

When evaluating how to decrease CO<sub>2</sub> emissions, the discussion often focuses primarily on energy innovation or technological solutions. While innovation and technology are indeed important tools to lower emissions, what is often overlooked are natural climate solutions.

Natural solutions, which include reforestation efforts, sustainable agriculture, and responsible land use practices, among other strategies, are some of the most cost-effective and efficient solutions to reduce emissions. Additionally, nature-based solutions are vital to promote ecological and community health, both in urban and rural areas. With industry leaders and policymakers on both sides of the aisle [supporting](#) these types of solutions, the United States should look for ways to further unlock the power of nature to lower our carbon footprint.

## Fact vs. Myth

- **FACT:** Nature-based solutions (NBS) can be more cost-effective than technical solutions in reducing emissions.
  - [Studies](#) show that nature-based solutions can be more cost-effective than emerging technologies, although we of course need both.
- **MYTH:** Natural solutions are ineffective at reducing our carbon footprint.
  - NBS have already substantially [reduced](#) atmospheric emissions.
- **FACT:** Through empowering landowners and engaging in public-private partnerships we can use natural solutions as part of our emissions-reductions strategy.

## Benefits of Natural Solutions

- ***Nature-based solutions are effective at sequestering and reducing emissions.***
  - A [study](#) published in the journal *Science* found that afforestation, planting trees where there are none, can reduce greenhouse gas emissions by up to 205 GTs.
  - In 2018, global tree cover [removed](#) 37.1 million tons of CO<sub>2</sub> from the atmosphere.
  - [Cover crops](#) in agriculture can sequester up to 60 million tons of CO<sub>2</sub> per year globally, the equivalent to removing 12.8 million passenger vehicles from roads.
- ***Nature-based solutions are cost-effective.***
  - A [study](#) by the Proceedings of the National Academy of Sciences (PNAS) found that a majority of NBS were more cost-effective than emerging bioenergy and carbon storage technologies.
  - A similar [study](#) published in The National Center for Biotechnology Information found that NBS could prevent \$50 billion of coastal damage costs by the year 2030, with an average cost-benefit ratio of more than 3.5.
- ***Nature-based solutions improve ecological health.***
  - Mangroves [improve water quality](#) by using their roots to reduce soil erosion.
  - No-till farming practices [increase microbes in soil](#), improving soil health and making land more resilient against runoff.
  - Grasslands and wetlands vastly [reduce](#) the impacts of flooding.

## Markets vs. Mandates

- Outdated government policies can impede the development of nature-based solutions.
  - A 1,600 acre vegetation management project in Colorado [was delayed](#) for years due to review and litigation under the [National Environmental Policy Act](#) (NEPA).
  - Landowners often need to [navigate](#) an extensive permitting process to have prescribed forest burns on land they own and want to protect.
  - [Conservation leasing](#) on federal lands is largely prohibited, resulting in the government picking winners and losers for federal contracts and forcing companies to adopt “use it or lose it” practices.
- The private sector is unlocking ways to bolster nature-based solutions.
  - [Forest resiliency bonds](#) unite land owners and investors to bridge the funding gap for reforestation efforts.
  - Conservation programs through the National Fish and Wildlife Foundation have been largely successful in cleaning up and restoring sections of the [Chesapeake Bay](#), the [Delaware River Watershed](#), and [others](#).
  - Companies including [Nori](#), [Ecosystems Services Market Consortium](#) (ESMC), and others are creating voluntary carbon markets.

### **How to increase the deployment of natural solutions**

- Continue [conservation easement programs](#) through the Department of Agriculture to empower landowners by granting tax incentives for conservation commitments.
- Explore creative funding mechanisms (grants, matches, tax cuts, etc.) to cost-effectively accelerate these types of projects.
- Break down barriers to carbon markets (e.g. the [Growing Climate Solutions Act](#)).
- Through the Army Corps of Engineers, [support](#) nature-based infrastructure in coastal resiliency planning.

### **Summary**

- Nature-based solutions are an effective way to slash carbon emissions
- Natural solutions are also vital to ecological health, resiliency, and conservation efforts.
- Through the private sector and public-private partnerships, we can continue to advance natural climate solutions as part of a larger effort to reduce our carbon footprint.