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Pathways for Food and Land Use Systems to Contribute to Global Biodiversity Targets

Key Messages

1. Brief overview and context

New research by the FABLE Consortium, an initiative convened under FOLU, shows how much progress can be made towards global biodiversity targets if urgent action is taken to make food and land use systems more sustainable. The modelling of two possible future scenarios developed for 20 countries* and six regions finds that:

- **If we follow current trends**, **we will fall far short of meeting three global biodiversity targets** proposed by the Convention on Biological Diversity (CBD)** to put us on track to recover biodiversity by 2030 and ensure people and nature live in harmony by 2050.
- **If countries take urgent and ambitious steps to follow a more sustainable pathway, we will achieve one of these biodiversity targets and get much closer to achieving the other two.**

- The analysis shows that **even what modelers considered as ambitious actions within their respective countries (the "sustainable pathway") results in a failure to fully achieve the three global targets**. This emphasizes **the need for even greater urgency and ambition, sharing of best practices between countries and a strengthening of international governance to deliver systemic change.**

- **Biodiversity conservation is key to maintaining a healthy and viable world for future generations and to achieving food security**.

- Biodiversity thrives in areas where natural processes, such as plant and animal reproduction and dispersion, take place without human interruption. At present, **land where such natural processes predominate, covers 56% of the world's land, excluding permanent ice and rock**. It is critical that this share increases and that more land where biodiversity flourishes is protected by 2050.

- **Human activities such as logging of forests, agricultural expansion, and agricultural intensification, is responsible for rapidly increasing rates of species loss everywhere.**
  - Over the past two decades, global cropland expansion has accelerated, with half of the expanded area replacing natural vegetation.
  - Populations of mammals, birds, amphibians, reptiles and fish declined globally by 68% between 1970 and 2016, driven mainly by conversion of pristine habitats into agricultural land.

- **This year at the CBD COP15**, governments will finalise the selection of global targets and priority actions needed to conserve and sustainably use biodiversity. Global targets are achieved through local actions. **Countries must decide what actions to take to shift people and food systems towards a new, sustainable, relationship with biodiversity to try to reach global biodiversity targets.**

2. Key Findings

- **The CBD's target of a 15% expansion of land where natural processes predominate (i.e., where biodiversity can thrive) globally by 2050, is missed under both scenarios presented by this brief, yet the shortfall is much smaller when ambitious actions are taken.**
    - Under Current Trends (business-as-usual scenario), there is only a 1% increase in land where natural processes predominate by 2030 and 2% by 2050, compared to 2010.
    - In the Sustainable pathway, the area of land where natural processes predominate expands by 7% by 2030 and by 14% by 2050, compared to 2010, while global **food security and climate mitigation outcomes improve. This demonstrates that ambitious actions can help safeguard the world's remaining biodiversity and achieve synergies with food security and climate mitigation objectives.**

- Of the 56% of the world's land area where biodiversity thrives, only 20% is protected. This means **only 11% of all land in the world is covered by areas where biodiversity flourishes within protected areas.** This presents a serious risk since the CBD post-2020 framework proposes at least 30% of land be protected by 2030, giving priority to areas that are important for biodiversity.

- **The CBD's halt-losses target is also missed under both scenarios, yet loss of mature forest is almost halved in the Sustainable pathway:**
    - Under Current Trends, more than 200 Mha of land where biodiversity thrives is lost by 2050.
    - In the Sustainable pathway, total losses of land where biodiversity thrives account for just over 100 Mha by 2050.

Country Examples

Countries with different biodiversity conservation contexts can each contribute to meeting global biodiversity targets.

United Kingdom | Modelling suggests that under the Sustainable pathway:

- The share of land in the U.K. where natural process predominate/biodiversity thrives, would more than double by 2050, through restoration of 7 Mha of abandoned crop and pastureland to woodland, heathland, shrubland, wetlands and other natural land.
- The U.K. continues to meet its food needs by shifting to a diet based on the national guidelines for a balanced diet. This includes reduced fat and sugar consumption and calorie intake, driving a reduction in consumption of livestock products (notably red meat, milk, and animal fats).
- Greenhouse gas emissions from agriculture are cut by 39% in 2050, driven largely by reduced emissions from the livestock sector.

Mexico | Modelling suggests that under the Sustainable pathway:

- The share of land where biodiversity flourishes in Mexico increases by 72%, through the restoration of 35.8 Mha of abandoned crop and pastureland to shrubland, wetland, and other natural land.
- Such reduction in agricultural land would be possible through a decline in meat and animal products in Mexican diets and an increase in imports of livestock products (notably milk) and animal feed (corn).
- Pastureland would also decline through large increases in pasture productivity.
- Mexico would be able to cut its GHG emissions from agriculture by 28% in 2050, largely through reduced emissions from livestock.

3. Recommendations and Calls to Action

- While global demand for agricultural commodities and timber continues to grow, **we need renewed efforts to safeguard the world's last remaining wilderness areas, restore degraded natural habitat, and improve the environmental sustainability of agricultural lands** for the benefit of people and nature.

- **Shifting to healthier diets, increasing crop and livestock productivity, limiting agricultural expansion, and undertaking largescale restoration** are essential to put countries on a sustainable trajectory.

- Immediate action is needed by governments, education systems, farmers, agri-food businesses, and consumers. Implementing reforms in countries would **help put the world on track to achieve global biodiversity, food security and climate mitigation goals by 2050**.

- **Cooperation between countries** is critical since choices made by one country can have a profound impact on global biodiversity and global food and land systems.

- Biodiversity conservation should be **embedded into land use planning and food production systems**.

- In all countries, **further agricultural land expansion should be avoided.** Degraded land, together with some agricultural land, should be freed up and restored to natural land.

- Initiatives to help halt biodiversity loss, increase the share of land where biodiversity thrives and expand protected areas should **recognise the essential stewardship role of Indigenous peoples and seek locally appropriate conservation approaches** that empower local people.

NOTES

***** The Twenty FABLE countries include Argentina, Australia, Brazil, Canada, China, Colombia, Ethiopia, Germany, Finland, India, Indonesia, Malaysia, Mexico, Norway, Russia, Rwanda, South Africa, Sweden, the United Kingdom and the United States.

****** The brief focuses on the achievements of the following three global biodiversity targets from the CBD post-2020 framework (CBD/WG2020/3/3), by 2030 and 2050:
***1**. Enhance the integrity of all ecosystems, "with an increase of at least 15% in the area, connectivity, and integrity of natural ecosystems, supporting healthy and resilient populations of all species" by 2050*
***2**. Achieve a "net gain in the area, connectivity, and integrity of natural systems of at least 5%" by 2030*
***3**. Retain "existing intact and wilderness areas", halting losses by 2030 or before*