



Determining substantial contribution to biodiversity

Ensuring agriculture delivers for biodiversity through the EU Sustainable Finance Taxonomy

IEEP policy report
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1. Summary

This report provides input to the ongoing development of the EU Sustainable Finance Taxonomy. It aims to set out the biodiversity and ecosystem objectives to which substantial contribution is to be measured, defines the agricultural economic sub-sectors from which these contributions should be sought, and proposes examples of how technical screening criteria should be developed to guide sustainable finance.

Defining specific goals and objectives of the Taxonomy

The Taxonomy Regulation (Art. 15) lists the protection and restoration of biodiversity and ecosystems as an explicit target but lacks more granular detail that would enable specific and measurable criteria to be established. We recommend the following specific objectives from which to determine criteria and thresholds to deliver the headline objective:

Global framing objective: “To ensure that by 2050 all of the world’s ecosystems are restored, resilient, and adequately protected.”

For agro-biodiversity and ecosystems:

- The population of all **naturally occurring species** particularly bird and insect **pollinators** on agricultural land are maintained and enhanced.
- A sufficient diversity and area (no less than [20%] of farmed land) of **habitats for wild species populations** is preserved, maintained or re-established, allowing them to thrive within agricultural land.
- **The genetic diversity** of farmed species is increased
- **Soil** fertility and soil organic matter is protected and enhanced, and erosion reduced – achieving land degradation neutrality
- **Invasive alien species** are avoided or suitably and strictly contained

For wider biodiversity and ecosystems agricultural activities support the preservation, maintenance or re-establishment of habitats and species to favourable conservation status:

- The use of natural resources and ecosystems for agricultural activities is sustainable and within parameters defined for **planetary boundaries not covered by other objectives of the Taxonomy, specifically** - No additional (natural) land take for agricultural production;
- Point source and diffuse pollution from agriculture is eliminated

The NACE structure used in the Taxonomy leaves a significant gap in the context of biodiversity. NACE does not address those areas where substantial and significant biodiversity and ecosystem contributions can and are being made, but where no economic activity is taking place. ***These areas should have access to the protection of and support from investments made by private finance.*** These may include old-growth forests or other areas of (semi-)natural habitats, or economic activities that focus solely on the protection and restoration of biodiversity and ecosystems, or associated drivers (such as ecotourism). We recommend that ***biodiversity and ecosystems that are subject to limited or no economic activities, should be enabled within the wider Taxonomy*** (if not specifically agriculture).

Existing EU legislation can be used to demonstrate compliance with the Taxonomy criteria, once those criteria have been clearly defined. EU legislation is purposeful and thus those purposes should be clearly recognised wherever it is used to demonstrate compliance or inform the development of criteria. ***The EU environmental “acquis communautaire” can provide a good basis on which to develop technical screening criteria, but sectorial focussed policies, such as the Common Agricultural Policy or the recast Renewable Energy Directive, should not.*** These sectorial policies may have the potential to be used in demonstrating compliance with the Taxonomy criteria but should not be assumed to do so unless it can be clearly demonstrated. Full legal compliance should underpin any substantial contribution or DNSH criteria.

Technical screening criteria are one of the most important elements of the Taxonomy process as these are the criteria by which an investment will be judged to be sustainable under EU law. ***Measurement of progress towards these criteria should be evidence based, rigorous and transparent.***

This requires a clear baseline for assessment to be established through a competent national authority. Wherever possible a direct measurement of the contribution made to the protection and restoration of biodiversity and ecosystems should be established as the primary means of determining compliance, before considering proxy indicators or assessments of progress (i.e. trajectory towards target).

Enabling activities in other sectors are important to support a sustainability transition in agriculture. One important example is the potential for the manufacturing sector to generate alternative plant proteins to enable diet shifts, as well as machinery or other inputs to production that can help implement substantial contribution activities within the agriculture sector.

2. Introduction

This report provides input to the ongoing development of the EU sustainable finance Taxonomy. It aims to set out the biodiversity and ecosystem objectives to which substantial contribution is to be measured in the context of the Taxonomy, defines the agricultural economic sub-sectors from which these contributions should be sought, and proposes examples of how technical screening criteria should be developed to guide sustainable investments.

Context of the work

The EU Taxonomy (Regulation (EU) 2020/852) is a tool to help investors, companies, issuers and project promoters focus their investments and the use of private finance to delivering a low-carbon, resilient and resource-efficient economy. It sets performance thresholds ('technical screening criteria') for economic activities which:

- make a substantive contribution to one of six environmental objectives;
- do no significant harm (DNSH) to the other five, where relevant;
- meet minimum safeguards.

The Commission is empowered to adopt a delegated act to define the above-listed criteria. So far, this work has been enabled through a Technical Expert Group (TEG) and has focussed on climate mitigation and climate adaptation objectives. The work of the TEG took place across most economic sectors and took 20 months. So far, all other objectives of the Taxonomy have only been addressed in the context of do-no significant harm criteria.

The six environmental objectives of the Taxonomy Regulation are: climate change mitigation; climate change adaptation; the sustainable use and protection of water and marine resources; the transition to a circular economy; pollution prevention and control; the protection and restoration of biodiversity and ecosystems.

One of the actions of the new EU Biodiversity Strategy is to enable the delegated act in defining the substantial contribution criteria for the **protection and restoration of biodiversity and ecosystems by 2021**. Article 15 of the Taxonomy Regulation (TR) defines what is considered by the Taxonomy in all sectors, as an

economic activity's '*Substantial contribution to the protection and restoration of biodiversity and ecosystems*' and embodies the main elements of the Taxonomy focussed on biodiversity (Box 1). This report considers only the agriculture sector contributions to this objective (focusing on Article 15(1) a-c), rather than other economic sector activities, such as forestry.

We recognise that there are overlaps within the Taxonomy's environmental objectives in the context of addressing the health, restoration and protection of ecosystems, such as those relating to water or pollution. However, these overlaps are not covered further in this report.

BOX 1: Article 15(1) of the Taxonomy Regulation

An economic activity shall qualify as contributing substantially to the protection and restoration of biodiversity and ecosystems where that activity contributes substantially to protecting, conserving or restoring biodiversity or to achieving the good condition of ecosystems, or to protecting ecosystems that are already in good condition, through:

- nature and biodiversity conservation, including achieving favourable conservation status of natural and semi-natural habitats and species, or preventing their deterioration where they already have favourable conservation status, and protecting and restoring terrestrial, marine and other aquatic ecosystems in order to improve their condition and enhance their capacity to provide ecosystem services;
- sustainable land use and management, including adequate protection of soil biodiversity, land degradation neutrality and the remediation of contaminated sites;
- sustainable agricultural practices, including those that contribute to enhancing biodiversity or to halting or preventing the degradation of soils and other ecosystems, deforestation and habitat loss;
- sustainable forest management, including practices and uses of forests and forest land that contribute to enhancing biodiversity or to halting or preventing degradation of ecosystems, deforestation and habitat loss; or
- enabling any of the activities listed in points (a) to (d) of this paragraph in accordance with Article 16.

3. Understanding the protection and restoration of biodiversity and ecosystems

The TR outlines what is intended regarding the protection and restoration of biodiversity and ecosystems by defining those activities that contribute substantially to this aim (Box 1). However, the TR does not define the goal of the protection and restoration objective in a way that allows the definition of 'substantial contribution' in practical terms, i.e. how much, where or what type of biodiversity needs to be in good condition for the objective to be met.

For the climate mitigation objective, the Taxonomy considers the goals of the Paris Agreement as the headline objective and interpreted those in the EU context as meaning "... net-zero CO₂ emissions by 2050 and a 50-55% reduction by 2030, consistent with the EU Green Deal". It is necessary to have a similar headline goal for the protection and restoration of biodiversity and ecosystems, from which substantial contribution can be defined, and one that is applicable globally. From there the individual contributions of those implementing action on the ground can then be extrapolated.

It is also important to note that the scope of the Taxonomy is global rather than EU in nature reflecting the commitment of the EU to the delivery of the Sustainable Development Goals (SDGs), and the diversity of the source of private investments and investors in the EU. Therefore, the headline objective, criteria and thresholds, need to be broadly applicable in a global context.

Determining the biodiversity and ecosystem objectives of the Taxonomy

The EU Biodiversity Strategy highlights the EU's ambition to support the Convention on Biological Diversity (CBD) "...to reverse biodiversity loss, lead the world by example and by action, and help agree and adopt a transformative post-2020 global framework at the 15th Conference of the Parties to the Convention on Biological Diversity. This should build on the **headline ambition to ensure that by 2050 all of the world's ecosystems are restored, resilient, and adequately protected.**"

The global commitment to biodiversity is reflected in the SDGs adopted in 2015, which provide useful context to the role of agriculture in contributing to both biodiversity objectives and those of the wider Taxonomy (Box 2).

BOX 2: The SDGs as a guide to biodiversity and ecosystem objectives relating to agriculture

Biodiversity plays a role in achieving most of the 17 SDGs, especially in relation to economic activities in crop and livestock agriculture, forestry and fisheries. Biodiversity is recognised as an underpinning element of all ecosystem services. Of particular significance to the connection of biodiversity and agriculture is SDG 15, defining the aim of terrestrial ecosystem protection, restoration and sustainable use. The biodiversity of forests and their protection (e.g. from agricultural expansion) is central to this goal due to their importance as habitats, carbon sinks and recreational areas. Further areas are embedded in other SDGs, including SDG 2.4 and 2.5 for sustainable food production systems and genetic diversity of seeds, cultivated plants and farmed and domesticated animals. Sustainable agriculture supports various ecosystem functions in relation to SDG 2, including soil quality, pollination, and water quality. Committing to genetic and ecosystem diversity furthermore increases resilience against climate change and helps to protect against some aspects of market volatility within agricultural commodities.

SDG 14 - life below water, with 14.2 of particular interest (sustainably manage and protect marine and coastal ecosystems) is also linked to agricultural practices and their impact on biodiversity and ecosystems, both from the use of marine resources for agriculture (such as traditional use of seaweed as a fertiliser), and the impact of agriculture on the marine environment (such as through diffuse nitrate pollution). Achieving conservation and sustainable management of the use of marine and coastal areas directly impacts the vitality of marine life and resources. Not only does this goal target the ocean and fisheries for food production and their protection from pollution but also the nutrient losses to marine system created by terrestrial agroecosystems.

If the headline ambition to the CBD is to set the frame of reference for the TR (given its global nature), then the Taxonomy will need to consider how that specific goal is achieved and in what increments, i.e. which ecosystems, when does restoration become evident, and so on. A subset of these will then be relevant to the agricultural component of the Taxonomy and a further potential subset to individual farms or farming types.

The EU Biodiversity Strategy identifies three shortcomings of achieving the successful protection and restoration of biodiversity to date: that protection is incomplete; restoration is small in scale; and legislation is not well enforced. Thus, pointing to sub-targets of the headline ambition to widen the network of protected areas and developing an EU Nature Restoration Plan. These can form the basis of what the Taxonomy should include with respect of substantial contribution.

The increase in protected areas is not directly translatable to the Taxonomy in that those implementing projects or investments within an agricultural context will not likely have the agency to designate an area as protected. A similar case is true for the enforcement of legislation. Those who are implementing projects or investments will, however, have the ability to implement activities that lead to the restoration of nature through agricultural activities, or on agricultural land.

Restoring nature and the role of agriculture

Agriculture has both a direct and intrinsic link with nature in that agro-biodiversity¹, is an important component of EU biodiversity in general, and many agricultural activities have an impact on wider biodiversity and ecosystems (Box 3). These impacts are both positive, such as the creation of habitat corridors, and negatively, such as diffuse pollution of water bodies.

BOX 3: Protected habitats, species and ecosystems linked to agriculture in the EU

EU protected habitats and species are the habitats defined in Annex I of the EU Habitats Directive, and the species listed in Annexes II, IV and/or V of the Habitats Directive and Annex I or II of the Birds Directive.

46 of the Annex I habitats, 328 of the Annex non-bird species, and 50 of the Annex I bird species are associated with the ecosystems grassland and/or cropland (EEA 2015²), and therefore considered to be partly or completely dependent on appropriate agricultural practices (grazing, mowing, low input cropping etc) (EC 2014). In addition, 23 Annex I dune, heathland and scrub, wetland and rocky habitats require periodic scrub clearance and some grazing to maintain their status, and over 220 associated Annex species (EC 2014). Some areas of 19 of the Annex I agricultural habitats are considered to exist because of natural conditions without agricultural management, but this makes up a very small proportion of the overall Annex I habitat area (EC 2014)³.

¹ Poláková, J, Tucker, G, Hart, K, Dwyer, J, Rayment, M (2011) Addressing biodiversity and habitat preservation through Measures applied under the Common Agricultural Policy. Report Prepared for DG Agriculture and Rural Development, Contract No. 30-CE- 0388497/00-44. IEEP: London.

² EEA (2015) <https://www.eea.europa.eu/data-and-maps/data/linkages-of-species-and-habitat>

³ European Commission (2014) Farming for Natura 2000. Guidance on how to integrate Natura 2000 conservation objectives into farming practices based on Member States good practice experiences.

For **agro-biodiversity**, the EU Biodiversity Strategy highlights a number of areas where it is necessary for agriculture to act in addressing biodiversity declines. These can be translated into priorities for action within the Taxonomy:

- Reversing the decline of **farmland birds and insects** (particularly pollinators) – as indicators of the broader health of agro-ecosystems.
- To provide space within agro-ecosystems for **wild animals, plants, pollinators and natural pest regulators**.
- Reversing the decline in **genetic diversity** of farmed species by facilitating the use of traditional varieties of crops and breeds.
- Protect **soil fertility, reduce soil erosion and increase soil organic matter**.

Whilst the Biodiversity Strategy sets clear objectives, they aim more at reducing pressures (reversing decline, reduce erosion) rather than identifying substantial and positive contributions to the restoration of biodiversity and ecosystems. Here the Birds (2009/147/EC) and Habitats (92/43/EEC) Directives give specific focus to where biodiversity should be enhanced through actions within the EU. Articles describing the aims of the Directives address the ‘preservation’, ‘conservation’, ‘re-establishment’ and ‘maintenance’ of biodiversity – which provides a more suitable positive framing for substantial contribution criteria in the context of the Taxonomy.

Combining these objectives of the Biodiversity Strategy, the Birds and Habitats Directives, with the content of Article 15 of the TR gives a more precise list of specific objectives to which substantial contribution needs to be demonstrated and from which technical screening criteria can be developed (Box 4).

For the **wider suite of ecosystems** that are influenced by agricultural activities (i.e. not on agricultural land per-se), the Biodiversity Strategy does not extend a more detailed list of priorities to be addressed by agriculture other than:

- reducing pressures on habitats and species, and ensuring all use of ecosystems is sustainable’ (with a particular focus on forests)
- tackling pollution and invasive alien species.

These are, however, still useful to frame the objectives for which ‘substantial contribution’ can be set within the Taxonomy and where activities undertaken during agricultural economic activities should be modified for their (potential) impact outside of agricultural land.

The use of planetary boundaries has been included in the context of sustainable use of ecosystems, as it better expresses the overall impact of a complex system of land management (agriculture) that requires biotic and abiotic resources to be used and modified so that food and other forms of biomass can be produced. The nine planetary boundaries described by Stephen et al (2015) are mostly covered by the other five objectives of the Taxonomy, and are not repeated fully here. Only land-take is included within the proposed substantial contribution criteria in Box 4.

BOX 4: Redefined objectives for substantial contribution of agriculture to biodiversity and ecosystems

Global framing objective: "To ensure that by 2050 all of the world's ecosystems are restored, resilient, and adequately protected."

For agro-biodiversity and ecosystems

- The population of all **naturally occurring species** particularly bird and insect **pollinators** on agricultural land are maintained and enhanced.
- A sufficient diversity and area (no less than [20%] of farmed land) of **habitats for wild species populations** is preserved, maintained or re-established, allowing them to thrive within agricultural land.
- **The genetic diversity** of farmed species is increased
- **Soil** fertility and soil organic matter is protected and enhanced, and erosion reduced – achieving land degradation neutrality
- **Invasive alien species** are avoided or suitably and strictly contained

For wider biodiversity and ecosystems agricultural activities support the preservation, maintenance or re-establishment of habitats and species to favourable conservation status.

- The use of natural resources and ecosystems for agricultural activities is sustainable and within parameters defined for **planetary boundaries⁴ not covered by other objectives of the Taxonomy, specifically** - No additional (natural) land take for agricultural production;
- Point source and diffuse pollution from agriculture is eliminated

⁴ Rockström J. et al (2009). A safe operating space for humanity. Nature, 461 (7263), 472; Steffen et al. 2015. Planetary Boundaries: Guiding human development on a changing planet. Science 347 (6223)

Note that 20% of farmed land (marked in square brackets) is proposed for the preservation of wild species populations, rather than the 10% set out in the Biodiversity Strategy⁵. This is to address the fact that the list of features proposed in the Biodiversity Strategy is only a sub-set of features and habitats important on farmed land; that the wording of the strategy is 'at least 10%', and that the Taxonomy is seeking to provide a 'substantial contribution' rather than a minimum. To put this in context, the proposed restoration target in the Biodiversity Strategy is 30% of species and habitats not in favourable status. A precise figure or range should be defined.

⁵ At least 10% of agricultural area under high-diversity landscape features - inter alia, buffer strips, rotational or non-rotational fallow land, hedges, non-productive trees, terrace walls, and ponds

4. Structuring the economic sub-sectors of the Taxonomy.

In developing substantial contribution criteria for biodiversity in agriculture, two condensations need to be made:

- Are the existing NACE categories for agriculture for climate mitigation suitable for the biodiversity objective?
- Are other NACE codes necessary in order to cover the scope of biodiversity and ecosystems covered by the Taxonomy environmental objectives in relation to the agriculture NACE, and the EU Biodiversity Strategy objective?

The Taxonomy is structured using NACE categories⁶ that provide consistency between economic sectors of society and avoid issues of overlap. Agriculture as an economic activity is defined according to the type of farming that takes place, such as the growing of perennial crops (NACE 1.2) or animal production (NACE 1.4) with various sub-divisions (Box 5). To date, the climate mitigation and adaptation screening criteria consider only the growing of non-perennial crops, perennial crops and animal production. Part of the rationale for the selection of only the three NACE categories for agriculture was that these represented the majority of farming sector activities in the EU that had the greatest impact on climate mitigation. The Taxonomy is simpler and easier to manage with fewer categories and it was reasoned by the TEG that these were activities that interacted directly with land in a way that could result in the reduction of GHG emissions or lead to the increase of carbon removals from the atmosphere.

⁶ The *Nomenclature statistique des Activités économiques dans la Communauté Européenne*, is a statistical classification of non-overlapping economic sectors.

BOX 5: Agriculture NACE rev 2. (2008)

AGRICULTURE, FORESTRY AND FISHING

1. Crop and animal production, hunting and related service activities
 - 1.1. **Growing of non-perennial crops** - i.e. plants that do not last for more than two growing seasons. Included is the growing of these plants for the purpose of seed production. E.g. growing cereals, rice, sugar cane, tobacco, fibre crops and vegetables, melons roots and tubers, and other non-perennial crops
 - 1.2. **Growing of perennial crops** - i.e. plants that lasts for more than two growing seasons, either dying back after each season or growing continuously. Included is the growing of these plants for the purpose of seed production. E.g. grapes, tropical and subtropical fruits, citrus, pome and stone fruits, tree and bush fruits / nuts, oleaginous fruits, beverage crops, and spices, aromatic, drug and pharmaceutical crops, and other perennial crops
 - 1.3. **Plant propagation.** i.e. the production of all vegetative planting materials including cuttings, suckers and seedlings for direct plant propagation or to create plant grafting stock into which selected scion is grafted for eventual planting to produce crops.
 - 1.4. **Animal production.** i.e. includes raising (farming) and breeding of all animals, except aquatic animals. This group excludes: - farm animal boarding and care, and the - production of hides and skins from slaughterhouses. E.g. Raising dairy cattle and other cattle or buffaloes, horses and other equines, camels and other camelids, sheep and goats, swine/pigs, poultry, other animals
 - 1.5. **Mixed farming.** i.e. the combined production of crops and animals without a specialised production of crops or animals. The size of the overall farming operation is not a determining factor. If either production of crops or animals in a given unit is 66% or more of standard gross margins, the combined activity should not be included here, but allocated to crop or animal farming.
 - 1.6. **Support activities to agriculture and post-harvest crop activities.** i.e. activities incidental to agricultural production and activities similar to agriculture not undertaken for production purposes (in the sense of harvesting agricultural products), done on a fee or contract basis.
 - 1.7. **Hunting, trapping and related service activities.** i.e. hunting and trapping on a commercial basis: taking of animals (dead or alive) for food, fur, skin, or for use in research, in zoos or as pets; production of fur skins, reptile or bird skins from hunting or trapping activities; land-based catching of sea mammals such as walrus and seal.

Source: https://ec.europa.eu/eurostat/ramon/nomenclatures/index.cfm?TargetUrl=LST_NOM_DTL&StrNom=NACE_REV2&StrLanguageCode=EN&IntPcKey=18493754&StrLayoutCode=HIERARCHIC&IntCurrentPage=1

Mixed farming comprises of the activities covered under the crop or animal production categories. For example, a mixed farming system that grew non-perennial crops and raised livestock, would be adequately dealt with through the technical screening criteria developed for those individual NACE codes. More simply, where crops were grown, the criteria and thresholds for crops would need to be applied, where livestock were managed the livestock categories would also be applied. However, mixed farming systems are an important contributor to biodiversity in the EU, and the loss of these systems is having a detrimental impact on biodiversity (Box 6). It is therefore proposed that this system should be included within the biodiversity Taxonomy for agriculture with specific criteria to address such hybrid systems.

Hunting, trapping and related activities will require specific consideration in its inclusion within the Taxonomy, or not. One of the main biodiversity related services that could be ascribed to hunting is the management of land for biodiversity. How much this happens is very dependent on the land ownership structure and the hunting rights system in the country, as well as the approach taken. Some land management activities that are applied to favour species to be hunted can be damaging to the natural or semi-natural habitats that would otherwise exist, such as grouse moor management.

Hunting can play an important role in controlling invasive or alien species⁷, even though full eradication is often not possible. Where good populations of natural predators are still absent, and game species are not fed, hunting *can* be important to protect natural (re)generation of vegetation and habitats. However, the approach taken requires care to ensure that the practice of hunting and managing land for such an activity does not lead to the increase of prey species beyond ecologically sustainable levels, leading to damage to natural habitats (mainly forests), or lead to the killing of natural predators in order to maintain prey populations for hunting purposes. In cases where large carnivores are returning to areas and providing similar pest or prey management through natural means, the role of hunters and hunting is diminished.

⁷[https://easin.jrc.ec.europa.eu/easin/Document/EuropeanCodeofConduct/Publication Code of conduct Hunting IAS 2016 Web.pdf](https://easin.jrc.ec.europa.eu/easin/Document/EuropeanCodeofConduct/Publication%20Code%20of%20conduct%20Hunting%20IAS%202016%20Web.pdf)

BOX 6: Mixed farming in the EU

The focus of the EU on increasing food production has led to the specialisation of farms over the last decades, where the intensified production of crops and livestock is separated. Mixed farming has the potential to counteract environmental consequences of the specialised system (including biodiversity loss, nutrient accumulation in soil and heightened N emissions in water and soil). In 2019, mixed farms made up 21.1% of EU farms, whereas specialised crop producers dominate the landscape (52.5%), followed by livestock farms (25.1%).⁸

Mixed farming systems integrate at least one type of cash crop and one type of livestock production.⁹ The NACE classification therefore breaks with the usual classification for identifying main agricultural activities. Classifying balanced farms as crop or animal production would be arbitrary, which justifies the additional category. Nevertheless, if the crop or animal production exceeds 66% of standard gross margins, the economic activity should not be classified as mixed farming.

To reverse the negative effects of specialised farming, mixed farms work towards a closed, self-sufficient system where nutrients and energy can be exchanged between crops and livestock. Integrated farms can achieve high levels of production while delivering ecosystem services.¹⁰

- **Soil quality:** arable-grassland rotations and grazing can limit erosions; use of organic manure
- **Water quality:** limiting water pollution
- **Biodiversity:** diversifying landscape elements; crop diversification and increase of nature-friendly features
- **Energy balance:** less imported feed and reduced use of synthetic fertiliser
- **Nutrient efficiency:** recoupling of N and C cycle; better nutrient recycling

The decision of whether to include “NACE 1.7 - Hunting, trapping and related service activities’ within the Taxonomy, should be approached with care. One rationale for inclusion is that the Taxonomy process would provide clear criteria by which it can substantially contribute towards the protection and restoration of biodiversity and ecosystems as well as what would constitute DNSH. Existing legislation and

⁸ <https://ec.europa.eu/eurostat/documents/3217494/10317767/KS-FK-19-001-EN-N.pdf/742d3fd2-961e-68c1-47d0-11cf30b11489>

⁹ https://ec.europa.eu/eip/agriculture/sites/agri-eip/files/fg16_mixed_farming_final-report_2017_en.pdf

¹⁰ https://ec.europa.eu/eip/agriculture/sites/agri-eip/files/fg16_mixed_farming_final-report_2017_en.pdf
<http://ri.agro.uba.ar/files/download/articulo/2014peyraud.pdf>

agreements can provide some direction for the setting of specific DNSH criteria (for example, the Birds Directive aims to provide a framework for ensuring that hunting activities do not jeopardise the conservation efforts undertaken for certain species (listed in Annex II)), and there is precedence for agreements between conservation organisations and hunters associations in establishing the 2004 Sustainable Hunting Initiative.¹¹

New NACE codes for biodiversity and ecosystems

The TEG on sustainable finance have noted that there are some economic activities that are not directly covered by the NACE codes and that are important for the environmental activities of the Taxonomy. Further, these additional NACE codes will need to be added to enable Taxonomy coverage of activities, including natural capital preservation, restoration and creation, etc. For example, in the development of the Forest Taxonomy for climate mitigation, a new NACE category for conservation forest was defined in order to facilitate (or not limit) private investments that would enable the protection of forest reserves, even if there is no economic activity taking place.

For this to be the case within agriculture, it would be necessary to define a specific ecotype or habitat that is closely linked to agriculture, and is not covered within another economic sector. Such habitats are not immediately apparent, or at least would not otherwise be covered within the NACE divisions proposed above. Semi-natural grassland areas are perhaps the closest example, and may warrant separation from the animal production NACE in the context of their particular importance for biodiversity.

There is, however, a significant gap within the use of NACE to structure the Taxonomy in that it assumes that private finance will invest only in economic activities. As an economic statistical classification, the 2008 NACE does not include areas that may be important for the delivery of environmental objectives, where no economic activity is taking place. These may include old-growth forest areas or other areas of natural or semi-natural habitats, or significant economic activities that focus solely on the protection and restoration of biodiversity and ecosystems, or associated drivers (such as ecotourism).

¹¹ https://ec.europa.eu/environment/nature/conservation/wildbirds/hunting/docs/agreement_en.pdf

Our recommendation is that habitats and ecosystems that are subject to limited or no economic activities should be enabled within the wider Taxonomy in order that they benefit from private finance and are protected through the DNSH criteria.

Aligning the Taxonomy structure to existing policies

The Taxonomy is designed to fit within and be coherent with existing EU legislation. In the context of agriculture this raises the question of whether existing requirements for policies that govern the use of agricultural land can be considered as Taxonomy compliant, such as the Common Agricultural Policy (CAP) or the sustainability criteria of the recast Renewable Energy Directive.

There are two reasons why much of the existing EU legislation focussed on economic activities is largely not suitable for direct translation into the Taxonomy for substantial contribution:

- **Aim:** The Taxonomy has the opportunity to lead and go beyond that of the existing policy architecture that pertains to public finance (e.g. the CAP). More concretely the Taxonomy defines those activities that deliver 'substantial contribution' rather than simply ensuring no-harm or baseline compliance with existing legislation whilst an economic activity is pursued;
- **Scope:** The Taxonomy applies to any and all investments wishing to be considered 'green' under EU law. EU legislation can sometimes be applied at the discretion of Member States or only in areas subject to certain criteria.

Existing legislation can however be used to demonstrate that the criteria of the Taxonomy have been adhered to, where those criteria are the same or more progressive in the existing legislation and are applied to the same land or activity being assessed. The logical process therefore in developing the technical screening criteria is to first define the substantial contribution objectives at a suitably granular level for the Taxonomy itself. Where necessary referring to the EU "acquis communautaire". Then, to define the specific technical screening criteria (thresholds, and metrics) that reflect that substantial contribution. This should be done with a focus on the environmental objective of the Taxonomy. After these are defined, other EU policies and legislation should be reviewed to see whether they can be used to demonstrate compliance with the Taxonomy.

Once defined, other EU legislation and policies can be reviewed to see whether the requirements in their implementation are suitable to demonstrate compliance with the substantial contribution criteria or DNSH criteria. It is however not sufficient to define substantial contribution criteria on the basis of policies that do not have substantial contribution to environmental objectives as their principle aim.

The CAP governs (for the most part) the use and management of agricultural land in the EU. Climate change and environmental care are included within the nine objectives for the 2021-2027 CAP and present an opportunity for alignment with similar objectives in the Taxonomy. However, in 2018, the European Court of Auditors critically reviewed the proposed CAP Regulations and found that its nine objectives were "not clearly defined, neither specific nor translated into quantified targets." (ECA, 2018¹² as cited in Marechal et al, 2020¹³). Furthermore, under the new system the implementation of the CAP will be subject to the discretion and choices made by Member States and thus may vary within the overarching framework.

In a more recent report, the European Court of Auditors found that the formulation of the agriculture targets in the EU Biodiversity Strategy makes it difficult to measure progress; the way the Commission tracks biodiversity expenditure in the EU budget is unreliable; the impact of CAP direct payments is limited or unknown; and the Commission and Member States have favoured lower-impact rural development measures (ECA, 2020¹⁴). The CAP is not therefore a reliable mechanism on which to base the definition of substantial contribution criteria or to demonstrate compliance simply because a land manager is in receipt of CAP support.

However, there are activities that can be funded and supported under the CAP that could be used to demonstrate Taxonomy compliance where those activities are implemented in practice. The Taxonomy requires evidence to be demonstrated that either a practice has been implemented or an outcome delivered. Such activities could be set out in the Taxonomy and defined on the basis that if implemented,

¹² ECA (2017) Greening: a more complex income support scheme, not yet environmentally effective, Special Report n°21/2017

¹³ Marechal et al (2020) Aligning the post-2020 CAP with the Green Deal: The European Green Deal, sustainable agri-food systems, and the Common Agricultural Policy. IEEP policy brief.

¹⁴ Special Report 13/2020: Biodiversity on farmland: CAP contribution has not halted the decline. <https://www.eca.europa.eu/en/Pages/DocItem.aspx?did=53892>

they deliver ‘substantial contribution’ to the protection and restoration of biodiversity and ecosystems. An individual may then be able to demonstrate that they are implementing those practices (for example through a well-designed eco-scheme), through the support and agreements they have under the CAP – but only where evidence is provided of their implementation and/or impact.

In the context of the recast Renewable Energy Directive, there are clearer and more precise ‘sustainability criteria’ that are akin to those being developed in the context of the Taxonomy. Yet it should be recognised that these are applicable only where a Member State wishes to count the energy generated from certain feedstocks (some of which will be produced in an agricultural context) towards their renewable energy targets. As such they are not binding on all feedstock production or sourcing from within a Member State or other country.

Our recommendation is that the rules of the CAP are not sufficient to demonstrate substantial contribution to the biodiversity objectives of the Taxonomy, but could be used to demonstrate compliance where clear criteria and thresholds are defined within the Taxonomy and evidence could be provided through CAP implementation.

‘Greening of’ agriculture and ‘greening by’ agriculture

The Taxonomy recognises two forms of contribution to the six environmental objectives across economic sectors. The first is where activities within one sector help to ‘green’ that same sector, for example where activities in agriculture help to restore or protect agro-biodiversity. This is known as ‘greening of’. The Taxonomy also recognises that activities within one economic sector can deliver benefits into another economic sector. For example, the manufacturing of renewable energy components (such as a wind turbine) can allow the manufacturing sector to contribute substantially to climate mitigation in the energy sector.

When developing the agriculture Taxonomy for biodiversity, it is important to consider whether or not to address only the ‘greening of’ agriculture, or include also ‘greening by’ agriculture. This becomes important in the context of how activities in agriculture materialise in impacts both within and outside of the sector.

Three situations can be envisaged:

- Activities within agriculture have a detrimental impact on other ecosystems and biodiversity outside of agriculture. In this case, the DNSH criteria should be sufficient to prevent any external harm, and thus 'greening by' criteria are not warranted.
- Activities within agriculture could have positive impacts on other ecosystems and biodiversity outside of agriculture, such as providing refuges for species or habitat corridors between locations. In this case, 'greening by' could be justified, in that the Taxonomy may allow agriculture to deliver a substantial contribution to biodiversity and ecosystem restoration objectives in other economic sectors.
- Activities within agriculture could have positive impacts on other economic sectors, through productive activities. For example, the collection and utilisation of agricultural residues within the bioeconomy to displace fossil or mineral alternatives. The use of such materials should be subject to substantial contribution criteria, rather than an assumption that positive impacts will result from their use.

If both greening of and greening by are applied, then it is important that 'greening of' is a prerequisite. Activities to deliver substantial contribution in other sectors outside of agriculture, should not lead to a decline in condition within agriculture. This is met on a baseline level through DNSH criteria. However, the decline in agro-biodiversity in Europe and globally, and the focus of agro-biodiversity within the EU Biodiversity Strategy suggest that DNSH is not sufficient and that substantial contribution for 'greening of' is essential for agriculture in any Taxonomy formulation.

Our recommendation is the development of robust criteria and thresholds for substantial contribution to the protection and restoration of biodiversity and ecosystems both within agriculture (greening of) and through agriculture (greening by) and that these are accompanied by rigorous DNSH criteria.

Enabling activities for agriculture

As agriculture can provide a contribution to other economic sectors, so too can other sectors enable agriculture to achieve substantial contribution to the biodiversity and ecosystems objective. Such enabling activities can be considerable in the form of development and manufacturing of inputs, machinery or components that allow agriculture to operate in a more environment and climate positive way.

Within this context, there is a broader systemic shift that many (including reference in the Farm to Fork Strategy) consider to be required if the agriculture sector itself is enabled to transition towards sustainability – specifically the shift in diets and consumption patterns that utilise lower amounts of animal protein in favour of plant-based proteins. These consumption pattern changes help production to shift towards a more sustainable and safe operating space, specifically for animal farming¹⁵. The development of criteria for other sectors (e.g. manufacturing) should be considered when addressing the necessary enabling conditions for agriculture to deliver substantial contribution to the biodiversity and ecosystem objective. The horizontal or interconnected nature of economic sectors is an important component of a well-functioning taxonomy, with the EU food system touching on many economic areas.

¹⁵ Buckwell, A. and Nadeu, E. 2018. What is the Safe Operating Space for EU Livestock? RISE Foundation, Brussels.

5. Ensuring substantial contribution and doing no harm

The Taxonomy, through the technical screening criteria, sets the criteria, indicator, metrics and thresholds to determine when substantial contribution has been delivered. However, the Taxonomy itself is not an enforcement mechanism, and it does not require that all activities in an economic sector are compliant, rather only those that wish to be considered as providing green finance.

Ensuring substantial contribution

Ensuring a substantial contribution has taken place, or no significant harm has happened, is a compliance checking and audit process when implementing the Taxonomy. Achievement of the technical screening criteria would need to be reported and verified in practice.

For example, the Taxonomy seeks to identify thresholds by which substantial contribution is judged. In the context of biodiversity this could be a proportion of a habitat that is restored to favourable conservation status. In order to 'ensure' that this has happened, the favourable conservation status needs to be verified. This could be achieved through third party certification schemes (Box 7), an audit process or other mechanism.

There are two key aspects to consider when setting thresholds and implementation methods, whether the result can be measured to a reasonable degree of accuracy and effort, and whether the result will be achieved within a timescale relevant to the investment (and thus be measurable within a reporting period).

Whether the result can be measured to a reasonable degree of accuracy and with a reasonable degree of effort is an important consideration when setting the metrics and thresholds in the Taxonomy criteria themselves. They must be measurable either by those implementing the practices on the ground (such as a farmer) or a third-party who is certifying that a farm is compliant. For biodiversity objectives, this is likely to require specific skillsets to address habitat or species identification and condition.

BOX 7: Example of third-party verification/certification schemes

Voluntary schemes provide mechanisms to demonstrate and verify certain characteristics of a product or its production method. Schemes for agricultural production are mostly voluntary and function in different stages of the food supply chain. A difference is made between third-party attestation procedures and schemes which rely on self-declaration.

The Commission can decide that Voluntary Schemes setting standards to produce agricultural goods contain relevant information on one or more of the technical screening criteria set by the Taxonomy. As such, investors could use such certification schemes to demonstrate compliance with the conservation requirements.

The assessment and recognition process and requirements for voluntary certification schemes are set out in different pieces of EU law, and in different ways. Current EU agriculture and food stuffs certification puts a greater focus on informing buyers and consumers about the quality and geographical origin rather than the impact of production systems on biodiversity and ecosystems. For example, the "Commission Communication - EU best practice guidelines for voluntary certification schemes for agricultural products and foodstuff" (COM 2010/C 341/04)¹⁶ Regulation (EU) No 1151/2012 is also relevant in this context¹⁷.

Whereas, under Article 30(4) of the recast Renewable Energy Directive the Commission are empowered to recognise voluntary national or international schemes setting standards for the production of biofuels, bioliquids or biomass fuels as ensuring compliance with the sustainability criteria set out in the Directive. This is more closely aligned to the sort of mechanism that would be necessary for demonstrating Taxonomy compliance.

The quality and specificity of the chosen objectives to which substantial contribution is delivered, will influence how the thresholds are set within the Taxonomy. Poorly or ambiguously defined objectives will make measurement and compliance verification challenging, yet highly specified objectives that are complex in their description and are likely to take a long time to achieve will be equally challenging.

¹⁶ <https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2010:341:0005:0011:en:PDF>

¹⁷ Regulation (EU) No 1151/2012 of the European Parliament and of the Council of 21 November 2012 on quality schemes for agricultural products and foodstuffs

Deciding on simplified or indirect results can function as proxies which are reasonably easy to measure can be a good path for the Taxonomy.

To attain measurable outcomes, biodiversity indicators should be quantifiable, reliable and ensure biodiversity outcomes, to be sufficiently balanced, context-specific, and sensitive to the impacts of agricultural practices. Transparent, understandable and cost-effective methods of indicator measurement can determine the success and build confidence in the Taxonomy for both the farmer and the investor. Involving the farmer in the assessment can create a cycle of learning and start adaptive management practices to better achieve the desired results.

Creating assessments under these conditions furthermore requires solid baseline data which reflects an ecological research base as well as habitat and species data of the area. An initial stage of baseline assessment should involve competent national authorities, environmental agencies, researchers and NGOs. Building up the evidence not only shapes the objectives but also the relation to the biodiversity results achieved. Setting measurable targets for biodiversity in the Taxonomy requires the assessment to encompass:

- The impact of present and past agricultural practices on the high conservation value farmland as well as the drivers, timescale and expected impact of future modifications in land use and management
- Habitats, species and ecosystems most at risk of deterioration or degradation
- Dynamic relationship between the target ecosystem and management choices of the supporting farming system
- Considering external factors beyond the farmer's control that may impact the result

Whether or not the result will be achieved within a timescale that is relevant to the investment is a second consideration. For example, an investment may run for 10 years, but the conservation status of a habitat may take 20 years to change towards favourable. Here, the activities supported through private finance will not be able to consider themselves as Taxonomy compliant, because the threshold (favourable conservation status) cannot be demonstrated within the timeframe of the investment.

There are two options to address this issue (which arises in most of the Taxonomy objectives). One is to simply change the substantial contribution threshold to something that is more achievable within the investment timeframe. However, this is not always possible, as was the case for demonstrating a threshold accumulation

of carbon in soils – discussed in the context of climate mitigation objectives of the Taxonomy. The other more pragmatic approach is to use a proxy, such as the application of a specific type of management practice, where one can be reasonably confident that the desired outcome will be achieved, if the practices are implemented correctly. This carries the risk that the result may never be achieved, through lack of suitable implementation, force majeure, etc.

In the context of climate mitigation Taxonomy both a specific GHG emission threshold and a management practice proxy were offered in the technical screening criteria. This sought to enable those who could measure a direct impact on the objective to do so, and those who could not, or for where the achievement of the objective would be beyond the investment, a proxy of implemented management practices was given.

Our recommendation is that both specific and measurable thresholds as well as proxy indicators are used within the context of the protection and restoration of biodiversity and ecosystem objective.

Ensuring do no significant harm to other environmental objectives

For the do-no significant harm criteria, a different approach is considered in the current Taxonomy. This is that the DNSH criteria are established relative to the agriculture economic activity itself, rather than the specific criteria proposed for substantial contribution. As such the criteria present in the existing Taxonomy for agriculture (with a focus on climate mitigation) should be considered as to whether they are suitable in the context of the revised Regulation.

Ensuring do no significant harm to biodiversity

For the Agriculture Taxonomy, significant harm to the protection and restoration of biodiversity and ecosystems is considered to be “...where that activity is detrimental to a significant extent to the good condition and resilience of ecosystems or where that activity is detrimental to the conservation status of habitats and species, including those of Community interest.” Therefore, the DNSH criteria for biodiversity are those which would prevent such activity from being allowed to take place or impact on biodiversity.

The current DNSH criteria for the biodiversity objective were proposed by the TEG in the context of the Commission communication on the Taxonomy (COM (2018) 353). The scope of the biodiversity objective of the Taxonomy has since changed, following the discussion in the Council and Parliament, to focus on the protection and restoration of biodiversity and ecosystems. As a result, modifications should be made to the criteria. These are set out in **blue** below, relative to the current DNSH criteria. As a minimum, full legal compliance is an assumed baseline for all activities.

- Activities ensure the protection of soils, particularly over winter, to prevent erosion and run-off into water courses/bodies and to maintain soil organic matter, **and soil fertility**.
- Activities do not lead to the conversion, fragmentation or unsustainable intensification of high-nature-value farmland, wetlands, forests, or other areas of high-biodiversity value¹⁸. This includes highly biodiverse grassland spanning more than one hectare that is:
 - i) natural, namely grassland that would remain grassland in the absence of human intervention and that maintains the natural species composition and ecological characteristics and processes; or
 - ii) non-natural, namely grassland that would cease to be grassland in the absence of human intervention and that is species-rich and not degraded and has been identified as being highly biodiverse by the relevant competent authority.
- Activities should not:
 - result in a decrease in the diversity or abundance of species and habitats of conservation importance or concern, **as well as all naturally occurring species particularly bird and insect pollinators**;
 - contravene existing management plans or conservation objectives.
- Where activities involve the production of novel non-native or invasive alien species, their cultivation should be **avoided or suitably and strictly contained, and** subject to an initial risk assessment and on-going monitoring in order to ensure that sufficient safeguards are in place to prevent escape to the environment.
- **Activities do not lead to increased utilisation of natural resources & ecosystems that would go beyond planetary boundaries not covered by other objectives of the Taxonomy, specifically - no additional (natural) land take for agricultural production.**

Note that it is assumed the impact on the water environment would be covered under the DNSH criteria for the water objective

¹⁸ Areas of high-biodiversity-value can be defined as set out in Article 29(3) of Directive EU (2018)2001

6. Suggestion for technical screening criteria

Some suggestions for the sorts of technical screening criteria that could be used to demonstrate substantial contribution to the headline objective are set out below. These are used to illustrate the choices necessary in setting such criteria and what they should contain in order to be robust and implementable. They have not been defined for the different sub-sectors of the agriculture NACE and do not reflect the full suite of objectives for the protection and restoration of biodiversity and ecosystems.

The technical screening criteria follow a common structure:

- **Principles** – setting out the purpose and aim of the criteria as they relate to the objective
- **Criteria** – setting out in detail what is necessary to achieve in order to deliver substantial contribution to the objective
- **Thresholds** – setting out the point above or below which substantial contribution can be judged to have happened
- **Metrics** – the specific measurement used

Principles

The principles to be followed in the technical screening criteria should cover the headline objective of *"To ensure that by 2050 all of the world's ecosystems are restored, resilient, and adequately protected."* All of the principles set out here must be fulfilled where appropriate¹⁹ if the activity is to be considered Taxonomy compliant:

1. Restore biodiversity and ecosystems that are in poor condition.
2. Maintain, protect and enhance biodiversity and ecosystems where they are in good condition.
3. Maintain agricultural activities within planetary boundaries.

¹⁹ In some cases, all ecosystems on the farmed land may be in good condition and therefore only maintenance and protection will be necessary

Criteria

The criteria of the Taxonomy are one of the most important elements of the technical screening criteria in that they articulate specifically what should be demonstrated. Their construction must build on the principles but provide more detail on the 'how', such as application of certain management practices, or requirements for application at a certain scale or intensity.

Based on the redefined objectives for biodiversity and ecosystems (Box 3) the following types of criteria would be necessary for each of the appropriate agriculture economic sub-sectors. Square brackets are here used to indicate specific text that would be required to complement the criteria. Each will require the definition of a given threshold (see examples in the next section).

Example 1: Based on the objective *"The population of all naturally occurring species particularly bird and insect pollinators on agricultural land are maintained and enhanced."*

- Example criterion 1a. Activities on agricultural land shall maintain and increase the number and diversity of naturally occurring birds [...definition/list of farmland birds...] on agricultural land.
- Example criterion 1b. Activities on agricultural land shall maintain and increase the number and diversity of naturally occurring insects (particularly pollinators) [...definition/list of relevant insects...] on agricultural land.

Note here that it is not necessary to specify by how much or at what level the species number is maintained, this is covered by the threshold for the criterion.

Example 2: Based on the objective *"The use of natural resources and ecosystems for agricultural activities is sustainable and within parameters defined for planetary boundaries not covered by other objectives of the Taxonomy, specifically - No additional (natural) land take for agricultural production"*

- Example criteria 2. Agricultural production is not undertaken on land that had one of the following status in or after [...date...] whether or not it continues to have that status [...unless agricultural activities are necessary for the maintenance of biodiversity and ecosystems on such land..]
 - a. primary forest and other wooded land, [...definition..];
 - b. highly biodiverse forest and other wooded land which is [...definition..];
 - c. highly biodiverse grassland that is:

- i. natural, namely grassland that [would remain grassland in the absence of human intervention and that maintains the natural species composition and ecological characteristics and processes]; or
 - ii. non-natural, [namely grassland that would cease to be grassland in the absence of human intervention and that is species-rich and not degraded and has been identified as being highly biodiverse by the relevant competent authority, unless evidence is provided that the harvesting of the raw material is necessary to preserve its status as highly biodiverse grassland].
 - d. highly biodiverse wetlands that is:
 - i. natural land that is [covered with or saturated by water permanently or for a significant part of the year and would remain wetland in the absence of human intervention and that maintains the natural species composition and ecological characteristics and processes];
 - ii. non-natural, [...definition..]
 - e. highly biodiverse [...other land types...] that is:
 - i. [...definition..]
 - f. areas designated:
 - i. by law or by the relevant competent authority for nature protection purposes; or
 - ii. for the protection of rare, threatened or endangered ecosystems or species recognised by international agreements or included in lists drawn up by intergovernmental organisations or the International Union for the Conservation of Nature [...etc...];

Note here that the criterion aims to avoid cultivation on specific land and ecosystem types that would be detrimental to their conservation, but also could recognise some ecosystem types that rely on low-intensity agricultural management for their continued existence. The grazing of semi-natural grasslands is one such example, and it may be necessary to specify these out within the Taxonomy criteria.

Thresholds, metrics and baselines

Thresholds

The threshold and metrics follow from the criteria and set out precisely when an activity is delivering substantial contribution and how that can be measured. Measuring when substantial contribution has been achieved can be problematic for some objectives that take a long period of time to materialize. For example, the restoration of a particular ecosystem may take decades to materialise as the species community develops. As such three types of thresholds can be considered. The first (and most desirable) is a measurement of when the desired result has been achieved, such as change of habitat condition or species numbers. This could take place throughout the period of the investment, such as regular ecosystem assessments, in order to ensure that progress is being made, and as a final assessment at the end of the investment. However, it is often unlikely that the period of the investment will be analogous to the period over which the restoration takes place, the latter often being over a longer period.

Example: *Criteria 1a. Activities on agricultural land shall increase the diversity and abundance of farmland birds. Threshold 1a. Increase in measured farmland bird species and numbers to [..definitive number..].*

The second approach accounts for this difference in time period by measuring at intervals during the investment whether there is a change in the status of the ecosystem. This can be used to demonstrate substantial contribution along a trajectory. In setting this sort of threshold, one would need to understand what a reasonable trajectory of (in this case) restoration would look like in practice, and whether it is possible to measure this at regular intervals.

Example: *Criteria 1a. Activities on agricultural land shall increase the diversity and abundance of farmland birds. Threshold 1a. Farmland bird numbers are measured to be increasing from the baseline taken at the beginning of the investment.*

The third approach assumes that the measurement of conservation status is not feasible or that the time period over which the restoration needs to take place is too long. As such a reliable proxy is needed that allows a degree of confidence that the ecosystem is being managed in a way that will lead (at some point) to the achievement of the headline objective. This could be a set of science-based and specific management practices (implement as a package), that 'should' ensure the headline objective is met, i.e. that by putting in place those management practices,

in the appropriate areas, and at the right level of intensity, we could be confident that the objective will be delivered. The risk is lack of enforcement, which has been a major barrier to the protection of biodiversity and ecosystems to date.

Example: *The essential management practices [pre-defined for each criteria objective] are deployed consistently over the applicable [...agriculture NACE...] production area each year*

It is not necessary to pick only one approach, and the screening criteria could allow for two different thresholds. For example, options can be presented in the Taxonomy to allow those who can demonstrate the achievement of a criteria objective (e.g. increase in farmland bird numbers) to do so, and those who cannot (timescale issues, for example) have the option of selecting the management practice as a proxy. Yet it is important to have a clear and stated preference for the Taxonomy to operate on the basis of evidence-based compliance with the criteria and thresholds.

Our recommendation *is that wherever possible, a direct measurement of the contribution made to the protection and restoration of biodiversity and ecosystems should be established as the primary threshold.*

Not all of the criteria can be subject to all these different types of thresholds. For example, the second proposed criterion example is an exclusion criterion where the threshold for achievement is simply the avoidance of cultivation or production on certain land types.

Metrics

The metrics (or units of measurement) used for the thresholds should follow those used for existing biodiversity and ecosystem assessments, so as to ensure compatibility to broader monitoring assessments and ease of access to baseline data and information. For example, Criteria 1 could have a measured threshold of the number and diversity of farmland birds present on agricultural land subject to the investment. The metric for the number of birds can be a simple count – following good practice for the period of that count, time of day, season, etc. – and the metric for the diversity of birds can be reflected in the number of different species observed. A further division could be made on the basis of the categories of birds present, for example ‘common’, ‘rare’, ‘threatened’.

Baselines

Most of the criteria proposed will require some form of assessment relative to a baseline or current trend. This may include a first count of species numbers and diversity, assessment of the conservation status of ecosystems and habitats present, level of soil organic matter, fertility and erosion rates, etc. Within the climate mitigation criteria, a baseline assessment of current emissions and carbon stocks was included in the list of essential management practices so as to create a clear reference point, and to encourage the monitoring and measurement of climate impact.

Our recommendation is that a baseline assessment of the biodiversity, ecosystem and soil condition is undertaken at the start of the investment as a reference level from which Taxonomy compliance can be assessed.



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