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# Just Transition Platform: Working Group on Steel Scoping Paper

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*Regional and  
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## I. Objectives of the Scoping Paper

The Scoping Paper is the first document produced by the Working Group (WG). It represents the first deliverable of the WG, laying down the foundations of the preparation of the Implementation Plan and providing the scope of the actions to be implemented by WG members in the next two years. The first part of the Scoping Paper focuses on the objectives and composition of the WG, while the second part describes the challenges and focus areas identified by the members of the first circle of the WG, including the approaches for actions and good practice examples from the local and regional level.

The Scoping Paper has been prepared in the first half of March 2022 by the 8 first circle members of the WG, supported by the [Just Transition Platform \(JTP\)](#) Secretariat. Between 30 March and 08 April, it has entered into consultation with the 8 second circle members (close observers) of the WG. Following a final review and validation, the Scoping Paper was presented at the JTP event in May 2022.

## II. Objectives of the Working Group

As a cornerstone of the JTP, four WGs have been established in November 2021 to ensure comprehensive stakeholder involvement throughout the activities of the JTP. Three WGs have a thematic focus on a carbon-intensive sector (chemical, steel, cement) to exchange and develop practical solutions to ensure that the decarbonisation of the respective industry happens in a fair way, leaving no one behind. The common objective (also with other WGs) is to develop problem-solving and advocacy actions within the identified focus areas, to achieve the wider goals of the JTP – supporting stakeholders in their just transition. The WGs ensure that this will be implemented through a multi-level and multi-stakeholder governance approach with a view of developing a common just transition vision across the EU.

The main objective of the WG on Steel is to exchange and to develop practical solutions to ensure that the decarbonisation of the steel industry will happen in a fair way and will leave no one behind. The WG will support the European Commission in developing its strategic approach to engaging different stakeholder groups in the process of implementation of the Just Transition Fund (JTF). Each WG will gather a variety of stakeholders and their different experiences and challenges encountered in transition sectors and will support the establishment of stakeholder networks in the transition areas.

## III. Working Group Composition

This (and the other three WGs) WG consists of three types of members, namely core members ('first circle'), close observers ('second circle') and other stakeholders ('third circle'). Within the first circle group, several Action Leaders will be identified to spearhead selected actions (see Figure 1). Notably:

1. **Core members of the WG (first circle)** actively participate in all the phases and activities of the WG. They shape and perform the work determined through the various deliverables and actions and participate in WG meetings on at least a bi-annual basis.
2. The **second circle of close observers** takes part in some of the work of the WG on an ad hoc basis. Members are kept informed of progress made by the WG, notably through consultations on the WG's deliverables.
3. Finally, **the third circle of other stakeholders** remains informed on the mid-term and final results of the WG activities.

WG members are organisations/authorities, represented by one person (and if needed by an alternative representative) in the activities and meetings of the WG. Within the WG on Steel, 8, 8 and 9 members (for the first, second and third circle, respectively) have been selected following a [call for applications](#) opened in September/October 2021. The WG on Steel is still looking for new members of all circles, especially the first circle.

Below is a brief explanation of the five different stakeholder categories that were addressed by the call for applications, including the number of members per circle. In the first circle, geographical, sectorial and gender balance (of representatives) was of utmost importance, as well as an even distribution between stakeholder types, know-how and interest. The complete list of members can be found in Annex 1.

Stakeholder group	Description	Number of members per circle <sup>1</sup>		
		First	Second	Third
<b>Member states authorities</b>	These are national authorities from the EU27, such as ministries or national agencies.	-	1	-
<b>Local and regional authorities</b>	These are regional authorities, national representatives of local authorities, local authorities representing cities and urban areas, or other bodies organised at national, regional or local level and authorities representing the territories covered by Territorial Just Transition Plans (TJTP) with relevance for the specific carbon-intensive sector(s).	-	1	1
<b>Associations representing regional, local, urban and other public authorities</b>	These include associations representing higher educational institutions, educational and training providers, think tanks and research organisations, active and knowledgeable in the field of just transition; as well as associations representing other public authorities having an active role or expertise in just transition matters, including public procurement offices, and bodies for the promotion of equal treatment established in accordance with Directives 2000/43/EC, 2004/113/EC and 2006/54/EC.	1	2	2
<b>Organisations representing economic and social partners</b>	These include social partners' organisations, in particular those active in just transition, associations representing stakeholders; association of chambers of commerce, associations representing business, financial sector actors, consultancies representing the general interest of industries and branches, active in the field of just transition, as well as	5	2	4

	representatives of the social economy; and associations representing thematic networks representing specific economic sectors.			
<b>Bodies representing civil society, such as non-governmental organisations</b>	These are bodies involved in the development of just transition, taking into account representativeness, geographic and thematic coverage, management capacity and expertise; as well as organisations or groups that are significantly affected or likely to be significantly affected by the implementation of the just transition strategy.	2	2	2
<b>Total</b>		8	8	9

<sup>[4]</sup> As of 9 March 2022; number of circles are subject to change

## IV. Presentation of the challenges

Steel production that is largely carbon-neutral is a great challenge, but technically possible. There are already some promising approaches that show what carbon-neutral steel production could look like in the future. A carbon-neutral steel production does also include a strong reduction of local pollution which is on the one side necessary to ensure a healthy environment and on the other side, to increase the local acceptance of the transition. Steel production can be roughly divided into primary production based on iron ore and the secondary route based on steel scrap. The blast furnace-converter route is the most important primary steel route worldwide, while the electric arc furnace is the preferred process for melting and purifying steel scrap. An important decarbonisation approach is to increase the share of the secondary route (melting of steel scrap in the electric arc furnace), as it is already comparatively low in CO<sub>2</sub> and requires relatively little energy. If renewable electricity and biomass (as a biogenic carbon carrier) are used, this route is, in perspective, almost CO<sub>2</sub> neutral. A greater challenge is carbon-neutral primary steel production. The main reason for this is the process emissions that inevitably occur in many process steps of the blast furnace route. For (largely) carbon-neutral steel production, rapid further development and market introduction of the technologies described is necessary (Schneider 2020).

The challenges of sectoral transformation also have implications for the entire steel supply chain. For example, the need to reduce pressure on and dependence on natural resources (iron ore, limestone, coal, etc.) extracted in other parts of the world or in other regions of Europe, sometimes with disadvantages for local communities and workers' working conditions.

Steel recycling will also play a more important role in the future and have effects on local labour markets and the global steel supply chain. It is important to ensure that no one is left behind at the steel mill or local level and that the just transition is shaped together with stakeholders and citizens.

### *Investment and innovation cycles*

In energy-intensive industries, new technologies are usually integrated into the existing structures and plants because of the long investment cycles and high-entry barriers for potential new competitors.

The investments that were made in the steel sector need to pay off over long periods and therefore the existing structures are highly persistent. Consequently, the probability of novel technologies and processes being implemented is often limited. But the window of opportunity for the bulk of the investment is playing out in this decade: About two-third of the EU steel factories are due to major investments in this decade, meaning that there is a now-or-never opportunity to uptake green technologies ([Agora Energiewende 2021](#)). Moreover, key low-carbon technologies are ready and can be deployed now. Predominantly, incremental innovations with typically smaller and stepwise effects such as productivity increases, energy cost reduction and more efficient material use have entered the markets. The risks and uncertainties of radical innovations on the other hand often require appropriate financial savings to deal with setbacks and failure (Lechtenböhmer 2019).

### *Circularity and demand-side reductions*

It will be crucial to create more value with (green) steel products that will use less raw materials, and thus reducing primary steel consumption in Europe. This means there is need for:

- a reduction of material, energy and other resources to create steel, but also a reduction regarding the weight of steel used in products;
- reusing steel again either for its original purpose or for a similar purpose;
- remanufacturing and restoring durable used steel products;
- recycling steel products at the end of their lifetime to create new steel.

Such a stronger circular economy<sup>1</sup> in the steel sector and business model innovations associated with steel (product as a service, repair of steel structures, etc.) will cause effects on the labour market (see below).

### *Education and training*

A shift to new production processes will require new skills. Energy intensive industries (EII) face a mismatch and gap in skills. Regions will have to anticipate and map the needs of industry for a skilled work force in order to prevent shortages and mismatches at regional and national level. Creating job opportunities will require upskilling and retraining of the workforce. Effective partnerships between vocational education and training, business, social partners, sectoral stakeholders, academia and civil society will be needed at regional level to address the issue of upskilling/reskilling of the workforce.

With all the challenges that arise with regard to the labour market or employees, it should be noted that it is not only about direct effects in the steel industry, but also about the indirect jobs that will be newly created through a stronger circular economy in the steel sector (highly efficient recycling techniques to eliminate pollution from copper scrap) and through changes in the business models associated with steel (product as a service, repair of steel structures, etc.).

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<sup>1</sup>Find more information here: <https://worldsteel.org/circulareconomy/>

### *Local communities and social acceptance*

As just mentioned, a transition needs to ensure a dynamic local employment market associated with a more circular steelmaking. Moreover, a transition should increase the resilience on the local level, in the meaning of using fewer natural resources that are very often not endemic or local renewables to rationalise the need for new infrastructure.

In many regions, local communities rely heavily on the steel industry as it is the only industry bringing economic power to a region. Here it is often the case that men work in the steel industry and women carry out the care work or work in rather low-paid industries (e.g. supermarkets, service providers, etc.). A Just Transition is therefore not only about finding solutions for the directly affected workers in the steel industry itself. Rather, it is about taking into account all the people in these communities who are affected by the transition. In concrete terms, this means explicitly to also consider women in the acquisition of new skills or finding socially just solutions for them in case of job-losses. Moreover, a number of studies show that diversity unlocks innovation and innovation is a key driver to reduce costs and increase competitiveness of clean energy technologies which are needed for a carbon-neutral steel sector (IEA 2018)<sup>2</sup>.

Thus, it is of high importance to increase the public acceptance of the necessary transition-related activities such as the implementation of large infrastructure projects (e.g. construction of new windmills, high-voltage lines, hydrogen pipelines or CO<sub>2</sub> storage sites often faces a negative reaction from local communities). Dealing with distributional consequences will also have to be taken into account in order to avoid that people with low income are disproportionately affected through higher electricity/heating bills.

### *Ongoing political and stakeholder activities*

The steel industry is represented by a variety of industrial organisations at different scales: national, European Union-wide as well as globally. These organisations often report production data and publish strategic industry documents such as roadmaps. Within the EU, a high-level round table was convened between 2012 and 2013 to advise on the future of the European steel industry. The European Steel Association (EUROFER) published a roadmap in 2013<sup>3</sup>, which was updated in 2019<sup>4</sup>. Recently in April 2022, the official report of the ‘GreenSteel for Europe’<sup>5</sup> project ([European](#)

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<sup>2</sup> <https://www.iea.org/articles/tracking-gender-and-the-clean-energy-transition>

<sup>3</sup> <https://www.google.com/search?client=firefox-b-d&q=A+Steel+RoAdmAp+foR+A+Low+Carbon+EuropE+2050+-+Eurofer>

<sup>4</sup> <https://www.eurofer.eu/publications/reports-or-studies/low-carbon-roadmap-pathways-to-a-co2-neutral-european-steel-industry/>

<sup>5</sup> The ‘GreenSteel for Europe’ project developed a technology roadmap and defined mid- and long-term pathways for the decarbonisation of the steel industry; analysed funding options; assessed the economic, social, environmental and industrial leadership impacts of EU policy options.



[Commission, 2022](#))<sup>6</sup> has been published as support to the EU towards achieving the 2030 climate and energy targets and the 2050 long-term strategy for a climate-neutral Europe, with effective solutions for clean steelmaking.

On 10 March 2020, the Commission adopted a new Industrial Strategy to help Europe's industry lead the green and digital transformations and to drive Europe's competitiveness and sovereignty. Following the experience of the COVID-19 pandemic, the update of the EU Industrial Strategy highlighted the need to promote an inclusive recovery and further accelerate the green and digital transitions. Thus, the Commission (DG GROW) proposed a collaborative process with stakeholders which includes Member States, industry, social partners and academia. It aims to identify and co-design the way forward: a transition pathway for industrial ecosystems. A priority is given to the ecosystems that face the most important challenges and have been most heavily affected by the crisis – including energy intensive industries such as the steel industry.

The consideration and integration of these activities play a central role in the implementation of the working groups. Through this, important impulses can be given from the Just Transition Platform to the aforementioned institutions. Strengthening this promoting role is very important for the success of the platform and the Working Groups affiliated to it.

## V. Focus areas of the Working Group

**Three focus areas have been identified by the WG on Steel.** These aim at addressing some of the challenges identified in the section above.

A complete description of each topic and issues that the WG plans to tackle can be found below. The description respects the same structure for all the three focus areas, presenting the problem description/issues to be tackled, the preliminary approaches for action and ideas for the implementation phase, and (where appropriate) good practice examples from the local/regional level.

Focus area 1 – Regional labour market: Assessing the impact of transition on the workforce

### *Problem description*

European steel is an essential element in helping Europe meet its climate goals including via the transformation of our transport systems, the modernisation of energy networks, the deployment of renewable energies and the refurbishment of buildings to become more energy efficient.

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<sup>6</sup> <https://op.europa.eu/en/publication-detail/-/publication/89cda1b2-b169-11ec-83e1-01aa75ed71a1/language-en/format-PDF/source-254269180>:

Furthermore, the industry provides for high added value and well paid, good jobs in various European regions. Therefore, the **Just Transition Mechanism**, along with other EU funding programmes, is an essential element in transforming the sector and safeguarding quality employment in Europe's regions.

Steel plant closures impact not only direct workers, but the entire supply chain and local businesses. It should be noted that while the EU steel industry is responsible for **326 000 direct jobs**, it supports over **2.6 million jobs** (indirect and induced).

A Just Transition for European steel workers, and steel producing regions, is essential, and decarbonisation must lead to transformation not de-industrialisation. Europe should lead the way in producing clean and circular steel to the global market noting that it is unacceptable for European steel regions and workers to lose out to cheap steel, produced with a high carbon footprint, imported from third countries with low environmental and working standards. European steel workers support the move to produce lower carbon and more circular steel here in Europe but insist that this transition is **just**.<sup>7</sup>

This green and sustainable future for the European steel sector calls for an ambitious green transition. For this transition to be **just**, the effective involvement of all stakeholders is key. In addition to the **broader stakeholder involvement**, social dialogue (at tripartite or bipartite level) must be the instrument to plan the job-to-job transition for European steel workers. **Supportive instruments for effective workers' participation** at sectoral or company level and collective agreements, laying out the conditions of the transition of workforce, must play a fundamental role. While the impact of site closures is obvious, it is important to remember that some process changes will severely impact the workforce. For example, a move from a blast furnace to an electric arc furnace can result in hundreds of jobs losses at a steel plant, and in some regions, there are no other opportunities for these workers to find jobs at a similar pay with similar rights (including permanent versus short term contracts).

Just Transition requires finding solutions for these impacted workers. This means the **anticipation and management of change** through social dialogue, in which, the effective and timely information and consultation of trade unions and workers is a prerequisite – 'Nothing about us, without us'. Sectoral and company's decarbonisation strategies must be complemented by **Just Transition strategies** laying out the job-to-job transition, including reskilling and upskilling programmes and job-transfer plans of workers. Trade unions and worker representatives must receive timely information and be effectively consulted on those programmes. The creation of the **Just Transition Platform Working Group for Steel** is a welcome opportunity to engage with the European Commission, regional authorities, education providers, civil society, and social partners to work towards a Just Transition for the steel sector to ensure that no worker or region is left behind.

#### *Approaches for action and first ideas for the implementation phase*

A Just Transition for steel workers, and the wider region, will require all stakeholders to come together to ensure that the decarbonisation of the steel sector is properly funded, organised, and does not leave any worker or region behind. For Just Transition to be a success, a few key aspects need to be respected:

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<sup>7</sup> European steel workers' vision on the transition: [European Steel Action Plan](#) & [European Steel Action Day](#)

## I. Adequate resources

A Just Transition will only be delivered if good quality jobs are maintained and created, all regions are able to flourish, and socio-economic inequalities are addressed. Europe needs a sustainable industrial policy that will tap the job potential of moving to a zero-emission industry, while securing investment to transform the industrial base. Job-to-job transitions must be supported, and this entails **serious investment in active labour market policies, retraining and upskilling**: it is estimated that it costs **EUR 10 000 to upskill/retrain a worker**. Currently, the **Just Transition Fund** is inadequate for the task at hand. Resources must be drawn from EU budgets, national funds and industry. While a Just Transition is not free, the costs of poor transitions are much higher for individuals, regions and society at large.

Moreover, the dimension of the challenge calls for a comprehensive funding strategy to ensure complementarity between funding instruments. Crucially, European funding instruments should be attached to **social conditionality** and require regions and companies to engage in effective social dialogue and collective bargaining.

- The implementation phase should identify potential sources of financing and any funding gaps.

## II. Creation of new jobs linked to circularity

The shift to more circular economy in the steel sector should encourage the creation of **more jobs**, while ensuring that education and training systems provide workers with the appropriate skills to support the transition to more circular steel in the design, manufacturing and recycling processes.

However, it should also be noted that many companies in the recycling/waste management sector are **small and medium-sized enterprises (SMEs)** which are not always covered by the same collective agreements when compared with larger steel companies, and do not have access to the same level of social dialogue or national/European Works Councils.

Also, it is important while considering the creation of new 'green' jobs in the sector, that these are **quality jobs with good pay and conditions** which respect workers' rights including adherence to high health and safety standards.

- The implementation phase should identify potential new jobs linked to boosting the circularity of the sector and highlight the need to ensure quality employment with good workers' rights and respect to health and safety standards.

## III. Mapping of employment consequences

Despite the importance of the steel industry and scale of the transformation underway, a clear, **granular mapping of the employment consequences** of a shift towards a climate-neutral European steel sector at regional level is still to be done. Without understanding where exactly the impacted workers are, Just Transition plans, including reskilling and upskilling programmes cannot be tailored to ensure job-to-job transitions. This analysis must be conducted by public authorities in coordination with social partners.

- The implementation phase should set out the minimum requirements to be included in the granular mapping exercises.

#### IV. Anticipation of change and social dialogue

Anticipation of change and social dialogue for all workers must be at the heart of a Just Transition, in 2013 the European Parliament proposed a European legal framework on the anticipation and the management of change – this should be created to ensure workers have the right to co-decision during the **transition of their workplaces and regions, strengthening social dialogue and collective bargaining**.

Sectoral and company's decarbonisation strategies must be complemented by **Just Transition strategies** laying out the job-to-job transition, including reskilling and upskilling programmes and job-transfer plans of workers. Trade unions and worker representatives must receive timely information and be effectively consulted on these programmes.

Collective bargaining is the tool to guarantee the quality of jobs and therefore needs to be reinforced for the transition to be just (maintaining and creating high-quality jobs) for workers.

- The implementation phase should consider and outline the positive benefits of a European legal framework on the anticipation and the management of change on workers and their regions.

#### V. A toolbox of rights to ensure that transitions are smooth for individual workers

Active labour market policies must address the urgency for education and training that ensures reskilling and upskilling to equip workers for jobs within and between transforming industries. Every worker, regardless of contract, must have the **right to quality training and life-long learning**. Furthermore, it must be remembered that skills are not a 'silver bullet' and that they must be combined with **future-proof occupational pathways** to support the transitions between jobs and respond to the skills needs resulting from a rapidly transforming industry.

- The implementation phase should identify minimum requirements in a toolbox of rights for workers to ensure a smooth and just transition for workers.

#### VI. Policy cooperation, exchange of good practices and stakeholder engagement is vital

A Just Transition will happen locally in regional economies and workplaces, but there is much that can be framed by common policy objectives and the **exchange of good practices**. Policy cooperation, between different policy portfolios (industrial policy, environment, employment, education, regional and others), communication and good governance at regional, national and European level is essential, and stakeholder engagement is required to ensure full cooperation.

- The implementation phase should identify means to improve policy cohesion and collect examples of best practice including how to ensure good governance and stakeholder engagement.

Finally, it must be remembered that the steel industry is a **global industry**. It is unacceptable to allow cheap steel, produced with a high carbon footprint, to be dumped on the European market, which not only adds to the international climate crisis, but would lead to thousands of job losses devastating regions across Europe. Therefore, we need an ambitious strategy to ensure a future green and sustainable steel sector which provides good jobs, adds to the local economy, and supports local communities.

*Good examples from other regional or thematic context*

[IndustriAll Europe/Safran European agreement on skills](#): in a context marked by the health crisis and the acceleration of the digital and environmental transformation, particularly affecting the aeronautics sector, IndustriAll Europe and Safran have reached a European agreement which will allow jobs to be saved by means of the development of skills and safeguarding of career paths.

[Renault - Agreement with trade unions on creation of ElectriCity](#): this agreement organises the social rights of employees and allows the creation of Renault ElectriCity. This new subsidiary brings together the three existing sites of Douai, Maubeuge and Ruitz, which currently employ a total of 5 000 people. This new division aims to produce 400 000 vehicles per year and should also see the integration of a battery factory on the Douai site, in partnership with the Chinese group Envision. With an estimated investment of more than EUR 3 billion, this alliance should make it possible to supply Renault's new electric division. The agreement provides also for the creation of 700 jobs in the future centre by 2025.

[Germany: Alliance to avoid redundancies in chemical sector](#): 26 German companies with around one million workers in the country, have decided to form the so-called 'Alliance of Opportunities'. This initiative, which is backed by employers as well as IG BCE, has been formed to help workers retrain for new professions or to work in sectors hit by labour shortages. It is hoped that it will help avoid redundancies, allow workers to maintain their employability and enable job transfers without periods of unemployment.

## Focus area 2 – Environmental dimension of a Just Transition

### *Problem description*

Just Transition is at the heart of the European Green Deal, as well as a key component to get the Paris Agreement targets in a socially just way. The greening of our economy not only is unavoidable to keep global warming at a manageable level, but also provides opportunities to achieve social objectives and to enhance the quality of life of communities in transition.

In this respect, the steel sector makes no exception; at the basis of the modern economy, steelmaking is at a turning point to transform its operations to make them compatible with the natural boundaries of Earth, while continuing to be one of the cornerstones of European economy. In fact, 71.4 % of steel installations in the EU would be reaching the end of their lifetime by this decade<sup>8</sup> and will require major reinvestments. Pivotal investment decisions are going to be made soon to clean the sector and make it Paris-compatible. Bold and decisive actions are required not only to make steel production more sustainable, but also to create new value chains able to diversify local economies and create decent and green jobs. To do so, regional specificities shall be taken into consideration when designing paths towards a clean steelmaking; for instance, some areas might have more potential in terms of

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<sup>8</sup> Agora Energiewende, [Global Steel Transformation Tracker](#)

scrap recycling, others might be a hotspot for a massive uptaking of renewable energy to produce renewable hydrogen and feed the grid, whereas the potential for new diversified activities around other sectors impacted by steelmaking (such as construction) should be always considered. In general, the environmental transition should be fully embraced to take the most from the opportunities it provides.

At the moment, the steel industry needs a combination of different approaches to reduce its footprint on the climate and the environment. Nevertheless, in the medium and long term, the alignment of the steel sector with the Paris Agreement could happen only by putting the 'coal to clean' transition at its core, meaning that strategies to facilitate the direct transition from blast furnaces to clean alternatives based on renewable energy should be preferred and developed already now, given the long investment cycles of the sector.

Not only would such a transformation allow to decrease GHG in a meaningful way, but also to dramatically reduce the amount of pollutants affecting the populations living in the surroundings of steel factories, with consequent further benefits in terms of reduced health costs, higher attractiveness of the area and better quality of life.

Regarding secondary steel, it has a wider set of possible alternatives to not only reduce GHG and pollution emissions, but also to diversify value chains and local economy. The use of Electric Arc Furnaces (EAF) puts this route on the right path to achieve the zero emissions target, since it would be enough to use renewable electricity to make the furnace run cleanly.

However, although the European steel sector is keen to improve its circularity by increasing its use of scrap metal, the period between 2015 and 2019 saw a sharp rise in ferrous scrap exports from the EU27, rising from 9 million tonnes to 15 million tonnes in 2019. This fact is highly concerning as ferrous scrap has an emissions reduction potential of between 1.4 and 5 tonnes CO<sub>2</sub> during the steel making process. With the increased demand in quality scrap needed for EAFs, EU policy makers must ensure that the current revision of Regulation 1013/2006 on Waste Shipments effectively regulates the exportation of EU ferrous scrap, and re-establishes a level playing field between Europe and third countries, both in its environmental and social aspects.

Moreover, the fact that EAFs use scraps makes it also a perfect fit with circular economy practices, being steel potentially recyclable perpetually with clear advantages in terms of reduced environmental impact. For instance, recycling the steel from a single car reduces GHG emissions by an equivalent of more than 550 litres of gasoline, whereas a ton of recycled steel allows to save more than 600 kg of coal<sup>9</sup>.

Of course, scraps need to be collected and must be of good quality. This opens, particularly for SMEs, multiple alternatives to build new local value chains, starting from dismantling of products and the selection of scraps, transport and recycling, until the creation of new products. It must be stressed that these new jobs must be decent jobs which fully respect European health and safety standards.

Also, a more efficient use of steel and 'smart design' practices will play an important role in the reduction of the environmental footprint of the steel sector, while at the same time keeping it on the forefront of innovation. For instance, using less steel to produce cars would require new skills and research, which can provide new opportunities to diversify the economy and new needs in terms of skills. Similarly, in the construction sector a decisive push towards more efficient practices to use steel

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<sup>9</sup> American Iron and Steel Institute

in new buildings, as well as boosting deep renovations projects, will not only allow to use steel more efficiently, but also make the renovation sector, which is typically local, grow.

The demand of steel in advanced economy is already flat, with a foreseen reduction of demand by 8 % by 2030<sup>10</sup>. So, it does not look credible to count on a sudden quantitative revival of steel production; instead, new pathways aimed at improving the way we use steel would deliver in terms of jobs creation and environmental protection.

The greening of steelmaking is a challenge requiring careful consideration and providing many opportunities. To massively increase the availability of renewable energy and renewable hydrogen (not only for steelmaking, but also for energy generation), will create many green jobs in the next few decades.

According to a study carried out by Vivid Economics<sup>11</sup>, the number of jobs created per million spent in energy projects is 7.4 for wind, 7.6 for solar PV and only 2.2 for oil and gas. However, it must be stressed that these new jobs should be decent jobs which are well paid, permanent (as opposed to fixed term contracts) with strong social dialogue and collective bargaining agreements.

Lastly, this transition is accelerated by geopolitical tensions that are pushing the EU to act fast<sup>12</sup> to reduce economic dependencies from undemocratic regimes, which are presently costing to European consumers billions of euros in higher energy bills, while directly threatening local jobs, as soaring energy prices are forcing businesses to halt their operations. Along with investments to reduce emissions in the blast furnace (such as direct reduction), a transition towards EAF powered by local renewables is needed to create local jobs, but also to safeguard existing ones.

As put by the International Labour Organisation, *“managed well, transitions to environmentally and socially sustainable economies can become a strong driver of job creation, job upgrading, social justice and poverty eradication. Greening all enterprises and jobs by introducing more energy and resource efficient practices, avoiding pollution and managing natural resources sustainably leads to innovation, enhances resilience and generates savings which drive new investment and employment.”*

#### *Approaches for action and first ideas for the implementation phase*

The implementation phase should look at the dependency in steelmaking processes and its potential direct impacts for local communities. Today, in the light of the Russian war in Ukraine and the effect on energy, some EAFs that are representing a possible way out of the primary route are already functioning in stop-and-go mode, which proves that external shocks can have an impact on non-resilient activities. If the just transition does not take resilience into consideration, we could potentially envision that tomorrow an external shock could occur, where iron ore supply would lack or be under embargo (or lack of sufficient high-grade iron ores), as those ores are rarely extracted in the vicinity of steelworks.

- As a raw-material based industry, the just transition should place its focus on enhancing resilience at local level that would reduce dependencies both for the primary route as well as the recycling route (local energy production, dynamic local job market linked with circular

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<sup>10</sup> Agora Industry based on World Steel Dynamics (2021)

<sup>11</sup> [UK Export Finance and domestic jobs \(2020\)](#)

<sup>12</sup> COM (2022) 108. Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of Regions - REPowerEU: Joint European Action for more affordable, secure and sustainable energy

steelmaking) and ease the pressure on natural resources (as a run-off resources scenario cannot be excluded). More resilience would also protect local communities from business economy-based decisions taken by global companies operating the steelworks.

- There should be a program which measures and shows to stakeholders the effect of certain environmental projects, e.g. improvement of air-quality, better utilisation of scrap metal, etc. In this respect, specific and measurable KPIs must be set.
- It is necessary to outline a common plan, backed at EU, about the industry's 'green' activities as well as it needs to be discussed/taken into account territories where industry players are unable to shift to 'green' technologies at the same speed with the rest. Such a plan should take into account the following areas and assess the needs to speed them up:
  - a. **Implementation of strategies aimed at increasing material efficiency in order to reduce overall steel demand.** This should be done along the value chain, involving steel producers, engineers, construction companies and product manufacturers. According to the International Energy Agency<sup>13</sup>, the main sectors that can contribute to improve material efficiency are improved product manufacturing, light weighting of vehicles and change in their use (e.g. more public transport, less private transport), improved design and construction of buildings, extended lifetime of buildings through deep renovations.
  - b. **Increasing the production of secondary steel through more effective scrap collection and sorting.** Stakeholders should work to increase scrap collection and recovery at regional and national level by improving recycling channels and sorting methods, and by better connecting participants along supply chains. Focusing on end uses that currently have low collection rates (e.g. reinforcement steel and packaging) will be important. The steel industry, steel product manufacturers and waste collectors could work together to ensure that manufacturing and end-of-life scrap is channelled back to steel producers. Engineers should consider reusability and recyclability in product and building design, and governments can assist by setting requirements and coordinating channels for end-of-life material reuse and recycling.
  - c. **Identification and implementation of actions aimed at increasing the quality of scraps.** Scrap treatment, processing and cleaning represent an opportunity to create new value chains able to increase the availability of high-quality scraps to be used to produce higher-quality recycled steel. In this respect, more research is needed to find innovative ways to valorise low-quality scraps, as well as improving product design in order to avoid contamination of steel with other metals making its recycling more difficult.
  - d. **Improve the collaboration among stakeholders across different value chains** (e.g. steel, cement, construction, recycling, universities and research, unions etc.) in order to develop coordinated actions and channels, identify ways forwards and anticipate the skills that will be needed by workers.

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<sup>13</sup> International Energy Agency, Material efficiency in clean energy transitions



- e. **Long-term Investments in zero-emission steel production to take advantage of the current investment-cycle window.** Once all strategies aimed at optimising the use of secondary steel and reducing at minimum the use of primary steel are set up, it will be clearer of how much primary steel is actually needed. Such an analysis will be essential in order to not overestimate investments in zero-emission steel factories and related facilities, such as renewable hydrogen factories and renewable energy installations.

Furthermore, the implementation phase must acknowledge and take into account the impact of steel transition on steel families and communities. The socio-economic and environmental transition will affect more specifically those communities/areas/regions that rely significantly or entirely on the steel industry and are therefore more vulnerable to the socio-technical transition that has started in the sector. In these communities/areas/regions, changes might prove extremely difficult for the working of various lock-ins mechanisms. Besides the traditional specialisation of economic relationships, such places are characterised also by cognitive lock-ins that attain the prevailing value systems of a community. Additionally, the vulnerability of steel communities is often reinforced by social structures relying on a traditional division of roles between men, as workers in the industry and breadwinner, and women, as housewives or involved in low-paid occupations. In many cases workers in the steel industry are the sole earner in their families. High unemployment rates, intellectual and youth migration, together with an ageing population, complete often bleak perspectives.

- For these reasons families and communities affected by the transition need support to address their transition-related needs. Such communities generally do not willingly choose to transition unless a better or similar alternative is provided, alongside ownership and control over their future. For such regions, green transition is best tackled alongside the improvement of socio-economic prospects and a greater agency in the decision-making.
- Therefore, to learn about families and communities needs and connect them with wider transition programs is an essential part of a Just Transition. Ultimately socio-economic diversification, greater empowerment on decisions and choices, and stronger social structures are key to build more resilient and inclusive communities and to ensure their long-term prosperity.
- *Another interesting idea for the implementation phase could be to link the just transition with the industrial transition pathways and see how goals for the just transition can be featured in clear targets for the steel industry by 2030 and by 2050. While upscaling new technologies (H-DRI, EAFs), industries should also reflect in the rollout plan the needs in terms of specific jobs, for instance with a mapping of the necessary specific skills, in order to not do this reskilling or upskilling exercise when the technology is already in operation on an industrial scale.*

*Good examples from other regional or thematic context*

1. **The ‘First Movers Coalition’** has set ambitious commitments to purchase a certain quantity of zero-emission steel by 2030<sup>14</sup>.

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<sup>14</sup> [https://www3.weforum.org/docs/WEF\\_Steel\\_2021.pdf](https://www3.weforum.org/docs/WEF_Steel_2021.pdf)

2. **The ‘Responsible Steel’ multistakeholder platform**<sup>15</sup> has developed standards to make steel production increasingly sustainable. It took into account environmental, social, occupational and labour-rights issues.
3. **The HYBRIT project in Sweden** is developing hydrogen-based DRI production. A pilot line began operations in summer 2020, and a trial delivery of the first fossil fuel-free steel took place in August 2021<sup>16</sup>. The project is aiming to demonstrate the technology at industrial-scale production as early as 2026. Additional time would likely be required after that for scaled-up production and then full commercialisation. Other steel companies are also advancing towards hydrogen DRI development, including a demonstration plant being designed in Germany.
4. **The Science Park in Gelsenkirchen, Germany**, was built on the site of a former coal-powered steel plant. The building’s glass facade looks over a man-made lake flanked by rolling lawns, and its roof is outfitted with 900 solar panels that generate a third of the building’s electricity. The building houses 55 businesses mostly focused on science, technology, and renewable energy development and became a hotspot to regenerate the local economy, previously highly dependent on carbon intensive activities.
5. **The new generation of Italian steel**. In the last 14 years the geography of the Italian steel has changed. Once led by the big blast furnaces in Taranto, Genova, Piombino and others, since 2008 the electric arc installations manufacturing secondary steel have gained the leadership in terms of sales<sup>17</sup>.

### Focus area 3 – Governance: The issue of governance in the Just Transition

#### *Problem description*

#### *Introduction*

In a key passage within a communication document on the EU Green Deal, the Commission writes: *Since it [transition] will bring substantial change, active public participation and confidence in the transition is paramount if policies are to work and be accepted. A new pact is needed to bring together citizens in all their diversity, with national, regional, local authorities, civil society and industry working closely with the EU’s institutions and consultative bodies.*

Also, with the approval of the Just Transition Fund (JTF), the EU Commission clearly points to the issue of multi-level governance, involving EU national and sub-national institutions, and to the principle of territorial involvement as the individual Member States are called upon to draft territorial plans for a just transition together with local institutions. Experiences of socio-economic transformation (de-industrialisation, re-industrialisation, new development) suggest that the availability of financial resources by itself does not imply positive outcomes nor are market mechanisms by themselves able

<sup>15</sup> <https://www.responsiblesteel.org/>

<sup>16</sup> <https://www.ssab.com/en/news/2021/08/the-worlds-first-fossilfree-steel-ready-for-delivery>

<sup>17</sup> <https://www.ilsole24ore.com/art/acciaio-export-e-produzione-sono-primato-AEdNbg>

to produce desirable outcomes. Processes of transformations need to be governed for their definition and outcomes to be socially acceptable and just and the key principles orienting them should be shared and widely pursued by policy interventions. The multidimensional nature of such a transition should also be stressed: the shift to a climate neutral and pollution-free economy is to be conceived as a technical as well as a socio-economic and cultural transition. Finally, transformations take place in places which can count on a variety of enabling resources, resilient capacities but which also present some deficits; socio-institutional resources too are different in different places.

### *The governance challenges*

- 1. A first challenge – that is a substantive question- concerns the capacity of public institutions to acknowledge the multidimensional nature of transition in the steel industry and the wide range of implications related to it.**

A first aspect of this challenge attains a comprehensive understanding of the contours of the issue. Transition in the steel industry is a **multidimensional and non-linear process**. The underlying transformations are of a technical and economic nature but also social and cultural ones: new and different models of production are required to be put in place in the industry, leading to a different social division of labour, as well as different lifestyles and consumption patterns. Cultural and symbolic dimensions are equally crucial: as many steel localities have been dependent on the industry for many decades, deep seated cultural aspects and values permeate the life of these communities. Their identity is itself conflated with that of the industry: many peoples' lived experiences are embedded into steel working culture; it is important therefore that this aspect evolves together with the transformations required to the industry. Transition is also a **collective endeavor**, requiring social legitimacy and cultural adherence to succeed, namely a new social pact. No single social group is specifically in charge of such a process, nor can it alone interpret the urgency underlying the choice of transition, its aspects and its consequences. Yet, different social groups have different values and beliefs; this translates into differentiated understandings of the transition challenge, of the consequences related to it and of measures to be taken to support it: such differences are also affected by the material and symbolic means to cope with the future different socio-economic scenario. The development of a shared, collective, vision for the achievement of people's well-being is at the core of this process. Finally, the transition **is required to be just**. The fundamental transformation of the socio-economic model towards a zero-carbon impact might achieve generalised desirable benefits only if it contributes to repair entrenched inequalities of the past and does not create new ones. Among the dimensions of inequalities linked to climate transition are inequalities among regions and countries, among different segments of the population (i.e. income, gender, age, educational levels, employment situation, etc.); various dimensions and types of inequalities (such as exposure to the effects of climate policies, climate change, negative impacts of pollution) are often interdependent and overlap. Processes of transition should therefore consider the material conditions of the local population which presents different vulnerability and capacity of adaptation as some social groups are more dependent than others on single carbon intensive industries and should acknowledge the existence of previous social vulnerabilities that might further worsen (i.e. low skilled workers, gender segregation).

The risk to avoid is to consider the transition in the steel industry as principally a technological and economic process to which an uncontested social change follows. The unclear understanding of the contours of the issue – attaining its scope and scale and its wide-range implications, starting from the assumption that not everybody shares the same vision, urgency, understanding (preferences, beliefs, values, capacity to cope, etc.), runs the risk of partial and simplified understanding of the just transition and of its implications.

- The implementation phase should appreciate the multidimensional nature of transition involving the steel industry and the wide range of implications related to it.

A second aspect is that JT implies a **multi-level government** that, in turn, means collaborative decision-making and practices among different political and administrative levels (the EU level, the national one, the regional level and the sub-regional one) and with the industry itself **to define and build what is likely to be a new model of development and to address the risks associated to transition.**

The different tiers of government have often different roles (e.g. in some countries the national level is in charge of industrial policy whilst regions are responsible for the Cohesion policy), leading to separation and lack of effective coordination. Additionally, processes of devolution have led to the primacy of local government bodies at the expenses of other tiers of government, to the false belief that decision-making at the local level is by itself more democratic while there is evidence that, also at that scale, there might be patterns of power cemented in several decades that might lead to an ineffective participation of citizens; that specialised economic agencies and expert knowledge are more able to design an effective transition.

Rather than being mutually exclusive, such scales of government are called to a joint effort to achieve an equitable transition. Current and future experiences of de-industrialisation and of economic diversification are required to consider the specific conditions in which they take place, namely heightened trade and production integration, the positioning of companies in the global production networks and their capacity of innovation, and the modified systems of welfare protection. The steel territories involved in the transition are also those where industrial crises are often accompanied by processes of more general socio-economic decline characterised by social deprivation, demographical shrinking and economic impoverishment. It is important therefore that local decision-making and policies in steel areas are sided by more general actions and policies that have a transformative vision of development, that question strategic priorities and support such a fundamental shift, also in collaboration with industry's representatives. In this context a renewed role of the State should be considered, among other things, in terms of affirmation of the public interest in protecting competing but equally recognised values and rights – such as employment and health– and of de-commodification of social and environmental relations. The existence of differentiated social and environmental risks affecting social groups, classes, generations and places when defining policies should also be borne in mind.

- The implementation phase should identify modalities to ensure collaborative decision-making and practices among different tiers of governments involved in the transition of the steel industry and to promote integrated approaches towards a transformative vision of development.

**2. A second challenge – that is a method question - concerns the management of transition, implying the political and administrative capacity to address change according to collective interests.**

A first aspect concerns **the actors that are involved in the process of change**. Information and communication are essential activities to make sure that there is a widespread awareness of the multidimensional challenge at stake, of the way in which processes are supposed/planned to occur, how they are going to be managed and their timing: this helps building a shared vision of the future and on how to get there (actions); it also contributes to build and consolidate trust and cooperative relationships, creating buy-in from the broad base of stakeholders which helps overcoming indifference or, worse, fear and suspicion. In marginal/weak territories the role of public institutions is extremely important to create trust, to orient individual behaviours toward collective choices and to mediate individual interests. **Participation** is a key aspect of a multidimensional idea of justice, besides the distributional aspect and the recognition of marginalised social groups and/or those who are the most hit by changes: underlying truly democratic and inclusive decision-making lies the removal of any form of institutional and cultural misrecognition and exclusion and the acknowledgement of uneven participatory dynamics. Participation implies the involvement of individual and collective social actors: from students to workers, from schools to voluntary associations, from interests' organisations to trade unions and environmental movements, who are called to voice their demands for desirable life and employment.

The risk is a belief that the complexity of the socio-economic processes involved in steel transition might be simplified by limiting participatory demands and by defining centrally planned plans. More generally, the dangers are that: processes of change and their underlying political choices remains unknown to vast segments of society; the decision-making is centralised and participation responds to particularistic logic that are expressions of limited social groups; a technocratic elitism considers itself more able to interpret and put into practice socio-economic transformation. Concretely an ex-ante, centralised, institutional planning runs the risk of depauperating the process of consensus formation and social dialogue that are essential ingredients for policy decision-making and implementation.

- The implementation phase should consider ways to enhance democratic participation involving all social groups and individuals according to a universalistic logic.

A second aspect concerns **the administrative capacity** to plan and carry out new and alternative paths of development and to mobilise resources and actors towards them. Steel transition requires realistic and credible prospects that (a) considers the socio-economic and cultural fragilities of transition

territories also in the backdrop of national and international panorama (b) identifies the levers of change, namely the existing and potential territorial socio-economic resources that can be activated to concur to positive transition processes. Economic targets and blueprints are in themselves insufficient if not considering dimensions such as justice, equity and social well-being and environmental sustainability. It also requires **an adequate long-term planning and a clear definition of the concrete measures to be adopted to reach political objectives**. The indications of final targets should be accompanied with indications of concrete quantitative and qualitative implementation actions that render them achievable in specific contexts. The quality and motivation of administrative personnel, and institutional coordination are important factors to achieve those objectives as well as the actual quantity of personnel that are able to work on transition plans and projects. So is the relationship with the political class. Equally important, however, is to promote the cultural adherence to a common project; the cultivation of recursive-iterative planning processes that produce incentives to cooperate and build social capital. An administration that pursues a JT also **envisages evaluation mechanisms that renders it accountable to citizens**. In this picture sub-national institutions, such as regions, play an important role in designing integrated place-based policy and carrying out an effective policy management: the mobilisation of knowledge embedded in place and in its inhabitants can produce social innovation if it comes to the fore and it is confronted and combined with external knowledge in a balanced negotiation and multiscale relationships.

The risk is to assume that transition needs institutional engineering and social planning or, by contrast, that a 'shopping list' of single, unrelated, projects is sufficient. At the same time, short-cut/easy solutions would lead to the practice of policy transfer whereby external 'successful' solutions are transplanted without consideration of local specificities and of wider national and international dynamics in which they are situated (one-size fits all policies). The risk to avoid is the undertaking of a 'low road' to ecological transition in which processes of economic revival co-exist with the root causes that contribute to the recurring social/employment and environmental crises.

- The implementation phase should embed the just transition principles of social justice and equity in planning, legislation and evaluation processes of transition in the steel industry to ensure ongoing and concrete actions throughout the transition phase.

*Good examples from other regional or thematic context*

**Spain's Just Transition Agreements**: Spain has adopted an encompassing approach to managing the just transition. Through its Just Transition Agreements, it has entered into pacts with social partners. The financial resources adopted for the JT are supposed to cover: investments in new business and clean energy initiatives; workers' early retirement schemes; workers' retraining for green jobs; and also environmental restoration of the affected areas which is especially critical for local communities.

**Canada's Just Transition Task Force**: The awareness of the geographically and socially uneven distribution of the negative effects of a coal-phase out urged the Canadian government to establish a 'Task Force on Just Transition for Canadian Coal and Power Workers and Communities.' The task force provided a report on the challenges involved, on new economic opportunities, on possible funds to be harvested, on policy opportunities and gaps; it also provided recommendations on a consultation

process regarding skills and training efforts needed to make communities fit for the upcoming transition. Such a report was based on first-hand exchanges with all stakeholders involved: from workers and their families to employers and business representatives, from labour union representatives, to local authorities, and non-governmental organisations. The recommendations contained in the report had therefore the necessary legitimacy towards the national government and Canadian society. A further aim of this effort was also to ensure recognition for affected workers and communities and to make their voices heard.

## VI. Workplan

The following section includes an overview of deliverables, milestones and WG meetings both completed and outstanding along a timeline.

### Deliverables, milestones and timing

The following table gives an overview of the achieved/outstanding milestones and deliverables (to be) reached by the WG throughout the next two years. The timing of milestones and deliverables after mid-2022 is indicative, hence in *italic*.

	Time	Milestone (M) / Deliverable (D)
x	September/October 2021	M: Call for applications for JTP WGs (M)
x	15 November 2021	M: Formal establishment of WGs – at public JTP event, session ‘Launch of JTP Working Groups on carbon-intensive regions’
x	February 2022	M: Six needs assessment interviews held with first circle WG members
x	16 March 2022	D: Draft Scoping Paper
x	31 March – 08 April 2022	M: Scoping Paper Consultation with the second circle
	10 May	D: Final Scoping Paper + presentation at public JTP event
	<i>October 2022</i>	D: Draft Implementation Plan
	<i>January 2023</i>	D: Final Implementation Plan
	<i>From January 2023</i>	M: Implementation of actions
	<i>December 2023</i>	M: Finalisation of all activities

### Meetings

Below is a table of WG meetings both held so far and to be held in the future. Again, the timing of meetings after May 2022 is indicative, hence in *italic*. The last column indicates the format of the meetings.

	Time	Meeting	Format
x	18 November 2021	First WG meeting	Virtual
x	24 February 2022	Second WG meeting	Virtual
	<i>w/c 23 May 2022</i>	Third WG meeting	Virtual
	<i>November 2022</i>	Fourth WG meeting	<i>tbd</i>
	<i>May 2023</i>	Fifth WG meeting	<i>tbd</i>
	<i>November 2023</i>	Sixth WG meeting	<i>tbd</i>

## Annex

### List of members of the first circle of the WG

Organisation	Main representative
<b>Member states authorities</b>	
<b>Local and regional authorities</b>	
<b>Associations representing regional, local, urban and other public authorities</b>	
Universita degli tudi di Bari Aldo Moro	Lidia Greco
<b>Organisations representing economic and social partners</b>	
industriAll European Trade Union (steel)	Elspeth Hathaway
Polish Steel Association	Mirosław Motyka
BeePartner a.s.	David Sventek
UNESID (Spanish Steelmaking and Transforming Association)	Santiago Oliver Sanjuan
Liberty Steel Group / Liberty Galati	Adrian Margarit
<b>Bodies representing civil society, such as non-governmental organisations</b>	
Bomiasto	Patryk Bialas
European Environmental Bureau	Riccardo Nigro



