

EU India-cooperation on the Industrial Transition

Takeaways from the EU-India Track 1.5 Climate Dialogue October 2022

Both the EU and India have strong ambitions to become carbon neutral. The EU aims to achieve net zero by 2050; whereas India has stated 2070 as its target year, keeping in mind its development needs. Achieving these targets will require a transformation of all sectors of the European and Indian economy. While viable clean energy solutions already exist for certain sectors such as power and mobility, the industrial sector, a major contributor to emissions in both regions, continues to seek clean technologies that are financially viable at a commercial scale. Going forward, identifying and deploying zero-carbon industrial materials such as green steel, green cement or chemicals will be critical to reach global climate targets. The scale of the technological transformation necessary would require the swift development and dissemination across Europe and India of new, breakthrough technologies.

On a positive note, there is substantial optimism regarding zero-carbon technologies for industry, with some already available and others expected to reach there soon. New projects and initiatives in Europe and India are announced on a regular basis. But final investment decisions are often pending due to a need for end-markets, finance, infrastructure, innovation support, and the need for an enabling regulatory and policy framework. As a result, the commercial deployment of these technologies continues to remain nascent.

How can EU-India co-operation unlock economic opportunities for both sides?

Deployment of low-CO₂ materials and technologies represent an economic opportunity – if not an economic imperative – for industry, tapping into a growing market for climate-neutral steel, chemicals, and cement.

A zero-carbon industry first refers to a shift to electrified processes, to low-carbon energy, e.g., renewable electricity, green hydrogen or bio-methane, and a shift in the feedstock to biomass or recycled materials. This will require reliable access to ‘affordable’ renewable energy and/or hydrogen and related infrastructure. It will also include transforming industrial processes, e.g., direct reduced iron (DRI) with hydrogen and carbon capture and storage.

Green hydrogen, in particular, is seen as a game-changer for many industries. It has a range of use cases: for example, as raw material in the chemical industry for the manufacture of ammonia, methanol, and other chemicals; or for various refinery and metallurgical processes, all of which can be possibly be decarbonised by green hydrogen. Costs for green hydrogen are projected to decline fast, making a business case for some industries in the near future. Changes on the downstream side include material efficiency, substitution to low-carbon inputs, and the pursuit of a circular economy.

Industrial innovation toward zero-carbon materials offers both the opportunity for climate leadership and industrial competitiveness. Given that industry operates globally, we should expect many projects that span borders, i.e., between economic blocs. As the International Environment Agency has repeatedly shown, international industry co-operation will speed up the transition and reduce costs.



In September 2019, the governments of India and Sweden launched the [Leadership Group for Industry Transition \(LeadIT\)](#) at the UN Climate Action Summit. It is supported by the World Economic Forum. LeadIT gathers countries and companies that are committed to action to achieve the Paris Agreement and that subscribe to the notion that energy-intensive industry can and must progress on low-carbon pathways to contribute to achieving global net zero.

In this context, The EU mission in India, ORF, and CEPS organised a Track 1.5 Climate Dialogue on EU-India Cooperation for Industrial Transition. The dialogue consisted of a closed-door discussion as well as a public dialogue.

The public dialogue brought together different stakeholders across public and private sector in both regions to debate some key aspects of the potential for cooperation on industrial decarbonisation. The sessions were designed to be interactive, consisting of a moderated session, co-moderated by CEPs and ORF, and followed by an open discussion with questions from the participants.

The speakers at the public dialogue are listed below:

- Seppo Nurmi, Chargé d’Affaires a.i., Delegation of the European Union to India
- Amar Patnaik, Member of Parliament, Rajya Sabha
- Jacob Werksman, Principal Adviser to Directorate-General for Climate Action, European Commission
- Naushad Forbes, Co-Chairman, Forbes Marshall
- Lydia Powell, Distinguished Fellow, Centre for Resources Management, Observer Research Foundation, New Delhi
- Kirsten Westphal, Executive Director Analysis & Research, H2Global Stiftung
- Helen Ågren, Director, Ministry of Environment, Climate Department, Sweden
- Hemant Mallya, Senior Programme Lead, CEEW
- Milan Elkerbout, Head of Climate Policy Programme, Centre for European Policy Studies (CEPS)
- Mihir Sharma, Director, Centre for Economy and Growth, ORF
- Irina Kustova, Research Fellow, CEPS

The Policy Dialogues addressed the following issues:

- The state of industrial decarbonisation in India, the EU and globally; and Indian and European policies regarding the transition;
- Key technologies, e.g., energy efficiency, hydrogen, CC(U)S, renewable energy, the circular economy, and opportunities for co-operation in these;
- What is the role of market-based mechanisms in supporting the industrial transition?
- What would industry like, and what can the public, private and financial sector deliver, in terms of deeper EU-India cooperation and of creating a pipeline of pilot projects?

Takeaways from the Dialogue

The discussions revealed many shared interests:

- Clear recognition of the importance of industrial transformation both from a) GHG emissions reduction perspective and b) for industrial modernisation and longer-term competitiveness.
- The importance of value chain effects on industrial modernisation were also highlighted as a key concern in both regions; This is also reflected in the focus areas for LeadIT.
- The need for competitiveness and a level playing field were mentioned by both Indian and EU participants.
- From a technological perspective renewable energy, energy efficiency, hydrogen and CC(U)S as well as breakthrough technologies more generally were identified on both sides as essential backbones of the industrial transition.

There were also certain issues where there was a difference in outlook between the Indian and EU stakeholders:

- The Indian stakeholders stressed the need for stronger commitments from the EU on financial assistance and technology sharing to move beyond just setting targets for emission reductions. The EU stakeholders were more bullish on the role of target-setting, positioning it as a key first step for a rapid and continued transition.
- The role of carbon pricing as a driver for low-carbon investment was viewed differently by stakeholders from the two regions. While there was substantial optimism from the EU stakeholders, particularly given the evolution of the EU-ETS, the Indian stakeholders were more sceptical. The key issue was the need to ensure that strong regulations and pricing do not hinder economic and industrial growth in a developing economy like India. There was an agreement that more detailed discussion was essential on this particular subject, including an exchange on the challenges and solutions that were relevant for the development and further amendments of the EU-ETS.
- Although being priorities for both the European and Indian side, the role of circular economy was given less attention in the discussions.
- The future role of natural gas and more generally, the role of fossil fuels in the EU in the light of the EU's energy crisis was another point of vigorous discussion.
- Differences also occurred on the role and need of CBAM and how it relates to Indian exports.
- EU stakeholders suggested that in addition to the long-term net zero target, it proved to be important in Europe to also have short-term industrial targets, such as those proposed in the EU's 'Fit for 55' program.

Discussion was productive on a number of issues including the regulatory frameworks and financial support needed for breakthrough technologies, overdependence on China for critical mineral raw materials, and the social dimension of the transition with a focus on employment. Indian participants identified the following challenges: the need to account for stranded assets, financing of breakthrough technologies, creating clear demand pathways for green hydrogen – currently policies focus mainly on the supply side – the role of nuclear energy, and the potential of public private partnerships.

Identified areas for future co-operation

From the dialogue, a number of possible EU-India cooperation areas emerged:

1. A deepening of LeadIT, which currently focuses on knowledge exchange and industrial co-operation. Possible extensions include a) an exchange of policy best practices and b)

technological cooperation across value chains, e.g. hydrogen, steel, and fertilisers, with other value chains possibly being added. Within the policy debates, discussions emerged on the role of targets and the ways to best create demand for low-carbon materials.

2. One other area identified has been investors' search for a pipeline of 'green'. This may constitute a major opportunity of integration into global value chains of industries. Institutionally, this could be anchored in a Climate Club/Alliance — focusing, say, on green steel, green hydrogen or other low-carbon materials. A precondition would be to agree on a common standard or taxonomy for green materials, e.g. via a value of CO₂/tonne of material. However, such a taxonomy would have to ensure interoperability while also accounting for the differences in the economies in the two regions. This way, potential Indian concerns about the impact of the CBAM could also be mitigated. At the same time, such a Club or Alliance would trigger incentives for innovation. More concretely, the idea was raised to further think through climate clubs in an EU-India perspective.
3. Sustainable finance is another possible area for co-operation. This could include cooperation on disclosure rules as well as definitions of 'sustainability'. Co-operation on disclosure might be easier given the more political nature of 'sustainability' definitions.
4. There was strong interest in public private partnerships (PPPs). A possible workstream could deal with co-operation on this concept. This could for example involve categorisation of different PPP models, best practice exchange as well as an evaluation of which model provides the best solution to an given problem.
5. To date India has 60 GW capacity of captive coal power plants,¹ typically old and undercapitalised. A joint EU-India project could develop strategies including financing to replace coal plants with green energy solutions.
6. There is substantial potential for green innovations from EU industries to be scaled up and commercialized in India. In the EU there is substantial financial support to innovate in green technologies, something that could be enhanced in India. As a result, innovations piloted in the EU could potentially be scaled up in India given the massive size of the Indian market. Here, there is potential to adopt a consortium approach between EU and Indian industries with sovereign support from governments in both regions.
7. Scope for greater collaboration between research institutions in India and Europe; creating a coordinating body for this could be effective.

Conclusion

The track 1.5 dialogue highlighted the imperative for ensuring industrial decarbonisation in both India and the EU. While the starting points for these two regions might be different, the end goal is the same, creating much scope for collaboration to catalyse the investment and technological advancement needed to ensure a rapid green transition. There is a need for more such dialogues and forums between stakeholders in these regions to build on the ideas and areas of cooperation identified above.

¹ This describes a power generation plant that provides a localised source of power – not connected to the main grid – to energy users, for example local communities.



Disclaimer: This Dialogue was organised by ORF and CEPS in collaboration. The EU Delegation to India provided financial and other support but the content and conclusions are the sole responsibility of ORF and CEPS.