



**NDC ASPECTS**

# Submission

**Enhancing International Cooperation  
through a Sectoral Perspective**

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Submission by the Wuppertal Institute  
on behalf of the NDC ASPECTS Project

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## Key Messages

- Sectoral systems differ substantially in their political economies, technologies, financing structures, industrial composition and international connectedness. Taking these differences into account allows for enhancing international cooperation for climate action.
- The Conference of the Parties serving as Meeting of the Parties to the Paris Agreement could promote a sectoral perspective in a number of ways, such as requesting Parties to include sectoral emission targets and concrete policies in their Nationally Determined Contributions and long-term climate strategies, and revise reporting requirements to put more focus on individual sectors.
- Parties could also conduct a range of joint activities to promote sectoral cooperation internationally, for example in the framework of the new work programme for urgently scaling up mitigation ambition and implementation, such as developing sector-specific international decarbonisation roadmaps, promoting exchange on potential technological, economic and policy options, or reviewing and/or endorsing relevant international cooperation efforts.
- The submission suggests several sector-specific cooperation options for selected individual sectors, focusing on agriculture, forestry, and land use; buildings; fossil fuel supply; industry; and land transport.

## A Sectoral Perspective Can Help Enhance International Cooperation

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This submission responds to the mandate of the Global Stocktake to support the enhancement of international cooperation for climate action pursuant to Article 14.3 of the Paris Agreement. In our view, this refers both to international cooperation under the United Nations Framework Convention on Climate Change (UNFCCC) and cooperation beyond the UNFCCC.

International cooperation could strongly benefit from a focus on sectoral systems. Our economies are underpinned by a patchwork of interrelated and interdependent sectoral systems, each supplying distinct goods and services such as energy, transport and mobility, agricultural products and food, residential and commercial buildings, or industrial products. Achieving the objectives of the Paris Agreement requires a fundamental transformation of these sectoral systems, which will involve changes in institutions, infrastructure, markets, business models, and social customs.

Promoting these transformations will require tailored approaches as each sectoral system is distinct in its political economy, technologies, financing structures, industrial composition, and the nature and extent of its international connectedness. Each sectoral system therefore requires its own transformation, and the barriers to, and opportunities for transformation vary strongly from sector to sector. Taking these differences into account will help tailor international cooperation to make it more effective (Oberthür et al., 2021; Rayner et al., 2021; Victor et al., 2019).

Moreover, as a response to the supply chain crisis resulting from the COVID-19 pandemic, many countries have started to develop proactive industrial policies to diversify their supply chains and “reshore” some industries considered to be critical. At the same time, global competition is increasing, particularly between industrial centers in Europe, North America and Asia to develop and attract “green” industries that will benefit from a low-carbon and climate-resilient transformation. In some areas, previous concerns over equitable burden-sharing have shifted towards securing the opportunities provided by the transformation. To achieve the necessary deep decarbonisation of our economies in general and in individual sectors in particular, global cooperation and trade of key enabling low-carbon goods, services and technologies is necessary. We need an innovation and implementation race to achieve those targets. But we need to avoid ruinous competition between leading industrial countries and, perhaps even more importantly, we need to ensure that also lesser developed countries get to benefit from the opportunities arising from the transformation.

Targeted sector-specific governance arrangements may provide a platform to more explicitly and equitably navigate the tensions arising from competitiveness and security concerns. Parties to the Paris Agreement should highlight these opportunities in the political outcome of the Global Stocktake and encourage increased voluntary international cooperation at the sectoral level. The Global Climate Action Agenda, and in particular the Climate Action Pathways that have been developed in recent years could be a vantage point for such cooperation. Parties should build on and further institutionalize the various “breakthrough” initiatives that have been launched at COP26 and COP27. Finally, the G7 Climate Club announced last year should be explored further, particularly its focus on facilitating the required industrial transformation.

Against this background, the following sections will in turn discuss:

- how cross-cutting action under the UNFCCC can promote a sectoral perspective; and
- how international cooperation could be enhanced in selected individual sectors, focusing on agriculture, forestry, and land use (AFOLU), buildings, fossil fuel supply, industry, and land transport.

## Potential for Cross-Cutting Actions

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To promote the widespread adoption of a sectoral perspective, the Conference of the Parties serving as Meeting of the Parties to the Paris Agreement (CMA) could:

- Request Parties to include sectoral emission targets and concrete policies in their Nationally Determined Contributions (NDCs) and long-term climate strategies. To provide stronger sectoral guidance to the relevant sectoral actors, such targets could include nationally binding sectoral emissions budgets.
- Develop additional reporting requirements that specifically focus on the implementation and achievement of NDCs in individual sectors under the Paris Agreement's Enhanced Transparency Framework (ETF). While the first review and potential update of the modalities, procedures and guidelines for the ETF is due only in 2028, an earlier revision would be appropriate given that Parties' NDCs and even more so actual implementation are currently far weaker than needed to achieve the objectives of the Paris Agreement.
- Use the annual high-level ministerial roundtable on pre-2030 ambition as an accountability checkpoint, making clear that Parties will be expected to demonstrate each year how they are improving ambition and implementation of their climate policies. In addition to their NDCs, this could include a focus on sectoral actions such as those taken in the context of the Breakthrough Agenda and the individual 2030 Breakthroughs.

Moreover, Parties could conduct a range of joint activities to promote sectoral cooperation internationally, for example in the framework of the new work programme for urgently scaling up mitigation ambition and implementation:

- Develop sector-specific international decarbonisation roadmaps, including indications of when each sector should achieve zero or net-zero emissions globally as well as interim emission reduction milestones. This could be based on existing roadmaps to sectoral decarbonisation such as the Climate Action Pathways developed under the Marrakesh Partnership or roadmaps developed by other institutions such as the International Energy Agency (IEA), the International Transport Forum, or the Global Alliance for Buildings and Construction.
- Promote exchanges of information on potential technological, economic, and policy options to decarbonise individual sectors among party and non-Party stakeholders to foster knowledge and learning.
- Provide orchestration of the governance landscape by reviewing and/or endorsing relevant international cooperation efforts, for example through the establishment of common minimum standards.

# Potential for Enhancing International Cooperation in Individual Sectoral Systems

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## Agriculture, Forestry and Other Land Use (AFOLU)

The AFOLU sector globally accounted for 13-21% of total global greenhouse gas (GHG) emissions in the period 2010-2019 (Pathak et al., 2022). The emissions profile of the AFOLU sector differs from other sectors, with a greater proportion of non-CO<sub>2</sub> gases (methane and nitrous oxide), a predominance of biological processes, and large intra- and interannual variability in emissions. Historically, large biophysical potentials for mitigation have been estimated for the sector, with forests holding the largest potential. However, national and international land use governance has been a critical issue for success, in particular in relation to the coordination of different institutions with competing interests.

International cooperation on AFOLU could be enhanced through the UNFCCC by supporting capacity-building in relation to the ETF and enhancing country information exchanges to allow for learning from each other's experiences, but also through initiatives outside the UNFCCC (e.g. UN-REDD, the Forest Carbon Partnership Facility (FCPF), the Capacity-Building Initiative for Transparency, the Global Forest Observations Initiative (GFOI), etc.). Specifically, the following could be considered (see also Vidal et al., 2022):

- Accounting for the specificity and context-dependency of the biophysical and socio-cultural factors along the different institutional and political arrangements at the national level. International initiatives and actions to enhance ambition in the sector, in particular when pursuing carbon transactions, so far have tended to pursue a one-size-fits-all approach.
- Considering the increasingly high vulnerability of the AFOLU sector to climate change impacts when designing and supporting mitigation actions and investments by donors (private and public) and multilateral institutions and arrangements.
- Aligning the Monitoring, Reporting and Verification (MRV) standards of existing and new initiatives outside the UNFCCC with existing UNFCCC modalities, procedures and guidelines under the ETF through engaging in joint discussions and forums between existing MRV support initiatives (such as the GFOI and UN-REDD) mediated by independent experts. Currently, MRV standards across initiatives are not aligned or well-nested in national MRV systems, and represent a burden for the host that needs to create parallel MRV systems to the one under the ETF (as is the case, for example, for the FCPF Carbon Fund).
- Improving the balance among different actors' representation in existing governance structures promoted outside of the UNFCCC in order to better incorporate these actors' interests into global governance, broadening and balancing the participation and decision-making power of relevant groups (developing/developed countries, government/civil society, public/private).

- Avoiding duplication of efforts, lack of information and connection of different initiatives outside of the UNFCCC, which have often led to fragmented and insufficient provision of funds, by providing updated, transparent and accessible information on all ongoing initiatives. This should ideally take the form of a global database hosted by an independent institution (such as the United Nations) and exchange forums (similar to the REDD+ Partnership or the voluntary meetings on the coordination of support for the implementation of REDD+) facilitated by independent institutions.

## Buildings

As of 2019, global GHG emissions from buildings amounted to 21% of total global emissions, and the IPCC and IEA consider that global mitigation investments in the sector need to grow by a factor of 3 to 4 by 2030 to get onto a Paris-compatible trajectory (Pathak et al., 2022). Nonetheless, there is no strong international signal on the need to decarbonise the sector, nor are individual parties addressing the sector sufficiently. For example, the “buildings breakthrough” launched at COP27 currently has only 16 supporting governments and nearly all of them are from Africa and Europe. There also is only limited transparency and accountability on actions in the sector and insufficient provision of means of implementation.

To help overcome existing barriers, the following activities could be pursued within the context of the “breakthrough” or beyond (see also Obergassel & Xia-Bauer, 2022):

- To give a clear signal on the need to decarbonise the sector, Parties should adopt clear targets for when the sector should be emission-neutral globally and nationally. Parties should also agree to phase out all support for fossil heating and aim for a full phase-out of fossil heating by a certain date.
- To help expand the market for low-emission solutions, Parties and non-Party stakeholders should adopt coordinated commitments to decarbonise their own building stock and to procure only highly efficient equipment and appliances, including heating, cooling, cooking, lighting, and other appliances.
- Developed country Parties should urgently scale up support for policy development, planning, implementation, evaluation and enforcement capacity of national and local governments in developing countries as well as for training, capacity building and awareness programmes of professionals such as architects, installers, etc.
- Developed country Parties should also scale up financial support and risk-sharing for investments as well as capacity building for local financial institutions.

## Fossil Fuel Supply

Addressing fossil fuel production is important for achieving the Paris Agreement temperature goal, with the International Energy Agency suggesting that no new fossil fuel production would be required under a net-zero pathway (IEA, 2021). The 2021 Production Gap Report further suggests that governments’ fossil fuel production plans are inconsistent with the 1.5°C objective, and that fossil fuel production needs to decline rapidly to keep that goal within reach (SEI et al., 2021). International cooperation on fossil fuel supply, in conjunction with international

action to reduce demand for fossil fuels, can support the achievement of the Paris Agreement goals (Andreoni et al., 2022).

Such international cooperation could be strengthened through the UNFCCC, but also outside of it. As part of the UNFCCC process, parties could:

- include targets and measures on fossil fuel production in their NDCs and their long-term strategies;
- report on information on fossil fuel production levels, public finance supporting fossil fuel production, and plans to transition away from fossil fuel production in their Biennial Transparency Reports; and
- develop guidance on alignment of financial support for fossil fuel production with the Paris goals in the context of the Sharm el-Sheikh dialogue on Article 2.1(c) of the Paris Agreement.
- Develop guidance on phasing out inefficient fossil fuel subsidies, elaborating on the commitment made at COP26 and COP27, whilst taking into account efforts made in reporting under the SDGs, and data collection efforts by the OECD, IEA, International Monetary Fund, and non-governmental organisations.

Outside of the UNFCCC process, parties could:

- strengthen transparency of fossil fuel production by establishing a dedicated platform for reporting and reviewing information on fossil fuel production, drawing and expanding on information collected by non-governmental organisations, such as the Global Registry on Fossil Fuels;
- deepen cooperation and expand membership through the Beyond Oil & Gas Alliance, and explore the extension of the Powering Past Coal Alliance to include a phase-out of coal mining.
- commit to phase out public finance for fossil fuels, building on the commitment to phase out international public finance by parties to do so at COP26, in line with Article 2.1(c) of the Paris Agreement.
- explore the further use of Just Energy Transition Partnerships (JET-P) to provide support for a fair and equitable wind-down of fossil fuels in developing countries, drawing on lessons learned from JET-Ps with South Africa and Indonesia.

## Industry

In 2019 the industry sector accounted for 24% of global direct GHG emissions, with more than 60% of industrial emissions stemming from energy-intensive industries (EIIs). The sector is further expected to decarbonise more slowly than others, due to comprehensive technological, economic, and policy barriers (Bashmakov et al., 2022). International cooperation holds great potential to address these barriers, yet this potential remains underexploited. The most important governance gaps include the lack of common standards for low-emission basic materials, support for technology development and diffusion, policies to create lead markets for green materials, and rules to address international competition (Otto & Oberthür, 2022).

To advance the global decarbonisation of EIIs and address the above-mentioned gaps, the CMA can pursue the following:

- Promoting the development of leader-led breakthroughs for cement, chemicals, aluminium and other EIIs, next to the existing ones for steel and hydrogen.

- Expanding developed country financing for the development and deployment of low-emission EII technologies, in particular towards relevant emerging economies (e.g. through the Green Climate Fund or the World Bank).

However, given the highly globalised nature of the sector and high concentration of EIIs within a few countries, other international institutions (particularly the G20) may be better placed to advance international cooperation on the governance gaps mentioned above.

The proposed G7 Climate Club provides a promising starting point to advance international cooperation on common standards, technology development, and lead markets. However, its membership remains limited and so far there is no clear incentive for other countries to join. This might challenge the legitimacy of the club for non-G7 members and can limit its potential to drive the global decarbonisation of EIIs. Explicitly inviting emerging and developing countries to join and develop the Climate Club, coupled with tangible financing commitments by G7 members, could help to address these shortcomings.

To ensure overall coherence, the UNFCCC could review and/or endorse ongoing governance efforts to ensure their overall coherence with the UNFCCC/Paris Agreement objectives. Regular review of progress of international cooperation could be undertaken as part of the Global Stocktake. Alternatively, building on the existing Climate Action Pathway for Industry and the Glasgow Breakthroughs industry-specific decarbonisation roadmaps can be developed under the mitigation work programme. Finally, high-level endorsement and guidance to specific international initiatives, such as a climate club, might be provided in COP cover decisions.

## Land Transport

In 2019, 23% of global energy-related CO<sub>2</sub> emissions were attributable to the transport sector alone (Jaramillo et al., 2022). In addition, transport-related emissions are projected to continue rising, with total transport activity expected to more than double by 2050 against 2015 levels (International Transport Forum, 2021). There is currently no strong international guidance to decarbonise the sector in the form of a roadmap or multilateral net-zero target, in addition to a lack of internationally coordinated rules including sectoral breakdowns in NDCs and a phase-out date for fossil-fuelled vehicles. Nevertheless, international cooperation has considerable potential to transform the sector towards decarbonisation (see also Hall & van Asselt, 2022).

- Under the UNFCCC, parties could pursue the creation of a land transport-specific roadmap and integration of sectoral emission budgets into NDCs.
- Outside the UNFCCC, groups of states could work together to develop a joint agreement to phase-out fossil-fuelled vehicles. Several countries have already established domestic time frames to phase-out conventional vehicles. However, international coordination of the efforts of such countries could send an even stronger market signal. Accordingly, this agreement could specify a harmonised, concrete date by which conventional vehicles must be replaced by electric vehicles (EV), hybrids or biofuels. In addition, the agreement could also include interim CO<sub>2</sub> emission reduction targets for new vehicles (e.g. by 2030).



- Another option for enhancing international cooperation outside the UNFCCC could take the form of a climate club focused on electric mobility that brings together key car manufacturers. In addition to setting a specific target for phasing-out fossil-fuelled vehicles (e.g. by 2030), a potential club could also commit to harmonising market-share targets for zero-emission vehicles and zero-emission vehicle charging infrastructure. However, designing the club to be open and inclusive would also be crucial to its perceived legitimacy by developing countries and emerging economies, in addition to ensuring the inclusion of buyer countries. Moreover, a club would have to provide support for the creation of charging infrastructure in low-income countries.

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NDC ASPECTS

## SUBMISSION TO THE GLOBAL STOCKTAKE

### Enhancing International Cooperation through a Sectoral Perspective

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