## OPPORTUNITY #22

What if we returned the planet to its natural state?

# A WALK ON THE REWILD SIDE

Phasing out land use for food production accelerates biodiversity and ecosystem restoration – hence rewilding – while mitigating climate change risks.

**MEGATREND**
Saving Ecosystems

**TRENDS**
Deforestation & Desertification
Restoration
Bioeconomy

**SECTORS AFFECTED**
Agriculture & Food
Materials & Biotechnology
Chemicals & Petrochemicals
Consumer Goods, Services & Retail
Data Science, AI & Machine Learning
Education
Energy, Oil & Gas & Renewables
Financial Services & Investment
Infrastructure & Construction
Logistics, Shipping & Freight
Manufacturing
Metals & Mining
Real Estate
Travel & Tourism
Utilities
Government Services
Professional Services

## WHY IT MATTERS TODAY

As natural carbon sinks, emissions get trapped by nature through soil, the oceans and vegetation. Natural storage of these emissions slows climate change more effectively than many existing technologies.

The world's forests absorb 16 gigatons of carbon dioxide per year, which is more than three times the emissions of the United States alone.[436] However, half of this carbon dioxide leaks back into the atmosphere through deforestation and forest fires.[437] Over a third of greenhouse gas emissions can be mitigated by restoring earth's ecosystems to their natural states.[438] As natural carbon sinks, emissions get trapped by nature through soil, the oceans and vegetation more effectively than many existing technologies. [439] The top three countries with the largest natural land carbon sinks are Russia, Canada and the United States.[440]

About three billion people reside in areas highly vulnerable to climate change.[441] One hectare of fully regenerated forest can absorb 10 tonnes of atmospheric carbon dioxide each year,[442] while the average person emits 4 tonnes per year.[443] Every year, approximately 1.9 billion trees are planted globally, or 60 per second.[444] The amount of land taken up by agriculture around the world is approximately 5 billion hectares, or 38% of the globe's land surface.[445] A study done in the United Kingdom found that the cost of a tree is around $7 (excluding maintenance for trees in cities), while the long-term economic benefits accumulated over 50 years can be over $9,000 per tree.[446] Using this calculation, planting 6,000 trees — as part of climate action — in strategic locations would generate benefits equal to $1 million per year over the course of 50 years.[447]

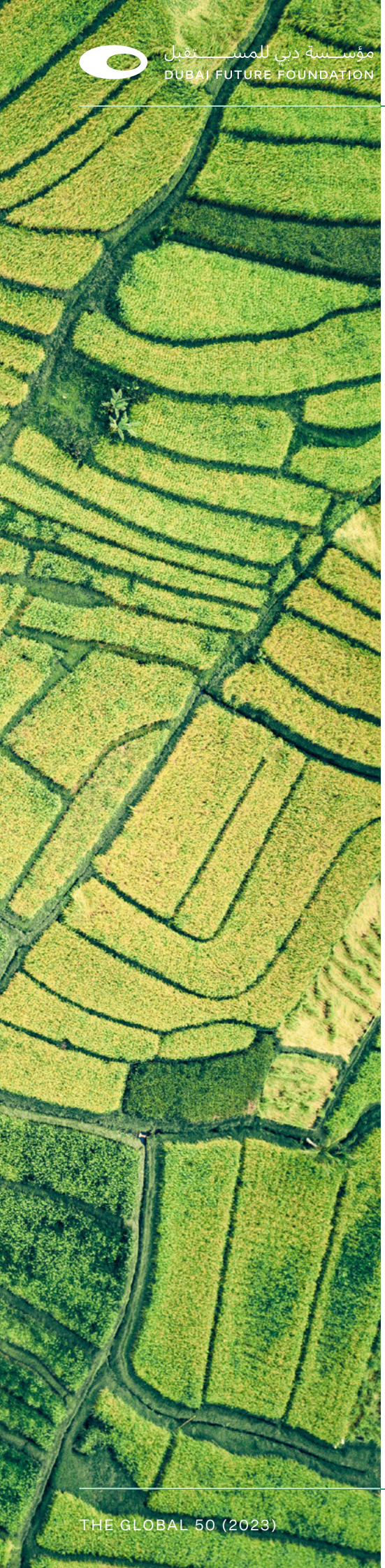
The top three countries with the

**LARGEST NATURAL LAND CARBON SINKS**

1 **RUSSIA**

2 **CANADA**

3 **UNITED STATES**



## THE OPPORTUNITY

The natural environment is earth's own carbon sink. Rewilding large swathes of the planet could boost natural carbon capture and mitigate the impacts of climate change both locally and globally. Rewilding can restore ecosystems and offset carbon dioxide emissions. The associated shift to alternative food production methods and nutritional models would decrease the direct and indirect greenhouse gas emissions (including of methane) related to agrifood production.[448]

Aside from assisting in carbon capture, rewilding prevents deforestation and/or desertification. Rewilding can be done naturally but it can also be accelerated through the use of planting schemes using diverse indigenous plants or plants genetically engineered for faster growth, carbon dioxide absorption and resilience.[449] Improved global imaging and modelling of the interaction between climate change and biodiversity can identify where investment in rewilding will have the best outcomes.

## BENEFITS

Dual benefits to nature and well-being through climate impact mitigation, improved air quality and better environments for humans and animals. Reduced economic costs of environmental degradation and climate impacts. Increased value from ecosystem services. Reversal of the trend towards habitat loss currently being experienced by some 80% of the world's land-based animal species.[450]

## RISKS

Increased food costs. Displacement and loss of income and culture for rural and farming populations.

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