safety and Health at Work (EU-OSHA) has for several years been applying foresight approaches as part of its mission to contribute to safer and healthier working conditions in the EU. Its foresight approach looks at changes that may take place in the future and considers what their consequences could be for occupational safety and health (OSH), with the aim of supporting policymaking and raising awareness to reduce work-related accidents and ill health.

Within EU-OSHA's 3rd foresight cycle,¹ work is focused on the circular economy (CE) and its effects on OSH, primarily within the European context. This project is carried out against the background of an EU policy shift towards more environmentally sustainable practices, with several policy initiatives driving efforts in the CE arena.² These initiatives, and indeed the CE as a whole, are widely considered to be critical and influential developments that will be beneficial to the action against climate change and will ultimately have impacts on jobs and on OSH.

Initiated in 2020, Phase 1 of the project explored different ways in which future jobs may be impacted by efforts towards implementing a CE, and what consequences this may have for OSH in the future. This was realised through the development of four macro-scenarios focused on the CE and its effects on OSH, drawing strongly also from previous foresight work undertaken by EU-OSHA. Phase 2, the current project phase, focuses on the dissemination and tailoring of the macro-scenarios developed in Phase 1, via stakeholder engagement.

Through a series of four workshops, the macro scenarios developed in Phase 1 are being disseminated in order to strengthen and maximise the impact of the overall foresight study, and to dive deeper into sectoral and stakeholder perspectives. This is being realised, in part, via the tailoring of the Phase 1 macro-scenarios through the development of micro-scenarios focussing on the specific target groups present at each of the workshops. The resulting micro-scenarios will be presented in a final report at the conclusion of Phase 2 of the project (ca. end of 2022).

This workshop summary report provides an overview of the outputs from the fourth workshop held on 13 October 2022, which focussed on cross-cutting implications and regional perspectives from the macro-scenarios.

¹ Previous foresight cycles completed by EU-OSHA used scenario-building to explore future risks related to work in 'green' jobs and related to digitalisation.

² The key related policy initiative is the European Green Deal initiative, which has the overarching aim of making Europe climate neutral by 2050 (see https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en). Alongside the Green Deal initiative sits the Commission's 2015 CE package, comprising - an EU action plan for the CE ('Closing the Loop') with 54 concrete actions to achieve a CE, many with significant policy and regulatory implications for the EU's waste and recycling sector (see <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52015DC0614>).

Workshop aims, expected outputs and agenda

Overall aims

- To provide participants with an understanding of what foresight is and its function in enhancing policy making (on a European, national, sectorial and/or company level) (i.e. anticipatory governance)
- Introduce participants to the scenarios and the likely implications these may have for OSH in the future (i.e., diving into stakeholder and sectorial perspectives)
- Enable participants to think about what cross-cutting implications and regional perspectives from the macro-scenarios

Expected outputs

- Dissemination of the Phase 1 macro-scenarios in a clear and memorable way
- Strengthen and maximise the impact of the overall foresight study (while positioning EU-OSHA as an inclusive, forward-thinking and solution-providing organisation)
- Content-wise, collect insights and input for the development of the micro-scenarios, here focussing on cross-cutting and regional implications

Agenda

Opening Remarks & Intro to Workshop and CE and OSH Scenarios – Plenary	
09:30 – 10:30 CET	Annick (EU-OSHA): Short Intro & Welcome Cornelia Daheim & Jessica Prendergast (Future Impacts): Intro to the foresight process and the four macro-scenarios All: Q&A
Working Session 1: Exploring Alternative Scenarios for the Future of CE and OSH – Group work	
10:30 – 11:30 CET	Guiding question for the group work: What changes could the different scenarios bring about for the future of work until 2040? Thinking about specific implications for your country / region? And what these changes might mean for OSH?
<i>Short Break</i>	
Working Session 2: Policy Implications from the Scenarios – Group work	
11:45 – 12:45 CET	Guiding question for the group work: What could policy-makers do to improve future OSH perspectives? incl. which actors and stakeholders play a key role in this? What are key levers, i.e., most important measures, for supporting workers?
<i>Lunch Break</i>	
Working Session 3: Results walk	
13:45 – 14:30 CET	Presentation of working group results by a facilitator (Future Impacts)
Sharing Results, Final Reflections & Next Steps - Plenary	
14:30 – 15:00 CET	All: Final comments and reflection / Q&A Cornelia Daheim (Future Impacts): Wrap-Up, Next Steps and Closing Remarks
Workshop End	

Overview of the results from the working groups

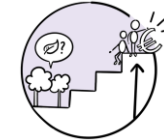
Working Session 1: Key implications from the scenarios

Highlights from the group work regarding general implications from the scenarios



	Scenario 1: The roaring 40's – fully circular and inclusive	Scenario 2: Carbon neutrality – of a hazardous kind	Scenario 3: Staying afloat – amid economic and environmental crises	Scenario 4: Regional Circularities – with European divides
General implications (for work and working conditions, in specific sectors, ...)	<ul style="list-style-type: none"> Reskilling, upskilling and knowledge transfer are challenging but critical Necessary to identify who is most vulnerable (e.g., workers, SMEs) OSH requirements likely to impact heavily on SMEs with limited resources Need for continuous union involvement & worker participation New possibilities to improve psychosocial conditions e.g. by reducing workloads in line with reduced consumption 	<ul style="list-style-type: none"> Rapid loss of jobs in some sectors vs rapid growth in other sectors Need for new skills and life-long learning New attitudes about existing risks Lack of accountability and transparency at policy and industry level Risk of workers doing 'dirty jobs' in the 'clean economy' Need to pay attention to older workers 	<ul style="list-style-type: none"> Survival is the dominant mode due to individualism and outsourcing EU internal market breakdown due to investment cuts and competitive pressures from non-EU countries Rising frustration due to skills mismatch for available jobs Less money leads to more repairs being done, introducing CE through the backdoor Investment stops, rising risk of unemployment 	<ul style="list-style-type: none"> Too little regulation for recycling activities 'CE-eyes': Pockets of circular systems where the fortunate do not look beyond Unequal share of knowledge More precarious jobs, especially in SMEs Few incentives for standardization of recycling and design Tensions likely (e.g., between groups of workers)
Specific OSH-related implications	<ul style="list-style-type: none"> Outcomes depend on the pace of the transition to a circular economy with larger challenges for OSH associated with a fast adoption of e.g. CE principles, automation, etc. The speed of transition will also affect the success (or not) of knowledge transfer, capacity building, etc. Important to be prepared (early) for CE / changed environments 	<ul style="list-style-type: none"> Need for preventative maintenance programs Reputation management for OSH, e.g., OSH as cross-sector guardian Green ≠ Safe. New professions (within the green industries) will likely include new and unknown risks, e.g., psychological risks Deregulation of OSH measures likely to make rapid transition possible Rapidness of change means that OSH practice and legislation may not keep up 	<ul style="list-style-type: none"> Without business investment, new products not designed with OSH (or CE) in mind Focus on short-term gain on production and consumption erodes awareness of OSH importance Mental health is key: with poor quality jobs, workers will take on risks every day OSH anchored in public health provision can safeguard new environment With platform work proliferating, nobody takes responsibility for OSH 	<ul style="list-style-type: none"> While there might be more white-collar, "good jobs" (such as designers) in the CE these workers might also suffer from mental stress, being overworked, and burnout The (formal and informal) recycling sector likely to be coined by unpleasant, monotonous, and unsafe jobs Information gap regarding components and materials of recycling goods leads to OSH risks

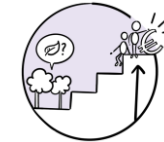
Highlights from the group work regarding specific regional implications



<p>Scenario 1: The roaring 40's – fully circular and inclusive</p>	<p>Scenario 2: Carbon neutrality – of a hazardous kind</p>	<p>Scenario 3: Staying afloat – amid economic and environmental crises</p>	<p>Scenario 4: Regional Circularities – with European divides</p>
<ul style="list-style-type: none"> • Structural differences between the regions (such as share of SMEs, share of primary industries, etc.) will result in some regions fearing better than others from the CE transition • Exacerbation of differing OSH awareness in EU regions • Potential to lead to divides and inequalities with some countries being places of cheaper production and lower CE/OSH requirements • Who benefits from CE depends on pre-existing sectors in respective regions 	<ul style="list-style-type: none"> • Cultural differences, educational models and people's attitudes towards CE and OSH vary significantly despite strong EU legislation • Increased migration (coming from within as well as outside EU) • Lower-income countries face brain drain • Regional variances in level of resources labour inspectors are granted to ensure good working conditions and OSH • Countries in fear of declining workforce resulting in less workers (e.g., Croatia) • High income countries need integration programs for adapting OSH • Majority of workers in 2040 are likely to be migrant workers 	<ul style="list-style-type: none"> • Regions will also become polarised due to e.g., age structure as age distribution differs widely (also within a country) • Rural regions might retain greater levels of solidarity than urban ones where competition for work trumps everything. However, waste streams will not only go to low-income countries but also to rural regions • Current starting point (environmental aspects, cultural and economic aspects) set tone for different places' trajectory into this 2040 scenario • Mediterranean regions will be particularly hard hit, as they will also suffer from climate change impacts • Culture strongly shapes crises responses • Exacerbation of differences and hierarchies within EU 	<ul style="list-style-type: none"> • Pioneer Region: regions as role models, e.g., for recycling • Danger that the low waged, unwaged and dangerous jobs in the CE will be carried out by workers in Eastern Europe • Country-wide industry transformations (e.g., Norway away from gas/oil to fish farming industry) • Illegal waste trade from richer EU countries to poorer one will rise causing risks for people dealing with waste but also for the environment • While safe and valuable waste will likely stay in richer EU countries, the more hazardous and less valuable waste will be traded to poorer regions within the EU and also exported out of the EU • Urban vs. rural divide with urban regions benefiting most

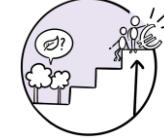
Working Session 2: Key policy implications from the scenarios for OSH

Highlights from the group work regarding policy implications



<p>Scenario 1: The roaring 40's – fully circular and inclusive</p>	<p>Scenario 2: Carbon neutrality – of a hazardous kind</p>	<p>Scenario 3: Staying afloat – amid economic and environmental crises</p>	<p>Scenario 4: Regional Circularities – with European divides</p>
<ul style="list-style-type: none"> • Promote EU cohesion across e.g. materials (i.e., production inputs), legislation, standards, wages, training programmes, qualifications, etc. • Improve and streamline communication between e.g. workers and employers, government and employers, within workplaces, EU countries, etc. • Share best-practices and highlight negative practices to avoid across EU • Accelerate EU oversight as a precursor of successful outcomes (for CE and for OSH) • Include tech maintenance considerations into legislation • Need for public investment into OSH, and integration of OSH into all legislation (i.e. Green Deal) from the start • Improve job situation for older workers and migrant workers (e.g., healthcare) 	<ul style="list-style-type: none"> • Promote retraining and life-long learning to prevent skills shortages (regarding CE) and provide for job security (especially for those workers displaced from the carbon-intensive industries, focus on retraining them for green industry jobs) • Tailor (re-)education opportunities to the social situation of workers, i.e., their time, resources, or capacities • Strongly integrate migrant workers into CE transition (as they are already working along the principles of CE) • Counteract pushback from industries and other stakeholders regarding 'anything new' (caused by 'overwhelm' of rapid transition) • Counteract the reinforcement of traditional gender roles in new formation of workforce in green industries • Beware of the timing: proactive policymaking is necessary • Manage OSH reputation: Making OSH 'cool' and changing the mindset of workers 	<ul style="list-style-type: none"> • Introduce and/or improve integration programmes and job safety for migrant workers • Establish short supply chains and embed the requisite skills locally (especially in rural areas) • Minimise the gap between employment standards in different EU Member States to avoid excessive migration and associated exploitation (e.g., care workers from Central Europe looking after elderly in Germany and Austria) • Undertake stakeholder needs assessment on the EU level and integrate OSH issues in procurement standards analogous to 'sustainable by design' • Reinvent mechanisms of collective solidarity, e.g., with new ways of working for trade unions • Re-evaluate the role of the private sector, building on businesses' willingness to invest 	<ul style="list-style-type: none"> • Introduce and implement digital detectors/digital twins/digital passports for all products so that consumers see what materials products are made out of but also know who produced it • Formalise the informal economy (e.g., workers receive a proper contract, not only to ensure that they are waged but to ensure OSH measures can be introduced) • Integrate informal waste workers into the formal waste management systems (e.g., create a public company that employs workers to collect valuable waste) • Increase public ownership to increase governmental control over the CE and to counteract higher fragmentation and a loss of control and accountability • Invest into and innovate the CE • Standardise and effectively regulate the circular economy across industries and EU taxonomy

“Tweets from 2040”



<p>Scenario 1: The roaring 40's – fully circular and inclusive</p>	<p>Scenario 2: Carbon neutrality – of a hazardous kind</p>	<p>Scenario 3: Staying afloat – amid economic and environmental crises</p>	<p>Scenario 4: Regional Circularities – with European divides</p>
<ul style="list-style-type: none"> • So proud to start the next steps of the DGSFS (Digital Green Social Fair Safe) strategy with social partners and NGOs from all across Europe! Progress ahead! #weneedyou #everyonewelcome #yeswecan #yeswewill #participatoryproject • Digital and environmental literacy should be a borderless right for all workers in the EU! #OSHmatters #SocialGreenTransition #StrongUnions #EU-OSHareYouListening • Embrace and adopt new technologies and opportunities in OSH to create safer and healthier work environments for all workers. All of us have the same rights! #Communication #Technologies #ThinkGreen #SaferAndHealthierEnvironment #GetMoving 	<ul style="list-style-type: none"> • Employees are at heart of our mission zero: It is their creativity, commitment, performance, health, safety ensuring our sustainable future. Vision zero is our guideline. • #LabourInspector, Give us more people, more money and more knowledge • We need to have more economic and social resources in order to raise awareness for all parties included in economy, safety and ecology • Safety is the future **recycling emoji** 	<ul style="list-style-type: none"> • Stop the social & environmental degradation! It's time to reconnect mainstreaming OSH across the EU Green Deal ambitions. Link OSH with safe & sustainable by design – Joint alliance of European Trade Association & Occupational social insurances • My new commission will include a commissioner to make sure that OSH is in all EU policies. That way we will protect our workers and companies. • Hi workers from all EU! Let's post here pictures of your working conditions, give your wage and name the company! (I mean the real company, the big one) #NameAndShame #FairWork #OSHforAll • When will we finally have minimum wages all over EU? (worker) • By 2040 80% of workplaces are digitalised (policy-maker) • Why are U using the countryside only as a Dump? We want infrastructure! (Inhabitant from the countryside) 	<ul style="list-style-type: none"> • Waste is value! Give us your waste back and we give you money back! For a forward-looking circular economy in Europe! #StopExportingOfWaste #WasteDumping • Finally the #GIGeconomy is regulated by basic #OSHstandards • Occupational health care is now organized for self-employed and GIG-workers • New proactive OSH legislation released with an emphasis on safe and sustainability by design also for workplaces! #OSH #SSbD • We are guaranteeing recycling of your plastic only if you collect it type-clean. To do this, you as consumers need full transparent information from industry. Industry is obliged to give you this information on every single bottle. #WasteTransparency • Gamechanger! Our new digital twin platform for all EU products & materials will improve OSH for CE • EU deposit on electronics parts has led to both more recycling & more jobs (Formal with better OSH) • New EU project on OSH policy gaps has created 16 new regulations for more sustainable work

<p>Scenario 1: The roaring 40's – fully circular and inclusive</p>	<p>Scenario 2: Carbon neutrality – of a hazardous kind</p>	<p>Scenario 3: Staying afloat – amid economic and environmental crises</p>	<p>Scenario 4: Regional Circularities – with European divides</p>
			<ul style="list-style-type: none"> • Formalized economy, protected workers #HappyGovernment Happy to welcome #GIGeconomy to #OSHfamily • Because our earth is worth it! We invest in public waste management & innovation • Looking for: developer for a new app to support our local bottle/battery/substances collection/identification process, including good OSH for workers, etc. (Regional policy-maker)

Key needs and priorities for action and policy: cross-cutting regional and cross-cutting policy implications (i.e., OSH levers)

Key levers to improve OSH prospects across the scenarios

Initiate and accelerate CE and OSH education, awareness, and communication

- Allow for continuous (re-)skilling and (re-)training of all relevant stakeholders (incl. workers, OSH inspectors, policy-makers, etc.) and introduce OSH literacy at the earliest possible stage (i.e. in secondary schooling)
- Counteract an unequal regional share of knowledge, skills mismatch, and related frustration by providing local education opportunities
- Integrate the changing nature of work and related new OSH challenges into the conceptualization of training programs (with elements on e.g., new psychosocial risks, etc.)
- Tailor training opportunities to regions' cultural differences, educational models, and people's attitudes towards CE and OSH, making them accessible for everyone (e.g., assess worker's social situation, their time, resources, or capacities)
- Improve and streamline communication between all stakeholders (i.e. workers, employers, government, European Commission, Member States, etc., with a focus on building OSH knowledge capacity)

Promote socially just (work-)migration

- Effectively integrate migrant and vulnerable workers into the CE transition with the principle of 'leave no one behind'
- Introduce and/or improve work integration programmes and job safety for migrant workers
- Minimise the gap between employment standards in different EU Member States to avoid excessive migration and associated exploitation
- Support union involvement and workers participation
- Counteract decline of workforce in specific regions (i.e., rural areas and socio-economically disadvantaged regions) via attractive work programmes

Pro-active and region-specific CE and OSH policymaking

- Proactive adaptation to changing workplaces as a result of CE, passing on best practice principles from first-mover regions
- Counteract illegal waste trade between EU regions, and from other (non-EU) countries
- Involve local stakeholders in the conversation to promote OSH (e.g., through local panels and regional unions)
- Customise CE and OSH policymaking to pre-existing sector distribution in respective regions

Introduce OSH practices through the backdoor: Areas and windows of opportunity

- Target formal and informal workers in the waste industry: Recycling may be one area where CE practices already exist (albeit in their infancy) but there are opportunities to accelerate these practices while at the same time introducing OSH practices and knowledge
- Integrate OSH issues in procurement standards analogous to 'sustainable by design'
- Provide incentives for OSH training to migrant workers who are already following CE principles

Discussion and conclusions

The group exercises and discussions at the workshop focussed on identifying key cross-cutting implications and regional perspectives from the macro-scenarios to 2040, as well as specific OSH implications. The exercises found that across all four scenarios both positive and negative OSH repercussions will likely be experienced by workers, with negative repercussions hitting vulnerable and migrant workers particularly hard. Particular importance was placed on the early integration of OSH considerations into relevant policy around the transition to CE, to get ahead of future changes to workplaces and ensure ‘no one is left behind’.

The training, reskilling, and upskilling of workers (as well as all other key stakeholders) was identified by workshop attendees as the key lever to improve health and safety outcomes. (Notably, this was identified as the key lever across all four workshops conducted for this project.) There was also a strong call to improve communication of CE developments and their effects on OSH (as well as emerging best practices), to employers and workers in all regions, with the goal of promoting convergence in health and safety outcomes across EU countries and regions.

Taking the insights generated at the fourth workshop as stand-alone outcomes,³ it’s possible to draw some initial conclusions on key actions and policy initiatives needed to support EU workers and regions in the transition to the CE as detailed in the four macro-scenarios. Across the working groups, a handful of key cross-cutting policy levers were identified by the workshop attendees, these included:

- **Promotion of clear and targeted communication on OSH regulation and best-practices**, ensuring that safe and trustworthy information reaches all workers across the EU via **comprehensive up-to-date training, reskilling, and upskilling initiatives**.
- A call to effectively **integrate migrant and vulnerable workers into the CE transition** following the principle of ‘**leave no one behind**’ while simultaneously **minimising the gap between employment standards in different EU Member States** to avoid excessive migration and associated exploitation, as well as regional polarisation.
- The need to **integrate OSH considerations in the earliest stages of policy making**, with a focus on proactively developing safe and **consistent guidelines and legislation** for EU countries and regions.

In looking ahead to upcoming project steps, the wide-range of varied perspectives collected at the four workshops on the upcoming opportunities and challenges for future EU workers and workplaces from a shift to a CE will be brought together in the upcoming final project report. As a key outcome of this project phase, the final results will also discuss the needs for research, policy and action that emerged across the stakeholder workshops, as well as putting forward recommendations and highlighting gaps and identifying needs for actions and research to improve the health and safety of workers in the future.

³ The final project report (to be published in early 2023) will bring together the insights across all four workshops in drawing conclusions on the effects on OSH from a CE in the EU.

