

NATURE BASED SOLUTIONS:

A WOLF IN SHEEP'S CLOTHING



OCTOBER | 2021

A FRIENDS OF THE EARTH INTERNATIONAL POSITION PAPER



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NATURE BASED SOLUTIONS:

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SUMMARY NATURE BASED SOLUTIONS: A WOLF IN SHEEP'S CLOTHING

Friends of the Earth International (FOEI) rejects the concept of Nature Based Solutions (NBS).

NBS¹ is often used as an umbrella term covering a range of schemes for climate and biodiversity protection.² **This paper sets out why the NBS concept is a dangerous and damaging one; a concept so broad and vague that it can refer to anything from peatland restoration to monoculture plantations; a bad idea dressed up in acceptable terminology and beautiful imagery; a wolf in sheep's clothing.**

Beneath the veneer NBS is firmly based in carbon and nature neo-colonialism, discredited market mechanisms and corporate greenwashing. NBS instrumentalises nature as a so-called solution without defining who created the problem. It instrumentalises the lives and historical practices of Indigenous Peoples, peasants, artisanal fishers, and many other communities as offsets for corporate destruction while enabling a wave of new dispossessions. As a marketised system NBS is not transparent. It is a distraction from the essential need to both cut carbon at source and properly protect, conserve and restore biodiversity and ecosystems in line with the science. NBS provides no certainty that nature and ecosystems will not be further eroded and lost.

Among many peoples and groups there is increasing support for NBS that arises from a genuine and welcome concern for nature. But NBS is not the answer. The concept has been captured by governments and corporations for their own purposes.

While NBS talks of using nature to solve societies' problems and is made to sound attractive, FOEI has serious concerns that NBS is a smokescreen which:

- is promoted mainly by corporations and northern governments to distract from a lack of real action to tackle the climate and biodiversity crises;
- is being promoted to sugar-coat offset schemes such as 'net-zero' carbon and 'no net loss of biodiversity' and even to allow polluting corporations to profit from new nature-based market mechanisms and schemes;³
- is based on flawed figures suggesting NBS can contribute 37% of the CO₂ mitigation that some actors claim is necessary by 2030;
- is supported by some large conservation groups as a way to attract funding for protected-area conservation approaches in the global South which do not value the role of local communities and Indigenous Peoples in managing forests—essentially a new version of the discredited REDD and REDD+ schemes;

- is such a vaguely defined concept that it will enable hugely harmful practices such as monoculture tree plantations and industrial agriculture to proliferate alongside small pockets of good practices which should be being prioritised and scaled up;
- threatens to co-opt and corrupt genuine solutions such as agroecology and community forest management (CFM) by lumping them together with dubious and destructive practices, cherry-picking parts of the frameworks that suit corporate goals⁴, and linking them to opaque market based schemes;
- is already co-opted by corporations to provide them with a new form of greenwash—including fossil fuel, agribusinesses and plantation companies that claim to be investing in NBS while expanding their destructive practices and failing to cut carbon at source.

FOEI sees evidence that NBS will lead to:

- expansion of large monoculture plantations and huge land grabs, meaning human rights violations, especially of Indigenous Peoples and local communities, peasants and other rural communities as well as loss of biodiversity, especially in the global South;
- further financialisation of nature;⁵
- renewed justification of intensive agriculture and so-called 'sustainable intensification', including new gene technologies;⁶
- massive growth in carbon markets and offset schemes that do not reduce emissions but do harm communities;
- greenwashing and hiding growth in fossil fuel emissions from governments and private sector actors alike, thus preventing radical action to tackle emissions at source in line with the science;
- a lack of will and funding to implement real, known structural and holistic solutions to the climate, biodiversity and food crises.

FOEI is committed to supporting real solutions for system change. We commit to promoting integrated and transformational solutions to the multiple crises we face, such as agroecology, community forest management, stopping fossil fuel extraction, and supporting community based renewable energy.⁷

¹ FOEI considers the acronym NBS to stand for "the concept of Nature Based Solutions". We reject the notion that NBS refers to solutions, and will for the purposes of this report therefore not refer to it in the plural.

² For brevity, NBS is used throughout this briefing to denote both 'nature based solutions' and 'natural climate solutions', although some commentators consider that there is a slight difference between the two.

³ Friends of the Earth International (FOEI) rejects both the concept of 'net zero carbon emissions' and 'no net loss of biodiversity'. See <https://www.foei.org/resources/publications/chasing-carbon-unicorns-carbon-markets-net-zero-report> and <https://www.foei.org/features/no-net-loss-biodiversity>

⁴ For more on the co-opting of agroecology see <https://www.foei.org/resources/publications/junk-agroecology-food-systems>

⁵ For more on the financialisation of nature see <https://www.foei.org/resources/publications/nature-for-sale>

⁶ For more on sustainable intensification and new gene technologies see <https://www.foei.org/resources/publications/publications-by-subject/food-sovereignty-publications/a-wolf-in-sheeps-clothing>

⁷ We recognise that there are some NGOs and local projects that are genuinely aimed at restoring nature that use the terminology of 'nature based solutions' to describe their work. FOEI considers that it is not helpful to use a term that has become synonymous with a push by governments and big polluters to impose new and damaging market mechanisms, to continue emitting and to instrumentalise nature.

WHAT IS THE CONCEPT OF NATURE BASED SOLUTIONS AND WHY IS IT BEING PROMOTED NOW?

01



Palm oil plantations,
Central Kalimantan, Indonesia.
© Victor Barro / Amigos de la Tierra

The concepts of Nature Based Solutions (NBS) and Natural Climate Solutions (NCS) have gained prominence in both climate and biodiversity debates over the past few years and more recently in debates on food systems transformation. The United Nations has claimed: “Changing our land practices alone could deliver 30 per cent of the emissions reductions that we need to achieve the goals of the Paris Agreement on climate action by 2030.”⁸ Such claims have been repeated by key decision-makers, some conservation NGOs, and business leaders. 2019 and 2020 saw an avalanche of ‘net zero’ commitments from corporations, many of which are linked to investments in NBS.

As NBS is being promoted as a ‘solution’ it is important to ask: a solution to which problem? Most answers relate to the amount of carbon that ‘nature’ can store. The problem NBS pretends to answer is mainly the climate crisis. The fact that there are crises of biodiversity loss, hunger and malnutrition and inequality - all of which are similar and closely linked to the climate crisis - doesn’t seem to count.

Together and separately, the Intergovernmental Panel for Biodiversity and Ecosystem Services (IPBES) and Intergovernmental Panel on Climate Change (IPCC) have identified the links between the climate and biodiversity crises and their complex interactions with health, food production and inequalities.⁹

NBS does not answer the question how to protect, conserve, restore and increase biodiversity, reduce inequality, or address the complex, systemic nature of the different crises we face.

As this paper sets out, NBS as a concept is a wolf in sheep’s clothing —dressed up in acceptable terminology and beautiful imagery, it is a concept so broad and general that it includes everything from peatland restoration to monoculture plantations. But beneath the veneer NBS is firmly based in carbon and nature neo-colonialism, discredited market mechanisms and corporate greenwashing. NBS instrumentalises nature as a ‘solution’ without defining who created the problem. It instrumentalises the lives and historical practices of Indigenous Peoples, peasants, artisanal fishers, and many other communities as offsets for corporate destruction while enabling a wave of new dispossessions. As a marketised system NBS is not transparent. It is a distraction from the essential need to cut carbon at source and properly protect, conserve and restore biodiversity and ecosystems in line with the science. NBS provides no certainty that nature and ecosystems will not be further eroded and lost.



DEFINITIONS OF NATURE BASED SOLUTIONS

All existing definitions of NBS are vague and broad and leave a lot of room for interpretation and co-option. NBS has been variously defined as:

“...actions to protect, sustainably manage, and restore natural and modified ecosystems that address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits.” IUCN

“effective, long-term, cost-efficient and globally scalable approach for climate action, with potential to remove up to 12 GT of greenhouse gasses per year, build climate resilience in various sectors and regions, add an additional US\$2.3 trillion in productive growth to the global economy, while supporting vital ecosystem services.” UN climate summit 2019

“Natural climate solutions (NCS) are proven ways of reducing carbon emissions and storing them in the world’s forests, grasslands and wetlands.” Nature4climate multistakeholder initiative

None of these definitions clarify what kinds of projects can and cannot be included in NBS, or what criteria define them.

NBS seems to offer magical solutions to highly complex problems that in reality require sustained, concerted action by governments, businesses and society as a whole: NBS over-simplifies the problem and presents apparently easy technical solutions to the climate and biodiversity crises, making it seem as if science or funding will resolve them.

Meanwhile, NBS hides the complex realities of corporate concentration of power, and the vested interests behind maintaining the status quo. This simplicity may be attractive since it avoids dealing with the structural changes needed to end the crises that affect us today. The pattern is reminiscent of highly discredited REDD and REDD+ schemes.^{10, 11}



Friends of the Earth and allies campaigning against false solutions such as carbon markets at COP25 in Madrid, 2019.
© Victor Barro / Amigos de la Tierra

8 UN News, 2019. Nature ‘one of most effective ways’ of combatting climate change. 19 September 2019. See <https://news.un.org/en/story/2019/09/1046752>

9 IPBES – IPCC joint workshop, June 2021. <https://ipbes.net/events/launch-ipbes-ippc-co-sponsored-workshop-report-biodiversity-and-climate-change>

10 Policy persistence: REDD+ between stabilization and contestation, *Journal of Political Ecology* <https://journals.librarypublishing.arizona.edu/jpe/article/id/2238/>

11 The interdisciplinary Nature based Solutions Initiative (NbSI) identifies that NBS: are not a ‘silver bullet’; should not be dominated by funding of forestry, as seems to be the case; are not substitute for the right urgent action to end carbon dependence; must be designed and delivered with the consent of and respect for local communities, and with equitable sharing of the benefits; must respect the cultural and ecological rights of local / indigenous communities; and, should be able to be verified for their effects and benefits.

WHO AND WHAT IS DRIVING NATURE BASED SOLUTIONS?

02



Friends of the Earth Africa campaigning against the financing of plantations.
© Amelia Collins / Friends of the Earth International

The concept of NBS emerged around a decade ago from the international conservation sector. It was initially seen primarily as a means of providing additional funding for their protected areas programmes.¹² Its normative development was undertaken within the framework of the International Union for Conservation of Nature (IUCN).

The NBS idea was heavily pushed from around 2016 by US-based conservation groups, especially The Nature Conservancy (TNC).¹³ Based on one paper led by TNC authors, the claim has been advanced since 2017 that NBS could help mitigate up to 37% of climate-changing emissions by 2030.¹⁴ That paper 'Natural climate solutions' (Griscom *et al*, 2017) bases its conclusions on a range of critical assumptions which on closer inspection appear to be technically problematic, highly undesirable, implausible, politically unrealistic—or all of the above.¹⁵ Nevertheless, the paper continues to be referred to as the scientific source showing the need to implement NBS.

For example, the study assumes that the area potentially available for reforestation is 678 million hectares. This is twice the area of India, or more than two-thirds that of the United States. There is no indication as to where this land might be, nor what would be the hidden carbon costs of turning it into plantations (roads, machinery, fertiliser inputs, etc).

TREES, TREES—NATURE BASED SOLUTIONS MEANS MORE MONOCULTURE PLANTATIONS

By far the largest supposed emissions mitigation pathway that Griscom *et al* set out relates to forests, especially reforestation. Taking together the forest-related pathways, biochar and 'trees in croplands', forest/tree-related pathways account for around 77% of the total proposed mitigation. Reforestation alone represents around one-half of all the putative mitigation potential. In other words, three quarters of the mitigation proposed by Griscom *et al* is essentially REDD+ rebranded as NBS.

The afforestation required could probably only be achieved at the scale and speed necessary if carried out by the private sector on a for-profit basis.¹⁶ Griscom *et al* claim that there are "opportunities to reduce costs, such as involving the private sector in reforestation activities by establishing plantations for an initial commercial harvest to facilitate natural and assisted forest regeneration".



Palm oil plantation near the road from Miri to Marudi, Sarawak, Malaysia.
© Amelia Collins / Friends of the Earth International



What's more, for the largest single mitigation pathway to be implementable, private companies would have to be given access to a continent-sized area of land for mass (re)afforestation; and they would have to be allowed to clear-fell the first plantation crop (thus probably negating any climate mitigation potential of that first crop) before allowing natural regeneration to take over.

The NBS considered most 'effective' in terms of quickly capturing carbon—such as planting of large expanses of fast-growing monocultures of alien and possibly genetically manipulated trees—could only be described as 'natural' insofar as they involve a living organism. More accurately these might be described as 'bio-engineering solutions', and should perhaps be treated with the same degree of caution as geo- engineering solutions, with which they might overlap. Not only are 'nature based solutions' not solutions, they are also not 'natural'.

NATURE BASED SOLUTIONS AS A MECHANISM FOR FINANCIAL INVESTMENT

The International Emissions Trading Association (IETA) has proclaimed a 'vision' of "Global markets for carbon credits generated from Natural Climate Solutions which enables private sector investment at scale". According to the influential UN Principles for Responsible Investment (PRI) initiative, nature-based carbon could provide much-needed growth in the finance sector: "The total NBS market value potential is estimated to be US\$7.7 trillion... This opens up enormous new opportunities for both project developers and investors."¹⁷

The narrative of the biggest promoters of NBS shows that it:

- is closely related to REDD+ schemes and can even be said to be a new avatar of REDD+ where tree-based carbon sequestration and offsets forms a central part. In the past 10 years REDD+ has come under fire as a model that has failed to stop climate change and fueled grabbing of territory;
- is foreseen as being supported by carbon markets and private sector investment;
- is seen as a mechanism primarily for increasing funding available for conservation, and specifically protected areas, when proper funding for the protection, conservation and restoration of biodiversity and ecosystems is needed without being dependent on a dubious market-based system.

NATURE BASED SOLUTIONS AS A CORPORATE OFFSETTING SOLUTION

NBS has found favour with large industrial interests, especially the fossil fuel industry and agribusiness, and business organisations such as the World Business Council for Sustainable Development (WBCSD), International Emissions Trading Association (IETA) and Carbon Offsetting and Reduction Scheme for International Aviation (CORSA).

Fossil fuel corporations, airlines and agribusinesses have all made huge commitments to expanding NBS to distract from stopping fossil fuel extraction and industrial agriculture. Big polluting countries are increasingly relying on NBS to justify carbon sequestration rather than emissions reductions as their contribution to the Paris Agreement. Indeed, NBS is closely linked to the increasing prevalence of 'net zero' climate pledges which allow corporations and countries to rely on offsets and hide their lack of action to get as close as possible to zero emissions.

The list of industrial corporations and business groupings which have offered explicit support for NBS already includes: BP, Chevron, Equinor, Total, Shell, Eni, BHP, Dow Chemical Company, Bayer, Boeing, Microsoft, Novartis, Procter and Gamble, HSBC, Woodside Energy, International Paper, Olam, Coca-Cola, Danone, Unilever, Mars, Earth Client, Systemiq, WBCSD, World Economic Forum, and IETA.



Airlines have made huge commitments to expanding NBS to deflect attention away from stopping fossil fuel extraction. © istock

12 IUCN, 2009a. No time to lose – make full use of nature based solutions in the post-2012 climate change regime. Fifteenth session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP15), 7th–18th December, 2009, Copenhagen, Denmark. See <https://ipbes.net/events/launch-ipbes-ipcc-co-sponsored-workshop-report-biodiversity-and-climate-change>

13 TNC, 2016. The Forgotten Climate Solution, TNC website. February 17, 2016. <https://www.nature.org/en-us/what-we-do/our-insights/perspectives/the-forgotten-climate-solution/>

14 Griscom *et al.*, 2017. Natural climate solutions. PNAS. October 31, 2017. vol. 114. no. 44. 11645–11650. <https://www.pnas.org/content/114/44/11645>

15 Offsetting fossil fuel emissions with tree planting and 'natural climate solutions': science, magical thinking, or pure PR? Redd Monitor <https://redd-monitor.org/2019/07/04/offsetting-fossil-fuel-emissions-with-tree-planting-and-natural-climate-solutions-science-magical-thinking-or-pure-pr/>

16 Griscom *et al.*, 2017.

17 UN PRI, 2020. The inevitable forest finance response: investor opportunities <https://www.unpri.org/inevitable-policy-response/the-inevitable-forest-finance-response-investor-opportunities/5906.article>

WHO AND WHAT IS DRIVING NATURE BASED SOLUTIONS CONTINUED

BOX 1: CORPORATE NATURE BASED SOLUTIONS ANNOUNCEMENTS

Shell's new pathway to 1.5 degrees shows that the company's long-standing vision of the role that oil, gas and coal will play in the energy mix until the end of the century remains essentially unchanged, according to an analysis by Carbon Brief. Aside from the temporary impact of Covid-19, the major addition is the "extensive scale-up of nature based solutions", specifically planting trees over an "area approaching that of Brazil".

Italian fossil fuel giant Eni is planning to increase oil and gas production by 3.5% per year until 2025; it claims it will then reduce its carbon footprint by 80% by 2050 by using 30 million tons a year of carbon offsets from primary and secondary forest conservation projects.

In 2019 Eni announced ambitions to plant 8 million hectares of trees in Africa. Following criticism it retracted, but still claims "forest conservation projects [are] one of the pillars of our decarbonization strategy, recognising the important and growing role of Natural Climate Solutions (NCS) in limiting global warming to 1.5°C".¹⁸

Heathrow Airport announced its ambition for net zero in 2019 with investment of £1.8 million for 2020 to kick-start UK nature-based carbon saving projects, which would essentially contribute to a UK carbon offset market.¹⁹

Analysis by GRAIN shows that agribusiness giant Nestlé's global strategy to reach 'net zero' includes "transforming its portfolio to introduce more products that are better for you, better for the planet; sourcing 100% renewable electricity and scaling up nature based solutions that remove carbon within our supply chain."

The company has announced a CHF 4 million investment into Project RELeaf, to plant three million trees in Malaysia by 2023.²⁰ In 2021 it also disclosed its aim to plant three million trees in key sourcing locations in the Americas.²¹

The majority of Nestlé's emissions occur in its supply chain, especially in sourcing of dairy, meat and commodity crops (coffee, palm oil, sugar, soybeans, etc). Nestlé's annual Scope 3 emissions are roughly double the total emissions of its home country, Switzerland.

Nestlé's climate plan does not involve a reduction in sales of foods based on dairy, meat and other highly-emitting agricultural commodities. On the contrary, its climate plan is based on projected growth of 68 per cent in sourcing of dairy and livestock products and commodity crops between 2020 and 2030 while offsetting its emissions via nature based solutions.²²

For these companies NBS provides a get-out-of-jail-free card – removing the financial pain of having to curtail their polluting activities in line with staying within the Paris Agreement's temperature goals or the imperatives of environmental justice concerns of governments and the public. They are heavily lobbying for, and investing in, NBS as carbon or biodiversity offsets against major expansion plans. At the same time NBS can provide a new income stream for corporations that provide 'NBS services' such as tree planting programmes or carbon trading. In this way NBS provides a mechanism where polluting companies such as fossil fuel producers, and large forestry and agribusiness corporations would benefit without having to change their business model and practices. Ending and reversing climate change and nature's decline is simply not that easy.

Given the tiny carbon budget remaining, and the fact that governments, businesses and society as a whole must make every effort to reach real zero urgently via reductions in fossil fuel emissions at source, there is no atmospheric space for NBS offsetting – it is a massive distraction, and a dangerous delaying tactic by corporations and some governments and financial institutions.



Global protest in solidarity with communities threatened by REDD at the COP21 climate conference, Paris, 2015. © Luka Tomac / Friends of the Earth International

¹⁸ <https://www.eni.com/en-IT/low-carbon/forest-protection-conservation.html>

¹⁹ Heathrow 2020, Heathrow set target for zero carbon. <https://www.heathrow.com/latest-news/heathrow-targets-zero-carbon-airport-by-mid-2030s>

²⁰ <https://www.nestle.com/media/news/nestle-plants-3-million-trees-2023-malaysia>

²¹ <https://www.nestle.com/media/news/nestle-reforestation-americas-absorb-carbon>

²² <https://grain.org/en/article/6634-corporate-greenwashing-net-zero-and-nature-based-solutions-are-a-deadly-fraud>



BOX 2: NET ZERO & CARBON OFFSETTING

Negative emissions are what results when carbon dioxide is removed from the atmosphere – simply put, the opposite of emissions. Both engineered and natural processes for carbon dioxide removal can theoretically lead to negative emissions if there are net removals of CO₂ from the atmosphere after other greenhouse gas-emitting aspects of the processes are accounted for.

Carbon offset credits may be generated through avoiding or reducing emissions to below a projected baseline, or removing carbon from the atmosphere. More critically, offsetting does not reduce overall atmospheric concentrations of CO₂. Temperatures keep rising, those least responsible suffer the greatest impacts, and corporates and the elites of the world continue their emissions-as-usual.

NBS contrasts with the concept and practice of ‘working with nature’, as used in agroecology and food sovereignty discourses, which implies deep humility, understanding of, and respect for nature. Communities have been managing their territories and commons sustainably for generations through approaches that are profoundly ecological. In these cases there is a need for a supportive institutional environment, and responsible governance that protects local and Indigenous communities from threats posed by agribusiness expansion that forces people to either abandon or defend their territories and ecosystems.

BOX 3: THE FINANCIALISATION OF NATURE: REDD AND REDD+

Reducing emissions from deforestation and forest degradation (REDD+, where the ‘+’ represents “forest conservation and enhancing forest carbon stocks”) was launched under the UNFCCC more than 15 years ago. The idea was that it would reduce emissions by financially incentivising actors to avoid deforestation and forest degradation. But in the one and a half decades since it began to be implemented it has proved hugely controversial and anything but a success. Through seeking to financialise nature and put a tradable price on it, it has failed to deliver its vision of reducing emissions on the scale suggested. More than 350 REDD+ projects across 53 countries have been established at a price of more than 24 billion euros in public finance. Collectively these projects cover a land area the size of Morocco. REDD+ has been described as “one of the most controversial environmental policies that has ever existed. It has divided governments, civil society and Indigenous Peoples’ organisations, and proved to be highly controversial within the United Nations itself”. Although polluters and some conservation NGOs continue to promote REDD+ as a climate solution, human rights groups and Indigenous Peoples’ organisations have consistently described its role as a “facilitator of dispossession and resource extraction, and a false solution to the climate crisis,” and as a “scheme that consolidates corporate control over territory and expands profits”.²³

NATURE BASED SOLUTIONS AND THE FINANCIALISATION OF NATURE

NBS are not inherently market mechanisms, but the trajectory of their development shows that they are likely to be used in close conjunction with market mechanisms in various ways:

- as a new justification for carbon markets to be accepted under the Paris Agreement;
- to initiate payments for ecosystems services and possibly biodiversity markets and offsets;
- to open whole new areas of nature as an asset class for market mechanisms (water bodies, oceans etc)—reducing the incredible diversity of the planet’s forests, grasslands, and wetlands to carbon that will be traded, and triggering a massive new resource grab from Indigenous Peoples, peasants and local communities, mainly in the global South.

The majority of NBS schemes, whether by corporations or governments, are already connected to offsets and generating carbon credits.

NBS threatens to distort nature protection – instrumentalising nature as a solution rather than as something worth protecting for its own sake, and formalising a false notion that ‘nature’ and ‘people’ are separate. The reduction of ecosystems and multidimensional solutions such as agroecology with carbon is also a threat; forests, lands and ecosystems are much more than the carbon stored in them. They are living, breathing systems, cultural and spiritual sites, and life-giving for millions of people across the planet.

NATURE BASED SOLUTIONS LEADS TO GRABBING OF LAND AND TERRITORY

03



Palm oil plantation, Central Kalimantan, Indonesia.
© Victor Barro / Amigos de la Tierra

The implementation of NBS at any significant scale would require vast areas of land. For example, the afforestation ‘mitigation pathway’ forming roughly half of the 37% in emissions reduction claimed in Griscom *et al* (2017), would require an estimated area approaching 700 million hectares, or nearly the size of Australia. Other major components such as improved forest management would require modification of forestry practices over many more millions of hectares of forest. In the case of afforestation, its promoters recognise that this could probably only be achieved at such scale and with the speed required if carried out by the private sector on a for-profit basis. Changes in forest management practices could probably only be applied at significant scale by providing incentives to large-scale industrial forestry companies.

Outright protection of forests – the third largest potential NBS mitigation pathway – could probably only be achieved quickly through a combination of command-and-control measures implemented by states in partnership with large corporate conservation organisations, as well as forestry corporations wielding the myth of ‘sustainable forest management’. The forest-related pathways which make up nearly three-quarters of the claimed mitigation potential of NBS would thus all require some form of extension and strengthening of corporate and state control of forest land.

The NBS pledges of corporations alone require eye-watering areas. Total’s Nature Based Solutions unit will be looking for projects to store at least five million tonnes of the company’s CO₂ emissions annually from 2030. Shell has announced ramping-up of the purchase of carbon offsets, including from tree planting and forest conservation projects, to 120 million tonnes a year by 2030; Eni is counting on forests to store 40 million tonnes of its CO₂ emissions annually from 2050 (and six million tonnes annually from 2024).²⁴

Those are just the demand for land from a handful of oil companies to use as carbon offset. Meanwhile, hundreds of other large corporations have made pledges to become carbon neutral, and corporations such as Nestlé and Unilever or tech companies such as Microsoft and Google, and other corporate polluters such as the aviation industry are also demanding land for above-ground carbon storage.²⁵

All of these corporate net-zero claims simply cannot be accommodated by nature, the land and seas. It is a serious case of double, triple or quadruple counting, perhaps even false accounting.



Corporate ‘net zero’ claims simply cannot be accommodated by nature. Pristine rain forest in Australia. © Amelia Collins / Friends of the Earth International

²⁴ *Ibid.*

²⁵ <https://wrm.org.uy/articles-from-the-wrm-bulletin/section1/corporate-enthusiasm-for-forest-protection-and-tree-planting-driven-by-determination-to-protect-profits-from-fossil-fuel-extraction/>



NATURE BASED SOLUTIONS PREVENTS ACTIONS TO TACKLE EMISSIONS AT SOURCE OR STOP THE DRIVERS OF BIODIVERSITY LOSS

04



Open coal mine Garzweiler II, Germany.
© Bert Kaufmann / Critical Information Collective

To keep the global average temperature rise below 1.5°C requires deep and immediate cuts in the burning of fossil fuels. That requires the complete phase-out of fossil fuel burning before mid-century, first in the developed countries that created the crisis, then in developing countries. In short, we must ‘keep the oil in the soil and the coal in the hole’.

Powerful actors, particularly those most responsible for emissions, such as the fossil fuel industry and agribusiness, continue to obscure the need for the phase-out of fossil fuels and greenhouse gas emissions. ‘Net zero’ pledges have become a common tool in the arsenal of these actors. The basic concept of ‘net zero’ can be captured in an equation: greenhouse gas emissions minus removals of greenhouse gases, balancing out to zero. To reach zero, emissions over a period of time cannot be greater than the amount of CO₂ that can be taken out of the atmosphere over that same period of time.

Therefore, corporations and countries can achieve net zero by claiming to sequester carbon or invest in carbon offsets schemes. These initiatives and pledges rely on offsets, which are now hidden behind the euphemism ‘nature based solutions’. As Box 1 (page 8) shows, corporations are planning massive expansion of their polluting activities and investing in NBS to offset them.

But ‘net zero’ and NBS will not lead to real emissions reductions, for several reasons:

- When the focus is only on the flows of carbon – carbon emitted and removed – the cumulative nature of carbon dioxide is hidden. CO₂ remains in the atmosphere for

hundreds to thousands of years, so any imbalance of additions over removals adds to atmospheric concentrations which will persist. The timescales envisaged for most NBS go well beyond what is needed in terms of immediate atmospheric CO₂ reductions to prevent catastrophic climate change.

- Offsets do not actually reduce atmospheric concentrations of CO₂. Yet global emissions, and therefore CO₂ concentrations, continue to rise at a deadly pace.
- The concept of ‘net zero’ dangerously conflates fossil and biological carbon cycles, incorrectly assuming that all those fossil emissions might be captured in natural ecosystems. But the carbon dioxide from fossil fuels being dug up and burned is additional to the carbon that is already cycling in biological carbon cycles.

The way NBS is being promoted and framed in the UN Convention on Biological Diversity (CBD) makes it clear that it is solely oriented towards the interests of other sectors:

- NBS as a contribution to climate mitigation and adaptation.
- NBS as a means to provide clean air and water to people.

NBS has not been framed a solution to the biodiversity crisis itself. Yet that is the challenge the CBD should be answering.

A further worry is that the term ‘nature based solutions’ is unclear. What is ‘natural’? Something that involves living species? Several actors in the CBD portray gene drives – a form of genetic modification that can drive whole species extinct - as a ‘natural’ solution. Monoculture tree plantations too are being portrayed as natural. Yet both have highly negative impacts on ecosystems.

NATURE BASED SOLUTIONS JUSTIFIES INDUSTRIAL AGRICULTURE AND CO-OPTS AGROECOLOGY

05



Nature based solutions means more detrimental monoculture. Harvesting soy in the state of Mato Grosso, Brazil. © Kelvin Helen Haboski / Shutterstock

The promotion of NBS in agriculture raises several issues of concern. Proponents of NBS believe that the removal of vast areas of land from agriculture is possible through ‘sustainable intensification’ of farming. ‘Sustainable intensification’ is a concept and set of methods that aims to make industrial farming more efficient and slightly greener. It retains the focus on productivity, technology and capital-intensive production rather than a structural transformation of food systems via ecological, economic, social and political change. Examples include reducing tillage through the use of genetically modified crops, or reducing the carbon intensity of factory farming by aiming for lower emissions per unit of production of meat. Yet genetically modified crops promote industrial farming by locking in pesticides, and carbon-intensity calculations for meat assume further intensification. Sustainable intensification does not provide an answer to the systemic problems of industrial food chains.^{26,27}

Without ‘sparing’ of land for NBS via agricultural intensification, NBS is essentially implausible at large scale. Yet several proposed intensification techniques pose huge threats to climate and biodiversity protection—such as gene drives, increasing fertiliser use or factory farming of animals.

Sustainable intensification techniques lend themselves to being categorised as NBS as they can be focused on single practices designed primarily to generate carbon credits. However, these techniques are hugely contested because of their narrow focus and uncertainties such as the mitigation potential of soil carbon sequestration, greenhouse gas (GHG) emissions of ruminants, and bioenergy carbon balances.²⁸ Sustainable intensification practices

are a massive contributor to climate change and the destruction of biodiversity. So it is unclear how NBS can promote sustainable intensification while combatting climate change. The circle simply cannot be squared.

The potential for large-scale land grabs for conservation projects and offsets from NBS are a major threat to peoples’ food sovereignty, especially since small-scale producers still provide the majority of the world’s food and conserve the majority of our biodiversity.²⁹ UN reports have recognised the dangers of large-scale afforestation or carbon sequestration projects on food security and nutrition, yet NBS remains silent on this.³⁰



Friends of the Earth International and allies highlighting our demands at the Convention on Biological Diversity in Kenya. © Friends of the Earth International



The UN Food and Agriculture Organisation (FAO) and TNC promote Ag-NBS as the agriculture version of NBS. Again, this simply repackages several corporate sustainability false solutions such as conservation agriculture, nutrient optimization and improved plantation management, without addressing the drivers of the industrial model or its social and environmental impacts.³¹

The key attraction of NBS seems to be to increase private sector investment: “Investors also see a growing opportunity for investment in Nature based Solutions, particularly in the sustainable agriculture space. In a survey of 62 asset owners and managers who jointly manage more than \$3 trillion in assets, approximately 70% of global asset managers surveyed expressed interest in investments in sustainable agriculture and forestry and land use projects”.³² Lending institutions, such as banks, see major opportunities to expand their lending portfolios for the many NBS activities that may improve financial returns but may entrench the climate and biodiversity crises.

Indeed, NBS in agriculture seems to be how agribusinesses and their supporters intend to react to the increasing call for agroecology among social movements, civil society, experts and progressive elements of UN institutions. Ag-NBS is a junk version of agroecology—it retains the status quo of corporate control and obsession with productivity and market-based solutions.

When put under NBS, the model of agroecology developed by peasant movements is likely to be rapidly co-opted by agribusiness corporations, chemical companies, financial firms and consumer goods corporations by taking some elements of agroecology such as ecological practices and combining them with corporate technologies and intellectual property rights, market instruments and offsets and further marginalisation of small scale food producers.³³



Deforestation in the Amazon.

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Agroecological farming in Namaacha, Mozambique.

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- 26 Putting meaning back into “sustainable intensification”. *Frontiers in Ecology and the Environment*, 12(6) <https://esajournals.onlinelibrary.wiley.com/doi/10.1890/130157>
- 27 Agroecological and other innovative approaches for sustainable agriculture and food systems that enhance food security and nutrition, HLPE, CFS July 2019 <http://www.fao.org/3/ca5602en/ca5602en.pdf>
- 28 https://www.foodandwaterwatch.org/wp-content/uploads/2021/04/Oppose-GCSA-2021_Final-2.pdf
- 29 <https://www.etcgroup.org/whowillfeedus>
- 30 IPCC, 2018. Climate Change and Land. An IPCC Special Report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems.
- 31 <http://www.fao.org/land-water/overview/integrated-landscape-management/nature-based-solutions/en/>
- 32 *Ibid.*
- 33 For more information on the co-opting of agroecology see <https://www.foei.org/resources/publications/junk-agroecology-food-systems>

NATURE BASED SOLUTIONS UNDERMINES PEOPLES' SOVEREIGNTY AND RIGHTS

06



Friends of the Earth and allies campaigning against false solutions such as carbon markets at COP25 in Madrid, 2019.
© Victor Barro / Amigos de la Tierra

Numerous studies have emphasised that the success of NBS will depend on the support of indigenous people and local communities. But clear support for the critical step of actually recognising land and other rights is much less evident among core NBS proponents.

The IUCN, for example, emphasises that indigenous **knowledge** should be mobilised for NBS. TNC's NBS narrative is almost entirely lacking in any mention of recognition of the significance of rights and tenure. The recently published IUCN 'Global Standard for Nature based Solutions' do include that "The rights, usage of and access to land and resources, along with the responsibilities of different stakeholders, are acknowledged and respected". However, these are purely voluntarily and compliance can, according to the standard, be self-assessed.

Adding 'safeguards' to NBS promises little solace. As we describe above, NBS is oriented towards land-grabbing and large corporate-friendly conservation projects; complying with such 'safeguards' tends to be an afterthought, and not at the heart of implementation.

NBS is deliberately made to sound good in order to distract from the real causes of the crisis we face today. In fact it will deepen the crisis, perpetuating inequality and corporate power in a development model that violates the rights of Indigenous Peoples on a daily basis.



Abeer Al Butmeh from Pengon/Friends of the Earth Palestine, highlighting the role corporations play in crimes of the Israeli state against the Palestinian people and environment, during UN binding treaty negotiations in Geneva, 2018 © Victor Barro/Friends of the Earth International.



REAL SOLUTIONS FOR SYSTEM CHANGE

07



CFM is the best way to protect forests and ecosystems and agroecology can reduce the use of fossil fuels, increase yields and store carbon in soils. Community agroecology and agroforestry project, Sungai Buri, Sarawak, Malaysia. © Amelia Collins / Friends of the Earth International

FOEI rejects NBS and re-affirms our commitment to promote system change as an essential condition to overcome the crises we face.

The solutions to climate change and biodiversity decline already exist without offsetting and NBS.³⁴

Decentralised solutions to the climate crisis already exist and are gaining importance; they are based on ecological, autonomous management, traditional knowledge, and governance by Indigenous Peoples, local communities and peasants, of their own land and territories. Examples include agroecology and Community Forest Management (CFM).³⁵ CFM is the best way to protect forests and ecosystems that naturally store carbon; and agroecology can reduce the use of fossil fuels, increase yields and store carbon in soils.

CFM is based on ancestral and customary practices and has no need of a new concept such as NBS. It is CFM that protects 80% of remaining intact and semi-intact ecosystems. CFM blends appropriate technology, ancestral knowledge and community practices relating to resource use. It is also a major opportunity for communities to exercise political control of their territories and resources. It is based on principles completely different from those of industrial forestry, which has driven severe social injustices.

Agroecology, within the framework of food sovereignty, offers an alternative to industrial agro-commodities that are a leading cause of climate change, biodiversity loss, land rights violations and land grabbing. It also encompasses a political approach for small-scale food producers to produce food ecologically, drastically reducing emissions, protecting biodiversity and ensuring their collective rights and access to—and control over—their commons.³⁶

The collective rights to land and associated rights to what we call ‘territories’—such as right to water, right to self-determination, women’s rights and how they are conceptualised in CFM and agroecology—are central in tackling the structural causes of the environmental crises.

To address the climate crisis, governments must urgently begin to cooperate on a coordinated phase-out of fossil fuel production and consumption, with equity at the core of that phase-out. We must accelerate the transformation towards a climate-just world by transforming our energy system including principles such as energy sufficiency for all, energy sovereignty, energy democracy, energy as a common good, 100% renewable energy for all, and community-owned, low-impact renewable energy.

We need binding rules on big business, allowing us to rein in the power of transnational corporations (TNCs) and provide affected peoples with access to justice, compensation and restoration of their livelihoods wherever human and environmental rights violations by corporations occur.

Our governments must build a just recovery on environmental, social, gender, racial, economic and people-centred justice.

³⁴ In some cases the solutions that we outline here may be described as NBS by some groups. This can cause confusion because of the total co-opting of the term as a market based mechanism. FOEI never describes our real solutions as NBS.

³⁵ Agroecological and other innovative approaches for sustainable agriculture and food systems that enhance food security and nutrition, HLPE, CFS July 2019. <http://www.fao.org/3/ca5602en/ca5602en.pdf>; Community Forest Management - An opportunity to preserve and restore vital resources for the Good Living of human societies, FOEI, April 2018. <https://www.foei.org/resources/publications/community-forest-management>

³⁶ Agroecological and other innovative approaches for sustainable agriculture and food systems that enhance food security and nutrition, HLPE, CFS July 2019. <http://www.fao.org/3/ca5602en/ca5602en.pdf>; The 10 Elements of Agroecology, FAO, 2018 <http://www.fao.org/3/i9037en/i9037EN.pdf>; Declaration of the International Forum for Agroecology Nyéléni, Mali February 2015 <https://www.foodsovereignty.org/wp-content/uploads/2015/02/Download-declaration-Agroecology-Nyeleni-2015.pdf>

NATURE BASED SOLUTIONS:

A WOLF IN SHEEP'S CLOTHING



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