

# CLIMATE ACTION PATHWAY

# **LAND USE**

## Executive Summary

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November 2019



## Vision statement

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**It is 2050**, and the full 30 per cent contribution of the land-use sector to the global mitigation goal of the Paris Agreement has been attained. Land degradation has stopped and sustainable land management is the norm, with adequate action and support for adaptation outcomes. Loss of remaining primary forests and all land degradation stopped in 2030, maintaining habitats for biodiversity and ensuring climate resilience and the provision of goods and services from key ecosystems that support water and food security. Governments have adequate and effective cross-sectoral institutional, legal and regulatory frameworks to implement landscape restoration and forest conservation. Land-use monitoring tools are used to inform decisions and track whether goals are on target. Fuelwood consumption is sustainable renewable energy source. Restoration supports local economies and ecological integrity and connectivity to ensure carbon sinks are secured for the future. Forests values are anchored in policy and financial decisions, which prioritize and align with the protection, reforestation and restoration of forest landscapes.

In 2050 there is equal access to food for all, and hunger and malnutrition is eradicated in all its forms. Food and agriculture systems are resilient, sustainable and regenerative thanks to the application of circular economy policies and climate-smart practices. There is equal access to financial resources, and subsidies are given to deforestation-free interventions. Emissions from agricultural sectors and food systems are cut to a minimum through the sustainable management of the food value chain. On the demand side, shifting diets and reduced food waste significantly contribute to mitigation outcomes.



## Milestones towards 2050

By 2020

- 150 M has have been brought to restoration.
- The role of agriculture and forest-related nature-based solution is maximized in the new nationally determined contributions (NDCs).

By 2030

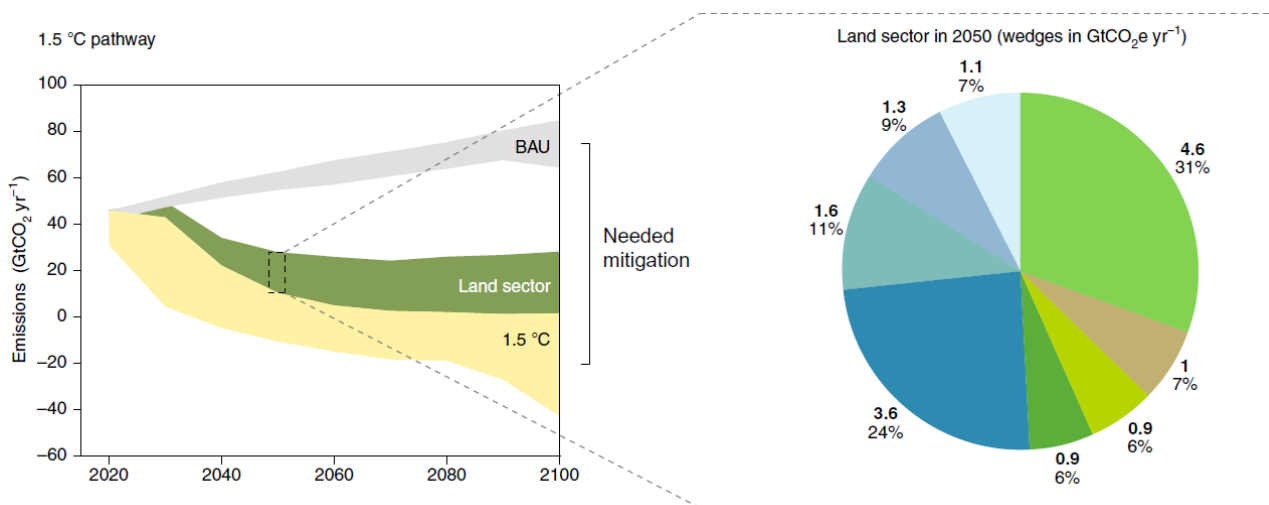
- 350 M has have been brought to restoration.
- End loss of primary forest and degradation of all land.
- Improved access to financial mechanisms for sustainable practices and reduction of pervasive incentives.
- The land use sector developed sustainable pathways and is resilient towards impacts of climate change.

By 2050

- Land degradation has stopped and sustainable land management is the norm.
- Forest values are internalized in financial decisions.
- Food systems are resilient, sustainable and regenerative.
- Emissions from agricultural sectors and food systems are kept to the minimum.
- Demonstrable improvements in ecosystems integrity and stability are achieved.



## Facts and figures



| Wedge  | Activity types   | 2020 | 2030 | 2040 | 2050 |
|--|--|------|------|------|------|
| ● Reduce emissions from deforestation and degradation, conversion of coastal wetlands, and peatland burning <sup>18</sup> (95% emissions reduction by 2050 compared to 2018) | Conservation policies, establishment of protected areas, law enforcement, improved land tenure, REDD+, sustainable commodity production, improved supply chain transparency, procurement policies, commodity certification, cleaner cookstoves | 25%  | 70%  | 90%  | 95%  |
| ● Reduce emissions from agriculture <sup>16,21</sup> (25% emissions reduction by 2050 compared to BAU)   | Reduce CH <sub>4</sub> and N <sub>2</sub> O emissions from enteric fermentation, nutrient management, synthetic fertilizer production, manure management   | 0%   | 0%   | 15%  | 25%  |
| ● Shift to plant-based diets <sup>45</sup> (50% adoption in global population by 2050)   | Reduce production of GHG-intensive foods through public health policies, consumer campaigns, development of new foods  | 5%   | 20%  | 35%  | 50%  |
| ● Reduce food waste <sup>45</sup> (50% reduction in total food waste by 2050 compared to BAU)  | Reduce food waste: consumer campaigns, private sector policies, supply chain technology, improved food labelling, waste to biogas  | 20%  | 30%  | 45%  | 50%  |
|  | Reduce food loss: improve handling and storage practices through training, investment and technology   | 10%  | 30%  | 45%  | 50%  |
| ● Restore forests, coastal wetlands and drained peatlands <sup>18</sup>  | Invest in restoration, national and local policies, payment for ecosystem services   | 0    | 9    | 45   | 90   |
| ● Improve forest management and agroforestry <sup>18</sup>   | Optimizing rotation lengths and biomass stocks, reduced-impact logging, improved plantations, forest fire management, certification; integration of agroforestry into agricultural and grazing lands   | 0    | 4    | 20   | 40   |
| ● Enhance soil carbon sequestration in agriculture and apply biochar <sup>17,45</sup>  | Erosion control, use of larger root plants, reduced tillage, cover cropping, restoration of degraded soils, biochar amendments   | 0    | 3    | 16   | 32   |
| ● Deploy BECCS <sup>17,35</sup>  | BECCS R&D, investment and deployment   | 0    | 0    | 11   | 22   |

Source: Roe, S., Streck, C., Obersteiner, M., Frank, S., Griscom, B., Drouet, L., Fricko, O., Gusti, M., Harris, N., Hasegawa, T., Hausfather, Z., Havlík, P., House, J., Nabuurs, G. J., Popp, A., Sánchez, M.J.S., Sanderman, J., Smith, P., Stehfest, E. and Lawrence, D. 2019. *Contributions of Land Sector to 1.5°C World*. In: *Nature Climate Change*[online] <https://www.nature.com/articles/s41558-019-0591-9>.



## Progress

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- The Nature-Based Solutions Coalition co-led by China and New Zealand drew from over 180 proposals to develop a Climate Manifesto at the 2019 Climate Action Summit. The Climate Manifesto acknowledges the important role of nature in climate action and commits to unlocking its full potential in four priority areas.
- Countries recognize the potential of the land-use sectors in achieving the Paris Agreement: 89 per cent of all countries refer to agriculture and/or land use, land-use change and forestry when outlining their mitigation contributions in their NDCs; 98 per cent of the countries that include priority areas for adaptation actions mention land use sectors in their NDCs.
- The United Nations General Assembly declared 2021–2030 the United Nations Decade on Ecosystem Restoration, which will offer unparalleled opportunity for more financial support, greater political will from countries, businesses and institutions to combine their efforts, and recognition and interest to restore natural landscapes that will result in job creation, food security and measures to address climate change.

## Climate Action Table

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This summary should be read in combination with the corresponding Climate Action Table for this area that outlines concrete actions for 2020, 2030 and 2050 with respect to policies, finance and investment, technology and innovation, business and services and civil society towards fully implementing the Paris Agreement.