‘Nature-based Solutions’ and ‘net zero’ are concepts dominating climate change discussions in 2021. Let's first be clear that neither term actually appears in the Paris Agreement guiding long-term climate action. So there's no agreed definition.

The concept of Nature-based Solutions first came out of IUCN and European academics in 2015-2016, and was then eagerly embraced by participants at the September 2019 ‘Global Climate Action Summit’. But very quickly the definition of what constitutes a ‘Nature-based Solution’ became broad and unworkable, so that the term itself is contested.

One problem is that ‘Nature-based Solutions’ has now been enlisted for the purpose of justifying geoengineering and industrial-scale biomass burning. An even more serious problem has been with respect to offsets: the use of ‘Nature-based Solutions’ to justify carbon markets that are intended to help countries, and companies, reach ‘net zero’ targets.

‘Net zero’ is not the same as decarbonization. Major emitters can keep on emitting while claiming progress toward ‘net zero’ if they buy offsets. In this conception, ‘nature-based solutions’ are actually Market-based Solutions, allowing for the creation of carbon and biodiversity offsets and international trade in those credits. Such transactions and crediting systems don’t reduce emissions; they simply re-assign responsibility for any reductions to the party that continues to pollute.

CLARA members reject any definition of ‘Nature-based Solutions’ that includes carbon offsets or biodiversity offsets—which lets major polluters and nature destroyers off the hook for their actions.

Our members have been part of countless conversations in which the term ‘Nature based Solutions’ has been used not to clarify a set of ecosystem approaches to climate mitigation and adaptation, but rather to make the case for a global carbon market, or a market in biodiversity offsets. CLARA members categorically reject the use of land-based offsets as a Nature-based Solution. If continued fossil fuel pollution is offset by a ‘Nature-based Solution’, it’s not a solution. It’s a distraction.

We don’t object to the use of market approaches. But we absolutely object to the use of carbon markets to ‘pretend’ that companies and corporations are making progress on decarbonization, when all they are really doing is making sure someone else is held responsible for their continued pollution. Nature-based Solutions are not carbon market solutions!
After the 2019 Climate Action Summit, CLARA members became extremely concerned about the links between Paris Agreement Article 6 negotiations, ‘Nature-based Solutions’ narratives, and ‘net zero’ commitment pathways. Enhancing ‘removals’ to reach under-2°C warming pathways, while drastically reducing emissions, is understood as a necessary component of climate action.

But carbon offset markets’ use of ‘removals’ isn’t ambitious climate action. Instead, it’s part of a misleading story, promoted most of all by fossil fuel companies, about achieving ‘net zero’ carbon emissions by 2050.

Specifically, CLARA members are concerned about a concerted effort within the UNFCCC, Parties, corporate circles, and a segment of civil society to ‘shift the narrative’ in ways that minimize the urgency and depth of the transformations needed to address the climate crisis, while confusing the distinction between removals and offsets. The common usage of the term ‘Nature-based Solutions’ also fails to distinguish between the removals and offsets. The ‘net zero’ frame obscures what portion of the emissions-reduction target is to come from decarbonization, and what from removals.

The shift away from absolute reduction targets and towards ‘net zero’ makes it easier for Parties to delay and distract away from the hard choices associated with deep emission cuts.

An absolute reduction target—what CLARA and others call ‘real zero’—would specify the total volume of emission reductions needed, and not attempt to obscure that imperative using ‘net’ targets.

CLARA members are also concerned that ‘net zero’ and ‘Nature-based Solutions’ frames are being used to downgrade attention to rights-based approaches and the central importance of ecosystem integrity (see text box). People are mostly absent from the ‘Nature-based Solutions’ space. Use of the NBS ‘frame’ instead facilitates further corporate capture of climate finance, negotiating space, and project benefits.

Whether such market approaches are identified as ‘NBS’ or not, nonetheless the NBS concept is being mis-used to serve market-based approaches and ‘net zero’ claims. To counteract this misuse, we suggest six fundamental requirements for making ecosystem-based approaches serve ‘real zero’ decarbonization claims.

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Removals and Offsets

‘Offset’ and ‘removal’ have specific meanings for climate change.

‘Removal’ is the more general term, covering all efforts to remove carbon from the atmosphere. Natural ecosystems, and cultivated lands, can sequester carbon—but there are natural limits to this. All removals are subject to ‘reversal’ (re-emitted to the atmosphere). Between now and 2050, however, the land sector must contribute more to mitigating climate change. Most of that contribution will result from ending bad practices, especially deforestation. Some of the solutions can be ecosystem-based: removing carbon from the atmosphere through forest restoration, agroecological transitions, and (sometimes) careful stewardship of soil carbon.

But many parties—both countries and corporations—would like to use the removals that result from either avoided deforestation, or forest restoration, as an offset. ‘Offset’ has the specific meaning of a transaction in which credits for carbon sequestration (or avoided emissions) are sold to a buyer that isn’t actually reducing emissions—just offsetting emissions by paying a seller for removals elsewhere. Offsetting isn’t a ‘Nature-based Solution’ at all, because offsets do not create a mitigation benefit.

CLARA notes first the need for dramatic action on the basis of equity that reduces the need for ‘removals’. We agree that land-based removals are important for climate stabilization. But we also note recent research showing that the volume of possible land-based removals is much smaller than previously assessed.

CLARA further follows the science in noting that the remaining global carbon budget associated with the 1.5°C target is much too small to allow for offsets of any kind—and certainly not for land-based offsets, given their impermanence.

Net Zero and ‘Real Zero’—Our Recommendations

1. No equivalence between land-based and fossil carbon!

   Separate emission-reduction targets for each. IPCC rules unfortunately allow for equivalent treatment of geological (fossil) and biological carbon. Fossil fuel companies would like there to be ‘full fungibility’ between fossil carbon and carbon stored in trees and landscapes—and they would like to appropriate that biological carbon to support ‘business as usual’ approaches. But science makes clear that there are huge differences between fossil and biological carbon—and their functional role. Consequently one should not be used to offset the other.

   CLARA calls for separate, land-sector-specific emission-reduction targets, that would accompany other sector-level targets. Having a separate, land-sector-specific target would better reflect the unique role of the
land sector as both source of emissions and carbon sink. Finally, there should be no ‘netting out’ of economy-wide targets using land-based offsets. True emission levels should be reflected in ‘gross’ (as opposed to net) sector-level accounting.

2. Reform current UNFCCC accounting rules that create perverse outcomes for nature and communities.

Rules that treat all carbon in land and forests as equal; that fail to reflect the functional role of biodiversity in underpinning the stability of ecosystems; that focus on short term net flows into and out of the atmosphere without considering longer-lived carbon stocks; and that employ poorly-constructed or intentionally-manipulated baselines are not adequate to the task of protecting and restoring nature. Worse still, the logic of offset markets equates basic land and food rights with investor rights. Mechanisms to encourage integrated solutions to prevent biodiversity loss and greenhouse gas emissions are urgently needed. Meanwhile, ‘net zero’ needs to be further exposed as an unscientific concept, because fungibility between ecosystem and fossil carbon is inappropriate.

3. Fight corporate capture of ‘Nature-based Solutions’!

We note the slogan adopted by CLARA member Global Forest Coalition: ‘Our nature is not your solution!’ Some of the most enthusiastic promoters of ‘NBS’ are companies (and Parties) seeking to protect existing business models and polluting industries. The United Nations could do a much better job clarifying what is considered a ‘Nature-based Solution’.

From CLARAs perspective, if the output of a land-based project leads to increased sequestration, or decrease in forest loss—but then that mitigation benefit is transferred to another party through offsetting—then the action cannot be considered a ‘solution’ at all. We intend to fight the appropriation of the NBS concept by corporate interests, and work toward re-introducing the political space necessary for a greater focus on ecosystem- and rights-based approaches, separate from the ‘NBS’ debate.

4. Land for equity and sustainable development, not for offsets.

So much negotiating energy at the UNFCCC, and in carbon-budget scenario creation, has centered on increasing removals—thus, privileging mitigation-first approaches over adaptation, food security/sovereignty, and implementation of the Paris Agreement’s long-term goals ‘on the basis of equity’. Because Parties have indicated that climate action should happen ‘in the context of sustainable development’, and mindful of food security, CLARA asks where in the NBS debate there is adequate concern for food security and the Sustainable Development Goals. Because—“your mitigation solution cannot be my loss of food security”—and that’s exactly the threat now that major fossil-fuel interests are buying up land in developing countries for future carbon offset projects.

5. Halt Article 6 negotiations, refocus on real climate finance toward ‘real zero’.

CLARA members exposed to the UNFCCC discussions on Article 6 have repeatedly seen how negotiators and corporate ‘enablers’ have reduced what should be a broader discussion of the role that market- and non-market mechanisms can play in delivering appropriate climate finance, into a discussion on the ‘finer points’ of carbon-market creation. However, it has become increasingly clear that the UK, as President of COP26, has every intention of moving forward with carbon-market negotiations under Article 6, even though this remains contested by many developing countries, who doubt that these negotiations can

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**Climate and Biodiversity—toogether at last**

An important outcome from the most recent UNFCCC Conference of Parties (2019, in Madrid) was—finally—a statement regarding the importance of looking at climate and biodiversity together. Specifically, Paragraph 15 of the ‘Chile-Madrid Time for Action’ (Convention document 1/CP.25) “underlines the importance of addressing biodiversity loss and climate change in an integrated manner’. Doing so advances the concept of ecosystem integrity, language that has been lacking in the climate convention. Recognizing the importance of integrated action is an important first step. CLARA notes however the current absence of meaningful mechanisms for advancing work on climate and biodiversity together. True ecosystem-based approaches, that promote ecosystem integrity, can be the link. CLARA members are eager to work with other groups concerned with the twin crises of climate change and biodiversity loss to propose true zero targets and true nature based solutions—not ‘market based solutions’.

‘Net zero’ is an unscientific concept. Fungibility between ecosystem and fossil carbon for accounting purposes is not appropriate.
be concluded in a way that leads to Overall Mitigation in Global Emissions (OMGE). CLARA is also focused on what might be delivered through Article 6.8, on non-market mechanisms. For us, Article 6.8 should be the real home for NBS discussions. We encourage Parties therefore to spend much more time thinking through public-finance (non-market) approaches that can be delivered through Article 6.8. And as noted, CLARA is opposed to the inclusion of land-based offsets in Article 6.2 and 6.4 mechanisms.

6. Rights First. The myth that there’s lots of unoccupied and/or degraded land globally that can be replanted to forests is central to many NBS approaches, reflected also in ‘Bonn Challenge’ commitments. ‘Degraded’ is a political designation, not a scientific one; and ‘unoccupied’ often means ‘original inhabitants were killed, starved out, or otherwise disappeared’ although indigenous claims to those territories persist. Instead, then, the debate needs to shift toward community land-and-forest resource tenure, plus community conservation and ecosystem restoration, as the only NBS approaches that are actually consistent with rights-based approaches.

Throughout 2021, CLARA will prepare a more in-depth analyses of particular Nationally Determined Contributions and their ‘NBS’ content. We will review the depth of ambition associated with corporate commitments to net zero, as well.

Overall, we remain deeply concerned about the sophistry associated with the use of ‘net’ targets. We continue to look for opportunities within the UNFCCC to make the case for gross-gross accounting approaches.

Total Global Carbon Budget?

During the Paris negotiations, Parties supported by fossil fuel interests vehemently opposed language in any agreement that called for complete decarbonization of energy and transport sectors. The final text shifted away from true-zero targets for 2050. Instead, Article 4.1 calls for “a balance between anthropogenic emissions by sources and removals by sinks” in the second half of this century. From this was spun the unscientific concept of ‘net zero’.

The Paris Agreement doesn’t define an actual emissions-reduction goal. Article 4.1 is also imprecise about how to measure the target for limiting warming. It doesn’t specify the surface temperature datasets that should be used as reference, or the reference time period from which 1.5°C of warming would be measured. Subsequently, the IPCC Special Report (SR) on the 1.5°C temperature goal did quantify a remaining carbon budget of 420 GtCO₂ for a 66% chance of avoiding warming greater than 1.5°C at the year 2100.

But at the same time most scenarios in the IPCC-SR allowed for emissions far above what is required to reach 1.5°C. This requires a huge volume of ‘removals’. Meanwhile, the full impact of non-CO₂ emissions, and Earth-system feedbacks like permafrost melt, are not well integrated in our understanding of warming trends.

A precautionary approach must therefore be used. GHG emissions to the atmosphere must be brought as close to zero as possible, as soon as possible. This is true in the agriculture sector as well. Forest protection and restoration may deliver modest removals that help cool the planet, but an over-reliance on the ‘net zero’ approach could lock in more than 2°C of warming—the dangers of which are extensively documented in both the SR on 1.5°C and the SR on Land.

Forest protection and restoration may deliver modest removals that help cool the planet. But relying on ‘net zero’ approaches could quickly lock in more than 2°C of global warming.

Contact CLARA
Media: Don Lehr (CLARA) / dblehr@cs.com / +1 917 304 4058
Network Coordination: Peter Riggs (Pivot Point) peteriggspivotpoint@gmail.com / +1 360 426 0959
Twitter: @CLARA_Alliance