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National food and land mitigation pathways for net zero

Policy Brief

Key Messages

1. Brief overview and context

New research by the [FABLE Consortium](#), an initiative convened under the [Food and Land Use Coalition](#), shows the critical need for countries to promote sustainable food consumption and production in order to keep global warming below 2°C. It is now widely known that food and land use systems are significant greenhouse gas (GHG) emitters.

The brief highlights how countries' food and land use systems can contribute to net zero targets. It classifies countries into six profiles, in order to identify priority actions in their food and land use systems according to their specific contexts.

- As of today, 129 countries have communicated net zero targets, representing 88% of current total GHG emissions. Yet, less than half are transcribed in law or policies, and many are not well-defined.
- In 2019, the AFOLU sector (Agriculture, Forestry and other Land use) accounted for 22% of GHG emissions. The volume and impacts make it essential to incorporate the AFOLU sector in climate strategies.
- This policy brief presents six country profiles to facilitate the prioritization of actions that can deliver significant climate change mitigation via food and land use systems. The three key criteria used to group countries are **(i) Food consumption patterns, (ii) Land-based CO₂ removal potential, and (iii) AFOLU emission patterns.**
- Using this analysis, countries can understand which actions are best suited for their specific context. The typology can be reproduced and **applied in the same manner over time to a country** as its food and land use systems evolve.
- The brief presents **case studies for Argentina, Ethiopia, India, and the USA**, each representing distinct profiles.

2. Key findings

- This research compares the results of two AFOLU pathways by 2050 for 20 countries and six rest-of-the-world regions: **the Current Trends pathway** depicts a business-as-usual scenario with a low ambition of feasible action towards environmental sustainability; **the Sustainable pathway** corresponds to a higher ambition. The results show that **the Sustainable pathway**, with reduced emissions from AFOLU, **could be compatible with the Paris Agreement objectives.**

- The degree of the contribution to net zero climate targets is greatly determined by a country's land-based CO₂ removal potential and the overall CO₂ intensity of its economy. Therefore, **transparency around a country's global role and responsibility on GHG emissions is needed, as well as investments in innovation and technology-based solutions.**
- Of the six key mitigation actions recommended for the different country profiles, **reducing and/or avoiding excessive food and red meat consumption** is the most impactful action, as it appeared critical for five of the six country categories. Other priority measures included **increasing agricultural productivity** and **restoring former agricultural land.**

3. Recommendations and calls to action

- It is critical that countries implement tailored actions promoting sustainable food production and consumption to **be on track with 2050 climate mitigation goals.**
- National climate strategies should systematically include key mitigation actions for the food and land use sector, that are adapted to countries' specific context.
- Reducing food and/or red meat overconsumption should be seen as an important lever for several countries as it has large co-benefits for health and spill-over effects for climate mitigation. According to this research, such action leads to significant carbon sinks on abandoned agricultural land.
- In countries without food and red meat overconsumption, increasing agricultural productivity and avoiding further conversion of natural ecosystems should be prioritized.
- For countries with low land-based CO₂ removal potential, investing in innovation and technology-based removals in other sectors would be crucial to reach the overall net zero targets.