

# NATURE-BASED SOLUTIONS

## CURRICULUM

A guide to deepen a shared understanding of the threat of Nature-based Solutions versus real solutions for climate justice.

Part of the  
**Hoodwinked in the Hothouse**  
Public Curriculum

Decolonize/Revitalize  
Unsettle/Subvert

Collectively Act To Resist And Transform  
Expand Accessible, Public, & Critical Climate Education

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# Nature-based Solutions Module

November 2023

**Authors:**

Dafne Yeltekin

Elisa Soto-Dansecó

Zainab Koli

**Design:**

Hoodwinked in the Hothouse

**Curriculum Working Group Coordinators & Editors:**

Laura Langner

Leonardo Figueroa Helland

**Curriculum Working Group Contributors & Editors:**

Annie Wilson

Cynthia Mellon

Dylan Gibson

Gopal Dayaneni

Indigenous Climate Action

Marija Uzunova Dang

Tamra Gilbertson

Terran Giacomini

Shehla Arif

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# Learning Objectives

This module hopes to:

1. Give participants a basic understanding of nature-based solutions (NbS), sometimes called natural climate solutions (NCS);
2. Help participants identify who are the key players promoting NbS and why;
3. Support learning about NbS from critical, feminist, anti-colonial, anti-capitalist, intersectional, indigenous, anti-imperial, environmental, climate justice, abolitionist, etc. perspectives;
4. Explore some of the ways grassroots movements are resisting NbS;
5. Identify alternatives that promote climate justice; and
6. Equip participants with the tools to develop their own critiques about NbS and related false solutions to the climate crisis.

Only have 5 minutes? See the following [summary](#).

## Activity

Why are you here? What would you like to get out of this?

# Executive Summary

## WHAT ARE NATURE-BASED SOLUTIONS?

Nature-based solutions (NbS), also sometimes called natural climate solutions (NCS), are claimed “solutions” to the climate and ecological crisis based on the deeply flawed idea that leveraging the capacities of nature to store and hold onto carbon can help solve the crisis. NbS is another term used for land based carbon offset programs or conservation projects including forest, soil, agriculture, and ocean offsetting programs. Carbon brokers and managers make money off of the projects, while polluters can claim carbon neutrality or that they have met their net-zero emissions reduction targets.” (IEN; NM No False Solutions). It’s essentially a catch-all term, a depository for rebranding long standing green colonial initiatives including conservation and carbon trading, among others, to clean up their bad reputation.

## WHY ARE NATURE-BASED SOLUTIONS FALSE?

Simply put, NbS is a false solution because it deepens relations of exploitation and does not address the root causes of climate change. Beyond that, NbS brings on a whole host of other problems.

- \* NbS is a cop-out of meaningful systemic change because it does not address the root cause of climate change
- \* Nbs puts profit over people and the planet
- \* For NbS to be implemented, they require huge amounts of land and/or water, inhabited by Indigenous and peasant communities
- \* Nature-based solutions directly co-opt ecological practices based on Traditional Indigenous Knowledge (TIK), turning them into financialized and privatized instruments
- \* Most NbS projects are found in the Global South yet it is the Global North that is primarily responsible for climate change
- \* NbS does not work at the most fundamental scientific level. NbS ignores the difference between fossil carbon and biological carbon (sometimes called modern, terrestrial, or biogenic carbon).
- \* NbS brings a one size fits-all approach. There is no one size fits all approach or silver bullet to solving climate change
- \* NbS projects, and Western conservation projects more broadly, operate on the idea that nature is external to humans, passive, inert, and that humans are therefore justified in the complete control and ownership over land.

## ACTORS: WHO’S BEHIND THE WHEEL

The scheme of NbS has not simply emerged out of thin air. It has a large and powerful network of colluding actors who have driven and continue to drive its development and implementation in order to profit off of exacerbating the climate crisis while avoiding accountability for their role in the crisis and positioning

themselves as key players in addressing it (IEN 2022). These drivers of NbS include corporations, governments, intergovernmental organizations, NGOs - particularly conservation NGOs, academia, and the science-policy field.

### **REAL SOLUTIONS AND RESISTANCE TO NBS**

Real solutions are guided by Traditional Indigenous Knowledge (TIK), place-based experience, and public-interest science, especially those in Indigenous communities and the Global South. The narrow frame of mind and western logics used in mainstream climate solution conversations brings about a mentality in which nature-based solutions sound like a rational way when they are in fact damaging to people and to the planet.

Some real solutions include:

- \* **Abolition:** applying an abolitionist framework to NbS helps us target systems and institutions of harm (the actors identified in the who's behind the wheel section) to reduce and ultimately (defund) remove all investments into these institutions and reinvest in actual community and care-based solutions.
- \* **Degrowth:** By challenging Western capitalist perpetual growth 'logics', Degrowth guides us to approach NbS with the goals of "de-accumulating" wealth, "de-enclosing" lands, and "de-commodifying" ecosystems and Indigenous and peasant knowledges. Decolonial Degrowth centers regenerative vision of growth.
- \* **Decolonization & Re-Indigenization:** Allows us to understand the harm nature-based solutions do to nature (including humans) as a re-enactment of colonialism. Under a colonial relationship to nature, the physical world is seen as having no agency of its own, a source of wealth to be extracted and exploited. Decolonization also gives a framework to understand how Indigenous lands are harmed in pursuit of NbS.
- \* **Buen vivir:** Buen vivir undermines the need for NbS because it acknowledges the complexity and uniqueness of each ecosystem, each community and each context whereas NbS equates one tonne of carbon anywhere with any other tonne of carbon elsewhere.
- \* **LandBack:** NbS are in direct opposition and stand in the way of landback. NbS require the occupation of more and more land. Landback directly addresses NbS: it seeks for all lands used for NbS projects to be returned to the Indigenous communities belonging to those lands (however they decide that should be done).
- \* **Agroecology and Food Sovereignty:** While NbS' failed attempts to sequester carbon are based on a faulty understanding of ecosystems as substitutable for each other, agroecology has a deeper understanding of ecosystems, their interdependence, lifecycles and diversity.
- \* **Community Forest Management (CFM):** Communities that have community forest management systems have been found to have higher levels of biodiversity than those managed by the government or by conservation programs or non-profits or corporations.



# Introduction

Time: approximately a 10 minute read

“In the occidental [western] vision, I pay you so you’ll protect this place, but don’t touch anything in the forest. But it’s precisely due to the intervention of humans in the forest that we find the richest biodiversity in Indigenous territories...Part of our informal education is that the sacred places are the places we visit most – it’s not that you don’t go, but that you have to know how to go, and how to present yourself. You have to ask permission for certain activities. If you don’t know how to ask, you have to ask in the way you know.”

Pedro Hernández Luna (Tseltal Maya of Chiapas)  
Intercultural University of Chiapas

Many traditional non-western knowledge systems, especially Indigenous knowledge systems, and the communities who embody them have and continue to be in relation, reciprocity, and collaboration with nature despite persistent colonial attempts to disrupt and end these relations and knowledge systems. Solutions through such knowledge systems see nature as a powerful agent to collaborate with and care for in fostering collective wellbeing for all human and other-than-human species, not simply as a resource to use, commodify, leverage, and isolate.

This stands in stark contrast to the colonial scheme of so-called Nature-based Solutions (NbS) that seeks to “leverage the power of nature,” while actually denying and attempting to control nature’s power.

Through this module, we hope to not only demystify and challenge the concept of NbS, the actors behind NbS, and the power of violent Eurocentric technoscientific knowledges that make NbS possible, but to begin from, center, and assert the power, expertise, and depth of our diverse grassroots knowledges, independent of their relation to Eurocentric knowledge systems. With this intention, we learn from the Zapatistas who are imagining un mundo donde quepan muchos mundos:

“Many words are walked in the world. Many worlds are made. Many worlds make us. There are words and worlds that are lies and injustices. There are words and worlds that are truthful and true. In the world of the powerful there is room only for the big and their helpers. In the world we want, everybody fits. The world we want is a world in which many worlds fit. [...] Softly and gently we speak the words which find the unity which will embrace us in history and which will discard the abandonment which confronts and destroys us. Our word, our song and our cry, is so that the dead will no longer die. We fight so that they may live. We sing so that they may live.”

Zapatista National Liberation Army, 1996

We intend for this module to be a collective knowledge sharing space for all of us to restore our confidence in our people’s knowledges, in their depth, their value, their autonomy and their power to not only resist, but reimagine and rebuild. This module seeks to center their autonomy (epistemic sovereignty) to know, evaluate and envision in their own terms, and not in the terms of dominant knowledge systems. We are not simply playing catch up which would limit us to decode dominant knowledge schemes, but rather bringing the ball into our communities’ own fields of knowledge to reclaim knowledge sovereignty.

## NbS at a glance

Nature-based solutions (NbS), also sometimes called natural climate solutions (NCS), are claimed “solutions” to the climate and ecological crisis based on the deeply flawed idea that leveraging the capacities of nature to store and hold onto carbon can help solve the crisis. The science behind this idea is increasingly being criticized and exposed as inaccurate (see [Stabinsky & FoEI 2021](#)). According to Indigenous Environmental Network, NbS is “another term used for land based carbon offset programs or conservation projects including forest, soil, agriculture, and ocean offsetting programs. Carbon brokers and managers make money off of the projects, while polluters can claim carbon neutrality or that they have met their net-zero emissions reduction targets” (Pham et al. 2022). It’s essentially a catch-all term, a depository for rebranding long standing green colonial initiatives including western conservation and carbon trading, among others, to clean up their bad reputation.

Forestry and agriculture offsets are the most prominent nature-based solutions. Anything from small-scale mangrove restoration to monoculture plantations of GMOs and fossil fuel intensive industrial agriculture can be NbS. Land-based offsets from forests and agriculture are becoming increasingly central to political and economic agendas to increase voluntary markets, so that corporations and governments can achieve so-called “net zero emissions.” NbS projects are typically carried out in the Global South to offset the emissions of corporations and governments based in the Global North.

It is important to note that in many cases NbS projects may not be branded as such. Within many communities in which NbS projects are operated or are being proposed, the term is not necessarily employed, and often other labels are used such as “carbon offset projects.” The term nature-based solutions is more so used in corporate, government, and large NGO spaces as part of their jargon.

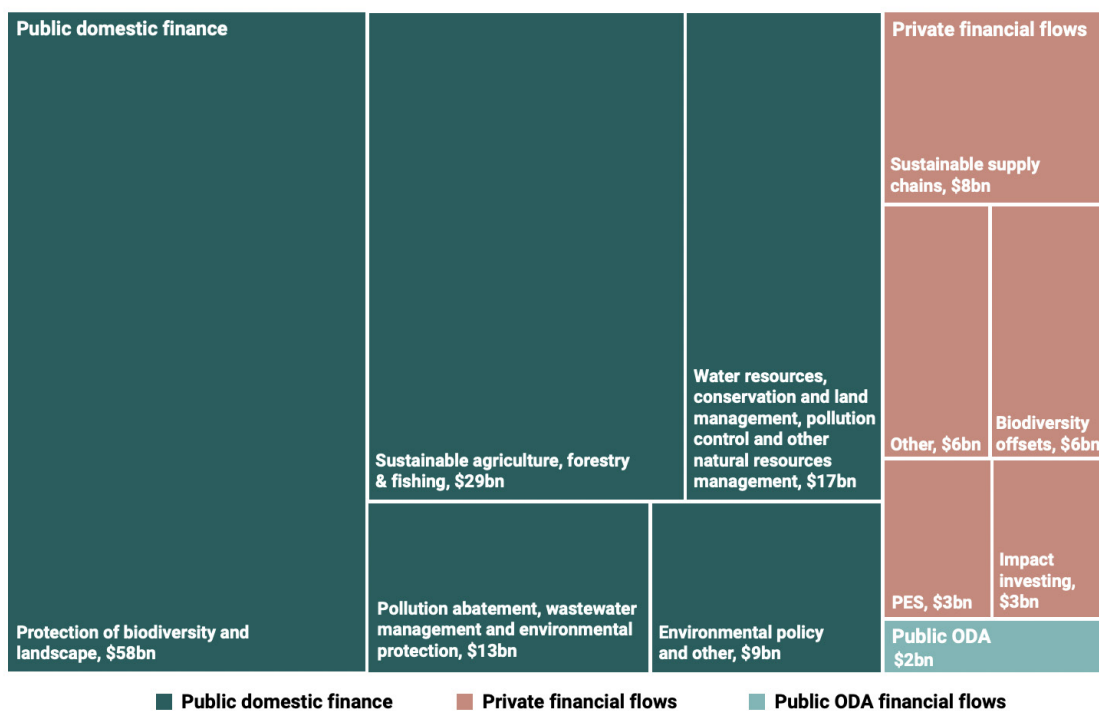
Importantly, nature-based solutions are tied to carbon markets, a false climate solution. It is impossible to understand NbS without also understanding carbon markets. The theory behind carbon markets is that you can turn carbon dioxide into a commodity (in the form of a carbon credit) and put it in a market to disincentivize the release of further carbon into the atmosphere. The well-intentioned but flawed central idea behind carbon markets is that we can make it expensive to consume greenhouse gasses and lucrative to sequester them, ultimately curbing greenhouse gasses.

Through carbon markets we get carbon offsets. Carbon offsets are simply the purchase of carbon credits bought for the purpose of compensating for (or ‘offsetting’) greenhouse gasses. When organizations use the term ‘net zero’ they

are referring to purchasing carbon offsets equivalent to the carbon they release into the atmosphere. Ultimately, carbon offsets allow polluters to keep on polluting while claiming to be ‘green’. This especially benefits the biggest fossil fuel companies, as they have the most money to buy offsets with.

How are carbon credits and carbon offsets made? Forests, soils, mangroves, and other elements of nature are used as ‘carbon sinks’, i.e. a physical place for humans to store carbon pollution. There are numerous critiques of carbon markets from technical, economic, human rights, and feasibility standpoints, among others. For starters, it’s important to stay away from the idea that nature is a sink to store pollution. It is more important to stop that pollution (the extraction and combustion of fossil fuels) at the source, which carbon markets don’t do (FOEI 2021). What’s most important to know about carbon markets as they pertain to nature-based solutions is that nature-based solutions is a name given to certain types of projects that generate carbon credits and are used as carbon offsets.

Public and private finance in terrestrial and marine NbS: US\$154 billion (2022 US\$)



(UN Environmental Programme, 2022)

## Activity: Is it a Nature-Based Solution?

Sort the different terms into 'Nature-Based Solution' and 'Not a Nature-based Solution.' Feel free to refer to the [Glossary](#) if there are terms you are unfamiliar with.

Terms may include, but not limited to:

- \* REDD, REDD+ (Reducing emissions from deforestation and forest degradation)
- \* Afforestation
- \* Regenerative agriculture
- \* Biodiversity offsetting
- \* Nature positive production
- \* Reforestation
- \* A mangrove restoration project that produces carbon offsets
- \* Climate-smart agriculture
- \* Geoengineering projects such as: space reflectors, biochar, ocean fertilization
- \* Ocean Iron Fertilization
- \* Biochar
- \* Solar radiation management (SRM)
- \* Stratospheric aerosol injection (SAI)
- \* Carbon capture technologies: CCS (Carbon Capture and Storage), CCUS (Carbon Capture Usage and Storage), BECCS (Bioenergy with Carbon Capture and Storage), DAC (Direct Air Capture)
- \* Community Forest Management
- \* Solar panels
- \* Wind turbines
- \* Hydrogen energy
- \* Nuclear energy
- \* Blue Carbon
- \* Soil Offset
- \* Renewable Energy Credits (RECs)
- \* Landfill Gas-To-Energy (LFGTE)
- \* Net Zero

# History of NbS

- \* Roughly 1600s-1800s: Colonization of Africa, Turtle Island, Oceania and other places by Western European nations. This is accompanied by massive changes in land use, dispossession of women, Indigenous peoples and local communities, and a decline in biodiversity. This period foreshadowed and set the stage for the relationships to land, nature, women and non-Europeans we know today.
- \* March 1, 1872: Yellowstone National Park is created on occupied Shoshone, Blackfoot, Crow, Flathead, Bannock, and Nez Perce land. It is the first national park in the US and second in the world. This is a key step in establishing 'protected areas' as the primary tool in Western biodiversity conservation and marks the beginning of the global National Parks Movement (Holdgate, 2010). This ingrained the notion that development and the exploitation of nature are justifiable if some areas are used to compensate for damage in others. It is also important in normalizing the idea that human activity inherently comes with environmental degradation and that the only way to protect ecosystems is to enclose them and remove humans from them.
- \* 1892: John Muir founds the Sierra Club, one of the largest conservation NGOs to date. John Muir is often referred to as the 'Father of the National Park System' and embodies the Western conservation ethos of land enclosure and Indigenous dispossession.
- \* 1916: The US National Park Service is created. This paves the way for the expansion of national parks both within the US and as a global movement. As more national parks are established, ideas of compensation and sacrifice that are embedded in national parks become normalized, particularly that it is fine to sacrifice certain ecosystems for the sake of economic expansions if you protect or restore different ecosystems. The creation of national parks also comes with the forced and sometimes violent displacement of Indigenous Peoples from their lands. As many Indigenous peoples' livelihoods, languages, spiritual practices, and cosmologies are land-based, the displacement from their lands is tantamount to cultural genocide.
- \* 1948: The International Union for Conservation of Nature (IUCN) is created in France. It remains one of the most powerful conservation organizations.
- \* 1980: The World Conservation Strategy is created as a collaborative project by the IUCN, UN Environment Programme (UNEP), World Wildlife Fund (WWF), the Food and Agriculture Organization of the United Nations (FAO) and UNESCO. This is the first time an international conservation publication of its kind created with the input of both international policymakers and conservation NGOs, marking an important overlap of influence and agendas which remains today. It's central goal is to "help advance the achievement of sustainable development through the

conservation of living resources”. This is the first time that sustainable development and conservation (the Strategy calls it ‘living resource conservation’) are so explicitly tied in a policy document with global reach. It entrenches the idea that Nature is fundamentally a set of resources as opposed to having its own intrinsic value. It also reinforces and ingrains the idea that perpetual economic development is both inevitable and desirable and that it can be made ‘green’ through western conservation practices of enclosure.

- \* 1989: The first carbon offsetting program is created by Applied Energy Services (an American energy company) in collaboration with the World Resources Institute.<sup>1</sup> American Energy Services financed an agroforestry project in Guatemala to compensate for a new coal-fired power plant they built in Connecticut. It marks a new development in the compensatory logic seen in previous conservation initiatives—it now incorporates a market mechanism (carbon markets). This is especially significant as it sends the message that ecosystems that hold lots of carbon are more important to save than others.
- \* May 22 1992: The United Nations Convention on Biological Diversity (UNCBD or CBD) is created. It is a multilateral treaty which is considered a key document on conservation and sustainable development. It is a key step in formalizing and legitimizing western conservation as the norm and pushing the idea of ‘sustainable development’ at a global level.
- \* 1997: The Kyoto Protocol is signed. (However, due to the lengthy and complex ratification process of the Protocol, it only came into effect in 2005). One significant element of the Kyoto Protocol is that, in response to heavy corporate lobbying, it establishes emissions trading as the primary tool to lower emissions. Emissions trading consists of trading emission permits, which are permits to pollute. This sets the stage for carbon markets and carbon offsetting.
- \* 2005: EU Emissions Trading Scheme (EU ETS) is created. It is the first major carbon market and the biggest one to date.
- \* 2008: REDD (+) first suggested. Pop up box: The term stands for “Reducing emissions from deforestation and forest degradation” and they are programs that fall under the umbrella of carbon pricing, alongside NbS. REDD (+) are programs implemented by UNFCCC in the Global South to supposedly reduce deforestation and support local economies. However, often REDD (+) projects have done more harm than good, especially to Indigenous communities, by grabbing their land to be used for monoculture tree plantations. Read more about REDD (+) here.
- \* 2009: The International Union for Conservation of Nature (IUCN) wrote a position paper for COP 15 promoting NbS as “an integral part of broader adaptation and mitigation plans and strategies.”
- \* 2013: REDD+ is adopted in Warsaw

1 <https://carboncloud.com/2023/02/10/offset-history-trexler/> and <https://impactful.ninja/the-history-of-carbon-offsetting/>

- \* 2015: 6th mass extinction declared by scientists.
- \* 2015: REDD+ included in Paris Agreement at COP21 push to involve NGOs in REDD+ efforts. This is significant, as in the past it had been the responsibility of governments, not NGOs. It's pitched as necessary to limit the Earth's temperature rising to less than 2 degrees.
- \* 2017: The Nature Conservancy (TNC) publishes "Natural Climate Solutions" paper, a landmark paper in creating what is today NbS. To this day, TNC is one of the major proponents of NbS among large environmental nonprofits
- \* NbS emerges, taking the place and/or supplementing REDD in many conservation conversations, but still using the underlying infrastructure of carbon markets and fortress conservation.
- \* December 2022: The Post 2020 Global Biodiversity Framework (GBF) is created at COP 15 of the UNCBD. It entrenches nature-based solutions and clears the way for creating biodiversity credits which are similar to existing carbon credits, among other things.
- \* 2030: What would you like to see in the future?
- \* 2050: If we commit to systems change, what might 2050 look like?

In a nutshell, NbS is the latest version of a very old colonial model of land management. Throughout history, the fundamental principles of Protected Areas—the epitome of Western conservation—have been kept intact. There have been modifications along the way, which have enabled conservation to be profit-generating, but biodiversity has continued to plummet and initiatives aimed at returning people to the land have continued to be undermined by this model. NbS is in essence REDD+ expanded beyond trees, with new branding. This rebranding, pushed by large conservation NGOs, governments, and private industry, uses co-opted climate justice language and intentionally keeps the boundaries of what NbS actually means ambiguous enough to enable various ecology-exploiting offsetting schemes to fit together in a convenient and easy-to-sell package, while the public remains unaware of what is really going on behind the scenes.



## Activity: Timeline of Resistance

Create a timeline of resistance and repression around NbS

- \* Can be for a group workshop or done individually
- \* Can be for NbS at large or for a specific NbS project
- \* Tools: internet, word processor/pencil and paper/whiteboard
- \* Time: 30 minutes or more

# Why Is NbS A False Solution?

Time: 30 min to 1 hour read (excluding the activities)

Simply put, NbS are a false solution because they deepen relations of exploitation and do not address the root causes of climate change. (By root causes we mean the 500+ years old system of colonialism, imperialism, capitalism, patriarchy, and extractivism). Beyond that, NbS brings on a whole host of other problems.

Can you think of what some of them might be? Some guiding questions in thinking about NbS are:

- \* Who are these solutions for? Who is pushing for them? Why?
- \* What problems are they actually solving?
- \* Who is profiting?
- \* Who is at the losing end?
- \* What other types of thinking or solutions are pushed to the side when NbS are proposed as a climate solution?

Take a minute to free write, create a bullet list, draw, think out loud or silently as you answer the above questions.

Here are some more specific questions to guide you in thinking about how NbS are false solutions:

<p>How might NbS reject systemic change?</p>	<p>NbS is a cop-out from meaningful systemic change because it does not address the root causes of climate change. Gas, coal, and oil extraction are allowed to continue causing harm. In other words, the polluters are allowed to keep on polluting but evade accountability for their continued role in fueling the climate crisis. NbS is nothing more than a greenwashed band-aid fix. Not only does NbS fail to address the root causes of climate change, it undermines real action to stop fossil fuels by creating a false sense of safety and taking attention away from more effective climate action.</p>
<p>How might NbS put profit over people and the planet? What does it mean for how we view nature?</p>	<p>At the most basic level, NbS allows the extractive industry to continue its actions, effectively putting their need for profit over human rights and the rights of nature. The price of this continued extraction is high and it is this very mentality that has led us to the climate crisis in the first place. More specifically, NbS takes Indigenous and peasant knowledge and privatizes and commodifies them for corporate gain. While proponents of NbS talk of “leveraging the power of nature”, they actually ignore and attempt to control the power of non-human species by commodifying them to reap their own power and profits. Putting a price on the carbon found within trees, animals, soil, water etc. distorts our relationship with them by turning them into commodities to buy and sell on a market, instead of acknowledging that nature is priceless. This is particularly dangerous because it puts nature under corporate control.</p>

What are the implications of NbS on the lands and rights of Indigenous Peoples, peasants, and/or those in the Global South?

For NbS to be implemented, they require huge amounts of land and/or water. However, the land and/or water on which NbS projects are created are not neutral or empty. They are already inhabited and stewarded, often by Indigenous Peoples, peasants, those in the Global South, small-scale farmers, and other frontline communities. In the pursuit of creating NbS projects, conservation NGOs, development and financial institutions, government, and the corporate sector all repeat old colonial dynamics by forcing Indigenous peoples and local communities off their lands, which often fail to comply with the standards of Free, Prior, and Informed Consent (FPIC) and bring egregious human rights violations.

<p>How might NbS co-opt Traditional Indigenous Knowledges (TIK)?</p>	<p>Nature-based solutions directly co-opt ecological practices based on Traditional Indigenous Knowledge (TIK), turning them into financialized and privatized instruments. These instruments provide a way through which TIK can fall under governmental, corporate and/or large NGOs control instead of within Indigenous communities. Many NbS projects include practices or elements of what Indigenous Peoples have been fighting against for years such as REDD+, industrial tree plantations, climate-smart agriculture, enclosure as “protected areas” and other biodiversity offsets. The end result is continued global inequality. Moreover, as TIK is essential in the relationship between Indigenous peoples and their lands, the cooptation of TIK and the accompanying landgrabbing are effectively Indigenous genocide. NbS projects cannot replace what Indigenous people have been fighting for years. Indigenous knowledge systems are always premised on the uniqueness and personhood of all members of the community, whether other than human or human. Within Indigenous cosmovisions, nonhuman persons such as animals, plants, rivers, forests are not equivalent to, substitutable or replaceable, let alone bought or sold for another such forest, river, etc. (Figueroa Helland 2022) Each has their personhood and unique spirit, just like each human does, and one cannot compensate for the killing of one person here by protecting another person there. The false</p>
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<p>How might NbS continue colonialism? What about carbon colonialism?</p>	<p>Most NbS projects are found in the Global South yet it is the Global North that is primarily responsible for climate change. Effectively, the Global North has outsourced its climate commitments. This is called carbon colonialism, as it perpetuates colonial inequality through carbon offsetting.</p>
<p>Is NbS effective on a scientific level?</p>	<p>NbS does not work at the most fundamental scientific level. NbS ignores the difference between fossil carbon and biological carbon (sometimes called modern, terrestrial, or biogenic carbon). Unfortunately, not all carbon is created equal. Whereas fossil carbon takes millions of years to be stored underground in rocks, minerals and other sediments, biological carbon cycles through the atmosphere, soil, water, and living organisms in the short-term. Some reports, like <u>Chasing Carbon Unicorns</u>, have demonstrated it is important to understand where carbon comes from. NbS attempts to sequester biological carbon as a replacement for the millions-of-years-old fossil carbon, but it simply does not work that way. The only way to replace fossil carbon is with time; there is no technological silver bullet. Even if this model of carbon sequestration were somehow possible, <u>there is simply not enough land/water on the planet</u> for all of the offsetting projects, such as NbS, proposed by governments and the private sector.</p>

How might NbS bring a one-size-fits-all approach to climate solutions?

Real change will require the input and development of solutions from those at the local level. There are as many ways to create healthy and vibrant ecosystems as there are ecosystems in collapse. There is no one size fits all approach or silver bullet to solving climate change. Each ecosystem and social context is unique and real climate solutions will take these unique factors into consideration to produce unique solutions. It is overly simplistic to think that a tonne of carbon in one place will have identical impacts to one tonne of carbon in a different place.

<p>How might NbS distort our understanding of Nature?</p>	<p>NbS projects, and Western conservation projects more broadly, operate on the idea that nature is external to humans, passive, inert, and that humans are therefore justified in the complete control and ownership over land. The idea of “untouched nature” or “bare land” is a Western colonial idea which assumes that the only way for ecosystems to be healthy is in the absence of human ‘interference’. This romanticized idea of “untouched nature” ignores the thousands of years during which Indigenous Peoples successfully stewarded land and is now used to force people, including Indigenous Peoples, off of their ancestral territories. This approach to nature of dominion, ownership, and control is arrogant and lacks respect for the complexity of nature.</p> <p>NbS projects also distort our relationship to nature by reducing it to a machine-like or managerial relationship revolving around the inputs/outputs of carbon. It pushes an oversimplification of extremely complex ecological systems and falsely elevates carbon as the most important element of climate change. This is often called ‘carbon reductionism.’</p>
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<p>What you might hear about NbS/Common misconceptions about NbS</p>	<p>How to Respond</p>
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<p>NbS is a great solution because it uses nature to solve climate change.</p>	<p>The ‘nature’ in ‘nature-based solutions’ is a co-opted version of Indigenous and peasant knowledges, which have been distorted to fit into the profit-generating frame of carbon offsets. There is nothing natural about that.</p> <p>The word ‘nature’ is also misleading—NbS allows projects like monoculture tree plantations, intensive agriculture, and kicking Indigenous People off lands they have inhabited for thousands of years. Those things don’t occur in ‘nature’.</p> <p>Also—fossil fuels are part of nature. Does that make them any less harmful?</p>
<p>Even if NbS didn’t sequester carbon, it is still a good idea because it preserves biodiversity.</p>	<p><u>80% of the world’s remaining biodiversity is stewarded by Indigenous Peoples.</u> They have unique and deeply rooted expertise through which biodiversity—including humanity—flourishes. The conservation model used in NbS systematically pushes Indigenous People off biodiversity-rich territories, which is completely antithetical to the goal of biodiversity conservation.</p>

<p>We need NbS to reach Net Zero! Otherwise we won't meet our climate targets!</p>	<p>Net Zero is not Real Zero. Net Zero allows for fossil fuel extraction to continue and does not stop emissions at the source! It would be like drinking 10 cans of soda and then eating 10 pieces of fruit—yes the fruit is healthy but it doesn't undo the negative health impacts of the soda. A damage here and now cannot be deferred to a future compensatory scheme. This overlooks tipping points, cascade effects and irreversible feedback loops in Earth system dynamics. Mother Earth does not do linear change, as both Indigenous storytelling has always stated and the Western geological record now also acknowledges.</p> <p>If we want to meet our climate targets, it is necessary to actually have zero emissions by stopping fossil fuel extraction.</p>
<p>It's just simple science—if you emit one tonne of CO2 and then sequester one tonne of CO2 it's as if nothing happened.</p>	<p>Unfortunately the science is not that simple. Fossil carbon takes millions of years to be sequestered into rocks and sediments whereas the carbon sequestered in NbS projects will only be sequestered for a few centuries in the very best case scenario.</p> <p>Also, each ecosystem is unique. The impact of a tonne of CO2 in one ecosystem is not identical as in another ecosystem.</p> <p>Finally, climate change is about so much more than CO2. There is biodiversity, pollution, ocean acidification, and so many aspects of climate change that it is reductive to rely on CO2 offsets as the only or main way to address climate change.</p>

<p>NbS and carbon offsets are a great way for us to address climate change without sacrificing the economy.</p>	<p>Economic expansion and consumerism are causes of the climate crisis, so no real solution to climate can cater to the idea that economic expansion is infinite. This especially applies to economic growth, accumulation, and extractivism in the fossil fuel industry, global transport and logistics, and consumer goods that we don't need.</p> <p>People and the planet should always come before profit!</p>
<p>Capitalism is here to stay. We may as well make economic growth good for the planet.</p>	<p>Capitalism is not inevitable. For almost all of human history there were other systems of economy that did not assume endless expansion with an equally endless extraction propping it up.</p> <p>Human history shows time and time again that we are wrong about things we once took for granted like the divine right of kings or the Earth being flat. Right now, many people may take capitalism for granted. But there is no guarantee that it will persist indefinitely. In fact, it is already in decline and the climate crisis is proof of that.</p> <p>Equally prominent systems have come to an end and this one will too. If we can foster a transition to a new system, centering the priorities and worldviews of frontline communities, we can help this one come to an end as peacefully and democratically as possible.</p>

Governance is the key to climate solutions. We can make (false) solutions work as long as we have the right governance.

The harms and problems with NbS cannot be solved with “good” governance. Also, global climate politics and policy so far have failed to deliver what they have promised, for example, in the Kyoto Protocol or Paris Agreement. They have failed, for instance, to deliver \$100 billion of climate finance due in 2020 to the Global South. Why should we trust governments around the world when they cannot even respect international treaties?

# False Solutions Case Studies

## Indigenous People In India affected by NbS

Survival International, a human rights group, has shown how the indigenous forest-based Baiga tribe in India is suffering after reforestation projects affected the region. The biodiversity offsetting project has in fact disproportionately affected the Baiga community. In India, usually when forests are destroyed for projects like mining, the companies responsible are required to give money to the CAMPA (Compensatory Afforestation Fund Management and Planning Authority) fund, which is used for compensating the loss of forest land and ecosystem services. But these projects often lead to biodiverse forests being replaced with monoculture plantations, often on the land of Adivasi people, whose existence the Indian government has denied for decades. (Also, some 90 percent of all mining operations are located in the forests and predominantly Adivasi regions of India) Compensatory afforestation programs are negatively impacting Adivasi people often without their informed consent as required by the Forest Rights Act. The Adivasis have been fighting for the protection of their collective right to self-determination, autonomy and identity, and for reclaiming their rights over land, territories and natural resources for centuries. “Adivasis have by and large been living in or around the forests with a rhythm akin to nature and thus their life cycle moves round nature.” The Adivasis co-exist and have a symbiotic relationship with nature and care for its well-being. “The concept of ‘exploitation’ has no place in adivasi philosophy; therefore, they do not exploit the natural resources but use it to meet their daily needs. Due to this, adivasi philosophy also addresses the ecological crises the world is facing.” (DungDung 2017)

The Pathalgari Movement, is a powerful mass movement fighting for these rights, and was unfortunately criminalized, declaring it as unconstitutional, anti-state and anti-national, and attacking it with the use of police and paramilitary forces.

We know Indigenous people protect 80% of Earth’s biodiversity and yet, they are often stripped of the lands they protect. In India, conservation efforts are affecting tribal communities. Across India, tribal peoples are being forcibly evicted from tiger reserves. Big conservation organizations such as the Worldwide Fund for Nature and the Wildlife Conservation Society provide support to India’s Forest Department, which carries out the evictions. Both WWF and WCS claim that relocations are “voluntary.”

There are many cases of Indigenous communities around the world being

stripped of their land due to “green” projects. You can learn more about it and other similar case studies on the [EJAtlas](#), an environmental justice atlas that documents and catalogs social conflict around environmental issues. You can add the filter “Indigenous groups or traditional communities” or search for a specific tribe such as Baiga to learn more about Indigenous communities fighting for climate change.

## Carbon offset scheme on Indigenous land in northern Kenya

Imagine there is a pastoralist Indigenous community that has been tending to their land in northern Kenya through knowledge systems passed down from community elders for generations. Imagine, one day, a conservation organization run by a white family decides it knows better. This is exactly what happened in 2013 to the Indigenous communities of Samburu, Maasai, Borana and Rendille people of northern Kenya with the conservation group Northern Rangelands Trust (NRT) which started a project, the “Northern Kenya Grassland Carbon Project” to sell carbon offsets which calls it the “the world’s largest soil carbon removal project to date and the first project generating carbon credits reliant on modified livestock grazing practices.” ([Eco Watch 2023](#)) The project is based on the idea that traditional pastoralist Indigenous grazing techniques, for example, gada and mpaka exercised respectively by the Borana and Samburu communities are not effective and should be replaced with more centralized methods similar to commercial ranching, which allegedly would allow for more vegetation to grow. “Grazing patterns are traditionally dictated by elders according to long-standing sets of rules, allowances and sanctions.” ([Survival International 2023](#)) The project covers two million hectares of land home to more than 100,000 people. The project was registered by Verra – the world’s top carbon credit certifier – as Project #1468 and has generated at least 6.7 million credits between 2013 and Feb. 2023, 4.5 million of which have been purchased as offsets, including 180,000 by Netflix and 90,000 by Meta. ([Eco Watch 2023](#)) The project has been described by the European Commission as a model on which is planning to base a forthcoming large funding program for conservation projects in Africa called ‘NaturAfrica.’([Survival International 2023](#))

A new report by Survival International “Blood Carbon: How a Carbon Offset Scheme Makes Millions From Indigenous Land in Northern Kenya”, which is supported by Indigenous Kenyan communities, raises questions about the credibility of the project and about the impact on the rights and safety of the Indigenous pastoralist peoples involved. For example, the aim of the project is to increase vegetation, but NRT’s own maps for 2012 to 2020 show vegetation declining in 48.5 percent of the project area. Also, to date, there is not really

evidence that NRT has properly informed communities about the project, nor received their free prior and informed consent. According to the report:

“The basic premise of the project, that it can enforce ‘planned rotational grazing’ within specified geographical areas runs fundamentally against the traditional indigenous pastoralism of the area, is conceptually seriously misguided, potentially dangerous and probably doomed to fail. It is based on a long colonial prejudice that sees pastoralists as incapable of managing their own environment and constantly destroying it by overgrazing. We believe that the project’s claim to be permanently storing quantifiable amounts of additional carbon in the soils of northern Kenya is highly implausible.”

Survival International 2023

“NRT is doing the wrong thing that I find unjust to our people”  
A leader of the Borana Indigenous people from Kenya, Abdullahi Hajj Gonjobe, describes the devastating impact that the Northern Rangelands Trust’s (NRT)

## California's Forest Carbon Offsets Program

California's Compliance Offset Program, also known as the forest carbon offset program, is a part of California's larger Cap-and-Trade Program run by the state's Air Resources Board (CARB). It is the largest existing project of its kind that issues tradable offset credits to projects that meet the Board's qualifications for reducing or sequestering greenhouse gas emissions; the project is worth more than \$2 billion. You can see a map of the offset projects here. But according to CarbonPlan, between 20 million and 39 million credits California's carbon offsets do not have real climate benefits. CarbonPlan, a San Francisco non-profit that analyzes climate solutions based on available science and data, published an analysis in 2021 which shows that the CARB's credits "are, in effect, ghost credits that didn't preserve additional carbon in forests but did allow polluters to emit far more CO<sub>2</sub>, equal to the annual emissions of 8.5 million cars at the high end." (ProPublica 2021)

In 2018, California Air Resources Board voted on a proposed policy to pay foreign states and provinces to sequester California's industrial CO<sub>2</sub> emissions in their tropical forests called the Tropical Forest Standard (TFS). A coalition of environmental justice organizations, Indigenous Peoples' representatives, green groups, academics and international forest-dwelling people urged CARB to reject the policy.

Ninawa Huni Kui, chief of the Huni Kui Tribal Federation of Acre, Brazil; Isaac Asume Osuoka of Cross River State, Nigeria; Marlon Santi, Kichwa People of Sarayaku and national coordinator of Pachacutik Indigenous Party, Ecuador; and Ana Valadez Ortega of the Center for the Study of Change in Rural Mexico issued a joint statement from the four tropical regions:

"We are forest people, scholars and community leaders, and we are united in urging California to reject any consideration of the Tropical Forest Standard. Our state governments, which would be responsible for implementing this standard, do not represent our interests; worse, they are capable of abuse, corruption, and systemic violence. We view any forest carbon plan, by the name REDD+ or any other name, as a continuation of the extractive, colonialist model of development that has devastated our lands, and as a profound threat to our ancestral knowledge and our rights to self-determination. Nature is not for sale." (FOEI 2018)

Indigenous leaders from Ecuador, Brazil, Mexico, and Nigeria Rejecting tropical forest offsets by the California Air Resources Board

The testimonies played a role in blocking the vote in the Tropical Forest Standard until April 2019, which is unfortunately now up and running.



While carbon offsets cannot address climate change, their impact is not always so black and white. There are cases that show us the complexity of how carbon offsets may be used in relation to Indigenous Peoples and frontline communities. For example, there is the case of the Yurok tribe in California that bought back its land by participating in CARB. This was not an uncontroversial decision. The offset credits were obtained by a variety of energy companies like Calpine, PG&E and Shell.

Over the last decade or so, the Yurok tribe has slowly reacquired a total of 100,000 acres from the Green Diamond Resource Company, a major Seattle-based timber business. With income from the offset program, the Yurok tribe has paid off loans from their previous watershed purchases; supported youth programming, housing, and road improvement; and helped develop off-reservation businesses. The tribe has said it is using the acquired land and funds to restore, through Traditional Indigenous Knowledge, its forests, and biodiversity, create a salmon sanctuary, and improve habitat for endangered species like the coho salmon, northern spotted owl, blacktailed deer and Roosevelt elk. ([LoCo 2019](#))

# Actors: Who's Behind The Wheel

Time: approximately a 30 + minute read (excluding activities)

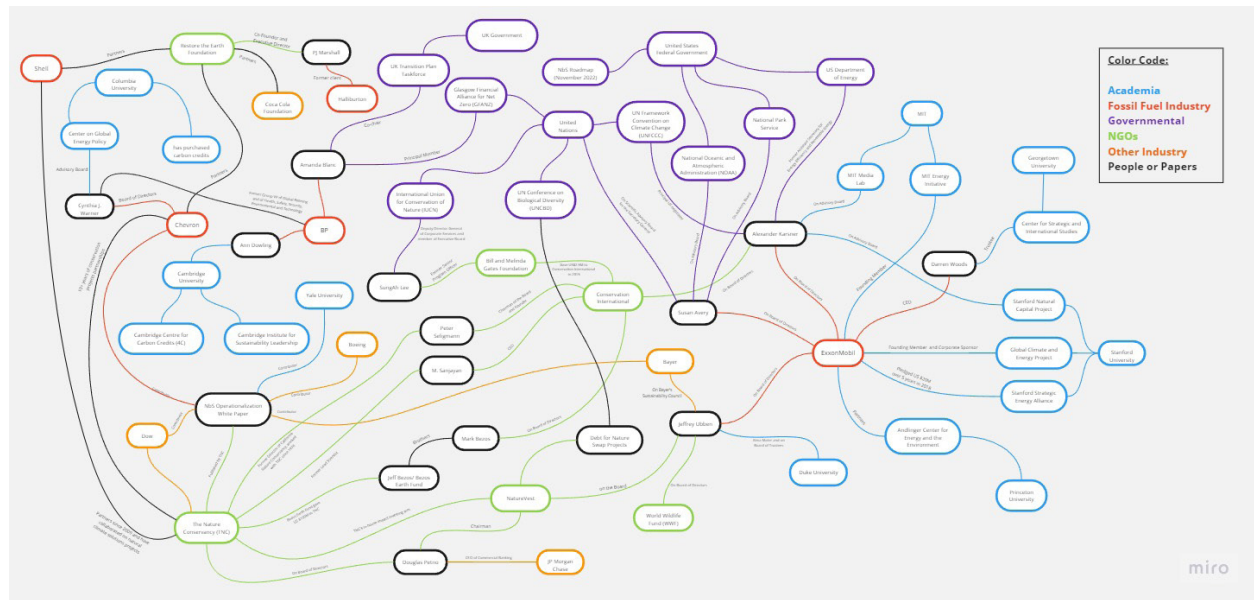
The scheme of NbS has not simply emerged out of thin air. It has a large and powerful network of colluding actors who have driven and continue to drive its development and implementation in order to profit off of exacerbating the climate crisis while avoiding accountability for their role in the crisis and positioning themselves as key players in addressing it (IEN 2022). These drivers of NbS include corporations, governments, intergovernmental organizations, NGOs (particularly conservation NGOs), academia, and the science-policy field. Some industrial players and business groups that have explicitly expressed support for NbS include, but are not limited to: BP, Chevron, Shell, Dow Chemical Company, Bayer-Boeing, Nestlé, CocaCola, Unilever, Amazon, Delta Airlines, Microsoft, HSBC, Procter and Gamble, Novartis, Woodside Energy, International Paper, Olam, WBCSD, World Economic Forum, Business for Nature, World Business Council for Sustainable Development, the International Chamber of Commerce, We Mean Business Coalition, the Capitals Coalition and the International Emissions Trading Association.

Critical Questions for this Section:

As you read through this section, some questions to carry with you are:

- \* Why would this actor be interested in pushing for NbS?
- \* What do they stand to gain? What do they lose or miss out on if they don't back NbS?
- \* Why is it a bigger, more established institution that is pushing for NbS?
- \* Who isn't on this list that you thought might be? Why aren't solar and wind companies on this list?
- \* Why do you think it is institutions of the Global North that are pushing for NbS (and not Global South)?
- \* Is there anyone missing from this list?

Below is an interactive Power Map/flowchart of all the actors. Visit <https://miro.com/app/board/uXjVM4Npckg/> to explore and interact with the Power Map.



## Intergovernmental

Intergovernmental institutions, particularly the United Nations and the World Bank, have been central in launching NbS on the global scale, legitimizing and promoting them as climate solutions, and driving their widespread adoption and implementation. In 2007, the United Nations Framework Convention on Climate Change (UNFCCC) and the World Bank launched REDD (Reducing Emissions from Deforestation and forest Degradation), the predecessor of NbS. Then in 2008, a World Bank report was the first major publication to introduce NbS as a climate “solution” which highlighted the Bank’s investment in biodiversity conservation. In 2009, the International Union for Conservation of Nature (IUCN), a leader in conservation, submitted a position paper to the UNFCCC 15th Conference of Parties (COP15) pushing for the scale up of NbS (see later on the section on conservation NGOs). It is also important to note that some of these institutions, including conservation NGOs, as we will see later, have been extremely active trying to incorporate Indigenous actors into their initiatives. This is an effort to neutralize dissent from Indigenous communities by using funds towards NbS and obtaining their consent. There is also a significant amount of ‘gender responsiveness’ language in NbS projects, which is a kind of liberal feminism and another attempt to neutralize dissent.

The United Nations has been a big proponent of NbS by affirming that NbS “can provide over one-third of the cost-effective climate mitigation needed between now and 2030.” A 2022 report by the UN Environmental Programme titled “State of Finance for Nature” calls for an urgent doubling of the current US\$154 billion annual global investments in NbS required to “halt biodiversity loss, significantly contribute to reducing/removing emissions (5 GtCO<sub>2</sub>/ year by 2025 further rising to 13–15 GtCO<sub>2</sub>/year by 2050) and restore close to 1 billion ha of degraded land.” The report also calls for further and accelerated commodification of our oceans through increased investments in marine NbS, claiming that much more than 9 percent of global NbS investments should be going to marine NbS.

## Governmental

Governments working with the private sector are pushing NbS to assert their power over climate “solutions” and continue ignoring their role in creating the social and ecological destruction that has led to the climate crisis in the first place. Supporting for-profit agendas, several national governments and intergovernmental bodies, including the European Union, have developed policies and initiatives to advance NbS. At COP26 the WWF (World Wildlife Fund for Nature) estimated that 92% of countries’ Nationally Determined Contributions (NDCs) included agendas to implement some form of NbS.

### Case Study: United States: White House Nature-Based Solutions Roadmap (US)

In November 2022, at the UNFCCC COP27 in Egypt, President Biden released a Nature-Based Solutions Roadmap, a strategy to scale up NbS adoption across federal agencies and serve as a supposed example for other nations to do the same: “We invite partners, communities, and other nations to join the Biden-Harris Administration in taking aggressive action to advance nature-based solutions as powerful tools that the world needs now.” This Roadmap not only includes resources that market NbS in woke-washed language as the perfect “equitable” solution for people and the planet, but also investments of over \$25 billion to support and incentivize implementation of NbS projects. The plan to deeply integrate NbS across government agencies on federal and local levels is extremely dangerous and makes it even more difficult to challenge and reverse the harms of NbS. However, as this plan is still in its early stages, there is still room to intervene.

Another concerning element of the roadmap is a working group that is developing cost-benefit analysis tools for nature based solutions. These cost-benefit analysis tools are used uncritically by policy makers as supposed objective tools to make policy decisions that affect people's lives and ecosystems. Ironically, the Roadmap claims that, "Nature-based solutions play a critical role in the economy, national security, human health, equity, and the fight against climate change," somehow assuming that NbS can both support national security and equity. We know that national security only exacerbates inequity and climate change. NbS is being used to greenwash US imperial pursuits. The Department of Defense is developing a guide on NbS for military installation planners and managers to integrate into military base management. Further, one of the benefits of NbS listed in the White House NbS [Resource Guide](#), is that it "support(s) military operation and readiness." While this may sound ironic, knowing that NbS is a false solution with the goals of profit extraction and delaying systems change, it is actually very much in line with the colonial logics of national security.

## Case Study: The European Union

The European Union (EU) is also increasingly pushing for NbS by supporting the funding, collaboration and jobs, projects, results and publications related to NbS. The EU funded "research and innovation" including nature-based solutions through its program 2014-2020 Horizon 2020 with a budget of €80 billion, which was succeeded by [Horizon Europe](#) with a budget of €95.5 billion (European Commission and European Commission). It says the EU is, "aiming to position itself as a world leader in NbS research, and thus supports projects such as [NetworkNature](#) gather and synergize the efforts of the European NbS community." Many European cities and regions have implemented NbS projects such as Amsterdam (NbS for greening the city and increasing resilience) or Berlin (NbS for urban connectivity and biodiversity).

The EU policy on NbS claims that "nature-based solutions help to create new jobs and economic growth" yet so far there is little evidence or plan on how decent jobs can be delivered by the European Commission through these NbS projects. NetworkNature, a database on NbS funded by the European Commission, published a [report](#) in collaboration with Global Youth Biodiversity Network, Youth4Nature and YOUNGO, titled, "What are nature-based solutions? Risks, concerns and opportunities," which highlights the potential of NbS to create colonial dynamics. The report states that "when funding for environmental projects are sent to the Global South, great care should be taken that these projects are not used in order to offset carbon activity in the global North without reform on their behalf. And that Indigenous knowledge and rights are taken into consideration, when implementing projects outside the European

Union.” It is unclear, given the EU’s colonial legacy, whether there is any plan in place for this to be avoided.

Additionally, the European Commission and the Brazilian Ministry of Science, Technology, Innovation and Communication started a dialogue on NbS in 2015, an interesting relationship given Brazil’s history of violations of Indigenous rights. Recently, the EU has also taken interest in sustainably financing marine policies and research programmes, an emerging field of NbS, which will be interesting to keep an eye on.

## Conservation NGOs

The scheme of NbS was originally developed by big conservation NGOs to channel more corporate funding to so-called “protected areas” under their control, essentially to support and expand their enclosure of land. In 2009, the International Union for Conservation of Nature (IUCN) wrote a position paper for COP 15 promoting NbS as “an integral part of broader adaptation and mitigation plans and strategies.” In 2017, The Nature Conservancy, the world’s largest conservation NGO which holds about 3.1 million acres of land on Turtle Island, commissioned a paper on “Natural Climate Solutions” which inaccurately stated that NbS can provide 37% of the CO2 reduction needed by 2030. Despite the lacking basis of this statement as it relies on entirely hypothetical calculations and highly implausible assumptions, this paper is still widely cited at the policy level in support of NbS, and often with the added call for a third of climate funding to be allocated to NbS projects, and therefore allocated to conservation organizations (WRM 2021).

Through such strategic introduction, development and championing of NbS alongside their leveraging of the massive amount of land they violently occupy, conservation NGOs have wrongly positioned themselves as central actors in addressing the climate crisis and secured corporate funding from polluting industries who are looking for such solutions that allow them to continue polluting and hoarding wealth. According to a 2015 quote from Justin Adams from TNC: “We need to find new ways of bringing private sector actors in. The Nature Conservancy has relationships, it has land assets, it has field programmes around the world. If we can leverage all of that, then the Nature Conservancy can play a very, very important role in addressing the climate challenge” (WRM 2021). In 2020, TNC, World Wildlife Fund, and Environmental Defense Fund, among other NGOs in support of NbS received \$100 million USD each from Jeff Bezos, the founder of Amazon’s Earth Fund (WRM 2021; TNC 2021; WWF 2021; ). Like said earlier, there is an effort to buy Indigenous communities’ consent. The

Nature Conservancy particularly has a large strategic interaction and outreach with Indigenous communities. Their website has a whole section dedicated to “Indigenous People and Local Communities” with the opening “Building trust. Acknowledging the past. Listening always” and a series of programs dedicated to restoring relationships with Indigenous communities. You can find more [here](#) and [here](#).

## Corporations / Private Sector

Corporations have a keen interest in offsetting projects such as NbS because they allow them to continue and increase their extraction while professing to be fighting climate change (or becoming “climate neutral”). Forestry, agriculture, and fossil fuel industries in particular are some of the largest beneficiaries and supporters of NbS. In addition to serving as greenwashing tools, NbS can actually serve as revenue streams for corporations. Corporations that have NbS projects can sell commodities generated from these projects such as timber and fish stocks, along with carbon credits (refer to carbon markets module). ([IEN 2022](#))

## Fossil Fuel Industry

The fossil fuel industry is heavily involved in NbS, by investing in projects to claim their carbon neutrality and net zero emissions while continuing to pollute our Earth.

### Case Study: Jeffrey Ubben

Jeffrey Ubben is a good case to understand how intertwined conservation NGOs, corporations and academia are in perpetuating false solutions like NbS. Ubben is a board member of Exxon Mobil while he serves on the board of WFF and the Board of Trustees of Duke University as well as of Nature Vest. Nature Vest is the in-house impact investing team at The Nature Conservancy, one of the first conservation NGOs to push for NbS. In November 2021, The Nature Conservancy (TNC) and the Government of Belize announced the completion of a USD 364 million debt conversion for marine conservation. It is an NbS project that is breaking ground because it is the largest debt conversion for marine conservation project to date. Further details about this project can be found later in this module [here](#).

## Case Study: Shell

Shell's investment in NbS is a perfect example of how a major oil company is adopting false solutions to evade accountability. Shell has committed to net zero emissions by 2050, by reaching a 50% reduction of the carbon intensity of all the products it sells, claiming its total emissions peaked in 2018 at 1.7 gigatonnes. Shell's commitment of carbon offsetting projects has a budget of \$450 million. The company claims it will work with its customers to reduce their carbon emissions as well, either by mitigating their emissions on their behalf or by supporting them in their actions to reduce emissions. This ambitious plan includes relying on the use of NbS to compensate for its emissions through reforestation projects covering an area the size of Brazil and requiring 700m hectares of land. By 2035, Shell wants to capture and store 25 million tonnes of carbon a year and to compensate for a total emissions of around 120 million tonnes a year by 2030. This plan is unrealistic given that the voluntary carbon offset market reached 104 million tonnes in 2019 and that Shell plans to increase its liquefied natural gas (LNG) operations by 20 percent through 2025. According to the Guardian, in 2020, Shell invested about \$90million in NbS projects by acquiring the Australian company Select Carbon that works on developing and monitoring carbon sequestration projects. In 2021, Shell announced it would invest about \$100million a year in nature-based projects. That year, it allocated more than \$480m to various projects – more than \$456m of it for NbS projects – to be deployed across the length of the contracts. According to Shell's website its NbS projects include: carbon farming in Australia, restoring degraded lands in the Philippines; regenerating mangroves in Senegal; and promoting sustainable farming in Zambia.

Shell is using NbS to continue its fossil fuel agenda, often lacking scientific backing for its carbon offsets project. Why are Shell's NbS solutions problematic? Friends of the Earth International Netherlands breaks down the reasons why Shell's NbS solutions are false and problematic:

- \* Storing CO<sub>2</sub> in trees is a temporary solution because Shell's CO<sub>2</sub> emissions will remain in the atmosphere for thousands of years to come.
- \* Shell plants trees of one species, for example, the fast-growing eucalyptus trees which damages biodiversity. Often these trees are genetically engineered (GE) trees. For example, two varieties of eucalyptus trees have already been approved in Brazil, which is the first country to authorize their commercial use. This has led to calls to stop their plantations in Brazil in 2015.
- \* Land is needed to offset Shell's emissions and this land is often located in the Global South, leading to human rights violations.
- \* 80% of Shell's current CO<sub>2</sub> offsets go towards protecting and not planting new trees, which according to FOE's report, present many loopholes.



All these solutions are false considering that Shell continues to invest in oil and gas to please its shareholders with a \$8 billion budget for oil and gas production and \$4 billion in fossil gas instead of making absolute cuts in oil production. In an interview with Reuters in 2019, chief executive Ben van Beurden stated that “despite what a lot of activists say, it is entirely legitimate to invest in oil and gas because the world demands it.”

## Timber and Forest Products Industries

Timber and forest products industries have created false narratives around forests and climate to keep profiting from logging and replacing natural forests with industrial tree plantations. For example, these industries intentionally ignore the distinction between natural forests and tree plantations such as industrial monocultures that destroy natural habitats, displace natural forests and do harm to Indigenous Peoples who depend on forests for their survival. Part of this narrative includes spreading the false notion that younger trees are better at sequestering carbon than older ones when in reality, old growth forests store more carbon in the active carbon cycle than tree plantations. These industries also claim that forests are in need of “thinning”, stating that wildfires can be controlled by thinning and logging. To reinforce all these narratives, corporations support the creation of genetically engineered (GE) trees - claimed to sequester carbon faster - which are being experimented across the world, including the U.S. and Brazil. These narratives put forth by forest industries also create new demands for wood that are claimed to be under “sustainable certification standards.” No certification standards can be sustainable and no deforestation can be tackled if demands for wood increase, and forests are harmed by excessive logging and the introduction of new plantations.

## Agribusiness

Today, Indigenous Peoples, small-scale farmers and other farmers using agroecology, who are mostly women, provide food to more than 70% of the world’s population using less than 25% of the agricultural land. (—> You can jump to real solutions sections to see how agroecology is a form of resistance to agribusiness.) Yet, since the 1980s, the agricultural system based on capitalism is being managed by a few multinational corporations, the so-called agribusiness. They control seeds and chemicals, promote unsustainable farming practices through government lobbying to increase their profits. 44% to 57% of all greenhouse emissions come from the industrial food chain such as

industrial-scale production, and deforestation. Climate SMART agriculture, soil sequestration programs, NbS, payments for environmental services (PES) are all projects that should supposedly sequester carbon and reduce emissions. These projects are sold as carbon offsets in carbon trading systems or as tax breaks in a carbon tax system, allowing polluters to keep polluting. These multinational corporations, additionally, to encourage investments in agriculture that rely on tech and automation, grab land from small-scale farmers and forest-dwelling communities. Like in the case of Shell, illustrated earlier, these corporations buy up lands, sell carbon credits and claim to advance net zero emissions. Agribusiness has also been heavily pushing for genetically-engineered (GE) crops and trees claiming that GE varieties can reduce emissions. Companies like Monsanto/Bayer, Dow, BASF and Syngenta among others are developing “climate friendly” crop varieties through GE processes ([La Via Campesina 2018](#)).

## Case Study: Nestlé

“Nestlé has made big commitments to support “nature based solutions” (NBS) for food or “nature positive food” which forms Action Track 3 of the UNFSS. Nestlé claims it will achieve net-zero climate emissions from its support for NBS. Yet, rather than decreasing the production of its most emission-intensive products such as industrial meat and dairy, Nestlé is planning on increasing production of dairy, livestock, and commodity products by 68 percent by 2030. It is intending to rely primarily on carbon offset credits to make up for this drastic increase in emissions.” ([Food Systems 4 People 2021](#); [GRAIN 2021](#))

## Academia

Around the world many academic institutions are supporting NbS through initiatives, partnerships, and perhaps most importantly by condoning NbS both to those in the environmental field and the young minds who will influence climate policy for years to come. Academic institutions promoting NbS include but are not limited to: Princeton University, Yale University, Stanford University, Imperial College London, Massachusetts Institute of Technology (MIT), University of Oxford, University of California Santa Cruz, National University of Singapore, University of Maine, University of Berkley, Instituto de Hidráulica Ambiental, Universidad de Cantabria, Spain and Stockholm University, and the Stockholm Resilience Centre.

Yale, for example, has initiatives centering NbS such the Yale Center for Natural Carbon Capture, and the Yale School of the Environment hold a course on Natural

Climate Solutions. In the media, YaleEnvironment360 published an article in 2022 asking [Why Are Nature-Based Solutions on Climate Being Overlooked?](#) At the University of Oxford, there is a Nature-Based Solutions Initiative; University of California Santa Cruz is in collaboration the Nature Conservancy on an initiative called Symposium on Natural and Nature-based Features (NNBF) and the National University of Singapore has a Center on Nature-based Climate Solutions (CNCS). Often these initiatives are promoted by big polluters that are using academia around the world to push and validate NbS through corporate-funded partnerships and research. For example, Exxon has funded Stanford University's [The Global and Energy Project \(GCEP\)](#) which has produced more than 900 papers in leading journals and more than 1,2000 presentations at conferences on carbon capture and storage and NbS. ([The Big Con 2021](#))

## Science–Policy Field

Both the scientific and policy spheres, represented by organizations such as the Intergovernmental Panel on Climate Change (IPCC) and Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, support NbS. The role of modern science and the modern scientific spheres in supporting and legitimizing NbS points to a larger trend of unchallenged acceptance of modern scientific knowledge.

In the 2021 IPCC report, nature-based solutions are highlighted as a tool for climate mitigation “due to its co-benefits in improving human well-being.” In 2021, IPBES and IPCC [published a joint report on the interactions between biodiversity and climate change](#) as a part of a workshop that highlighted the role of NbS. The report states that “Nature-based solutions (NbS) can play an important role in climate mitigation, but the extent is debated, and they can only be effective with ambitious reductions in all human-caused greenhouse gas emissions. Nature-based solutions can be most effective when planned for longevity and not narrowly focussed on rapid carbon sequestration.” ([IPBES IPCC 2021](#)) The report goes to lengths to illustrate the ways in which NbS are the solution to climate adaptation and mitigation, despite admitting that “large-scale afforestation or bioenergy plantations may violate an important tenet of nature-based solutions – namely that they should simultaneously provide human well-being and biodiversity benefits.” The joint report claims the workshop is built on both scientific and Indigenous knowledge where NbS should take in consideration needs and access rights of indigenous peoples and local communities. Yet, little space is given in the report to the ways in which Indigenous rights are protected through NbS.

## Activity: Power Mapping

- \* Participants are encouraged to do some investigative research themselves on a specific NbS project in their community or in exploring how NbS is linked to them. We guide them by giving them tips and tools on how they might find information to map out the actors on their own.
- \* The purpose is for participants to learn how to do power mapping themselves and identify what actors they can/should target (esp for grassroots org audience) as well as providing a personal link to NbS.
- \* This activity can be done independently, but it's even more "fun" and easier to do this activity in groups.

Is there an NbS project happening near you? Curious to see if your employer, school, or government is tied to NbS? This is your chance to explore the links and flows of NbS projects by making your own power map. Here are some tips and tricks for doing so:

## Follow the money!

When looking up an NbS project, a suspected NbS project, an organization, or an initiative, their funding sources typically reveal the true lines of power.

- \* Funders can be described using a range of terms including: sponsors, donors, partners, contributors, supporters.
- \* Sometimes a funder is never explicitly identified, but their logo may appear throughout websites, promotional materials, and in the acknowledgement section of reports. Always check to see who is thanked at the end of any report or publication!
- \* Often funding from specific projects is hard or impossible to trace. It's fine to get a more general sense of how money moves throughout an industry, or on initiatives that are thematically linked. You can uncover this information by looking at annual reports and/or financial statements if available.
- \* Many countries require NGOs to publicly disclose certain financial information. In the US, you can refer to the IRS' [tax exempt organization search](#). In the UK, you can consult the [register of charities](#).
- \* Many countries have financial information about their public companies available online. For example, in the US the Securities and Exchange Commission (SEC) has [EDGAR](#), an online tool for researching public companies' operations and financial information.
- \* Political parties and their candidates are required to disclose their financial information as well. <https://www.opensecrets.org/>

## There is always a face behind the mask.

All organizations are composed of people and since power tends to be concentrated in the top executives and board members of most organizations, looking into them often yields results.

- \* Most nonprofits and corporations have the current and past members of their Board of Directors, Board of Trustees, and/or executives. Often their bios will include their previous professional experiences and any affiliations they may have.
- \* To trace the connections between organizations, look to see which people serve in multiple boards, where people have formerly been employed/other former associations, what schools they have gone to, and who they have collaborated on previous projects with.
- \* If you're not sure how or where to begin, pick an organization that you are either personally tied to or are interested in and start looking into the people on their board of directors and/or board of trustees. Examples of organizations you might want to start with include your employer, alma mater, your bank, your electric company, big fossil fuel companies, the make of your car, or your retirement fund.

# What's On The Horizon?

Time: approximately a 5-10 minute read (excluding the activity)

## What's coming up: Debt-for-Nature Swaps

A debt-for-nature swap is a financial tool in which part of a Global South country's foreign debt is restructured if they commit to invest in local conservation projects (many of which include NbS projects). Debt-for-nature swaps are not a brand new tool—big conservation NGOs such as Conservation International, and the World Wildlife Fund have used them in the late 1980s. They largely fell out of use but are now re-emerging as a tool for conservation NGOs, federal governments, and large financial institutions.

Essentially, debt-for-nature swaps encourage Global South countries to hand over their nature for the promise of financial relief. Here it is important to note that the reason most Global South economies are struggling to pay off foreign debt and even have foreign debt in the first place is a direct result of former colonial invasion and exploitation at the hands of the Global North.

Debt-for-nature swaps don't offer new conservation technologies or practices—the only new thing about them is that they tie conservation projects (including NbS projects) to the financial sector and to foreign debt. Currently, there are only a handful of debt-for-nature swaps actively in place but interest in them is rapidly growing. Perhaps the best-known example of a current debt-for-nature swap is in Belize, where the federal government committed to the largest debt conversion for ocean conservation to date, with a US \$364M debt conversion (representing about 12% of Belize's GDP) in exchange for the conservation of 30% of their ocean via a 'blue bond'. (The Nature Conservancy 2022; International Monetary Fund 2022)

# What's coming up: Voluntary Carbon Markets

Voluntary carbon markets (VCMs) are a new type of carbon market. As their name suggests, they are entirely voluntary—they are fueled by corporations or individuals who wish to offset their carbon emissions through purchasing carbon offsets and/or by those who would like to profit by selling them. This is in contrast to existing carbon markets which are, compliance carbon markets. This means that they are driven by binding emissions targets or other regulations.

The standards, guidelines, regulations, infrastructure and other key elements of voluntary carbon markets (VCMs) are currently being negotiated and developed under Article 6 of the Paris Agreement, so sometimes you will see that VCMs are referred to using A6, which is an abbreviation of Article 6.

VCMs are much bigger in scope than just NbS but NbS projects are certainly included in them, as they are a means through which carbon credits are generated. VCMs are important in the future of NbS because they offer an avenue through which huge amounts of NbS projects may be funded, promoted, developed, etc. The actors behind VCM are of course fossil fuel corporations and other major emitters who seek to expand the voluntary carbon market to keep polluting the planet. In the report [Fossil Futures Built on House of Cards](#), FOEI looks at how the VCM and demands for carbon offsets are set to expand in the coming years by “building an elaborate house of cards that is being used, along with the fairy tales of carbon-neutrality and ‘net zero’ fossil futures, to enable fossil-based capitalism to carry on unimpeded.” (FOEI)

Text in between ‘what’s coming up’ and the future scenarios:

As voluntary carbon markets and debt-for-nature swaps are still in their early stages, it is impossible to predict the exact ways in which they will unfold. However, there is one thing we do know—that by entrenching and expanding NbS, the harms that NbS projects cause will have a parallel entrenchment and expansion.

Now is a crucial time to take action. There are many things about voluntary carbon markets and debt-for-nature swaps that are still being shaped and which we have the power to influence. This includes their structure, implementation, PR, financing, and the regulations around them, among others. We have the opportunity to prevent harm instead of denouncing it once it happens. The wellbeing of many ecosystems and communities depends on this.

Below are a few scenarios of what our future might look like based on what types of action we take today in response to voluntary carbon markets and debt-for-nature swaps. Read through them and explore what they might look like using the questions below as a guide. Feel free to talk, write, draw, do a visualization, or use any other tools in thinking through your answers.

## Activity: Envisioning Possible Futures:

### Scenario 1: Business as Usual

- \* Beginning at the next UNFCCC Conference of the Parties (COP), voluntary carbon markets are implemented at scale and provide a new and wide avenue through which more NbS projects can be developed.
- \* Similarly, debt-for-nature swaps are championed in large international climate governance bodies (like the UNFCCC) and are rolled out at increasingly larger scales. Through debt-for-nature swaps, more NbS projects are implemented.
- \* NbS projects gain traction, funding, legal backing, and popular support. There is a rapid expansion of NbS projects in the coming years.

Who would benefit from this? Who would be harmed? Why?

What impacts would this have for climate change and fossil fuel emissions?

What are the implications for human rights? For health? For economic inequality? For Global North/Global South dynamics?

How might this help or hinder the global environmental movement?

Does this shift the status quo? If yes, how?



**Scenario 2: Active Resistance**

- \* VCMS and debt-for-nature swaps are critiqued, including their links to NbS and carbon markets. This occurs at the level of international policy (at the UN, for example) as well as in other forums and spaces.
- \* Widespread and relatively unified opposition within the environmental field. Some of the discourse and rhetoric make it to the environmental lexicon of the general public.
- \* Opposition highlights the voices and needs of those who have been historically oppressed, including women, peasant communities, indigenous peoples, those from the Global South etc.

Who would benefit from this? Who would be harmed? Why?

What impacts would this have for climate change and fossil fuel emissions?

What are the implications for human rights? For health? For economic inequality? For Global North/Global South dynamics?

How might this help or hinder the global environmental movement?

Does this shift the status quo? If yes, how?

## Scenario 3: Middle of the Road

- \* Instead of an active opposition or critique of debt-for-nature swaps and voluntary carbon markets, an approach closer to harm reduction is adopted. It is accepted that NbS projects will expand under these two emerging topics and focus is dedicated to creating guardrails and minimizing damage.
- \* Collaboration and co-creation of guidelines, best practices, standards, frameworks etc. from nonprofits, the private sector, government, and civil society groups.

Who would benefit from this? Who would be harmed? Why?

What impacts would this have for climate change and fossil fuel emissions?

What are the implications for human rights? For health? For economic inequality? For Global North/Global South dynamics?

How might this help or hinder the global environmental movement?

Does this shift the status quo? If yes, how?

# Real Solutions And Resistance To NbS

Time: approximately a 30 minute to one 1 hour read (excluding the activities)

When it comes to nature-based solutions, and to climate change in general, false solutions have focused on trying to come up with new ideas—ones that build from the ground up in order to maintain the status quo while claiming to minimize environmental harms.

What if a better future lies not only in new ideas and new paradigms, but in supporting knowledge systems that have already been in place for millenia? What if we already have many of the answers we seek?

Let it be clear—the purpose of this module is not to prescribe a way forward but rather to provide information about ways of living and thinking that often get excluded from mainstream/western climate solution conversations. These include real solutions that are guided by Traditional Indigenous Knowledge, place-based experience, and public-interest science, especially those in Indigenous communities and the Global South. The narrow frame of mind and western logics used in mainstream climate solution conversations brings about a mentality in which nature-based solutions seem like a rational way ahead when they are in fact damaging to people and to the planet.

‘Real solutions’ can look different in different contexts. There is no one-size-fits-all fix, no silver bullet, or single ‘right’ way to move forward. Therefore, a future that embodies climate justice is, as the Zapatista saying goes, “un mundo donde quepan muchos mundos”, “a world where many worlds fit.”

The real solutions we dig into in this section are political visions, lifeways, and processes that are practiced and built towards on the daily. They help us address NbS from its roots. By learning from case studies of communities practicing these political visions, we see how diversely these visions are adapted to local contexts and how their practices contribute to these ever-evolving frameworks and theories. We want to acknowledge that while some of the case studies presented are not necessarily directly related to NbS, they offer a point of reflection and a window into our imagination of what an alternative to NbS could look like.

# Abolition

## What is Abolition?

If you've heard the term abolition before, it most likely brings up images of policing, or recent calls to defund police, police brutality etc. However, abolition is a much wider and richer concept. It's not only about removing harmful practices, but about building fair and nourishing ones. According to Ruth Wilson Gilmore, the goal of abolition is "to change how we interact with each other and the planet by putting people before profit, welfare before warfare and life over death."([Gilmore 2022](#))

## How does Abolition apply to NbS?

"PIC abolition is a positive project that focuses, in part, on building a society where it is possible to address harm without relying on structural forms of oppression or the violent systems that increase it" ([Kabe 2021](#)).

When we view NbS through this powerful definition by Mariame Kabe, the harm to be addressed is the climate crisis. NbS relies on the same structural forms of oppression that drive the climate crisis to address it, increasing harms through land grabbing, repression of land defenders, allowing continued extraction, commodification of Indigenous knowledges, etc. Alternatively an abolitionist framework here moves us to truly address the harms of climate change in ways that reduce harm and nurture care. Abolition is grounded in abundance, "a vision of restructured society where we have everything we need" ([Kabe 2021](#)).

Similar to how policing, prisons, and other "security" institutions are performances of safety that actually make us collectively less safe, NbS are performances of climate action that don't actually address but exacerbate climate change. Both are intended to provide a false sense of security while only really protecting, or "securing," the systems, institutions and people benefiting from continued oppression.

Applying an abolitionist framework to NbS helps us target systems and institutions of harm (the actors identified in the who's behind the wheel section) to reduce and ultimately (defund) remove all investments into these institutions. For example, \$154 billion USD were invested into NbS in 2022, a large portion of which is public investments and the UNEP is calling for a doubling of this investment by 2025 ([UN Environmental Programme, 2022](#)). The European Commission has allocated around €95.5 billion to "research and innovation" that

includes NbS projects starting in 2020 ([European Commission](#)). Philanthropy, too, pledged \$5 billion USD into NbS in 2021 ([ATMOS](#); [Greenfield 2021](#)).

Abolition pushes us to imagine what it would look like for these billions to be moved from NbS and reinvested into actual community and care-based solutions. Money would be reinvested into the resources and infrastructure under-resourced communities need and demand (such as schools, housing, healthcare, public transit, libraries, parks, etc). It would also call for an end to fossil fuels.

Abolition provides us a useful criteria to determine whether the ways we're resisting and practicing alternatives to NbS and fighting for climate justice will make a "real difference." In the words of [Asha Ransby-Sporn](#), Chicago-based community organizer and co-director of organizing at Dissenters, it guides us to ask ourselves, "Will it take power, resources or legitimacy away" from systems of oppression? This ensures that our demands in resistance to NbS do not end up being solely reformist in nature and "move us closer to abolition" ([Asha Ransby-Sporn, Rising Majority](#)).

## Activity: From NbS to Abolition

Nature-based Solutions	Abolition
Seeks to secure the interests of systems, institutions and people who profit off of NbS and its exploitation	Seeks to collectively make all human and non-human species safe and allow them to thrive
	Seeks to defund and dismantle exploitative systems and institutions, including those driving NbS
Seeks to maintain the status quo	Seeks to restructure society by building life-giving systems
Increases the harms of the climate crisis through reliance on the same structural forms of oppression that drive it	Reduces harms and nurtures care Addresses the harms of the climate crisis from its root causes
Collaborates with police, military and private security to violently implement and enforce NbS projects through repression of environmental defenders	Envisions a world without police, military, and private security
Calls for increased investments into NbS	Calls for divestment from NbS (and the systems and institutions driving it) and a reinvestment into community and care-based climate justice solutions

Feel free to come up with further contrasts between NbS and abolition.

How does Abolition intersect with other real solutions? (Degrowth, Abolition, Decolonization & Re-indigenization, Landback, Agroecology, Community Forest Management)?

Abolition and decolonization are mutually dependent, imagining a world without the military and prison industrial complex goes hand in hand with imagining a world without colonial systems. These quotes illustrate this deep relationship:

“Abolition and decolonization are a necessary ongoing kinship to uplift all bodies harmed by colonialism, as mechanisms of erasure, disappearance, and confinement work to uphold the prison industrial complex and uphold the same actors that benefit from the first colonial settlements centuries ago. Making the connections between struggles in detention centers, prisons, and indigenous struggles for liberation can inform us of the radical kinships possible when we realize illegality and criminality are productive regimes that are continuously being reproduced to highlight socially constructed differences to further bury us and our coming together.” (The Abolitionist Editorial Collective 2020)

“Abolition and decolonization are strong and necessary frameworks in thinking about a world without borders or cages, while being cognizant of the critiques about their co-optation in ways that no longer root them in the specificity of Black and Indigenous struggles.” (Harsha Walia, The Abolitionist Editorial Collective)

## Activity: Radical Imagining

“If all we do is fight against what we don’t want, we learn to love the fight and have nothing left for our vision but longing. But longing isn’t good enough. We must live into the vision by creating it and defending it. We must ‘Build the New’ *as a way to* ‘Stop the Bad’ —we must be both visionary and oppositional.”

### *Movement Generation*

The precursor to building a just future is imagining it. In this activity you will learn to build your imagination skills, which we don’t practice enough and on a societal level are at risk of atrophying.

Imagine you live in a world in which abolition has already been ‘achieved’ and is actively practiced. Go through the following questions and allow yourself to talk, write, think, draw etc. through your answers without reservation or judgment. This is an opportunity to lean into optimism and into possibility. The sky’s the limit.

- 1- What does this world feel like? What feelings does it evoke in you?
  
- 2- What does it look like? What does it sound like? Taste? Smell?
  
- 3- What is present and what is not present? Can you do something you might not be able to do right now?
  
- 4- How do we go about solving problems?
  
- 5- What types of relationships do people have with one another? What about with institutions?
  
- 6- What is your role in this new world?



## Abolition in Practice:

While we have not found examples of groups advancing a divest-invest framework targeting NbS specifically, there are many campaigns advancing divest-invest demands in relation to climate and environmental justice broadly. These includes United Frontline Table’s People’s Orientation to a Regenerative Economy, Muslim Abolitionist Futures’ Abolishing the War on Terror, Building Communities of Care Grassroots Policy Agenda, The Movement for Black Lives’ Breathe Act, among various other local “people’s” budget proposals across cities. All of these campaigns call for very specific divestment of public funding from systems and institutions of harm and regulations to curb ecological and social exploitation, and a reinvestment into community-led climate justice and community safety priorities. While they do not explicitly name NbS or carbon offsetting, divest-invest demands around NbS can indeed fit into their climate justice demands and can also serve as models to develop NbS-specific divest-invest campaigns. You can check out their demands linked above for more details.

## Activity

A table with two sides: one side for where participants think resources/ institutions should be divested from within NbS, and the other side for where they want to see resources moved to (can be visually drawn or written)

Divest From	Invest Into
-ex: NbS projects, conservation NGOs, police departments	-ex: education, health, community gardens

# Degrowth

## What is degrowth?

Degrowth means many different things to different people, but broadly it can be defined as a framework that challenges both the structure of the colonial-capitalist system and its widely internalized view of endless extractive growth as necessary for “development”. Instead, Degrowth is most known for calling for a scaling down of production and consumption, particularly by wealthy corporations and governments guilty of overproduction and consumption. But more foundationally than that, decolonial Degrowth centers alternative visions of growth as regenerative, care-based, abundant, localized, equitably distributed, and truly prioritizing social and ecological wellbeing. Its call for downscaling is towards a larger vision for the abolition of capitalism and colonialism through care, autonomy, and self sufficiency (Parrique 2020). (Demaria, Kallis & Bakker 2019; Hickel 2021; Tyberg 2020; Chertkovskaya & Paulsson 2020; [Degrowth.info](http://Degrowth.info); [Degrowth.org](http://Degrowth.org))

However, not everyone understands and practices degrowth with this decolonial approach. There are many, especially in the global North who see the downscaling of production and consumption as the end goal of degrowth, and call for this broad downscaling across all peoples and countries without any nuanced historical analysis. Particularly because of this, the term Degrowth is sometimes (rightfully) met with hesitation in some revolutionary spaces, as a global North concept lacking systemic decolonial analysis and vision (Hickel 2021).

Alternatively, Degrowth as “an intellectual and political agitation tool towards decolonization” (Tyberg 2020) of “imaginaries and institutions” (Demaria, Kallis & Bakker 2019) as the end goal, is not only extremely useful but actually already present in and practiced by communities and movements of the global South across the world well before the term came to be (Tyberg 2020; Chertkovskaya & Paulsson 2020).

“The concept of degrowth may make sense from a Southern perspective, not as an umbrella term that will encompass the variety of alternatives practiced there, but as an attempt to deconstruct and undo in the West a Western imaginary that has been at the heart of colonialism and that domestic elites use in the Global South to justify inequalities and eradicate more egalitarian alternatives.” (Demaria, Kallis & Bakker 2019)

“Essential for degrowth is:

- \* Striving for a self-determined life in dignity for all. This includes deceleration, time welfare and conviviality.
- \* An economy and a society that sustains the natural basis of life. It values rather than exploits reproductive labor.
- \* A reduction of production and consumption in the global North and liberation from the one-sided Western paradigm of development. This could allow for a self-determined path of social organization in the global South.
- \* An extension of democratic decision-making to allow for real political participation.
- \* Social changes and an orientation towards sufficiency instead of purely technological changes and improvements in efficiency in order to solve ecological problems.
- \* The creation of open, connected and localized economies.” ([Degrowth.info](#))

How does Degrowth apply to NbS?

In applying Degrowth to NbS, we find this definition of Degrowth by Jason Hickel quite useful:

“Degrowth, then, is not just a critique of excess throughput in the global North; it is a critique of the mechanisms of colonial appropriation, enclosure and cheapening that underpin capitalist growth itself. If growthism seeks to organize the economy around the interests of capital (exchange-value) through accumulation, enclosure, and commodification, degrowth calls for the economy to be organized instead around provisioning for human needs (use-value) through de-accumulation, de-enclosure and de-commodification.”

Hickel 2021

NbS come out of the perpetual growth “logics” of the capitalist system. NbS allow corporations and governments to continue increasing their endless production, consumption and pollution, while making claims that those emissions are being “offset” by their NbS projects. Rather than slowing this extractive economic growth, NbS actually support the acceleration of it. On top of that, NbS open up more ecosystems and Indigenous and peasant knowledges for corporations to commodify and lands to enclose for new revenue streams. Degrowth directly challenges this and guides us to approach NbS with the goals of “de-accumulating” wealth, “de-enclosing” lands, and “de-commodifying” ecosystems and Indigenous and peasant knowledges.

Degrowth challenges the colonial underpinnings of NbS that place harmful NbS projects in Global South communities to supposedly “offset” Global North emissions. Degrowth returns responsibility onto Global North corporations and governments to take accountability for, reduce and repair the harms they’ve caused.

By challenging growth-based development, degrowth provides a framework to refute the marketing of NbS projects to global South countries and communities as offering economic development benefits. Communities in the global South have resisted NbS projects presented as development projects by pushing to degrow the scale of these capitalist projects and centering alternative practices of growth such as commoning, cooperatives and mutual aid.

## Activity: From NbS to Degrowth

Nature-based Solutions	(Decolonial) Degrowth
Comes out of the perpetual growth “logics” of the capitalist system	Centers alternatives visions of growth as regenerative, care-based, abundant, localized, equitably distributed, and truly prioritizing social and ecological wellbeing
	Challenges the structure of the colonial-capitalist system and its widely internalized view of endless extractive growth as necessary for “development”
“Organizes the economy around the interests of capital” (Hickel 2021)	Organizes the economy around sustaining life
Supports the acceleration of endless production, consumption and pollution by corporations and governments	Calls for a downscaling down of production and consumption, particularly by wealthy corporations and governments guilty of overproduction and consumption
Encourages accumulation of wealth, enclosure of lands, and commodification of ecosystems and Indigenous and peasant knowledges	Encourages de-accumulation of wealth, de-enclosure of lands, and de-commodification of ecosystems and Indigenous and peasant knowledges
Displaces the responsibility of the climate crisis onto Global South communities to “offset” the emissions produced by Global North corporations and governments	Returns responsibility for the climate crisis onto Global North corporations and governments to take accountability for, reduce and repair the harms they’ve caused

How does Degrowth intersect with other real solutions? ( Decolonization/ Re-Indigenization, Abolition, Decolonization & Re-indigenization, Landback, Agroecology, Community Forest Management)?

Degrowth in its decolonial form can intersect with anti-imperialism, abolition, landback, buen vivir, feminism, agroecology, and other liberatory frameworks. Degrowth draws upon alternative visions of growth from these frameworks and knowledge systems and those of other Indigenous, peasant, global South, grassroots communities.

Degrowth's call for "de-enclosure" is a call for LandBack.

Its call for downscaling connects to abolitionist calls for divestment and reinvestment - the closing of NbS projects, a shrinking of the institutions driving NbS, a removal of public and private funding being poured into NbS, and a reinvestment of those funds into under resourced communities and into the resources and infrastructure communities need for regenerative growth (or "regrowth"). Divest-invest demands are a form of degrowth in action.

## Activity: Radical Imagining

“If all we do is fight against what we don’t want, we learn to love the fight and have nothing left for our vision but longing. But longing isn’t good enough. We must live into the vision by creating it and defending it. We must ‘Build the New’ *as a way to* ‘Stop the Bad’ —we must be both visionary and oppositional.”  
Movement Generation

The precursor to building a just future is imagining it. In this activity you will learn to build your imagination skills, which on a societal level are at risk of atrophying.

Imagine you live in a world in which degrowth has already been ‘achieved’ and is actively practiced. Go through the following questions and allow yourself to talk, write, think, draw etc. through your answers without reservation or judgment. This is an opportunity to lean into optimism and into possibility. The sky’s the limit.

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2- What does it look like? What does it sound like? Taste? Smell?

3- What is present and what is not present? Can you do something you might not be able to do right now?

4- How do we go about solving problems?

5- What types of relationships do people have with one another? What about with institutions?

6- What is your role in this new world?

## Degrowth in Practice: The People's Agreement of Cochabamba

The People's Agreement of Cochabamba, drafted at the World People's Conference on Climate Change and the Rights of Mother Earth in Bolivia in 2010 by grassroots organizations from across the world, is an example of a decolonial version of degrowth in practice. While not explicitly named as degrowth, it embodies the core elements of degrowth. It begins by challenging the capitalist system and its logic of endless growth: "This regime of production and consumption seeks profit without limits, separating human beings from nature and imposing a logic of domination upon nature, transforming everything into commodities." The Agreement calls for "a new system that restores harmony with nature and among human beings," through the "the recovery, revalorization, and strengthening of the knowledge, wisdom, and ancestral practices of Indigenous Peoples" which provide alternative visions and practices of growth.

The Agreement returns responsibility onto wealthy nations "as the main cause of climate change" and demands that they:

- "Restore to developing countries the atmospheric space that is occupied by their greenhouse gas emissions. This implies the decolonization of the atmosphere through the reduction and absorption of their emissions;
- Assume the costs and technology transfer needs of developing countries arising from the loss of development opportunities due to living in a restricted atmospheric space;
- Assume responsibility for the hundreds of millions of people that will be forced to migrate due to the climate change caused by these countries, and eliminate their restrictive immigration policies, offering migrants a decent life with full human rights guarantees in their countries;
- Assume adaptation debt related to the impacts of climate change on developing countries by providing the means to prevent, minimize, and deal with damages arising from their excessive emissions;
- Honor these debts as part of a broader debt to Mother Earth by adopting and implementing the United Nations Universal Declaration on the Rights of Mother Earth."

This includes a reduction in their greenhouse gas emissions, which comes with an overall downscaling of production and consumption to levels that fulfill the fundamental needs of their populations, and no more than that. Even more foundationally it calls for a shift to a "sustainable model of production used by Indigenous and rural farming people."



The Agreement explicitly condemns offsetting mechanisms such as REDD +/++ (Reducing Emissions from Deforestation and Forest Degradation) as “violating the sovereignty of peoples and their right to prior free and informed consent as well as the sovereignty of national States, the customs of Peoples, and the Rights of Nature.”

It calls for financial compensation from polluting countries for the “restoration and maintenance of forests in favor of the peoples and indigenous ancestral organic structures” and calls on governments to “create a global program to restore native forests and jungles, managed and administered by the peoples, implementing forest seeds, fruit trees, and native flora.” This is not to serve as offsets but as a way to repair the harms they’ve caused to peoples and ecosystems in ways that recognize their sovereignty. (People’s Agreement of Cochabamba 2010)

“Degrowth is a process of conflict with the prevalent model of growth-based development – not a blueprint to be discovered but rather a process that emerges as a model of growth encounters its limits and people challenge the consequences”  
Demaria, Kallis & Bakker 2019

## Decolonization & Re-Indigenization

What is decolonization and re-indigenization?

The word decolonization is growing in popularity and used in a lot of different contexts, often as a metaphor. But decolonization is not a metaphor; it’s the action of removing colonialism from all aspects of life. (Tuck and Yang 2012) It means dismantling settler states. It means achieving Indigenous liberation and sovereignty, it means re-Indigenization; it means reclaiming Indigenous lands, knowledge, cultures, cosmovisions, languages, rights and self-determination (Tuck and Yang 2012; Figueroa Helland et al. 2021). It means returning stolen land, restoring Indigenous and BIPOC sovereignty, and dismantling all institutions of settler colonialism, settler states, neocolonial and postcolonial state formations and property regimes. Decolonization goes hand in hand with moving away from capitalist and patriarchal systems and embracing regenerative systems based on mutuality and reciprocity. Importantly, decolonization and re-indigenization don’t look the same everywhere—it is not as simple as copying and pasting the same practices everywhere. Because each Indigenous community is different, their process and needs around re-Indigenization will be different as well.

How do decolonization and re-Indigenization apply to NbS?

“What we saw referred to as ‘nature-based solutions’ was a co-optation of Indigenous worldviews but also a new strategy meant to facilitate the erasure of Indigenous-led movements, solutions, and demands necessary for us to continue to do what we’re already doing well.” - Janene Yazzie, NDN Collective ([ATMOS](#))

Decolonization and re-Indigenization allow us to understand the harm nature-based solutions do to nature (including humans) as a re-enactment of colonialism. Under a colonial relationship to nature, the physical world is seen as having no agency of its own, a source of wealth to be extracted and exploited. Decolonization also gives a framework to understand how Indigenous lands are harmed in pursuit of NbS.

“Decolonization is rooted in re-Indigenization. Decolonization must take place in conjunction with the transition away from the deadly systems of racial capitalism and patriarchy and toward a regenerative, place-based economy and way of relating to one another and the land ([Cooperative Climate Futures 2021](#)).”

Decolonization and re-Indigenization involves “Returning lands to their original Indigenous caretakers, enabling the resurgence of Indigenous identities, cultures and lifeways, restoring Indigenous communal land governance, management and commons tenure, defending and expanding Indigenous self-determination, rights and sovereignty, and reclaiming and revitalizing Indigenous knowledges, cosmovisions, languages and relational conviviality worldwide” ([Figueroa Helland et al. 2021](#))

## Activity: From NbS to Decolonization and Re-Indigenization

Nature-based Solutions	Decolonization and Re-Indigenization
Continues to displace and dispossess indigenous peoples	Attempts to reverse and/or stop the displacement and dispossession of indigenous peoples
Does harm to nature and people through the same logics of colonialism	Allows us to understand the NbS do to nature and people as a re-enactment of colonialism
Under colonial logic, the physical world (nature and people) is seen as a source of wealth to be extracted from	Decolonization and re-Indigenization give agency to the physical world and return lands and resources to its original caretakers
Continues the status quo in terms of the harmful relationships between indigenous peoples and powerful institutions	Centers reconciliation, reparations, and power redistribution in the relationships between indigenous peoples and powerful institutions

How do decolonization and re-indigenization intersect with other frameworks? (Degrowth, Abolition, Decolonization & Re-indigenization, Landback, Agroecology, Community Forest Management)?

We said earlier that abolition and decolonization are mutually dependent. The same goes for all the other frameworks. Decolonization and re-indigenization is an important framework for all the other ones that should actively support them in their actions. Because colonialism permeates all aspects of life, any political vision, whether it's a call to return land to its original caretakers, scaling down of production and consumption or adopting agroecological practices, necessitates a systemic and decolonial approach.

## Activity: Radical Imagining

“If all we do is fight against what we don’t want, we learn to love the fight and have nothing left for our vision but longing. But longing isn’t good enough. We must live into the vision by creating it and defending it. We must ‘Build the New’ as a way to ‘Stop the Bad’ —we must be both visionary and oppositional.”

### Movement Generation

The precursor to building a just future is imagining it. In this activity you will learn to build your imagination skills, which on a societal level are at risk of atrophying.

Imagine you live in a world in which decolonization and re-indigenization have already been ‘achieved’ and are actively practiced. Go through the following questions and allow yourself to talk, write, think, draw etc. through your answers without reservation or judgment. This is an opportunity to lean into optimism and into possibility. The sky’s the limit.

- 1- What does this world feel like? What feelings does it evoke in you?
- 2- What does it look like? What does it sound like? Taste? Smell?
- 3- What is present and what is not present? Can you do something you might not be able to do right now?
- 4- How do we go about solving problems?
- 5- What types of relationships do people have with one another? What about with institutions?
- 6- What is your role in this new world?

## Decolonization and re-Indigenization in practice: Kichwa communities win landmark Free, Prior and Informed Consent case for the rights of Indigenous peoples in Peru

Cordillera Azul National Park (PNCAZ), covering 1.35 million hectares of forest with a 2.3-million-hectare buffer zone, was established as a protected reserve to prevent timber exploitation in the year 2000. In 2002, the NGO Centro de Conservación, Investigación y Manejo de Áreas Naturales (CIMA) was established to manage the National Park and was financed by several foreign donors (USAID, Gordon and Betty Moore Foundation, Packard Foundation) before beginning the REDD project in 2008 selling carbon credits. The project was intended to sell carbon offsets at least until 2028, which was the duration of the contract for CIMA's management of the park. During the implementation of the project, farmers, Indigenous groups or traditional communities International ejos and local ejos, landless peasants, Kakataibo People, Kichwa People, fisher people mobilized to protect the project. The Kichwa community had been dispossessed for the most part by the Cordillera Azul National Park and forestry concessions. In June 2022, the the Ethnic Council of the Kichwa Peoples of the Amazon (CEPKA), the Federation of Indigenous Kichwa Peoples of Chazuta (FEPIKECHA) and the Federation of Indigenous Kichwa Peoples of the Lower Huallaga of the San Martin Region (FEPIKBHSAM), the bases of the Coordinating Committee for the Defence and Development of the Indigenous Peoples of the San Martin Region (CODEPISAM) of Peru, issued the statement, "The Kichwa people reject the Cordillera Azul National Park's exclusionary conservation and opaque carbon trading." The Kichwa community clearly stated:

"We reject that MINAM and SERNANP continue to deny our right to prior consultation and participation in the distribution of the benefits of the REDD+ Project, saying that there are no communities within the PNCAZ. There are at least 29 Kichwa communities with territories which coincide with the area under management. Where are our purmas (forest fallows), collpas (watering holes), purinas (hunting trails), ancient paths and water springs? The Park's forests DID NOT appear out of nowhere; their conservation is the product of our relationship with them, the care, protection, management, control and vigilance that we have been carrying out for centuries based on our traditional knowledge"

Statement by Kichwa People

You can read the full statement of the Kichwa people rejecting the Cordillera Azul National Park's exclusionary conservation and opaque carbon trading [here](#) and learn more about it [here](#) and on the [EjAtlas](#). In September 2022, The Kichwa demanded a new model for conservation, a new social contract. On 3 September 2022 in Chazuta, San Martin, a high-level meeting was held where Indigenous organizations of the Kichwa people presented their demands to the Ministry of Culture (MINCUL) and the National Service of Natural Areas Protected by the State (SERNANP), regarding more than 20 years of the exclusion of Indigenous peoples from the conservation model of the Cordillera Azul National Park (PNCAZ). Read the list of the demands [here](#).

After this, CEPKA filed a lawsuit against the Government and the Cordillera Azul National Park for being dispossessed of its territory by the Park and forestry concession. In April 2023, the Kichwa people achieved Free, Prior and Informed Consent ordering for the titling of their ancestral territory to begin.

## **Decolonization and Re-indigenization in Practice: Baka People, Congo Basin**

The Indigenous community of the Baka People in Congo have been stripped of their lands in the Messok Dja rainforest for the implementation of a new national park. The Baka people depend on the forest to eat, heal themselves and carry out their rituals. "The Baka have always protected the forest. We don't destroy the trees: We only take the sap, the bark and the leaves. We don't kill animals, except those we eat," says Michel Zamoutom, the patriarch of Kika-PK14, a small hamlet in southeastern Cameroon on the border with Congo-Brazzaville. ([Pulitzer Center](#)) For over a decade, the World Wide Fund for Nature (WWF) has been working with the Congolese government to set up the Messok Dja National Park with the help of funding bodies like the European Commission (EC), the US Fish and Wildlife Service (USFWS) and the United Nations Development Programme (UNDP). In the name of "fortress" nature conservation, Baka people are criminalized. WWF is in fact deploying "eco-guards" and private security that wage violence against Baka people. There are reports of some Baka men who were taken to prison to be tortured and raped ([The Guardian](#)). WWF says the eco guards were employed by the Congolese government, but admits contributing to their training and wages. Many Baka communities have written [signed letters of complaint](#) which they asked Survival International to forward to the funders of the proposed park. The Baka people are fully aware of their legal rights, they know the free, prior and informed consent (FPIC) of local communities must be obtained for projects happening on their land. Without their consent, Messok Dja National Park is illegal. This is how they are resisting corporate and NGO powers. ([Pulitzer Center](#); [Deep Green Resistance News Service](#))

Pull Quotes from [here](#) or include one letter:

“We, the Baka and Bakwele together, refuse this new park that WWF wants to create. That is our forest, where we find wild mangos, koko, fish and meat to feed our children with. In our forest we also find all the medicines we use to heal ourselves. We cross the forest and go as far as Souanke. For us the forest has no boundaries. If they cut the forest, how will our children and grandchildren live?”

“If they want to work in our forest they must come here and seek our consent.”

██████████  
Sembe District  
Sangha Department  
Republic of Congo  
██████████

We, the Baka and Bakwele together, refuse this new park that WWF wants to create.<sup>8</sup> That is our forest, where we find wild mangos, *koko*<sup>9</sup>, fish and meat to feed our children with.

In our forest we also find all the medicines we use to heal ourselves. We cross the forest and go as far as Souanke. For us the forest has no boundaries. If they cut the forest, how will our children and grandchildren live?

Already the ecoguards make us suffer a lot. They take our things, they send us to prison, they beat us and then we have to pay fines. We cannot find justice.

We do not understand the purpose of all this. We are told that international law says that they need to get our consent before doing a project in our forest. We invite you to come here, to listen to what we have to say and to make sure this law is applied.

Yours sincerely,



# Buen Vivir

## What is Buen Vivir?

The concept of buen vivir comes from a translation of ‘suma qamaña’ in Aymara and ‘sumaq kawsay’ in Kichwa which can be roughly understood as “good living”, “harmonious life”, “inclusive life”, “know how to live” and/or “plentiful life” in English. We also want to acknowledge there are different names and terms associated with the concept in different Indigenous communities and that they often cannot be accurately translated in Western languages. Sumaq qamaña and Sumaq kawsay date centuries back and continue to exist in Andean communities. Buen Vivir can mean different things, it’s ‘the whole’ (pacha); it’s multipolarity; it’s equilibrium; it’s complementarity; it’s decolonization. It is a concept that “prioritizes harmony, co-operation and humility over possessive individualism” (Adelman 2015). At its core, it is about the relationships of interdependence and humility. ([Systemic Alternatives](#)) Buen vivir is not simply ‘harmony with nature,’ as a romanticized vision of Indigenous peoples, it is a real political project that takes many different forms.

The concept of ‘buen vivir’ has become a buzzword and has often been co-opted, watered down, and/or alienated from the context it was meant to be used in. For example, the governments of Bolivia and Ecuador included the concept of buen vivir in their constitutions as principles of the States between 2007 and 2008. ([Systemic Alternatives](#)) However, the inclusion of ‘buen vivir’ does not mean the countries have taken a decolonial path nor have encompassed the full complexity of the term as their governments still rely on neo-extractivist policies. When buen vivir and other knowledge systems are brought to the state level, they are made to cohere with what the goals of the state, resulting in contradictions that do not reflect communities’ visions of buen vivir.

## How does Buen Vivir apply to NbS?

Buen vivir undermines the need for NbS because it acknowledges the complexity and uniqueness of each ecosystem, each community and each context whereas NbS equates one tonne of carbon anywhere with any other tonne of carbon elsewhere. Nature is seen as something active and in constant flux that we are in a deep relationship of reciprocity with and mutuality while NbS requires a view of nature as passive and inert that we need to have complete control and power over.



## Activity: From NbS to Buen Vivir

Nature-Based Solution	Buen Vivir
Sees land as something to have complete control and power over.	Sees land as something we are in a deep relationship of reciprocity and mutuality with.
Equates one tonne of carbon anywhere with another tonne of carbon elsewhere in the world.	It acknowledges the complexity and uniqueness of each ecosystem and each community to create regenerative and sustainable systems.
Uses a logic of simplification and standardization.	Uses a logic of complexity and nuance.
Concept that originates from and serves the interests of the Global North.	Concept that originates from and serves the interests of the Global South.

How does Buen Vivir intersect with other real solutions: (Degrowth, Abolition, Decolonization & Re-indigenization, Landback, Agroecology, Community Forest Management)

Buen vivir has a mutually dependent and reinforcing relationship with decolonization. Unsurprisingly, it mutually reinforces other concepts such as the commons, degrowth, decolonization, abolition, depatriarchalization and anti-imperialism and so on. Buen vivir is also deeply tied to the concept of the autonomy of the land where the relationship with land is central, something we will explore later with the concept of land back.

## Activity: Radical Imagining

“If all we do is fight against what we don’t want, we learn to love the fight and have nothing left for our vision but longing. But longing isn’t good enough. We must live into the vision by creating it and defending it. We must ‘Build the New’ *as a way to* ‘Stop the Bad’ —we must be both visionary and oppositional.”  
Movement Generation

The precursor to building a just future is imagining it. In this activity you will learn to build your imagination skills, which on a societal level are at risk of atrophying.

Imagine you live in a world in which Buen Vivir has already been ‘achieved’ and is actively practiced. Go through the following questions and allow yourself to talk, write, think, draw etc. through your answers without reservation or judgment. This is an opportunity to lean into optimism and into possibility. The sky’s the limit.

1- What does this world feel like? What feelings does it evoke in you?

2- What does it look like? What does it sound like? Taste? Smell?

3- What is present and what is not present? Can you do something you might not be able to do right now?

4- How do we go about solving problems?

5- What types of relationships do people have with one another? What about with institutions?

6- What is your role in this new world?

## Buen Vivir In Practice: Indigenous movement in Ecuador

The biggest organization of the movement, the Confederation of Indigenous Nationalities of Ecuador (Confederación de Nacionalidades Indígenas del Ecuador, or CONAIE), founded in 1986, has established itself as a legitimate political movement in the national discourse. According to scholar Altman, “Good life allows for local decolonization, a concrete and local fight against the structures of “the coloniality of power” framed within a discursive panorama that includes concepts of plurality and autonomy. ” (Altman, 2017) Altman states, “The buzz phrases good life, buen vivir, and sumak kawsay as they are developed and proposed by the Indigenous movement in Ecuador involve a profoundly decolonial concept that calls into question coloniality of power as a matrix of racist exclusion, capitalist exploitation, and Eurocentric epistemicide.” (Altman, 2017)

## LandBack

What is LandBack?

At the heart of the Land Back movement lies the goal of returning land and its stewardship to Indigenous peoples. Key here is the term ‘returning’—these lands were never surrendered and remain illegitimately occupied. In Indigenous cosmologies and epistemologies everything emanates from the land; matters of land therefore also implicate hunting and fishing, Indigenous cultures, languages, livelihoods, and sovereignty amongst other things. In light of this, the Land Back movement is about much more than just land. The movement also includes Indigenous self-determination, cultural and language preservation, food sovereignty, and the material wellbeing to Indigenous communities. LandBack is required and prioritized for decolonization and re-Indigenization.

How does LandBack apply to NbS?

NbS are in direct opposition and stand in the way of landback. NbS require the occupation of more and more land, as we have seen earlier, for example with the case of Shell relying on the use of NbS to compensate for its emissions through reforestation projects covering an area the size of Brazil. Landback directly addresses NbS: it seeks for all lands used for NbS projects to be returned to the Indigenous communities belonging to those lands (however they decide that should be done).

NbS actually relies on the colonial and imperial occupation of land. The White House NbS RoadMap states that “Federal agencies manage approximately 650 million acres of public land, from national parks to beaches and working forests. Intentionally managing these natural resources to embed nature-based solutions can increase the return on taxpayer dollars” ([White House](#)). Instead these Indigenous lands should be returned to their rightful caretakers to best care for them through their ancestral practices that would more successfully achieve the goals that NbS claim to (e.g. enhancing water storage, moderating drought risk, and reducing flood risks from storms and sea level rise). “Co-stewardship and co-management” with Indigenous communities, as suggested “where appropriate” by the White House is not sufficient ([White House](#)).

“When people have their own say over their own communities, that’s when their communities thrive. If a community can have a say over their community, that community is going to be healthier and stronger. They will protect and defend their community, their rivers, their streams, their mountains, their forests.”

-Thomas Joseph, Indigenous Environmental Network ([ATMOS](#))

“While Indigenous communities globally have been calling for more protections of nature, they’ve called for this alongside other demands, such as the recognition of their land and cultural rights. The reality is that many governments ignore their rights, which is already resulting in displacement as nature-based solutions proponents pursue this avenue.”- Yessenia Funes ([ATMOS](#))

## Activity: From NbS to LandBack

Nature-based Solutions	LandBack
Requires occupation of more and more land for NbS projects	Requires all lands used for NbS project (and all other lands) to be returned to Indigenous communities belonging to those lands (however they decide that should be done)
Land is under corporate control or the control of large conservation NGOs	Land is not manipulated or controlled—it is stewarded by those who have historically inhabited those lands and have unique knowledge of that land.
Is based on a Western model of ‘fortress conservation’	The relationship with land is fundamentally one of mutual care and reciprocity
Embedded with a carbon market framework, which commodifies nature and boils it down to how much carbon it holds.	Embedded in a framework that sees nature and markets as wholly incompatible. Holistic view of nature in which value cannot be measured by only looking at carbon.
Continues the status quo in terms of the harmful relationships between indigenous peoples and powerful institutions	Centers reconciliation, reparations, and power redistribution in the relationships between indigenous peoples and powerful institutions

How does LandBack intersect with other real solutions? (Degrowth, Abolition, Decolonization & Re-Indigenization, Agroecology, Community Forest Management)?

LandBack is a central demand of decolonization and re-Indigenization. It is called for under decolonial versions of degrowth that center “de-enclosure” of lands. Although not always explicitly tied or included by all abolitionists, abolition in its goals to dismantle all oppressive systems and structures includes the abolition of borders and private property.

Despite these possible and present intersections, there is still also a widespread non-commitment to LandBack among many groups practicing versions of these real solutions.

## Activity: Radical Imagining

“If all we do is fight against what we don’t want, we learn to love the fight and have nothing left for our vision but longing. But longing isn’t good enough. We must live into the vision by creating it and defending it. We must ‘Build the New’ as a way to ‘Stop the Bad’ —we must be both visionary and oppositional.”  
Movement Generation

The precursor to building a just future is imagining it. In this activity you will learn to build your imagination skills, which on a societal level are at risk of atrophying.

Imagine you live in a world in which LandBack has already been ‘achieved’. Go through the following questions and allow yourself to talk, write, think, draw etc. through your answers without reservation or judgment. This is an opportunity to lean into optimism and into possibility. The sky’s the limit.

1- What does this world feel like? What feelings does it evoke in you?

2- What does it look like? What does it sound like? Taste? Smell?

3- What is present and what is not present? Can you do something you might not be able to do right now?

4- How do we go about solving problems?

5- What types of relationships do people have with one another? What about with institutions?

6- What is your role in this new world?

## Landback in Practice: Tanzania Indigenous Peoples

In the name of mitigation policies to address climate change, including NbS, many Indigenous Peoples are evicted from their ancestral lands in the Global South. Armed forces are deployed in forcefully evicting Indigenous peoples in Tanzania in the name of conservation projects. The climate crisis has seen an increase in rates of evictions of Indigenous Peoples in Tanzania from land based investments to enlargements of protected areas. ([Tanzania Indigenous Peoples Policy Brief](#))

PINGOs Forum (The Pastoralists Indigenous Non-Governmental Organizations' Forum) is an advocacy coalition of indigenous peoples' organizations who are currently 53, working in Tanzania for the rights of the marginalized indigenous pastoralists and Hunter-gatherers communities since 1994. As a human rights and development network PINGOs Forum seeks to advocate and support development of competencies on sustainable livelihoods of Pastoralists and hunter-gatherers communities in Tanzania. It endeavors to amplify the voices and foster the interests of pastoralists and hunter-gatherers by advocating for change on good governance and human rights. Furthermore, PINGO's Forum addresses issues of Gender, HIV/AIDS, Environment, and Climate Change. Learn more at [www.pingosforum.or.tz](http://www.pingosforum.or.tz).

IWGIA is an international human rights organization staffed by specialists and advisers on indigenous affairs. IWGIA supports indigenous peoples' struggle for human rights, self-determination, right to territory, control of land and resources, cultural integrity, and the right to development. IWGIA was founded in 1968 with the aim of establishing a network of concerned researchers and human right activists to document the situation of indigenous peoples and advocate for an improvement of their rights. Today indigenous peoples from all over the world are involved in IWGIA's global network Learn more at [www.iwgia.org](http://www.iwgia.org).

TIPTCC was formed in 2013 by a committee consisting of seven key indigenous organizations with the goal of creating a mechanism to raise awareness on climate change and its effects on indigenous peoples' livelihoods in Tanzania and to promote the integration of indigenous peoples' livelihoods and rights in climate change policies and initiatives. TIPTCC has since its formation provided a forum for discussing Indigenous peoples' positions on different climate change and REDD+ related policies and initiatives, including the draft REDD+ policy, REDD+ safeguards, and REDD+ Information and communication system and World Bank Environmental and Social Framework.

## Landback in Practice: Sogorea Te' Land Trust and Movement Generation

There are efforts across Turtle Island (North America) to return land to its original caretakers. In June 2023, two organizations, Sogorea Te' Land Trust, an urban Indigenous women-led land trust, and Movement Generation, a nonprofit collective that inspires and engages in transformative action towards the liberation and restoration of land, labor, and culture and focusing on Just Transition, announced long-term partnership to care for land as part of a broad Indigenous land back movement. They have partnered to return 43 acres of land to Indigenous care, in the unceded Bay Miwok territory of the San Francisco East Bay Area. "Returning land to Indigenous care is healing for us and healing for the land," says Corrina Gould, co-founder of Sogorea Te' Land Trust and tribal chairperson of the Confederated Villages of Lisjan.

"Working together with Movement Generation to create visions and commitments into the next generations allows us to reimagine relationships to this land and multiply the possibilities of our work."

Movement Generation 2023

This is just one example of many to illustrate there are alternatives to NbS.

"Movement Generation envisions the land to become a Bay Area movement hub for deep political strategy, reconnecting with earth and ancestry, and practicing rematriation, with the support of Sogorea Te' Land Trust. Here, MG will host intergenerational programs for organizers, healers, cultural workers and earth workers to engage in grassroots ecology, building their capacity to guide their own communities towards a Just Transition and an ecologically regenerative future."

Movement Generation 2023



# Agroecology and Food Sovereignty

## What is Agroecology?

Agroecology and food sovereignty are the (Western) name given to deep and complex knowledge systems of ecological processes that have been developed over hundreds of thousands of years by peasants, fisher people, land-based communities, and Indigenous peoples. The knowledge of Peasant and Indigenous farmers is key in centering agroecological farming practices. This knowledge is place-based, locally-adapted, and culturally-relevant.

“Peasant agroecology and food sovereignty are social, political, and ecological visions that unite multiple sectors within a single movement to challenge business-as-usual and create systems of shared control over the requirements of life.”(La Via Campesina 2018)

These knowledge systems are threatened by agribusiness and transnational corporations. However, often agroecology is co-opted by big corporations and even NGOs strategically trying to push their distorted vision of agroecology for their own benefits under names of ‘climate smart agriculture’, ‘sustainable’ or ‘ecological intensification’, industrial monocultural production of ‘organic’ food, etc. To learn more about co-optation of agroecology read [“Junk Agroecology”: The Corporate Capture of Agroecology for a Partial Ecological Transition Without Social Justice](#) by Friends of the Earth International, Transnational Institute and Crocevia.

## How does agroecology apply to NbS?

There are four decades of grassroots and academic evidence showing that agroecology technologies, innovations and practices—that were not even recognized in official circles until 2010—are the most effective agricultural response to the climate crisis and are real alternatives to nature-based solutions (FOEI 2018). While the world already produces enough food to feed the global population now and in four decades’ time, 815 million people suffer from hunger in the world. If supported, agroecology can double agricultural productivity in entire regions within 10 years (de Schutter, 2010). Agroecology and food

sovereignty offer potential for reducing emissions and achieving social justice. At least 75% of the peasants, family farmers and Indigenous Peoples and other small-scale food producers, mostly women, on 500 million small farms, which account for about 80% of the world's food production have contributed to humanity 2.1 million varieties of 7,000 domesticated plant species. ([FOEI 2018a](#) and [HITH 2021](#)) Instead of operating in a way where nature is seen as external to humans, passive, inert, and that humans are therefore justified in the complete control and ownership over land, we need to redshift our relationship with nature to one of mutuality and reciprocity. La Via Campesina, an international movement bringing together millions of peasants, landless workers, indigenous people, pastoralists, fishers, migrant farmworkers, small and medium-size farmers, rural women and peasant youth from around the world, centers food sovereignty peasant agroecology and food sovereignty in its work as a way to challenge business-as-usual and achieve climate justice. In its report [La Via Campesina in Action for Climate Justice](#), it shows how peasants in France, Indonesia, South and East Africa and Puerto Rico are resisting false solutions and developing pathways to the new system.

While NbS' failed attempts to sequester carbon are based on a faulty understanding of ecosystems as substitutable for each other, agroecology has a deeper understanding of ecosystems, their interdependence, lifecycles and diversity. With agroecology, carbon sequestration in healthy soils together with carbon sequestration in vegetation and the less dependency on fossil fuel actually lead to a reduction in greenhouse gas emissions and improve adaptation to climate change and resilience of agricultural production. ([FOEI 2018a](#)) Agroecological practices nurture our lands and waters, rather than occupying and extracting from them through land and marine-based NbS, for example.

## Activity: From NbS to Agroecology

Nature-Based Solutions	Agroecology
Operates within and strengthens the corporate-controlled industrial food and farming system	Opposes the corporate-controlled industrial food and farming system
Heats the planet as it prolongs fossil fuels burning and industrial food production	Cools the planet by taking care of the soil and ecosystems
High input: allows continuation of fossil fuels, synthetic fertilizers and pesticides	Low input: drastically reduces fossil fuels, uses no synthetic fertilizers or pesticides
Maintains a precarious labor model and forces farmers into carbon farming contracts	Uses agricultural practices that aim to keep people in rural areas and provide decent work
Puts control of land in the hands of a few and I.T. corporations which cultivate for profit regardless of environmental impact	Puts control of land in the hands of small-scale food producers
Narrow vision of nature as 'capital, providing ecosystem services and an opportunity for revenue	Holistic, emancipatory vision of nature as interlinked with culture food systems and livelihoods

Source: FOEI: [Double Jeopardy report: how nature based solutions threaten food sovereignty and agroecology](#)

How does agroecology intersect and food sovereignty with other real solutions? (Degrowth, Abolition, Decolonization & Re-indigenization, Landback, Agroecology, Community Forest Management)?

Agroecology and food sovereignty intersect with frameworks such as decolonization and re-indigenization and degrowth as they put mutuality and reciprocity with nature first, away from the commodification, extractivism, and exploitation of natural resources and people of the capitalist and neocolonial system.

## Activity: Radical Imagining

“If all we do is fight against what we don’t want, we learn to love the fight and have nothing left for our vision but longing. But longing isn’t good enough. We must live into the vision by creating it and defending it. We must ‘Build the New’ as a way to ‘Stop the Bad’ —we must be both visionary and oppositional.”  
Movement Generation

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## Agroecology and Food Sovereignty in Practice: The Declaration of Nyéléni

A group composed of Friends of the Earth International, La Via Campesina, the World March of Women, ROPPA, WFF and WFFP came together to organize Nyéléni 2007, the World Forum for Food

Sovereignty:

According to the group, agroecology is complementary and inseparable from food sovereignty. “Through Nyéléni processes, the food sovereignty movement created the basis for future positions in many global negotiations, including the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries, and Forests; the Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication; agroecology; and the implementation of Farmers’ Rights in the context of the International Treaty on Plant Genetic Resources for Food and Agriculture.”

According to the Declaration of Nyéléni(2007):

“Food sovereignty is the right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems. It puts those who produce, distribute and consume food at the heart of food systems and policies rather than the demands of markets and corporations. It defends the interests and inclusion of the next generation. It offers a strategy to resist and dismantle the current corporate trade and food regime, and directions for food, farming, pastoral and fisheries systems determined by local producers. Food sovereignty prioritizes local and national economies and markets and empowers peasant and family farmer-driven agriculture, artisanal fishing, pastoralist-led grazing, and food production, distribution and consumption based on environmental, social and economic sustainability.”

(Declaration of Nyéléni, 2007)

The Nyéléni process has been working alongside strategies of resistance advanced by Indigenous communities fighting for decolonization. The 2007 Nyéléni Forum was central in moving African states to support the UN Declaration on the Rights of Indigenous Peoples (UNDRIP). Many organizations and movements engaged in the Nyéléni process have called for the recognition and application of the UN Declaration on the Rights of Indigenous Peoples (UNDRIP). (IPES FOOD 2023)

According to the 2015 Declaration of Nyéléni:

“Agroecology is the answer to how to transform and repair our material reality in a food system and rural world that has been devastated by industrial food production and its so-called Green and Blue Revolutions. We see agroecology

as a key form of resistance to an economic system that puts profit before life [...]We cannot allow agroecology to be a tool of the industrial food production model: we see it as the essential alternative to that model, and as the means of transforming how we produce and consume food into something better for humanity and our Mother Earth. Agroecology is a way of life and the language of Nature, that we learn as her children. It is not a mere set of technologies or production practices. It cannot be implemented the same way in all territories. Rather it is based on principles that, while they may be similar across the diversity of our territories, can and are practiced in many different ways, with each sector contributing their own colors of their local reality and culture, while always respecting Mother Earth and our common, shared values.”  
(Declaration of Nyéléni, 2015)

During the 2015 Forum, one of the nine strategies agreed upon was to ‘denounce and fight corporate and institutional capture of agroecology’ threatening real transformative agroecology. (Nyéléni 2015, 7)

Agroecology is possible, everywhere around the world, whether it’s turning strawberry monocultures into sustainable food and farming systems through a 30-year farmer-researcher partnership in California, or breaking away from industrial commodity production in Central American coffee-growing communities. Learn more at [IPES FOOD \(2018\)](#) “Breaking away from industrial food and farming systems: Seven case studies of agroecological transition.”

## Fighting NbS in practice: LVC Agroecology Schools – Socially produced knowledge

For over 25 years, political and technical training has been a strategic priority of La Via Campesina (LVC). La Via Campesina has more than 70 schools and training processes based on popular education, which is a method and an approach that puts forward the scaling up of agroecology at the territorial level and the strengthening of peoples’ food sovereignty. “For La Via Campesina (LVC), agroecology cannot exist without popular education; without the participation of women and young people, because agroecology must permeate the productive chain, as an organizational-political practice that makes solidarity, autonomy, popular agrarian reform, work, income and thus food sovereignty possible.” In this context, political-agroecological training represents for LVC a continuous, broad and systematic process that reflects on practices and integrates socially produced knowledge. A process in which new knowledge

based on people’s experience on the ground is created and shared; a process that also acknowledges the multiplicity of knowledge and social and human diversity.” (La Via Campesina)

What does La Via Campesina do with its agroecological training strategy?

1. It denounces the capitalist agribusiness model—through direct struggles, land occupations, assemblies, street closings, fairs, events, etc.
2. It promotes peasant agriculture and builds knowledge—through formal and informal courses (for leaders, activists and grassroots), exchanges of agroecological experiences in all regions and biomes, “farmer-to-farmer” processes, and alliances with various organizations that promote agroecology.

Where?

- \* In everyday life: peasant-to-peasant
- \* In country schools
- \* In bachelor’s/master’s degrees in rural education
- \* In the Latin American Institutes of Agroecology (IALAs) and other agroecology training centers

## Activity: Imagine your own popular education school

- \* How do you envision your school?
- \* What would you like to see in the school?
- \* What type of teaching and learning style would it have?
- \* What would you teach from what you have learnt here so far?
- \* Where would it be located?
- \* Who would have access to the school?

# Community Forest Management (CFM)

What is Community Forest Management (CFM)?

Community forest management (CFM) is another alternative to nature-based solutions where nature is not commodified. CFM is a cultural and spiritual practice. “Community forest management systems view the land as the commons.” (CCF). CFM is not limited to forests, it can be practiced in different ecosystems. It strengthens the collective rights of Indigenous Peoples and local communities, it prevents deforestation and forest degradation, contributes to climate stability, fosters community organization, and protects the commons, contributing to social, economic and gender justice (FOEI 2018b) The concept of CFM refers to the political control by communities over their territories and resources through horizontal decision making processes that include transparency and accountability towards the rest of the community (FOEI 2018b). CFM “is a type of collective, community- based management, traditionally identified with protection against the industrial and commercial use given to natural resources, including forests. CFM is not a new concept but is traditional knowledge that is opposed to “Western science”, “which is based on simplified models that often include assumptions that have facilitated in many cases the devastation of resources and conditions of serious social injustice.” (FOEI 2018b)

CFM is political, cultural, spiritual and technical thought and practice. It is political because it implies the need to be organised in order to think and manage territories and what they contain; cultural because it is based on traditional knowledge, and by each people’s needs and own ways of meeting them; spiritual because it involves ancestral links, values and worldviews, which in turn generate assessments that are more complex than that of academics or economy; and technical because it appeals to the need for appropriate technology, which can be provided by communities themselves or through interaction with other cultures. (FOEI 2018b)

How does CFM apply to NbS?

It is known that forests are the most effective in safeguarding against climate change than NbS as they regulate water cycles allowing basins and aquifers to maintain water in a better way. They also help prevent disasters caused by floods, tsunamis and landslides. Both academia and local communities have been saying for decades that decentralization in the management of some resources is necessary in environmental policies yet at, global level, it is estimated that local communities manage around 8% of all forests in the world. This needs to increase if we want to protect our biodiversity.



Communities that have community forest management systems have been found to have higher levels of biodiversity than those managed by the government or by conservation programs or non-profits or corporations. A study that compared forty protected areas and 33 CFM experiences in several localities in Mexico, South America, Africa and Asia concluded that the areas under CFM presented a lower annual deforestation rate which was less variable than areas under absolute protection regimes. (Porter-Bolland L. et al, 2012) In Latin America, local communities have obtained property or use rights recognized by governments for at least 150 million hectares, 11 which represent approximately 20% of the total forest land in Latin America. Mexico is probably the country in the region with proportionally more forests in the hands of “ejidos” and indigenous and peasant communities. ([FOEI 2018b](#))

## Activity: From NbS to Community Forest Management

Nature-based Solutions	Community Forest Management
Prioritizes the carbon in forests and the carbon that can be turned into carbon credits	Prioritizes the health and wellbeing of forests and people who steward those forests.
Does not center the preservation and sustainable use of territories	CFM refers to regulations and practices used by many communities for the preservation and sustainable use of the territories they inhabit
Allows continuation of fossil fuels and results in low levels of biodiversity	Communities with CFM systems have found to have higher levels of biodiversity than those managed by the government or corporations
Puts the power in the hands of a few and maintains the status quo	CFM centers decentralization processes in the management of territorial resources and the strengthening of community rights
Continues Western ownership private property mechanisms putting land in the hands of a few	CFM through Indigenous and peasant knowledges breaks Western ownership models and sees the land as community-shared land

How does CFM intersect with other real solutions? (Buen Vivir, Degrowth, Abolition, Decolonization & Re-indigenization, Landback, Agroecology)?

The concept of buen vivir is tied within CFM. Forests are closely related to all the natural commons that are necessary for good living: water, seeds, biodiversity, climate, soils, honey, fruits, medicines, they are all elements that depend on forests. In many communities around the world, forests are closely connected with the spiritual world. (FOEI 2018b) CFM is also deeply tied to agroecology and food sovereignty as hundreds of food products that are derived from forests. To learn more about the deep relation between CFM and agroecology, read [Community Forest Management & Agroecology](#) by FOEI.

There has been an increase of decentralization of forests, especially in the Global South, but forest policies and laws have still not opened enough spaces for communities to control their forests and participate in decision making processes of resources. Different movements are rising to speak up, demanding their rights, especially Indigenous communities demanding access to their ancestral lands. It is necessary to promote territorial consolidation processes under Indigenous Peoples control. There are many territories that have not been legally demarcated and so peoples and communities cannot exercise their rights over them. (FOEI 2018b)

## Activity: Radical Imagining

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## Community Forest Management in Practice: Nepal's Community Forests

Nepal is one of the few countries in the Global South to have a community forestry management program which was designated by the government in the late 1970s. In the early 1990s the Forest Act 1993 was established which allowed more decentralization and gave local and Indigenous communities access to the lands they belonged to and relied on. Today, community forests occupy nearly 2.3 million hectares—about a third of Nepal's forest cover—and are managed by over 22,000 community forest groups. (NASA 2023)

According to the Forest Act 1993 and Regulation 1995 the national forest can be managed in five different ways: community forest, leasehold forest, religious forest, government-managed forest and protected forest. Local communities manage the forest through legally recognised Community Forest User Groups. But often the Nepalese government is reluctant to hand over the national forests as community forests. For example, the government was initially opposed to giving the national forests to the local communities in the areas of the Barandabhar corridor, the Basanta corridor and the Panchase landscape in Nepal because they are a source of revenue for the government, such as timber products. After various campaigns in these areas, the government's District Forest Offices gave the majority of the national forest to Community Forest User Groups as community forests. The use groups have contributed to reduce deforestation and increase forest regeneration and biodiversity. In the Panchase the communities have contributed to the reduction of landscape soil erosion, landslides and floods Phewa Lake of Pokhara valley. The communities and user groups and their federation, FECOFUN, continue to fight against the threat of the government through advocacy campaigns to protect community rights over the forests. (Case Study from [Global Forest Coalition 2018](#). Learn more about the important work Global Forest Coalition is doing. GFC is an international coalition of NGOs and Indigenous Peoples' Organizations defending social justice and the rights of forest peoples in forest policies.)

# Activities for all Real Solutions

## Activity: Reflection Questions

What knowledge systems/ideologies/political visions do you and your community hold/practice? How would you apply it to critique and offer alternative solutions to NbS? How do those knowledge systems intersect with those we've explored here (Buen Vivir, Degrowth, Abolition, Decolonization & Re-indigenization, Landback, Agroecology, Community Forest Management)?

## Activity: Putting the Nature Back into Nature-Based Solutions

Now that you have read about other frameworks and tools in creating a just and liveable future as well as real examples of how they're put into action, what would actual nature-based solutions look like to you?

# Conclusion

## From us to you

We hope in this module you:

1. Gained a basic understanding of nature-based solutions (NbS) sometimes called natural climate solutions (NCS);
2. Were able to identify who are the key players promoting NbS and why;
3. Learned about NbS from critical, feminist, anti-colonial, anti-capitalist, intersectional, indigenous, anti-imperial, environmental, climate justice, abolitionist, etc. perspectives;
4. Explored some of the ways grassroots movements are resisting NbS;
5. Identified alternatives that promote climate justice, and
6. Were equipped with the tools to develop their own critiques about NbS and related false climate solutions

## From you to us

We would like to learn from you if you:

1. Have any questions for us
2. Have any feedback you would like to share with us
3. Disagree with anything that you learned in this module

[Bibliography](#)

[Glossary](#)

[Reach out to us at hoodwinked@riseup.net](mailto:hoodwinked@riseup.net)