

Natural Solutions to Climate Change

A view of the Old Creek river valley meandering through Laohegou Nature Reserve, Pingwu County, Sichuan Province, China. © Nick Hall

WHAT ARE NATURAL CLIMATE SOLUTIONS (NCS)?

Natural climate solutions incorporate strategies for protecting and restoring terrestrial ecosystems and improving land management to better avoid emissions and/or enhance carbon storage. These strategies focus on three ecosystems: forests (which represent the greatest mitigation potential), grasslands (including agriculture and rangelands) and wetlands (including peatlands).

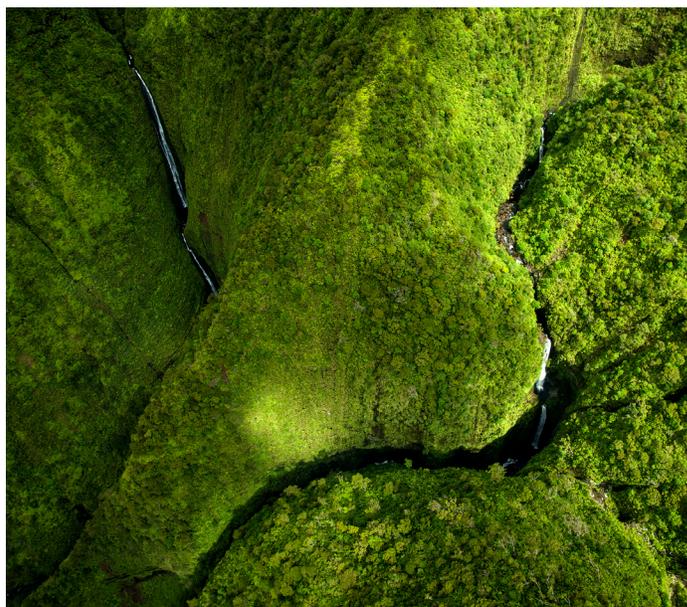
WHY IS NCS IMPORTANT?

The land-use sector is currently responsible for a quarter of greenhouse gas emissions. But adopting sustainable land management strategies could provide more than one third of the near-term emission reductions needed to keep warming well below the target—2°C above pre-industrial levels—set by the Paris climate agreement. By using these cost-effective solutions, nature’s mitigation potential is estimated at 11.3 billion tons per year by 2030—the equivalent of stopping burning oil globally.

These solutions are available immediately, are scalable, and can transform key sectors of the global economy, such as forestry and agriculture – they are also available almost everywhere on the planet. Combined with innovations in clean energy and other efforts to decarbonize the world’s economies, natural climate solutions offer some of our best options in the response to climate change. A 2 or 1.5 degree Celsius stabilization pathway is unlikely to occur without taking land use more seriously. Or put simply, we cannot get there without nature.



Jane Kibugi's holding fresh soil on her hillside farm in the Upper Tana Watershed, Kenya. © Nick Hall



Waterfalls pour down into Wainiha Valley, Kauai, Hawaii. © Ethan Welty

The Green Path to a Stable Climate

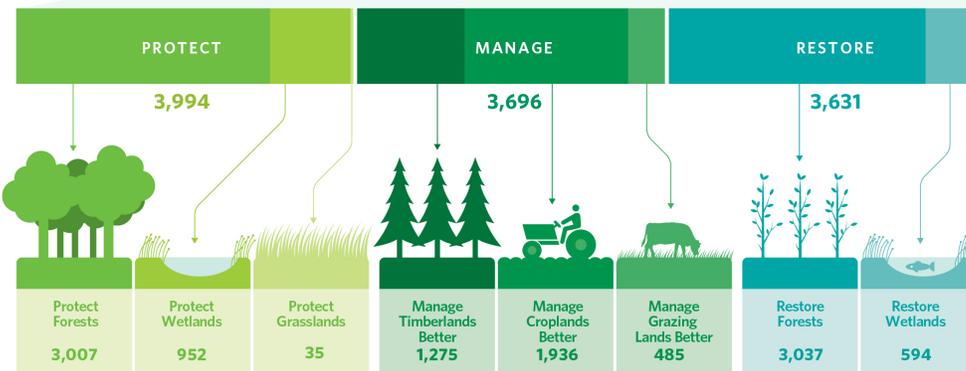
We must cut 30 gigatons a year of carbon emissions by 2030 if we are to keep global temperature increases well below 2 degrees Celsius (3.6 degrees Fahrenheit). Nature can reduce more than one-third of the emissions needed to hit this goal if countries invest in carbon-storing forests, grasslands, wetlands and farmlands.



Of the 30 gigatons of excess carbon in the atmosphere each year, 11 gigatons could be removed using nature itself.

Weighty Matters

A gigaton equals 1 billion metric tons—the equivalent of about 3,000 Empire State Buildings. Carbon figures below are in millions of metric tons.



WHAT ROLE CAN THE PRIVATE SECTOR PLAY IN IMPLEMENTING NCS?

It is time to change how we think about land use. Resistance to rethinking land-use practices is often based on several beliefs: restoration is “too expensive”, changing land use is “too difficult”, and returns will take “too much time”. The reality is that many cases disprove these beliefs. The Nature Conservancy (TNC) has been closely involved in such successes from Indonesia to China, Africa, the U.S., and Brazil, where we are also exploring new business models that can be scaled up in the land sector.

Such a scaling-up can only be achieved by mobilizing the full resources of the private sector, mainstream finance, and public

policy. The conversation around climate change solutions as a whole has already started to shift, with notable progress in scaling up renewable energy. We need to apply the same level of vigor and capital to lands.

A working forest, when sustainably managed, can be both a carbon sink and a source of jobs. Smarter forestry practices like Reduced Impact Logging for carbon can maintain timber harvest while preserving more standing trees. And changes in agricultural practices can reduce carbon emissions and enhance the health and carbon content of soils to increase crop yields. While payments to conserve forests are starting to flow under the UN’s REDD+ program, the Green Climate Fund has committed \$500 million for forest protection payments, total public and private sector investment in sustainable land use remains inadequate. According to the Climate Policy Initiative, public financing for agriculture, forestry, and land-use mitigation attracted \$3 billion in 2014, compared to \$49 billion for renewable energy generation and \$26 billion for energy efficiency. We cannot hit the 2°C or below target without natural climate solutions— private sector finance is a critical part of the equation.

The Nature Conservancy is a global conservation organization dedicated to conserving the lands and waters on which all life depends. Guided by science, we create innovative, on-the-ground solutions to our world’s toughest challenges so that nature and people can thrive together. We are tackling climate change, conserving lands, waters and oceans at an unprecedented scale, providing food and water sustainably and helping make cities more sustainable. Working in 72 countries, we use a collaborative approach that engages local communities, governments, the private sector, and other partners. To learn more, visit www.nature.org or follow @nature_press on Twitter.