

Soil Association – Written evidence (NSD0044)

Submitted by Gareth Morgan and Alex Mackaness on behalf of the Soil Association

The Soil Association is pleased to make this submission to the Inquiry. We are a long established charity focussed on supporting a shift to sustainable farming and healthy and sustainable diets; we also run a number of certification schemes including for organic farming and sustainable forestry.

The essence of our evidence is the slightly unorthodox view that agriculture can be, and should be, viewed as a potential nature based solution, in contrast to the conventional view that the focus on agriculture should be mitigating GHG emissions and offsetting the residual impacts. We also make observations about the role of biodiversity offsetting in securing Nature based Solutions and how this might be better governed.

Our starting point is that **NbS must not be a substitute for the phase out of fossil fuel use**, and any policy around NbS must be centred around this principle as indicated in the [NbS guidelines](#) proposed by the Nature Based Solutions Initiative. We would also support the contention that NbS must be **'designed, implemented, managed and monitored by or in partnership with Indigenous peoples and local communities** through a process that fully respects and champions local rights and knowledge, and generates local benefits.'

How can farming be a Nature based Solution?

The general assumption is that NbS is best secured through creating new habitats (such as forestry, peatland restoration, saltmarsh creation and the like). These will undoubtedly have a major role. Currently, there is a strong bias within NbS towards forests which, although critically important, means most finance and international goals are targeted to forestry. **We need more focus on other ecosystems, including semi-natural and farmed ecosystems.** In a country such as the UK where 70% of the land area is under agricultural management there will be limits to how much land can be taken out of production without merely sucking in imports (with potentially worse GHG emissions). We therefore contend that farming, if performed in ways that have been described as "agroecological" can in itself be a Nature based Solution, through working with nature to provide benefits for human well-being, biodiversity and climate change, based on the principle that agriculture should be practiced as a semi-natural ecosystem.

However, agriculture is often practiced in a way that cannot be considered a Nature based Solution, and currently the global food farming system is a major contributor to climate change as well as the primary driver of biodiversity loss.¹ In a recent Chatham House report Professor Tim Benton suggests that to reverse this we have three levers at our disposal:

¹ [Food system impacts on biodiversity loss | Chatham House – International Affairs Think Tank](#)

- Firstly, dietary patterns need to shift towards plants and food waste must be significantly reduced.
- Secondly, more land needs to be protected and set aside for nature.
- Thirdly, we need to farm in a more nature-friendly way, that limits inputs and replaces monocultures with polyculture farming practices.

It is critical that the **third lever is deployed** so that farmland (used for food production) delivers on its potential as an NbS for biodiversity and the climate. Currently some farming systems, such as intensive animal feedlots, could be viewed as the antithesis of NbS. At the extreme, this approach to farming is premised on privileging a single ecosystem service (food) leaving other ecosystem services to be provided elsewhere on land exclusively devoted to nature or climate mitigation (such as woodland creation). In this evidence we indicate what is needed for this to happen.

1. What is the potential scale of the contribution that nature-based solutions can make to decarbonisation in the UK?

Farmland can make a significant contribution to decarbonisation but it is imperative that clear criteria and metrics are developed to determine which farming practices or systems provide Nature based Solutions. Indicators for Nature based farming solutions could include the level of organic matter in soil, soil invertebrate density and diversity, appropriate grazing of species rich grassland and minimal use of artificial inputs on arable crops. Farming systems that generate these benefits should be encouraged by policy measures and incentives to support and increase qualifying agroecological practices that can be guaranteed as Nature based Solutions.

More specifically, for farming to qualify as NbS criteria (which should be met *for the duration* of each farming activity, and *at each stage* of any farming rotation, both arable and grassland), permanent semi-natural grass and heathlands should remain unploughed and characteristic of the local habitat types, temporary grasslands should contain a minimum diversity of plant species, arable land should support a defined minimum level of invertebrate density and diversity, and a degree of plant diversity, at a level that is capable of supporting a vertebrate food chain. Where appropriate to the area, and at an appropriate landscape scale, farmland should include semi-natural habitat at a defined level, including shrubs and trees and species rich areas, in tandem with in-field functioning ecosystems. Farming practices should avoid deleterious impacts on surrounding or global biodiversity, closely managing nutrient and water use at the farm level and those that result in nutrient excess in surface or groundwater or rely on imported feed grown with a negative impact on biodiversity or the climate, would need to be excluded.

Agroecological farming, when undertaken at the whole-farm level, should be considered an NbS for the demonstrable benefits it provides. The principles of agroecology align well with the leading NbS standard from International Union for the Conservation of Nature (IUCN). Under this global standard, an action is only considered an NbS if it serves “to protect, sustainably use, manage and restore natural or modified ecosystems... address[es] societal challenges, effectively and adaptively, provid[es] human well-being and biodiversity

benefits”.² There is good evidence that certified organic farming provides both climate and nature benefits and this could be a good starting point for recognition as a NbS.

2. What major scientific uncertainties persist in understanding the effects of nature-based solutions and affect their inclusion in carbon accounting, and how can these uncertainties be addressed?

Whilst there are clear principles guiding the actions of agroecological farmers there is no strict list of actions that must be adhered to. There is a need to develop a robust set of criteria that must be met in order that a farming system can be truly considered an NbS.

These criteria should be based on a better understanding of target levels of organic matter appropriate to the soil type over the farming cycle, the number and diversity of invertebrates, and the degree of functioning of the soil fungus community.

Regenerative agriculture is being adopted widely without general verification. Work is needed to ensure guidance is provided in this area. In the meantime, certified organic farming (which is an assured and verified manifestation of agroecology) should qualify as a Nature Based Solution.

It might be claimed that highly resource intensive or monocultural agriculture can provide Nature based Solutions in that they are claimed to “spare” land to create nature areas. We argue that this is conceptually flawed for a number of reasons. Firstly, there is no recognised mechanism by which a potentially damaging cultivation practice in one place yields land for nature somewhere else (indeed, it is suggested that by depressing commodity prices it may actually increase consumption e.g. through displacement into biofuels). Secondly highly resource intensive agriculture is more likely to generate negative externalities to the detriment of nature. Thirdly, recent work such as the Ten Years for Agroecology project in which we are partners, suggests that in the long term agroecology provides resilient and significant yields but that dietary change is the key factor in a move to sustainable farming. And finally non-agroecological farming is likely to be monocultural with little scope to provide the foundation for foodchains and resilient natural populations.

It would be useful for more research to be done to look at the impacts of different food and farming systems at scale to assess their aggregate net impacts on the climate and biodiversity and their potential contribution to climate change mitigation.

3. What frameworks already exist for the regulation and financing of nature-based solutions?

We contrast the leadership role taken by UK government on the UK Woodland Carbon and Peatland codes, with the current situation for a UK soil carbon code, where the impetus is primarily NGO and private sector.

² [IUCN Global Standard for NbS | IUCN](#)

The Soil Association is involved in the voluntary offset market through our accreditation under the Woodland Carbon Code, our support for developing standards for soil carbon and our SA Exchange initiative. It is our view that any offsets, including those defined as NbS should be guided by the following considerations:

- offsets should not be a substitution for possible emission reductions (see above)
- offsets should optimise multiple benefits for climate, nature and health
- sellers of offsets must own a plan in place to avoid and reduce all emissions in their own enterprise, including offsetting their own unavoidable emissions, before they are rewarded via the carbon market
- sellers of carbon offsets (farmers, forest owners/managers and other land managers) should be fairly rewarded and remain in control of their contribution, when participating in wider net zero supply chain approaches
- approaches that add value to net zero strategies should be favoured, by including removal of historic and supply chain emissions, as well as future and direct emissions.

We have a concern about the current state of the voluntary offset market which is largely a function of the general lack of quality and governance in this market. The market is influenced by ungoverned, cheap offsets that are too easily available. The current carbon price is too low resulting in a lack of incentive to favour more costly emission reduction strategies in the drive to achieve net zero targets. Although all aspects of quality affect the price of an offset, most experts agree that the strongest correlation is between genuine additionality and price, as projects or activities that would not otherwise be taken forward as 'business as usual' tend to be costly. It is only by addressing this issue that we can have confidence that offsetting is making a valid contribution to a safe climate.

High standards are critical not just to govern additionality but to ensure wider benefits for nature and people, transparency of ownership, permanence, and the coherent use of any offsets for an appropriately formulated net zero strategy.

Ultimately, even if voluntary offsetting was effectively governed and all carbon credits were high-quality, offsetting has inherent high transaction costs based around trading, and measures to raise quality inevitably increase these costs further. **Therefore, voluntary offsetting as a mechanism is best positioned as a transition measure,** until global climate governance develops to ensure more effective mechanisms are in place.

6. How should nature-based solutions be planned and monitored at the national level?

There is a need for a regulated approach to guarantee that the maximum level of gross emissions are reduced at source AND that offset payments for unavoidable emissions are efficiently invested in climate mitigation e.g. a 'polluter pays' mechanism, with full ring-fencing of financial penalties for nature-based carbon removals.

The UK government needs to advocate through the UNFCCC for policies and implementation measures under the global process, that maximise emissions reduction. We favour 'polluter pays' approaches as the best way to incentivise this reduction, with all fiscal receipts or levies invested in nature-based solutions, that optimise carbon removal in conjunction with wider benefits for biodiversity.

The UK Government should adopt a leadership role in the restoration of a safe climate by ensuring a policy focus on dealing with past emissions, as well as ensuring net zero for future emissions.

Alongside this global advocacy for the compliance approach, the UK government should show leadership and support the facilitation of high-quality voluntary offsets and the associated private market, as a key component of a net zero policy framework.

Also at the domestic level policies and incentives should be made available to ensure that more farmland can genuinely contribute to the aim of Nature Based Solutions. This would include through agri-environment schemes, where agroecological practices meet the criteria for NBS these should be supported for the public benefits these provide; and in developing the 30x30 land for nature target where we think farmland should count to this target, but only where it meets the above criteria for NbS to ensure that clear decisions can be made about which farmland and practices are providing the benefits.

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