PLANGEA

A STRATEGIC APPROACH TO LAND USE

We should take strong efforts in ecosystem **restoration and conservation** to halt the biodiversity loss and climate change.

Holistic spatial planning is key to achieving positive outcomes for nature and its contributions to people.

On the PLANGEA Web interactive map, users can choose from customisable criteria to optimise the prioritisation:

Biodiversity Conservation:

- species' extinction risk;
- ecoregions' risk of collapse;
- impacts on ecosystems' integrity.

Cost Minimisation:

- restoration implementation costs;
- opportunity costs.

Climate Change Mitigation:

- net values of carbon sequestration (restoration) and emission (conversion).

In addition to the prioritisation map, the benefits and costs are presented in graphs, tables, images, and reports.

"These findings can help develop national strategies to implement the new Kunming-Montreal Global Biodiversity Framework adopted at COP-15"

- Neil Burgess, Head of the Science Programme of the UNEP-WCMC

Current and potential applications:

recommendations for the POST-2020 GBF about priority areas for conservation and conversion;

alternative scenarios for agricultural trade;

socioeconomic opportunities for ecological restoration;

mitigation of mining impacts;

biodiversity conservation in private areas and more.

Visit
plangea.earth

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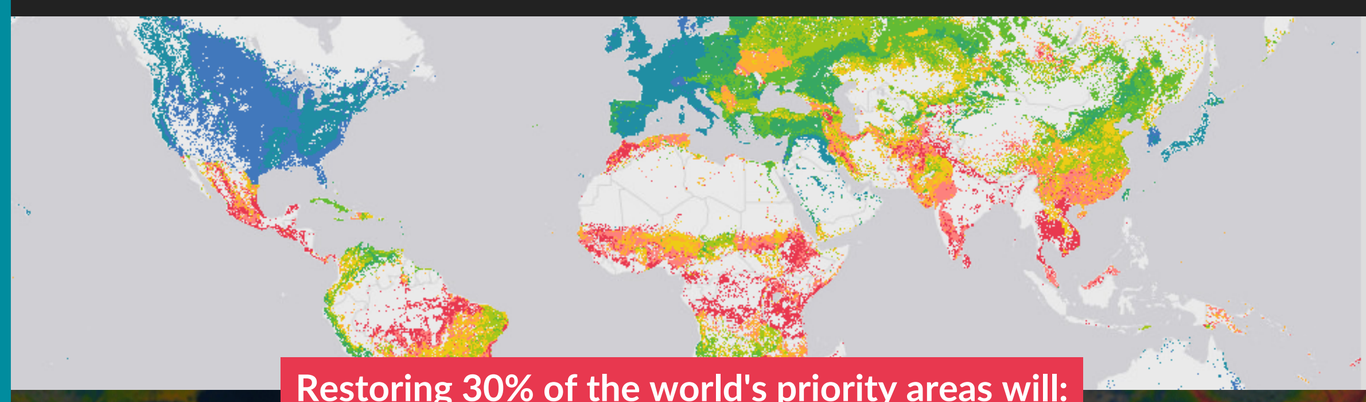
PLANGEA Web is a **decision support platform** developed by **International Institute for Sustainability (IIS)** to simulate, visualise and explore priority areas for ecosystem restoration and conservation to **different scenarios.**



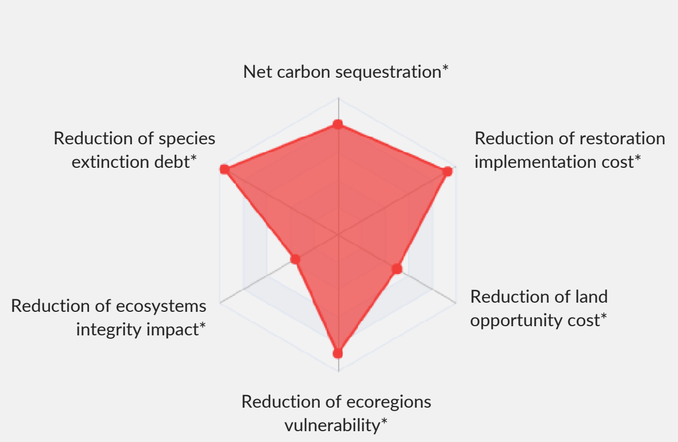
Restoring 30% of the world's priority areas will:

Reduce threats to biodiversity by **79%** in the biodiversity conservation maximisation and climate change mitigation scenario, **41%** more than the non-optimised scenario.

Remove **18 $GtCO_2$** from the atmosphere in biodiversity conservation maximisation and climate change mitigation scenario, which is **99%** more than the non-optimised scenario.

Decrease by **US$ 2.908** the cost per hectare restored in the cost minimisation scenario, a **68%** saving over the non-optimised scenario.

These graphs were generated based on the following parameters:
Prioritisation focus: Restoration;
Action target: 30%;
Spatial scale: Global;
Optimisation criteria: Biodiversity conservation, Climate change mitigation and Costs minimisation.

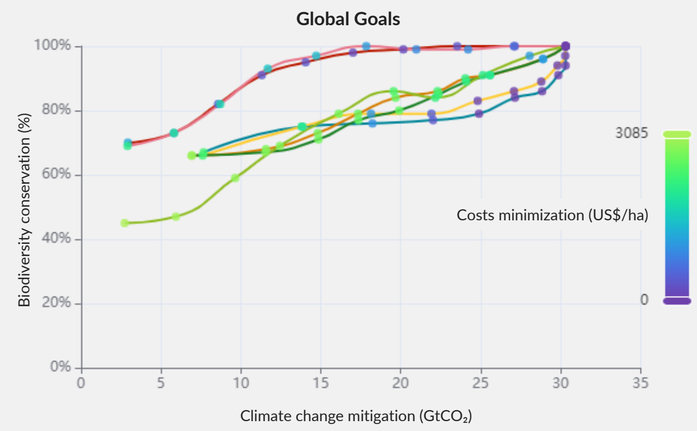


*Percentage values in relation to the maximum potencial benefit

Biodiversity Conservation:
96%
Reduction of species extinction debt 100%
36%
Reduction of ecosystems integrity impact 100%
87%
Reduction of ecoregions vulnerability 100%

Climate change mitigation
81%
Net carbon sequestration 18,24 GtCO2

Cost minimisation
30%
Reduction of land opportunity cost 206,00 US$/ha
65%
Reduction of restoration implementation cost 4.082,00 US$/ha



Considering the spatial scale (global), these graphs show the results achieved in each action target, according to the possible scenarios generated from the combination of the optimisation criteria.

The data on this platform is provided by the International Institute for Sustainability (IIS) in collaboration with our donors. This output has been funded in part by the UK Research and Innovation's Global Challenges Research Fund under the Trade, Development and the Environment Hub project (TRADE Hub, project number ES/S008160/1).

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