



**PLATFORM ON
SUSTAINABLE FINANCE**

**PLATFORM ON
SUSTAINABLE
FINANCE:
TECHNICAL
WORKING GROUP**

**Taxonomy pack for feedback
August 2021**

This is a long report. Please think before printing.

DISCLAIMER

The Platform on Sustainable Finance (PSF) is seeking feedback on its technical work to date. Neither this report nor its specific contents represent recommendations of the PSF.

This document is not an official Commission document nor an official Commission position. Nothing in this document commits the Commission nor does it preclude any policy outcomes.

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ABOUT THIS DOCUMENT

This document is structured into two parts:

Part A and its Annex describes the EU taxonomy approach, the activities considered, and the methodological framework followed.

Part B and its Annex includes the feedback materials, consisting of:

- The questions on which we invite stakeholders to provide feedback
- The proposed draft technical screening criteria on which feedback from stakeholders is sought. (see Part B: Feedback materials)

Stakeholders are invited to provide feedback on this document from 3rd August 2021 until 24th September 2021.

The feedback received will be analysed by the Platform on Sustainable Finance and be integrated where possible and where relevant to improve the robustness of the technical screening criteria. This will happen between September and October, with the aim of preparing the PSF Taxonomy report by November 2021.

PART A: EXPLANATION OF THE TAXONOMY APPROACH

1. Background

In line with the Article 20 of the Taxonomy Regulation ((EU) 2020/8521), the European Commission has set up a permanent expert group, the Platform on Sustainable Finance. The Platform on Sustainable Finance will assist the Commission in developing its sustainable finance policies, notably the further development of the EU taxonomy. The Platform operates through a plenary in full composition of all 57 members and 10 observers, supported by subgroups where the technical work on its opinions, reports or recommendations takes place.

The Platform on Sustainable Finance is in particular tasked with:

- Advising the Commission on the technical screening criteria on environmental objectives in line with Article 19
- Advising on the possible need to update those criteria
- Analysing the impact of the technical screening criteria in terms of potential costs and benefits
- Assisting the Commission in analysing requests from stakeholders to develop or revise technical screening criteria for a given economic activity (request system will be set up in 2021)

The first of its tasks is the subject of this report and call for stakeholder feedback – specifically to gather further evidence and feedback on proposed draft technical screening criteria.

The draft criteria presented in this report are working documents of the Platform and do not represent a final view of the Platform. They are presented to gather feedback so that they can be improved and developed before a final set of recommendations and criteria are proposed to the Commission in November. The work is detailed at this stage, but will be refined over

¹ [EUR-Lex - 32020R0852 - EN - EUR-Lex \(europa.eu\)](#)

time for clarity and brevity. To see how resolved criteria are presented, refer to the [Taxonomy Compass](#).

The following sections of this document set out the background and methodology used to develop the criteria, the questions on which stakeholder feedback is sought, and the draft criteria themselves.

2. Purpose of the Taxonomy

The European Union (EU) is committed to meeting the aims of the “European Green Deal” and to transforming the EU into a modern, resource-efficient, and competitive economy. As set out in the European Green Deal², the EU will face and pursue various economic reforms, including the decarbonization of the energy system, the transition to a circular economy, and the reverse of the alarming declines in ecosystems and biodiversity. Addressing the environmental challenges in the EU will help to achieve the broader international environmental objectives, such as those set out in the Paris Agreement; however, it will also require tremendous investments and innovations across sectors.

Just to meet the climate and energy targets set for 2030 and mitigate climate change, the EU faces an investment gap of EUR 350 billion per year. Moreover, further additional investments to achieve the EU’s broader environmental objectives are evaluated to be in the range of EUR 100 – 150 billion per year. In order to close these investment gaps, the financial sector has to play a key role in re-orienting flows to support the transition towards a more sustainable economy. However, such reorientation of capital flows requires a common understanding among all investors, financial institutions, and companies across the EU of what a “sustainable investment” is.

As a result, a unified EU-wide classification system (“the EU taxonomy”) for sustainable economic activities was established to steer green investments towards those activities that are essential to achieving the European Green Deal objectives. The EU taxonomy creates an operational list of economic activities with technical screening criteria, which determine in determining in which cases each economic activity makes a substantial contribution to an environmental objective. In this way, the EU taxonomy inter alia:

² [A European Green Deal | European Commission \(europa.eu\)](#)

- creates a uniform and harmonised classification system providing a common language for investors, companies, policymakers, and financial institutions about what is considered an activity which makes substantial contribution to an environmental objective;
- creates transparency as well as security on environmental sustainability for investors and helps to shift investments where they are most needed;
- protects private investors from greenwashing;
- helps companies to become taxonomy-aligned;
- mitigates further market fragmentation and barriers to cross-border capital flows by applying a single, unified taxonomy system instead of different taxonomies across the Member States;
- provides the basis for further policy development in sustainable finance, including standards, labels, and any potential changes to prudential rules.

3. Taxonomy approach explained

The European Commission will adopt the EU taxonomy as a series of delegated acts under the Taxonomy Regulation, based on advice from external experts from the public and private sectors and on the basis of a transparent process with the involvement of stakeholders, using robust methodologies and scientific evidence. For this purpose, as required by the Taxonomy Regulation, the European Commission has set up a Platform on Sustainable Finance (PSF), which is a new expert group that replaces the Technical Expert Group (TEG) and advises the European Commission on further developing the taxonomy.

This section explains the elements applied in the further development of the EU taxonomy. It sets out the requirements and principles used by the PSF to assess which economic activities should be included in the taxonomy and under which conditions. Furthermore, it describes the NACE sector and economic activity-based framework under which criteria were established.

3.1. Requirements for designing taxonomy criteria

The Platform applied the requirements and principles outlined in this section to develop technical screening criteria (TSC) for the economic activities in the EU taxonomy. **Therefore, all feedback and input to the Platform through this feedback should also address these requirements and principles.**

The Taxonomy Regulation (Art. 3) defines six environmental objectives:

1. climate change mitigation;

2. climate change adaptation;
3. the sustainable use and protection of water and marine resources;
4. the transition to a circular economy;
5. pollution prevention and control;
6. the protection and restoration of biodiversity and ecosystem.

A [first delegated act on sustainable activities for climate change adaptation and mitigation objectives](#)

was formally adopted on 4 June 2021 for scrutiny by the co-legislators. A second delegated act covering mainly the remaining environmental objectives 3-6 (as well as some additional criteria for the environmental objectives 1-2) will be adopted in the first half of 2022. As such, the Platform has been mandated to focus on and deliver a recommendation to the Commission on TSC for the second draft delegated act on sustainable activities for the environmental objectives 3-6.

The core of the EU taxonomy is the TSC, which define when an activity is deemed sustainable. As a tool to build confidence in the contribution of economic activities to environmental objectives, it has been crucial for the PSF to build their recommendations upon robust and transparent methodologies and processes to ensure that science-based criteria are developed. Thereby, the preparatory work from the Joint Research Centre of the EU Commission (draft report “Development of the EU Sustainable Finance Taxonomy – A framework for defining substantial contribution for environmental objectives 3-6”³) and the Taxonomy Regulation served as a basis to define a methodology and conditions that need to be complied with in setting robust, scientific and evidence-based technical screening criteria.

3.2. Taxonomy sector framework

The taxonomy aims to define economic activities as taxonomy-aligned while intending to be as comprehensive as possible and covering all relevant parts of the economy. As such, it is necessary to establish the taxonomy criteria within a defined sector framework. Consistent with the first delegated act and the work of the TEG, the PSF applied the NACE industrial classification system in defining technical screening criteria to the environmental objectives 3-6. The NACE classification system is comprehensive in its coverage of the EU economy, used by EU institutions such as Eurostat, and already implemented by some financial institutions.

³ This report was provided as an initial reference for the PSF work and is now under internal review, hence not yet publicly available

However, in some areas, NACE sectors were supplemented by additional categories, when the current level of granularity within NACE was not considered sufficient.

The PSF recognises that the existing sector frameworks used to classify economic activities also have some boundaries and limitations as the latest NACE Rev.2 classification system was published in 2008. Not all the newest production methods are captured within this framework. Furthermore, there are relevant economic activities that are not directly covered by NACE codes. To fully develop the taxonomy further work may need to be done on a systems approach to economic activities in order to feed into the final PSF report, but this falls outside this report.

3.3. Prioritised economic activities

Due to resources, workload and time available, it was considered that the PSF would only be able to address up to about 20 economic activities per environmental objective in the first phase of the work. The Commission, presented a proposed methodology and resulting list of priority economic activities for each of the objectives 3-6 to the PSF at the beginning of its mandate. In short, this involved the following steps and considerations, which took place prior to the start of the mandate:

- Analysing data on **environmental impact and improvement potential**. This involved:
 - Ensuring consistency with the approach by the TEG on climate mitigation and adaptation, but necessarily including a wider suite of indicators given the diversity of the four remaining environmental objectives and related impacts;
 - Selecting the sectors in which the expected greatest contributions could be expected by focussing on prioritisation based on impact and potential for improvement;
- Looking at activities as being part of a **value chain** as reduction of impact can sometimes be reduced more effectively by substituting activities, and in line with the Taxonomy Regulation, which requires life cycle considerations to be taken into account in developing technical screening criteria.
- Prioritising further activities notably in the mining sector due to the **commitments taken by the Commission** in the recent Action Plan “Critical Raw Materials Resilience: Charting a Path towards greater Security and Sustainability”.
- Identifying activities, under each objective, that directly and substantially **improve the state of the environment**. This relied on qualitative assessments and expert judgment.

The following sections explain in more detail the different steps of the methodology for identifying and selecting a first batch of priority activities. The PSF was invited to review and, if needed, refine the methodology and thus the resulting lists and to use the results as starting point for their work. Based on the activities selected for each objective, the PSF was also invited to identify 3-4 relevant **enabling activities**⁴ per objective for which technical screening criteria would need to be developed. These fell outside the prioritisation and ranking methodology developed for identifying the priority 'own performance' economic activities. Further enabling activities, including the environmental performance improvement measures that can utilise other enabling activities, will be included in future work of the Platform.

It is important to note that an activity that is not included in this first batch of activities for the remaining 4 environmental objectives, for which the PSF will develop recommendations for TSC, may still be addressed as part of a second batch. The PSF will start working on this after submitting the current batch of criteria. The recommendations for criteria for activities included in that second batch will be addressed in a later update of the delegated act. Thus, non-inclusion in the first batch of priority activities does not imply that the activity will not be considered for inclusion in the taxonomy.

3.4. Prioritisation for objectives 3-6 vs. approach on climate objectives

The methodology used to prioritise the activities for objective 3-6 needed to be consistent with the one used by the TEG⁵ and adopted in the drafting of the first Taxonomy Delegated Act and the related Impact Assessment, which involved the following:

- First, the **priority macro-sectors**⁶ were selected based on their aggregate levels of GHG emissions (using Eurostat 2016 data). GHG emissions reflect the impact of those macro-sectors with respect to the objective of climate change mitigation. They can be measured using a single indicator (gCO₂e, i.e. grams of carbon dioxide equivalent).

⁴ In doing so, it should be remembered that enabling activities are defined in Article 16 of the Taxonomy Regulation: "An economic activity shall qualify as contributing substantially to one or more of the environmental objectives set out in Article 9 by directly enabling other activities to make a substantial contribution to one or more of those objectives, provided that such economic activity: (a) does not lead to a lock-in of assets that undermine long-term environmental goals, considering the economic lifetime of those assets; and (b) has a substantial positive environmental impact, on the basis of life-cycle considerations."

⁵ See p.10 of the TEG's March 2020 Taxonomy Report: Technical Annex.

⁶ Corresponding to the 'sections' in NACE. See next footnote.

- Second, using expert judgment, ‘mitigation opportunities’ were identified i.e. sectors and activities within each macro-sector that have the potential to substantially reduce GHG emissions (**improvement potential**).

An equivalent methodology was developed for objectives 3 to 6, taking into the following specificities:

- **Several impact or pressure indicators** are required for each objective - unlike for climate change mitigation, no single indicator captures and normalises the various types of impacts with respect to that objective. For example, emissions of SO_x, NO_x, PM etc. are all relevant indicators for pollution prevention and control, but there is no commonly accepted way to aggregate them in a single indicator.
- Identifying priority activities within macro-sectors required a harmonised framework. For climate change mitigation, the PSF chose to start with macro-sector-level GHG emissions to identify the priority macro-sectors and then drill down into the economic activities within each macro-sector because GHG emissions data were readily available for macro-sectors and not always for individual economic activities. However, impacts as heterogeneous as pollution or ecosystem damage make it problematic to aggregate at the macro-sector level. So, for objectives 3 to 6, data on impact and improvement potential were required **at the level of economic activities** (NACE group or class)⁷ rather than macro-sectors, and this made it possible to create a ranking directly at that level.

3.5. Data on environmental impact and improvement potential

Developing priority lists at the level of economic activities for each of the environmental objectives required a very significant data collection effort (impacts and reduction potentials across a wide range of economic activities and impact indicators). To assist with the task, the Commission contracted out the work on data collection.

Whilst a harmonised methodology was applied across all four objectives, for the collection, assessment and structuring of the data, objectives were treated separately in order to obtain

⁷ For an explanation of the different levels of NACE, see Eurostat – Methodologies and Working Papers, NACE Rev.2 - statistical classification of economic activities (pp.15-16). Available at: <https://ec.europa.eu/eurostat/web/products-manuals-and-guidelines/-/KS-RA-07-015>

four separate lists and rankings of economic activities. More specifically, for each objective, **the assessment included the following tasks:**

- Collecting data and analysing the impacts and improvement potentials of economic activities;
- Assessing the magnitude of those impacts and their improvement potentials;
- Verifying selected improvement potentials and identifying concrete improvement opportunities (including through enabling activities); and
- Determining of illustrative sequences for the economic activities, by ranking them according to a multi-criteria analysis.

For each activity, the magnitude of its **impact** with respect to the objective was assessed, measured using a set of indicators (e.g., SO_x, NO_x, and PM for pollution prevention and control) was assessed. Then, the **potential for improvement** (i.e., potential to reduce that impact), across the same set of indicators was then subsequently assessed.

For each impact indicator, two scores were attributed to the activity (for impact and for improvement potential). They were multiplied to obtain a **combined score** for that indicator. The higher the impact of an activity, the higher the priority that should be given to it for that objective. However, an activity with a high impact and a low reduction potential should not be prioritised since the opportunity to make a *substantial* contribution to achieving the environmental objective is limited. Hence, the higher the improvement potential, the higher the priority. Using a score that combines both impact and reduction potential (aggregated across each of the indicators for the objective) is therefore appropriate.

It was then possible to **aggregate across indicators** (with specific weighting factors) the different combined scores for each activity. The **total score for each activity reflects the impact and improvement potential** across all relevant impact indicators for the objective considered. Based on this multi-criteria analysis score, a **ranking** (or sequence) of activities for each objective was produced. Illustrative sequences were generated using a range of weighting factors.

This multi-criteria analysis ranking approach made it possible to prioritise activities based on their environmental pressure reduction potential (and the potential to reduce that impact), since quantitative data that could be mapped onto the selected indicators was more readily available.

Additionally, the taxonomy can include economic activities that make a substantial contribution by *directly improving* the state of the environment, by *restoring* the environment or by *directly*

enabling other economic activities to achieve their improvement potential. However, quantitative data for these aspects was more difficult to find and the mapping the limited available data onto the indicators was not always straightforward. For this reason, the assessment included an identification of such activities for each objective, but relied on qualitative assessments and expert judgment.

3.6. Selection of priority activities

Based on the data collected and assessed by the contractors on environmental impacts and improvement potentials, a first batch of 12 of the most relevant economic activities, for each environmental objective, were identified from the longer list of relevant economic activities using the following steps.

Step 1: Determine the appropriate weighting factors

For each objective, the assessment presented a number of illustrative sequences or rankings. Each of these sequences was generated by attributing different weighting factors to the indicators. Drawing on this, a sensitivity analysis revealed that there are only minor differences between the sequences for an objective using different combinations of weightings. Therefore, the precise attribution of weighting factors has a limited influence on the result. For each objective, the proposed lists contained a short justification for the weighting factors chosen.

Step 2: Use ranking based on impact and improvement potential

As explained in Section 3, in order to prioritise activities, it was appropriate to use a combined score reflecting both the impact and improvement potential of the activity (aggregated across each of the indicators for the objective).

Step 3: Value chain considerations

One of the challenges with the assessment methodology was that the data on improvement potential tended to focus on each activity considered in isolation, rather than as part of value

chain or life cycle. Yet the Taxonomy Regulation requires that life cycle considerations be taken into account in the development of technical screening criteria⁸.

One way to reduce the negative impact from an activity is to **perform the activity differently** (i.e. improving its environmental performance). For example, an installation manufacturing iron with low pollutant emissions would replace other installations manufacturing iron with higher pollutant emissions (for a constant demand for iron). This type of improvement potential is well captured in the data collected by the contractor.

However, another potentially effective way to reduce the negative impact is by **substituting** for the activity by another activity in a different NACE code (at the same or a different stage in the value chain). In such cases, **developing criteria for that activity may not be a priority**, even if it appears high in the ranking. Instead, the activity **could be de-prioritised** and, where relevant, **include the substitution activity instead** (for which criteria would still need to be developed). For example, shifting to renewables in electricity generation will reduce the need for coal mining. Hence, even if coal mining has a high impact (and that impact can be reduced to some extent), it may be decided to prioritise developing criteria for renewables instead (as a low impact activity that can substitute a high impact activity).

In some cases, substitution may be **only partial**. For example, public transport can largely replace individual vehicles in urban areas, but often not in rural areas. In such cases, both the initial and substitute activities could be prioritised.

3.7. Other activities prioritised

In addition to the proposed activities for prioritisation identified by the assessment, the PSF was invited to address three activities to help to implement the commitment taken by the Commission in the recent action plan “Critical raw materials resilience: charting a path towards greater security and sustainability”:

The Communication states in the Critical Raw Material strategy states that the EU sustainable finance taxonomy ‘*will address the enabling potential of the mining and extractive value chain and the need for the sector to minimise its impacts on the climate and environment, taking into*

⁸ Article 19 (1)(g): “The technical screening criteria [...] shall: take into account the life cycle, including evidence from existing life-cycle assessments, by considering both the environmental impact of the economic activity itself and the environmental impact of the products and services provided by that economic activity, in particular by considering the production, use and end of life of those products and services”

account life cycle considerations. This should help to mobilise support for compliant exploration, mining and processing projects for critical raw materials in a sustainable and responsible way.’ It sets out the following action (action n.2): ‘Develop sustainable financing criteria for the mining, extractive and processing sectors in Delegated Acts on Taxonomy by end 2021 (Platform on Sustainable Finance, Commission).’

The three activities are:

- Mining and quarrying (NACE code 07, 08, 09)
- Manufacture of basic metals (NACE code 24)
- Manufacture of non-metallic mineral products (NACE code 23)

3.8. Composition of the Technical Working Group and sector teams

On the 16th of October 2020 the Platform on Sustainable Finance started its work. It operates through a plenary in full composition of 57 members and 11 observers from EU and international bodies, businesses, civil society, academia, think-tanks, and experts appointed in personal capacity. The PSF is currently organized in four operating subgroups where the actual technical work takes place. The plenary ensures that the relevant links are created between the operating subgroups and that the work is formally endorsed. (see Figure 1)

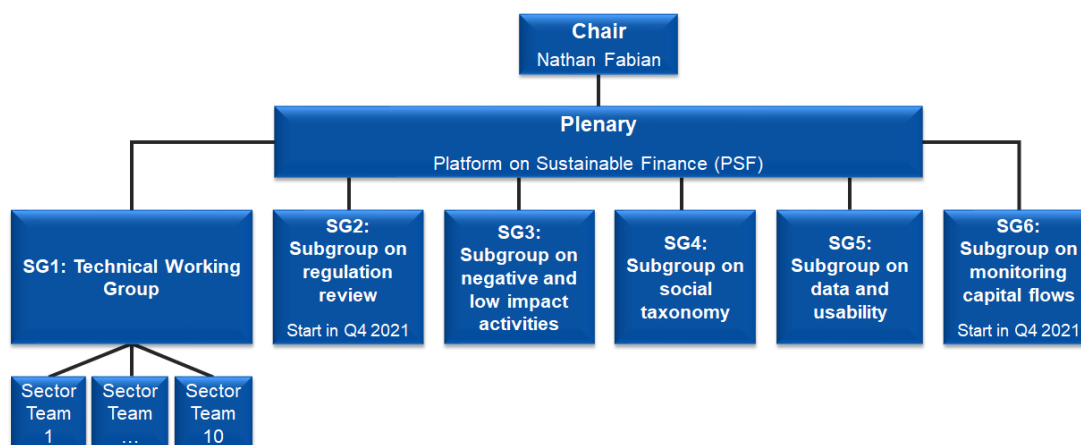


Figure 1: Composition of the Platform

The Technical Working Group (TWG) started its mandate with 32 officially appointed PSF members and 3 observers. However, it could not cover all expertise necessary for all economic activities received in the mandate. This led to call for further expertise in the plenary, which made it possible to build a group of about 100 experts including the rapporteurs who were able to deliver 102 Technical Screening Criteria, available in Annex B to this report.

In a first instance the TWG mandate was focused on developing technical screening criteria for the environmental objectives 3-6 with only minor additional criteria on the environmental objectives 1-2. The prioritized economic activities of the mandate were allocated across the following eight different sectors:

- Agriculture, forestry and fishing;
- Mining and Processing;
- Manufacturing;
- Energy;
- Construction and buildings + ICT + Emergency Services;
- Transport;
- Restoration and Remediation + Tourism; and
- Water supply, Sewerage, and Waste Management.

Thereby, 10 different sector teams were organized to allow the representativeness of all relevant stakeholders for each sector to be represented and to be able to cover and group consistently the economic activity in sectors.

Table 1: Activities prioritised (ST1-ST5)

ST1 Agriculture, Forestry and Fishing							
Economic Activities	NACE codes	Mitigation	Adaptation	Water	Circular economy	Pollution	Biodiversity
Growing of non-perennial crops	A1.1			X		X	X
Growing of perennial crops	A1.2			X		X	X
Animal production	A1.4					X	X
Marine fishing	A3.11						X
Forestry and logging	A2						X
Forest fire fighting (Forestry and logging)	A2.40						X
ST2 Mining and Processing Sectors							
Economic Activities	NACE codes	Mitigation	Adaptation	Water	Circular economy	Pollution	Biodiversity
Mining of metal ores	B7	X		X	X	X	X
Other mining and quarrying	B8	X		X	X	X	X
Mining support service activities	B9	X		X	X	X	X
Manufacture of other non-metallic mineral products	C23	X		X	X	X	X
Manufacture of basic metals	C24	X		X	X	X	X
ST3 Manufacturing 1							
Economic Activities	NACE codes	Mitigation	Adaptation	Water	Circular economy	Pollution	Biodiversity
Manufacture of chemicals and chemical products	C20			X	X	X	
Manufacture of rubber and plastic products	C22.1, C22.2			X	X		
Manufacture of basic pharmaceutical products and pharmaceutical preparations	C21					X	
ST4 Manufacturing 2							
Economic Activities	NACE codes	Mitigation	Adaptation	Water	Circular economy	Pollution	Biodiversity
Manufacture of fabricated metal products, except machinery and equipment	C25			X		X	
Manufacture of machinery and equipment n.e.c	C28			X			
Manufacture of electrical equipment	C27			X	X	X	
Manufacture of computer, electronic and optical products	C26				X	X	
Manufacture of motor vehicles, trailers and semi-trailers	C29					X	
Manufacture of other transport equipment	C30					X	
Repair of fabricated metal products, machinery and equip	C33.1				X		
Maintenance and repair of motor vehicles	G45.20				X		
(Sale), maintenance and repair of motorcycles and relate	G45.40				X		
Repair of computers and personal and household good	S95				X		
ST5 Manufacturing 3							
Economic Activities	NACE codes	Mitigation	Adaptation	Water	Circular economy	Pollution	Biodiversity
Manufacture of textiles	C13				X	X	
Manufacture of wearing apparel	C14				X	X	
Manufacture of leather and related products	C15			X	X		
Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	C16				X		
Manufacture of food products	C10				X		X
Manufacture of beverages	C11						X

Table 2: Economic activities prioritised (ST6-ST10)

ST6 Energy							
Economic Activities	NACE codes	Mitigation	Adaptation	Water	Circular economy	Pollution	Biodiversity
Electric power generation, transmission and	D35.1					X	
Hydropower (dams, weirs, run-off-the-river)	D35.1						X
Wind, wave and tidal power	D35.1						X
ST7 Construction and buildings + ICT + Emergency Services							
Economic Activities	NACE codes	Mitigation	Adaptation	Water	Circular economy	Pollution	Biodiversity
Construction	F						X
Construction of buildings	F41				X		
Civil engineering	F42		X		X		
Implementation of nature based solutions for flood risk prevention and protection for both inland and coastal waters	F42.91			X			
Construction of flood risk prevention and protection infrastructure for inland and coastal floods	F42.91			X			
Telecommunications infrastructure and solutions, and Information service activities	61-63		X				
Emergency Services	84.25		X				
ST8 Transport							
Economic Activities	NACE codes	Mitigation	Adaptation	Water	Circular economy	Pollution	Biodiversity
Water transport	H50	X*		X		X	X
Urban and suburban passenger land transport	H49.31					X	X
Freight transport by road and removal services	H49.4					X	X
Passenger cars (including Taxi Operation)	(inc. 49.32)					X	
Aviation		X*					
ST9 Restoration and Remediation + Tourism							
Economic Activities	NACE codes	Mitigation	Adaptation	Water	Circular economy	Pollution	Biodiversity
Conservation of habitats/ecosystems							X
Restoration of ecosystems			X				X
Remediation activities	E39			X	X	X	X
Tourism, sports and leisure activities							X
ST10 Water Supply, Sewerage, and Waste Management							
Economic Activities	NACE codes	Mitigation	Adaptation	Water	Circular economy	Pollution	Biodiversity
Water collection, treatment and supply	E36			X	X	X	
Sewerage (including SUDS)	E37			X	X	X	
Waste collection, treatment and disposal activities; materials recovery	E38			X	X	X	
Desalination			X				

The first step was to analyse the set of economic activities and identify whether they should be merged, and increase the granularity or deprioritise according to scientific evidence available, data availability and expertise in each sector seam. This step made it possible the postponement of 44 activities beyond this initial set. These would be considered by the Platform in its future work, after the public consultation.

Mining – and example of ongoing work

Some TSC have proven particularly challenging to identify for activities where evidence is lacking or the approach to delivering a substantial contribution is not yet clear. One such activity is land-based mining and quarrying of minerals (other than coal, lignite, crude oil/petroleum or natural gas). This includes the extraction of solids or liquids by different methods such as underground or surface mining, well operations, etc. and supplementary activities aimed at preparing the crude materials for marketing, for example, crushing, grinding, cleaning, drying, sorting, and concentrating ores.

The activity is classified under NACE codes B07 & B08 (but excludes B05 & B06) in accordance with the statistical classification of economic activities established by Regulation

(EC) No 1893/2006. Any crushing, grinding, cleaning, drying, sorting, and concentrating that is exceptionally classified under NACE codes C20 or C23 is also covered here (see Table 3). Given that the state of scientific research on the environmental impacts of mining on the seabed has not yet been considered by the TWG yet, these definitions do not cover deep sea mining or deep seabed mining.

Table 3: Economic activities prioritised for mining sector

ST2 Mining and Processing Sectors							
Economic Activities	NACE codes	Mitigation	Adaptation	Water	Circular economy	Pollution	Biodiversity
Mining of metal ores	B7	X		X	X	X	X
Other mining and quarrying	B8	X		X	X	X	X
Mining support service activities	B9	X		X	X	X	X
Manufacture of other non-metallic mineral products	C23	X		X	X	X	X
Manufacture of basic metals	C24	X		X	X	X	X

Below, we provide more details about reflections and evidence on key questions underpinning the criteria setting that the Platform is considering.

Further to the TWG’s initial assessment of the mining sector showed the need to collect further evidence on the following aspects was highlighted in the work done until now:

- Thresholds for climate change mitigation criteria appropriate for mining economic activities consistent with an IPCC ‘1.5°C with no or limited overshoot’ emissions scenario and the net-zero emissions target by 2050 and –55% by 2030.
- Setting criteria that ensure do no significant harm (DNSH) for all environmental objectives in accordance with the taxonomy criteria, in particular for the protection and restoration of biodiversity and ecosystems and the sustainable use and protection of water and marine resources.
- Evidence on the impacts on and contributions of mining and quarrying to all other environmental objectives.

To better understand the current performance distribution profile of mines and quarries across the 6 environmental objectives, we invite stakeholders to provide data via the general feedback section in the ongoing consultation that could further shape decision-making within the Platform. In particular, we would welcome stakeholders who can provide representative data on:

- the distribution profile of scope 1 and 2 GHG emissions across the lifetime of mines
- the distribution profile of European mine performance across different types of pollutants

On data limitations, there is a need to set baselines and thresholds for different pollutants across a range of mining and processing activities, in particular for emission criteria for NO_x, SO_x, dust and mercury. There is also a need for further review of data under the BAT-AEL's where criteria are not set but where thresholds need to be determined under normal operating conditions.

The activity "Manufacturing of non-metallic mineral products" (C23) and "manufacturing of basic metals" (C24) have very similar issues. Similarly, to better determine circularity, data are needed to determine the percentage of non-metallic waste and by-products as input or output from a wide range of metals processing sub-sectors. These data can also be used to determine the percentage of waste/by-products from a range of metal processing activities that are currently reused/recovered/recycled and made available for use in other economic activities.

4. Defining headline ambition levels for environmental objectives

In order to develop TSC, it is important to understand the environmental objectives of the Taxonomy, how a contribution can be made to them. Understanding when a substantial contribution is made to a given environmental objective is one of the central challenges of developing technical screening criteria.

An activity is considered taxonomy-aligned

1. if it makes a substantial contribution to at least one of the following environmental objectives: 1) Climate change mitigation; 2) Climate change adaptation; 3) Sustainable use and protection of water and marine resources; 4) Transition to a circular economy; 5) Pollution prevention and control; 6) Protection and restoration of biodiversity and ecosystems;
2. while not causing significant harm to any of the other five objectives.

These two conditions are considered met when an economic activity fulfils a set of activity-specific technical screening criteria. Additionally, an activity needs to meet a set of minimum social safeguards listed in the Taxonomy Regulation. (see Figure 2)

Defining substantial contribution to the Taxonomy environmental objectives requires an understanding of what the objectives are in terms of their end-state targets (**headline ambition levels**), how they interact and what sort of contribution should be expected through an implementing activity. In this context it is useful to describe the environmental objectives in

relation to the DPSIR (Driver, Pressure, State, Impact, Response) Framework that is used by the European Environment Agency (EEA) and others to underpin the development of environmental indicators in the context of policy monitoring and development. The framework is particularly useful in the context of the Taxonomy as it describes the causal links between economic or social activities on the environment.

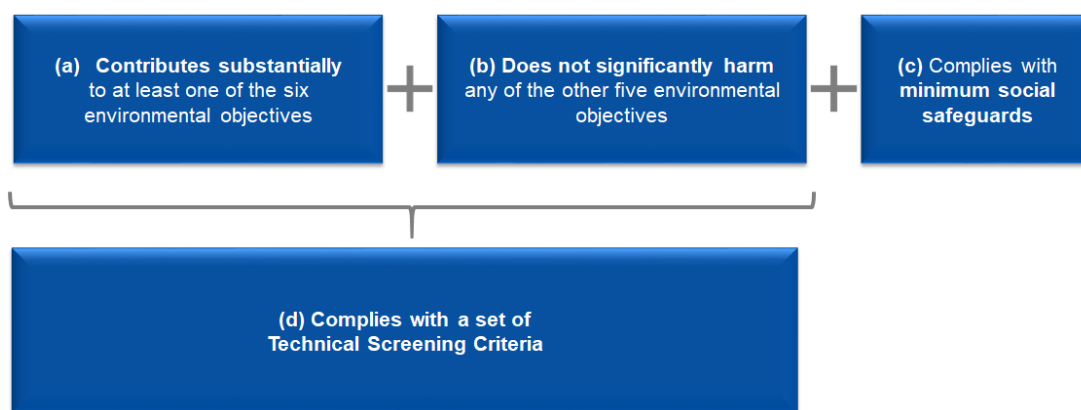


Figure 2: The 4 basic conditions for an activity to be considered taxonomy-aligned

The DPSIR Framework is a systems analysis view of how social and economic developments interact with the environment. According to this systems analysis view, social and economic developments exert **Pressure** on the environment and, as a consequence, the **State** of the environment changes, such as the provision of adequate conditions for health, resources available and biodiversity. Finally, this leads to **impacts** on human health, ecosystems and materials that may elicit a societal **Response** that feeds back on the **Driving** forces, or on the state of impacts directly, through adaptation or curative action (EEA, 1999).

All environment objectives of the Taxonomy are interrelated, both in terms of the means by which an objective is achieved, and the effect of achieving one objective on another (Figure 2). The interaction of these objectives and the opportunity from an economic activity to deliver a substantial contribution is related in part to where they appear in the DPSIR Framework. For example, Pollution is a *pressure* that affects the *state* of the Biodiversity and Water objectives. Circular Economy can be seen as a *response* that helps to achieve the desired *state* of an objective, or to reduce the *pressure* on an objective. When developing technical screening criteria, the headline ambition levels reflect these positions, with the water and biodiversity headline ambition levels focussed on improving the state of these objectives, the pollution ambition level focussed on addressing the pollution pressures, and the circular economy ambition level focused on a system change to enable the achievement of other objectives (including climate). (see Figure 3)

This section provides a summary headline level of ambition for objectives 3 – 6 of the Taxonomy Regulation. It is drawn from work of the TWG on environmental ambition levels. This section also benefited from input and comments from staff from the European Commission's Joint Research Centre (JRC) and Directorate General for the Environment (DG ENV) to ensure correct presentation of EU policies and initiatives in the relevant policy areas. It provides the basis for checking on the development of technical screening criteria (TSC) within the sector teams of the platform with respect to their eligibility to provide substantial contribution to the headline level of ambition for objectives 3-6.

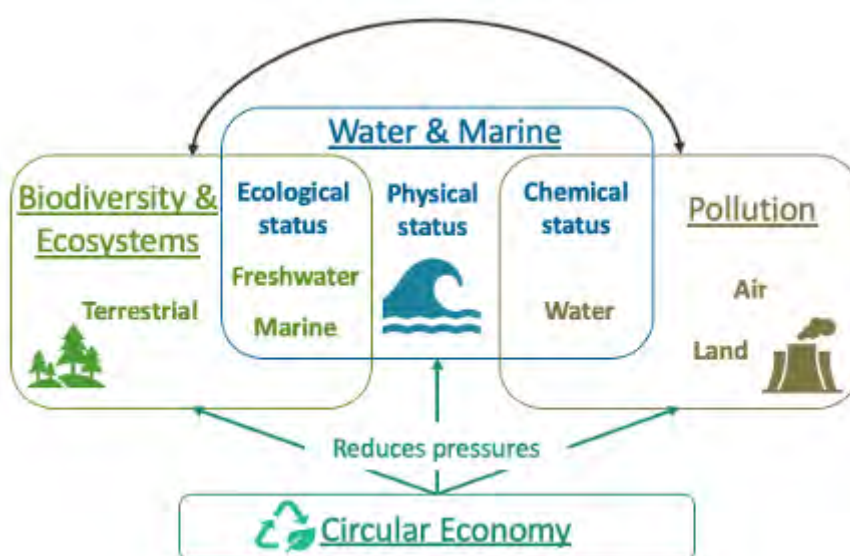


Figure 3: Overlapping among the different environmental objectives of the Taxonomy

Headline ambition level in this context means the aspirational goal linked to each environmental objective. For example, the goals and targets of the Paris Climate Agreement provide an internationally agreed state for the climate to which countries need to respond. This creates the framework in which the contribution to these targets can be articulated at different geographies (such as through NDCs) or from different economic activities. This recognises that no one country or sector can achieve the targets on their own, and that only together can we achieve the global level of ambition. The Paris Agreement aim to limit the global average temperature increase to 1.5 °C was translated by the Technical Expert Group in the context of the EU Green Deal into a **climate neutrality target by 2050 and a greenhouse gas reduction target, including emissions and removals, to at least 55% by 2030 compared**

to 1990⁹. Thus, the technical screening criteria provided under the 1st Taxonomy DA for the mitigation and adaptation objectives were developed for clear headline ambition level. This note provides those same interpreted targets for objectives 3-6 of the Taxonomy Regulation.

The principles for setting a headline ambition level of the four remaining objectives are:

- Be science-based
- Be based on international agreements that EU supports
- Reflect EU's response to international agreements or EU's leadership on an objective

4.1. Objective 3 – The sustainable use and protection of water and marine resources

To ensure at least good status for all water bodies by 2027, and good environmental status for marine waters as soon as possible¹⁰; and to prevent the deterioration of bodies of water that already have good status or marine waters that are already in good environmental status.

Rationale and link to environmental strategies and policies

The protection of water bodies in Europe is primarily regulated by the Water Framework Directive (WFD) covering inland surface waters, transitional waters, coastal waters and groundwater, and its daughter legislation (setting chemical standards for surface water and groundwater), as well as by other more specific directives such as the Urban Waste Water Treatment Directive and the Nitrates Directive, and the Directive on the Reduction of National Emissions of certain Atmospheric Pollutants, as well as the Industrial Emissions Directive among others. It includes the protection and enhancement of the status of aquatic ecosystems, the promoting of sustainable water use based on a long-term protection of available water resources, specific measures for the progressive reduction or cessation of discharges, emissions and losses of priority substances and the prevention of deterioration. The first deadline for achieving at least good status for all water bodies in Europe set out in the WFD was 2015 (with exemptions possible until 2027), less than half of all water bodies

⁹ https://ec.europa.eu/info/sites/default/files/business_economy_euro/banking_and_finance/documents/200309-sustainable-finance-teg-final-report-taxonomy_en.pdf

¹⁰ The term as soon as possible is a placeholder for any new deadline. The deadline set by the MSFD is 2020.

are currently in good status (EEA (SOER 2020)) and a follow up deadline was set for **2027**. **It is this latter date which is used in the context of the headline ambition level.**

To distinguish between different qualities of water bodies, their status is defined in the WFD with reference to dimensions such as **good ecological status** and **good chemical status** that cover among others the quality of the biological community, certain supporting elements (such as nutrients, oxygen), river basin specific pollutants (regulated at national level), and hydrological characteristics, as well as the presence of priority substances (regulated at EU level) which determine the chemical status. The latter is expressed in terms of compliance with all the quality standards established for chemical substances at European level. **Good status is used in the headline ambition level to capture these two elements, and as is consistent with the wording of the WFD.**

For Marine waters, maintaining biodiversity and providing diverse and dynamic oceans and seas which are clean, healthy and productive is the ultimate aim of European marine policy and is outlined by the Marine Strategy Framework Directive (MSFD) and its related legislation. In that respect, this Directive should, inter alia, promote the integration of environmental considerations into all relevant policy areas and deliver the environmental pillar of the future maritime policy for the European Union. It is the first EU legislative instrument related to the protection of marine biodiversity, as it contains the explicit regulatory objective that "biodiversity is maintained by 2020", as the cornerstone for achieving **Good Environmental Status**¹¹. In the headline ambition level, good environmental status is used instead of 'good status' to be aligned with EU legislation in this area. The 2020 objective was not met – as a result of overfishing and unsustainable fishing practices, plastic litter, excess nutrients, underwater noise and other types of pollution as predominant pressures (EEA (SOER 2020)). The MSFD is undergoing review and a new target date is expected. In the absence of such a target, **as soon as possible** is included in the headline ambition level.

In addition to the WFD and MSFD related wording, Art. 12 of the Taxonomy Regulation (TR) states that only activities that can claim to be sustainable under the Regulation are those which can provide substantial contribution to 'achieving the good environmental status of marine

¹¹ The Commission produced in this context a set of detailed criteria and methodological standards that helps to implement the Marine Strategy Framework Directive. Commission Decision (EU) 2017/848 of 17 May 2017 laying down criteria and methodological standards on good environmental status of marine waters and specifications and standardised methods for monitoring and assessment, and repealing Decision 2010/477/EU (OJ L 125, 18.5.2017, p. 43. It links -together with the Annex of the Directive- ecosystem components, anthropogenic pressures and impacts on the marine environment.

waters or to preventing the deterioration of marine waters that are already in good environmental status' or to 'achieving the good status of bodies of water, including bodies of surface water and groundwater or to preventing the deterioration of bodies of water that already have good status'.

The EU environmental acquis, and EU legislation more generally includes a series of targets and commitments that seek to ensure the sustainable use and protection of water and marine resources. These have been used to determine the overall ambition level above for both freshwater and marine resources. They can be found in Annex A2: Relevant targets & reference points for headline objectives of this note.

4.2. Objective 4 – The transition to a circular economy

By 2030 economic growth is decoupled from extraction of non-renewable resources and depletion of the stock of renewable resources is reversed, and by 2050 economic activity is largely decoupled from resource extraction, through environmental design for a circular economy to eliminate waste and pollution, keep materials and products in use at their highest value, and to regenerate ecosystems.

This ambition builds on a reduction of the EU27 material footprint (RME) by 50% by 2030 and by 75% by 2050 (compared to a 2015 baseline of 14t/capita) and raising the circular material use rate of all materials to increase the average to at least 25% by 2030, by increasing the durability, repairability, upgradability, reusability or recyclability of products, and by remanufacturing, preparing for reuse and recycling of used materials and products; and on cultivating 25% of total agricultural land and production forestry by 2030, and 100% by 2050, using regenerative production methods, such as agroecology and silvopasture.

Rationale and link to environmental strategies and policies

Today's linear take-make-waste economy is based on the extraction of resources and depletion of natural capital, i.e. the stock of renewable and non-renewable resources (e.g. plants, animals, air, water, soils, minerals) that combine to yield a flow of benefits to people. If we follow the historical path, global use of materials such as biomass, fossil fuels, metals and

minerals is expected to double in the next forty years¹², while annual waste generation is projected to increase by 70% by 2050¹³. Such a linear model relies on resource extraction and unpriced negative externalities, and undermines the ability to transition towards a climate-neutral circular economy. In addition, it amounts to billions of euros of value being wasted in raw materials and energy, underutilised assets, and disposal costs. Alongside leading to significant economic value loss, this system aggravates many global challenges, such as climate change, biodiversity loss and pollution¹⁴. In 2019, the circular material use rate in Europe was 12% showcasing the significant gap and potential to transform to a circular economy¹⁵.

Moving past the current linear model, a circular economy aims to redefine growth, focusing on positive society-wide benefits and gradually decoupling economic activity from the extraction of natural resources. The transition to renewable energy sources is an essential requirement for the circular economy, which is based on three principles, driven by environmental design¹⁶: eliminate waste and pollution; keep products and materials in use at their highest value; and regenerate ecosystems. As stated in the Commission's 2020 Circular Economy Action Plan, the EU needs to accelerate the transition towards a regenerative growth model, advance towards keeping its resource consumption within planetary boundaries, and therefore strive to reduce its consumption footprint and double its circular material use rate in the coming decade. The action plan also highlights how scaling up the circular economy will make a decisive contribution to achieving climate neutrality by 2050 and decoupling economic growth from resource use, while ensuring the long-term competitiveness of the EU and leaving no one

¹² OECD (2018), *Global Material Resources Outlook to 2060*.

¹³ World Bank (2018), *What a Waste 2.0: A Global Snapshot of Solid Waste Management to 2050*.

¹⁴ IRP (2019), *Global Resources Outlook 2019: Natural Resources for the Future We Want. A Report of the International Resource Panel*. United Nations Environment Programme. Nairobi, Kenya.

¹⁵ The EU Green Deal emphasizes that only 12% of the raw materials used by the EU's industry come from recycling. This percentage is based on EUROSTAT indicators used to measure progress towards a circular economy. See: https://ec.europa.eu/eurostat/databrowser/view/CEI_SRM030_custom_354994/bookmark/table?lang=en&bookmarkId=c6638243-2f7f-4256-b2fd-6a5159b4b68a

¹⁶ In line with the ISO 14006 (2020) Guidelines for incorporating Ecodesign as part of an environmental management system (EMS) that are applicable to product-related environmental aspects and activities that an organization can control and those it can influence. The term environmental design has been used to avoid confusion with the legally defined term in the context of EU Directive 2009/125/EC establishing a framework for the setting of Ecodesign requirements for energy-related products.

behind. More broadly, transitioning to a circular economy not only addresses the negative impacts of the linear economy, but more importantly it represents a systemic shift that builds long-term resilience, generates business and economic opportunities, and provides environmental and societal benefits.

As today there is no quantitative overarching EU ambition level for the circular economy, the ambition builds on a range of published strategies and targets. For example, the Commission committed to develop indicators on resource use, including consumption and material footprints¹⁷. In February 2020, the EU Parliament called for binding targets for 2030 to significantly reduce the EU material and consumption footprints and bring them within planetary boundaries by 2050. Finally, the Council encouraged the Commission to explore how these indicators could set a benchmark for an indicative EU circular economy goal. Globally, policy packages could decrease global material extraction until 2060 by up to 25%¹⁸, and research shows that Germany can reduce its consumption of primary raw materials by up to 70% until 2050¹⁹. The Taxonomy Regulation highlights the importance of increasing durability, reparability, upgradability, reusability and recyclability, in particular in designing and manufacturing activities, of prolonging the use of products, including through reuse and remanufacturing, and of recycling²⁰. The Farm to Fork strategy contains a target for 25% of EU farmland to be farmed organically by 2030^{21 22}.

4.3. Objective 5 – pollution prevention and control

By 2030, pollution²³ sources, sinks and pathways due to human activities have been fully identified and measures have been applied that prevent and eliminate pollution

¹⁷ European Commission, *Circular Economy Action Plan*, 2020

¹⁸ IRP (2019). *Global Resources Outlook 2019: Natural Resources for the Future We Want. A Report of the International Resource Panel*. United Nations Environment Programme. Nairobi, Kenya.

¹⁹ Resource-Efficient Pathways towards Greenhouse-Gas-Neutrality – RESCUE Summary Report

²⁰ Regulation (EU) 2020/852 (Taxonomy) on the establishment of a framework to facilitate sustainable investment

²¹ https://ec.europa.eu/info/sites/info/files/communication-annex-eu-biodiversity-strategy-2030_en.pdf

²² The EU Business @ Biodiversity Platform suggested targets to ensure 100% of EU farmland to be organic by 2050.

²³ For a definition of “pollution” and “pollutants”, see Article 2 points (10) and (12) of the Taxonomy Regulation (EU) 2020/852.

across air, water, soil, living organisms and food resources. By 2030, the production and use of substances, materials and products is safe and taxonomy-aligned.

- ***Substances of concern²⁴ have been substituted and their production and use have been minimized, as far as possible. Where substances of concern are still being used, their use, presence in products and articles and quantities is being tracked to ensure adequate risk management throughout their life cycle.***
- ***The sub-group of the most harmful substances²⁵ (incl. ozone depleting substances) are phased out from products for consumer or professional use, except when their use has been proven to be essential for society²⁶.***

Legacy pollution is safely remediated and pollutants are destroyed or irreversibly transformed into safe materials. By 2030, pollution resulting from heat, noise, light and vibration has been identified and reduced to prevent, or if prevention is not practicable, minimize any adverse impact on human health and the environment.

Rationale and link to environmental strategies and policies

On 12 May 2021, the European Commission adopted the EU Action Plan: "Towards a Zero Pollution for Air, Water and Soil" (ZPAP) as a key deliverable of the EU Green Deal. The zero-pollution vision for 2050 is for air, water and soil pollution to be reduced to levels no longer considered harmful to health and natural ecosystems, that respect the boundaries with which our planet can cope, thereby creating a toxic-free environment. This 2050 vision target is seen in the context of the UN 2030 agenda for Sustainable Development (the SDG targets), and has a series of associated targets for 2030 to help achieve the overall 2050 goal. The **2030** date has been used in the overall headline ambition level to reflect these interim targets, and

²⁴ **Substance of concern** cover substances having a chronic effect for human health or the environment (Candidate list in REACH and Annex VI to the CLP Regulation), those which hamper recycling for safe and high quality secondary raw materials and the most harmful substances as listed in the Chemicals Strategy for Sustainability.

²⁵ **Most harmful substances** (as listed in the chemicals strategy for sustainability) are: carcinogenic, mutagenic or reprotoxic substances (CMRs); persistent, bioaccumulative and toxic substances (PBTs); very persistent and very bioaccumulative substances (vPvBs); endocrine disrupting substances (EDs); immunotoxicants; neurotoxicants, respiratory sensitisers; substances having specific organ toxicity (STOT) with chronic effects; persistent, mobile and toxic substances (PMTs) and very persistent and very mobile substances (vPvMs).

²⁶ **Essential use** is aimed to be defined within the commitment of the Chemical Strategy for sustainability where it's stated essential use criteria will ensure that the most harmful chemicals are only allowed if their use is necessary for health, safety or is critical for the functioning of society and if there are no alternatives. The basis of this being the Montreal protocol decision IV/25.

the urgency to act, as well as provide coherence with other environmental objectives listed in this note.

Pollution of the natural environment results from the introduction of substances, or contaminants into natural systems at levels which would cause harm or adverse change. These can include a wide variety of chemical substances or energy, such as noise, heat, or light into a range of different environmental pathways and systems. The headline ambition level notes this range (under the umbrella of 'pollution' as defined in Article 2 TR) and the importance to identify and reduce them as consistent with the zero-pollution hierarchy, which follows a *prevention, minimize & control, and eliminate and remediate* logic. This places pollution in *pressure* category of the DPSIR framework, and thus activities focus on the reduction of the pressure, rather than achieving a specific state (as is the case for water or biodiversity).

Two specific elements are singled out, substances of concern and most harmful substances. This reflects the most dangerous and most urgent series of pollutants to be addressed when considering action at an economic activity level. Substances of concern have intrinsic hazardous properties and are covered in the EU Chemical Strategy for Sustainability (now within the framework of ZPAP). Most harmful substances are a sub-group of Substances of Concern with the most serious negative effects to the environment, health and wildlife. Both require substantive actions focused on reduction in general, and phasing out from products.

4.4. Objective 6 – The protection and restoration of biodiversity and ecosystems

To ensure that by 2050 all of the world's ecosystems and their services²⁷ are restored to a good ecological condition²⁸, resilient, and adequately protected. The objectives of the EU Biodiversity Strategy will be achieved at latest by 2030. From today the world's biodiversity needs to be put on the path to recovery and no deterioration in conservation trends and status of all protected habitats and species by 2030 will be ensured.

²⁷ See: Guidance document on integrating ecosystems and their services in decision-making (2019) https://ec.europa.eu/environment/nature/ecosystems/pdf/8461_Summary%20EU_Guidance_Draft_02_17.07.2020.pdf

²⁸ Compared to the baseline of 2020

The EU Biodiversity Strategy for 2030 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 biodiversity framework at the 15th Conference of the Parties to the Convention on Biological Diversity." The ambition should be that "by 2050 **all of the world's ecosystems are restored, resilient, and adequately protected**. The world should commit to the biodiversity net-gain²⁹ principle to give nature back more than it takes. As part of this, the world should commit to no human-induced extinction of species."

The EU Strategy for 2030 sets as a milestone, the objective "to ensure that **Europe's biodiversity will be on the path to recovery by 2030** for the benefit of people, the planet, the climate and our economy, in line with the 2030 Agenda for Sustainable Development and with the objectives of the Paris Agreement on Climate Change." The overall ambition is to ensure **by 2030 no deterioration in conservation trends and status** of all protected habitats and species and to ensure that **at least 30% of species and habitats** not currently in favorable status are in that category or show a strong positive trend. Moreover, the forthcoming EU Nature Restoration Plan³⁰ aims to "bring diverse and resilient nature back to all landscapes and ecosystems. This means reducing pressures on habitats and species" and ensuring **all management and use of ecosystems is sustainable and all ecosystems are in a good ecological condition**.

Implementing the EU legal framework for nature restoration requires clear and binding targets and timelines, as well as clear definitions and criteria on restoration and/or the sustainable use of ecosystems. A key concept for this is the mitigation hierarchy and its systematic application is central to the Do No Significant Harm framework. In the mitigation hierarchy, offsets are the last resort set of measures in the series of essential sequential steps that must be taken to limit any negative impacts on biodiversity. In line with this definition, offsets are

²⁹ The definition of net gain which the MDB's including the EIB use is as follows: Biodiversity Net Gain is an approach to development that leaves biodiversity in a better state than before. Biodiversity Net Gain relies on the application of the mitigation hierarchy to avoid, mitigate or compensate for biodiversity losses. Biodiversity Net Gain must be defined relative to an appropriate reference scenario.

³⁰ The current understanding is that the corresponding legal draft is expected towards the end of this year. The Impact Assessment is currently still under preparation.

therefore a criterion in the do no significant harm (DNSH) framework and cannot as such be considered as substantially contributing to biodiversity.

To inform the development of the technical criteria for biodiversity, ambition levels will need to be defined by ecosystem, restoration needs to be defined against a baseline and “sufficient and adequate” levels of biodiversity protection and restoration need to be defined in terms of both quantity and quality. The EU Biodiversity Strategy already provides for a set of qualitative and quantitative targets which can inform the definition of *substantial contribution*, *low-impact* and *significant harm* for biodiversity at activity level [or: in the sector teams]. See Annex A2: Relevant targets & reference points for headline objectives to this note.

While the development of the technical criteria for biodiversity shall be based on the biodiversity strategy, where it provides targets [or: as far as possible; or: as far as it is in line with scientific evidence], it is important to use additional references for aspects not covered or for which no targets are defined in the strategy. One important example is biodiversity restoration. In the context of the UN Decade on Ecosystems Restoration, the UNEP has developed relevant guidance for this and has defined a series of targets (Annex A2: Relevant targets & reference points for headline objectives).

5. Methodology for developing technical screening criteria explained

The draft JRC report “Development of the EU Sustainable Finance Taxonomy – A framework for defining substantial contribution for environmental objectives 3-6” provides a robust methodology for the further developing the EU Taxonomy. In particular, it focuses on how to define the **substantial contribution** (SC) that an activity has to make to be taxonomy-aligned for the four non-climate environmental objectives. It also defines seven **possible approaches** that can be used to assess the contribution of an economic activity. In order to assess which is the most suitable approach, it outlines a series of considerations that **cut across all environmental objectives**, regardless of the sector and type of substantial contribution. These considerations help to ensure alignment with the requirements defined in Article 19 of the Taxonomy Regulation.

The report also proposes an eight-step process (see Figure 4) to ensure application of these concepts and consistency among the Technical Screening Criteria. These steps are outlined in Figure 4. Further detail is then provided on the key concepts included in these steps. The methodological concepts and steps set out in the draft JRC report have been implemented accordingly by the PSF in collaboration with the JRC.

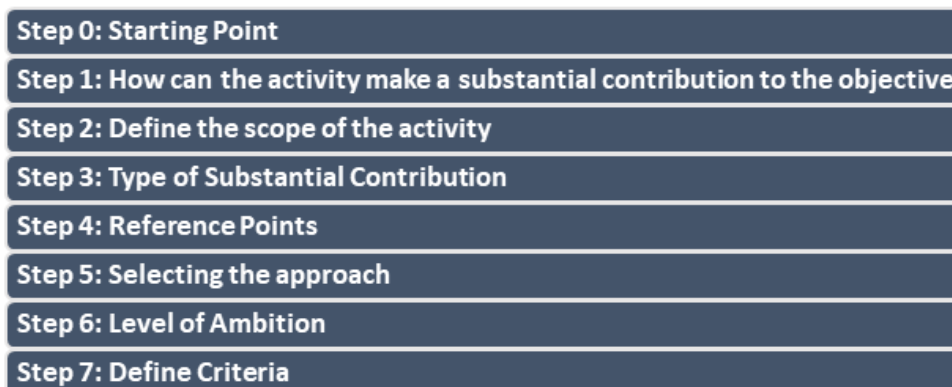


Figure 4: Step-by-step methodology to define technical screening criteria

5.1. Substantial contribution types

The report identifies **three main ways** in which an activity can **make a substantial contribution (SC)** to an environmental objective. **The first two main types of substantial contribution are related to the own performance of the economic activity, while the third type is about enabling the own performance activities (see Figure 5).** It is worth noting that these types of substantial contribution vary in their applicability to the different environmental objectives.

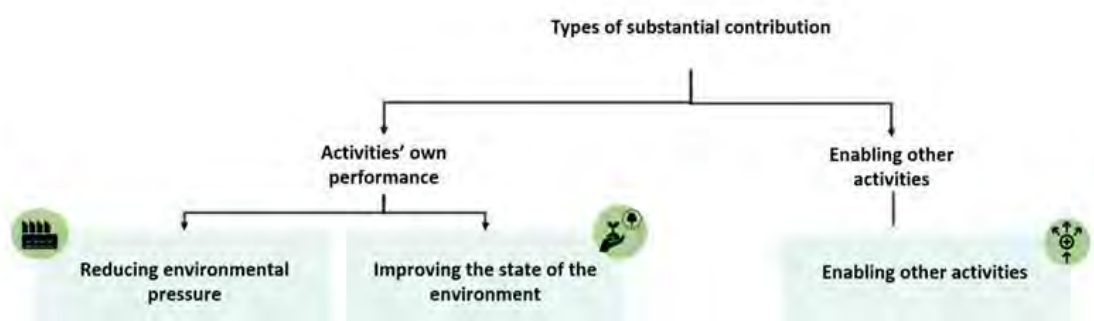


Figure 5: Types of substantial contribution

Reducing pressure on the environment

Three different types of activities that substantially contribute to reducing the pressure on the environment are considered

- Economic activities that generally are responsible for a significant pressure on the environment vis-à-vis the relevant environmental objective, but **with high improvement potential**. They make a substantial contribution if performed in a way that reduces the pressure on the environment compared to the baseline (i.e., the likely

alternative scenario). Undertaking of the activity compared to a no activity taking place scenario would be a negative impact on the environment. However, the impact will be significantly lower compared to the activity that would likely be carried out instead. As a result, by substituting activities exerting higher environmental pressures there is a **substantial reduction of the environmental pressure**. This must be considered in the context of each environmental objective, and applicability may vary as detailed in section 6.

- Activities that have a **low environmental impact**:
 - And have the potential to **substitute high-impact activities**, therefore, significantly reducing the overall pressure that is exerted on the environment. This needs to be justified based on the life cycle consideration. A contribution in this context cannot be considered substantial if it shifts the environmental burden to another life cycle stage. While many activities across the economy have a low environmental impact (education for example), not all of them replace high impact activities. An example is electric vehicles that can make a substantial contribution by replacing more polluting vehicles internal combustion engines vehicles.
 - And are **helping to substantially reduce the pressure that other activities are exerting on the environment**. The environmental benefits achieved from reducing the environmental impact of other activities must substantially outweigh the impact the activities themselves exert on the environment. Urban wastewater treatment is an example of such activities as this is an activity that substantially reduces the impact of activities discharging wastewater by removing pollutants from the wastewater effluent before it is further discharged back into the environment.

Directly improving the state of the environment (activities 'healing the environment')

The aim of this type of activities is to **enhance the environment and contribute to achieving a good environmental status**. These economic activities make a net positive contribution to the environment, therefore leading to a positive environmental impact.

Enabling activities

These are economic activities that **directly enable** other activities to make a substantial contribution. In line with Article 16 of the Taxonomy Regulation, these activities must not lead to lock in in assets that undermine long-term environmental goals and their environmental impact must be positive over the life cycle (i.e. the benefit that is enabled must be larger than the impact of the enabling activity).

5.2. Possible approaches

The term approach in this context refers to one of the ways to set **criteria**. The approach covers the way in which (1) the environmental performance of an activity is **measured or**

assessed (e.g. quantitative vs. qualitative, units used) and (2) how the required level of environmental performance can be **defined** (e.g. implementation of certain practices, baseline or comparison group).

The seven approaches defined in the JRC methodology are:

- 1. Impact-based approach:** Criteria set using this approach require an activity to demonstrate a certain level of impact regarding the environmental objective considered. The impact is defined as the result of certain pressures (e.g. GHG emissions, water abstraction, etc.) that the activity exerts on the state of the environment (e.g. local water availability of the activity area, atmospheric GHG concentration, etc.). Hence, the impact will depend on the environmental performance of the activity (i.e. the pressures it exerts) but also on the context in which the activity takes place. Activities qualify if they operate above or below a given threshold.
- 2. Performance in relation to the environmental target:** criteria set using this approach require an activity to demonstrate a certain level of performance. Performance is usually defined in terms of a *pressure* that the activity exerts on the environment (e.g. GHG emissions, water abstraction, etc.), although it could refer both to a positive or a negative pressure (i.e. a pressure leading to a worsening or to an improvement of the state of the environment). The performance is measured with a specific performance metric (direct or proxy) relating to the environmental objective considered. Activities qualify if they achieve a certain level of performance (such as meeting a threshold for CO₂e/km), derived from environmental considerations (e.g. with reference to scientific literature or EU policy that is based on scientific evidence). In contrast to the first approach, this performance-based approach is independent of the context in which the activity takes place and only relies on the intrinsic performance of the activity.
- 3. Best-in-class performance:** Like for the previous approach, criteria set using this approach require an activity to demonstrate a certain level of environmental performance of the activity, defined as a pressure on the environment (which may be negative or positive), and measured under a relevant metric. Activities qualify if they operate above a threshold that is based on the performance currently achieved by the best performers (e.g. the level of performance achieved by the top 10% best activity operators in the EU).
- 4. Relative improvement:** In this approach, the criteria require a minimum evolution of a given metric over time. This can be the performance improvement of an underlying activity or asset (e.g. improving the energy performance of a building for a renovation activity), the improvement in the state of the environment (e.g. reducing the amount of

water pollutants by X% for a cleaning activity), etc. Activities qualify if they can demonstrate an improvement by at least a defined relative threshold (e.g. an energy efficiency improvement of at least 20% compared to a previous point in time).

5. **Practice-based:** Criteria set using this approach require an activity to demonstrate implementation of or compliance with a set of defined practices or a list of qualitative requirements that are likely to substantially reduce the pressure on the environment or to substantially improve the state of the environment. These criteria describe *how* the activity must be performed. Activities qualify if they follow those practices.
6. **Process-based:** Criteria set according to this approach define a number of qualitative process-based steps to determine how to reduce the pressure or enhance the state of the environment in the case of the specific activity. This approach makes it possible to cater for activities for which both a quantitative threshold or a defined list of qualitative requirements do not work well because the current thresholds or qualitative criteria need to be defined an ad-hoc basis and the criteria determine how to define them. Activities qualify if they follow the process steps detailed in the criteria and implement or achieve the requirements stemming for them.
7. **Nature of the activity:** Criteria set using this approach define the exact scope and description of the activity. Activities qualify if they fall within such scope/description. The activities are then taxonomy-aligned without being subject to quantitative or qualitative requirements.

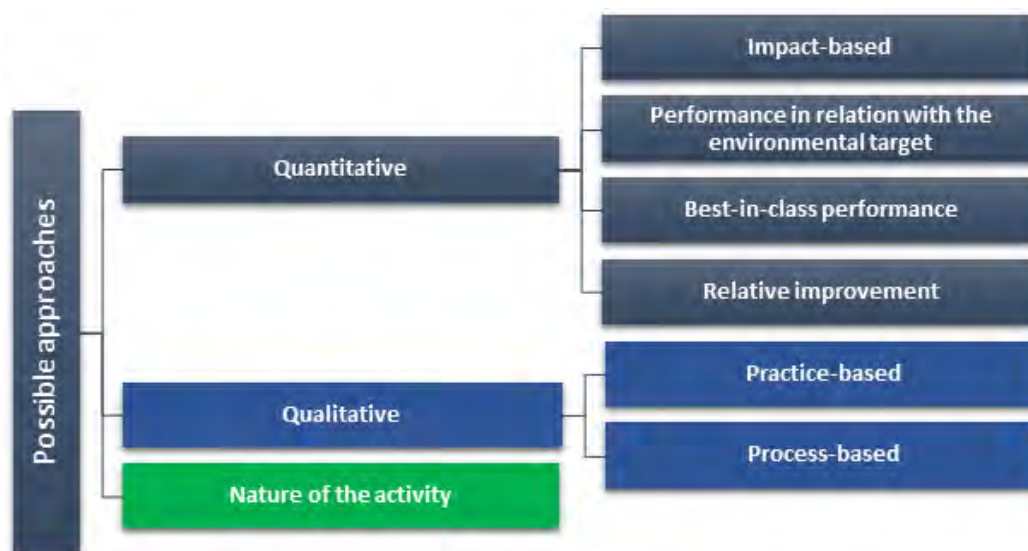


Figure 6: The seven possible approaches

In order to ensure that the approach used for defining the technical screening criteria is suitable, it must meet the conditions set out in the article 19 of the Taxonomy Regulation. The four broad requirements are:

- policy coherence: where appropriate, the approach makes it possible to build on EU legislation, approaches and policy goals;
- environmental ambition and integrity: the approach makes it possible to follow scientific evidence and take into account life cycle considerations;
- level playing field: the approach allows fair treatment of activities within the same sector;
- usability of the criteria: the approach makes it possible to develop criteria that are of easy and unambiguous to implement and verify.

However, the degree of compliance of each approach with each requirement depends on the environmental objective, on the type of substantial contribution and on the sector and activity considered.

6. Understanding Environmental Objectives

In developing the technical screening criteria (TSC) for the taxonomy objectives, and following the publication of the Taxonomy Regulation, it has been necessary to clarify specifically what substantial contribution means for those objectives that sit within the 'state' area of the DPSIR framework. Unlike circular economy which is about system change, or pollution which relates to pressure reduction, the water and biodiversity objectives require an understanding of when the desired end state has been reached and how that can be described in the context of different economic activities through TSC. These substantial contributions complement Articles 12 (Water) and 15 (Biodiversity) of the Taxonomy Regulation to provide methodological guidance. They are different in nature, reflecting the different objectives and the content of each article. They have been used to guide and refine criteria development of the criteria that are being presented in this consultation.

6.1. Clarifying substantial contribution to Objective 3 - Sustainable use and protection of water and marine resources

The following two closely related questions on the interpretation of Article 12 of the Taxonomy Regulation came up throughout the process of developing technical screening criteria (TSC):

1. Can an activity with pressures³¹ on a water body that are much lower than the sector average qualifies as making a substantial contribution to the water objective?
2. Does this depend on the status of the water body affected by the activity?

Four types of economic activities (hereafter 'activities') can be considered in this context and used to address the questions through examples.

Some economic activities have a direct **positive impact** on the environment ('**Type 1** activities').

Example 1 (1st Delegated Act (DA)): the restoration of wetlands helps to enhance their capacity to act as carbon sinks (i.e. once restored, these wetlands can better capture and store CO₂ from the atmosphere, thus reducing CO₂ concentrations in the atmosphere).

Example 2 (water): renaturation of rivers, including by abolishing barriers in rivers.

The inclusion of such activities, subject to appropriate technical screening criteria, is straightforward and compatible with all environmental objectives of the Taxonomy Regulation.

However, most activities exert some pressures on the environment, thus leading to a negative impact. To achieve our environmental objectives, *these pressures need to be minimised*³². That is the reason why, in addition to such activities with a direct positive impact, the taxonomy aims to recognise as 'green' (taxonomy-aligned) those **activities that significantly reduce pressures in line with meeting the EU's environmental policy objectives**. There are three cases:

Type 2. An activity leading to an improvement in another activity (improvement measures, upgrades): an activity B leads to an *improvement in the environmental performance*

³¹ These would include pressures on surface waters such as impacts on ecological, chemical and hydro-morphological quality/status; as well as pressures on groundwater, such as impacts on chemical and quantitative quality/status.

³² Such pressure minimisation can be incentivised by formulating appropriate substantial contribution criteria. At the same time, adding DNSH criteria to the water objective (as to other objectives) are another way to ensure pressures are reduced to an acceptable level (in line with Article 17) for those activities that are addressed through substantial contribution criteria to another environmental objective.

of another activity X. In many cases, such activities would qualify as an enabling activity in the meaning of Article 16 of the taxonomy Regulation.

- Example 1 (1st DA): renovating (activity B) a building, can improve its energy performance (activity X) thus reducing GHG emissions associated with the building's energy use.
- Example 2 (water): upgrading (activity B) an industrial installation discharging pollutants directly into a water body (activity X) leads to a reduction in the emission of pollutants³³.

The implications in terms of disclosure are different for activity B and activity X in this example. They are described in Annex I.

Type 3. An activity dealing with pressures from other activities: an activity C captures pressures from other activities (X, Y, Z...) and mitigates them.

- Example 1 (1st DA): infrastructure for transport and subsequently underground storage (activity C) of CO₂ captured from industrial installations (activities X, Y, Z...), leading to reduced GHG emissions.
- Example 2 (water): a plant (activity C) treating wastewater from other installations in an industrial park and/or from households (activities X, Y, Z...), leading to a reduction in pollutants emitted to the water body.

Type 4. An activity with pressures substantially lower than sector average: an activity X1 is responsible for some pressures, but these are much lower than the average of other activities within the same sector (X2, X3, X4...)

- Example 1 (1st DA): an installation generating electricity from **wind power** (activity X1) is responsible for some pressures (11-15 gCO₂eq/kWh) but these are much lower than the average for the electricity generation sector (EU average carbon intensity: 244 gCO₂eq/kWh) (activities X2, X3, X4...).
- Example 2 (1st DA): a building that qualifies as **near-zero energy building** (activity X1) still uses some energy and is thus responsible for some GHG emissions, but these pressures are much lower than the average of other buildings (activities X2, X3, X4...).

³³ The upgrading could involve in an end-of-pipe solution (e.g. installing a system to treat the waste water) or in an integrated pollution abatement (e.g. the use of different types of chemicals)

- Example 3 (water): a steel manufacturing installation (activity X1) whose emissions of pollutants to water that are much lower than the average emissions of other steel manufacturing installations (activities X2, X3, X4...).

Recognising type 4 activity as “reducing pressures” would rely on an assumption for the counterfactual: if the activity had not taken place (e.g. wind power), another activity with higher pressures (e.g. in the worst case coal) would have taken place instead to respond to the demand for the output (e.g. electricity). While the construction of a new wind farm is not automatically accompanied by the closure of a coal plant (direct replacement), the idea is to encourage a gradual shift in electricity production (replacement from a system’s and medium-term perspective).

The working group debated whether and when this assumption is appropriate in the context of the water objective was debated, leading to the question below.

Questions on the compatibility of type 4 activities with Art.12

Article 12.1 of the Taxonomy Regulation states that an activity makes a **substantial contribution to water** where that activity “contributes substantially to achieving the good status of bodies of water, or to preventing the deterioration of bodies of water that already have good status [...]”³⁴ It is quite straightforward to argue that activities of type 1, 2 and 3 contribute to achieving the good status of water bodies, or to preventing the deterioration of water bodies already in good status³⁵. However, there is a **question as to whether an activity of type 4** (with pressures much lower than sector average) **can be considered to make such a contribution**.

The approach taken in the development of TSC to date

- **For an activity linked to a water body not in good status:**
 - When an activity of type 4 (with lower pressures) does not directly replace another activity with higher pressures on the same water body, it cannot be considered to be making a substantial contribution to achieving good status

³⁴ The article continues with an equivalent phrase relating to marine waters: “or contributes substantially to achieving the good environmental status of marine waters or to preventing the deterioration of marine waters that are already in good environmental status”.

³⁵ Whether that contribution is substantial depends on whether the activity considered meets the relevant technical screening criteria.

since the activity is responsible for new pressures (even if lower than sector average) on the affected water body.

- The assumption that the counterfactual would be another activity with higher pressures is not appropriate.
 - Indeed, an activity takes place in a specific water body, and the counterfactual may be an activity in another water body, with a different status.
 - As such, a comparison with the approach taken under the 1st DA for climate mitigation activities, where the counterfactual relied on a systemic perspective and indirect replacement of high-pressure activities was considered a way to demonstrate the substantial contribution to climate mitigation, is not appropriate.
- When an activity of type 4 **directly replaces** another activity with higher pressures on the same water body (i.e. simultaneous closure of the high-pressure activity), it can be considered to be making a substantial contribution to achieving good status through pressure reduction – providing the difference in pressure reduction is substantial.
- **For an activity linked to a water body having a good status**, even if there is no direct replacement, the activity can only be considered to contribute to *preventing deterioration of bodies of water that already have good status* if the pressure exerted by the activity is at a level that does not lead to the deterioration of that same status. Just having a pressure level lower than the sector average would not be sufficient. This follows from the drafting of the “chapeau text” of Article 12. The practical relevance of this case for the sectors teams may well be limited³⁶.

The following table provides an overview of these cases.

³⁶ This is because such a situation may be unlikely to arise in practice, an possible example being a new industrial installation that is constructed according to state-of-the-art technology which avoids deterioration of the status of a water body already in good status.

	<i>The water body has good status</i>	<i>The water body does not have good status</i>
<i>Activity directly replaces another activity with higher pressures on the same water body</i>	Contributes to preventing deterioration (subject to compliance with TSC)	Contributes to achieving good status ³⁷ (subject to compliance with TSC)
<i>Activity does not directly replace another activity</i>	Contributes to preventing deterioration (subject to compliance with TSC and depending in particular on level of pressure exerted by the activity)	<i>Does not</i> contribute to achieving good status

A final case is the one whereby an activity is linked to a water body not in good status, but where the activity is performed in a way that the water body subsequently reaches good status. This situation would require TSC that follow the impact-based (or ‘environmental-outcome’) approach. Whether or not this is practical way forward would remain to be analysed on a case-by-case basis.

The above guidance rests on the legal interpretation that **activities with the same level of pressures can be treated differently based on the water body they affect (i.e. their location)**³⁸, as the situation of a body of water of good status is not comparable to the situation of a body of water of bad status. Therefore, the same activity may or may not qualify depending on the status of the relevant body of water.

Implications for how TSC have been developed for different activities

The following guidance was used in the development of TSC for activities prioritised for the water objective – this is reflected in the criteria within this consultation report.

³⁷ This could also cover cases of a water body in good *potential*, in view of bringing it to good *status*.

³⁸ The Commission’s Legal Service confirmed this would be appropriate and would not violate Art. 19.1(j), which requires that criteria “ensure that those activities are treated equally if they contribute equally towards the environmental objectives set out in Article 9 of this Regulation, to avoid distorting competition in the market”.

- A new activity potentially affecting the ecological (biological, hydromorphological, physio-chemical) status or the chemical status of a body cannot be considered a substantial contribution to the water objective.
 - Example: Construction of new ports, inland waterways, hydropower plants, or their extension; construction of new industrial facilities not replacing another more polluting one.
 - The promotion of best practices to reduce environmental impacts could be captured by including a retrofit activity that would require mitigation measures to reduce impacts of existing plants (such as being done in ST6 for existing hydropower plants). The other approach is to leave out such activities from the water part of the taxonomy given that some of these are already addressed in the 1st DA with DNSH criteria for water (for example hydropower criteria in the 1st DA). Alternatively, and where GHG emissions are not the most relevant impact, an option would be to develop substantial contribution criteria for another relevant environmental objective, with DNSH criteria for water.
- Where an activity addresses water pollution aspect (rather than water use), consider “re-branding” of the TSC as substantial contribution to the pollution objective (given Art. 14 covers pollution to water)
 - Example from current draft TSCs:
 - Maritime transport defines substantial contribution to pollution.
 - Any industrial activity emitting pollutant effluents into bodies of water and which hence can be addressed under Article 14. Where such processes would also have a material impact in terms of water use, DNSH criteria for water can address this impact.
- Consider that improving water use efficiency could be addressed under the circular economy objective, note Article 13(1)(a) on using natural resources more efficiently.
 - Example from current draft TSCs:
 - Criteria for manufacturing of leather and related products address techniques to reduce the water consumption. Therefore, this could be tackled under the circular economy objective as resource efficiency measures.
- Using the impact-based approach (see step 5 in the template for the development of TSC) instead of previously followed approaches (e.g. best-in-class).
 - A possible criterion could be for manufacturing of paper where it replaces directly the same activity with higher pressures in the same water body - which does not have good status. The impact of the replaced activity must help

achieve the good status the water body, for example by reducing its water use by implementing closed loop systems. Therefore, the criteria could be formulated as “Further to the replacement of an activity with higher pressure on the affected water body, the water abstraction from the paper manufacturing activity result in the water body achieving good status”

- Consider whether the activity could be redefined as an enabling activity, i.e. following a type 2 approach as above
 - Example: growing of (non-)perennial crops: consider developing criteria for the installation of water-efficient irrigation systems and/or safe re-use of reclaimed water when feasible, with safeguards to avoid over-abstraction³⁹.

6.2. Clarifying substantial contribution to objective 4 - Transition to Circular economy

This section describes how to develop a converging and coherent set of activity-specific criteria for defining substantial contribution as part of the transition to a circular economy. This is the most challenging environmental objectives because it is a relative new concept in scientific literature.

The starting point and guiding principle for defining these criteria is the overall ambition level for transitioning to a circular economy, which the taxonomy should help to achieve. This definition itself, builds on the related state of science and relevant (EU and international) strategies and policies, which already comprise a set of more concrete criteria, indicators and timelines. These are closer in nature to the TSC and should be able to inform the definition of substantial contribution and DNSH.

In 2015, the first circular economy action plan was adopted by the European Commission. It included measures to help stimulate Europe's transition towards a circular economy, boost global competitiveness, foster sustainable economic growth and generate new jobs. The action plan established concrete and ambitious actions, with measures covering the whole life cycle: from production and consumption to waste management and the market for secondary

³⁹ For example the draft delegated act from November 2020 included as part of DNSH criteria to water for crop production activities “*where the activity involves water abstraction, a permit for water abstraction has been granted by the relevant authority for the activity, specifying conditions to avoid significant impact on water bodies*”.

raw materials and a revised legislative proposal on waste. On 4 March 2019, the European Commission adopted a comprehensive report on the implementation of the action plan.

The European Commission adopted a new and more detailed circular economy action plan (CEAP) in March 2020. This more detailed action plan is a fundamental part of the European Green Deal. It includes 35 actions and establishes the pathway for a transition to a circular economy by reducing the pressure on natural resources, creating sustainable growth and jobs, achieving the EU's 2050 climate neutrality target and halting biodiversity loss. It identifies initiatives along the entire life cycle of products: promoting eco-design and circular economic processes, encouraging sustainable consumption, preventing waste and reducing resource consumption.

Defining Substantial Contribution

A clear and robust methodological approach to determine and define how an activity can make a substantial contribution to the transition to a circular economy was developed within the JRC draft report 'Development of the EU Sustainable Finance Taxonomy – A framework for defining substantial contribution for environmental objectives 3-6'⁴⁰. The methodological concepts set out in the draft JRC report have proven to be successfully applicable in the work of the Platform on Sustainable Finance (PSF) and so were implemented in the same way in collaboration with JRC. No further development or modification of the methodological approach had to be undertaken by the PSF.

The concept of JRC's methodological approach to defining substantial contribution to the environmental objective of transition to circular economy is based on the Taxonomy Regulation and presented within this section. Thereby, the Taxonomy Regulation (Art. 2) defines 'circular economy' as:

'an economic system whereby the value of products, materials and other resources in the economy is maintained for as long as possible,

- *enhancing their efficient use in production and consumption, thereby*
 - *reducing the environmental impact of their use,*
 - *minimising waste and the release of hazardous substances at all stages of their life cycle,*

⁴⁰ This report was provided as an initial reference for the PSF work and is now under internal review, hence not yet publicly available

- *including through the application of the waste hierarchy.'*

Article 13 of the Taxonomy Regulation further specifies a list of means by which an activity can make a substantial contribution to this objective:

'An economic activity shall qualify as contributing substantially to the transition to a circular economy, including waste prevention, re-use and recycling, where that activity:

(a) uses natural resources, including sustainably sourced bio-based and other raw materials, in production more efficiently, including by:

(i) reducing the use of primary raw materials or increasing the use of by-products and secondary raw materials; or

(ii) resource and energy efficiency measures;

(b) increases the durability, reparability, upgradability or reusability of products, in particular in designing and manufacturing activities;

(c) increases the recyclability of products, including the recyclability of individual materials contained in those products, inter alia, by substitution or reduced use of products and materials that are not recyclable, in particular in designing and manufacturing activities;

(d) substantially reduces the content of hazardous substances and substitutes substances of very high concern in materials and products throughout their life cycle, in line with the objectives set out in Union law, including by replacing such substances with safer alternatives and ensuring traceability;

(e) prolongs the use of products, including through reuse, design for longevity, repurposing, disassembly, remanufacturing, upgrades and repair, and sharing products;

(f) increases the use of secondary raw materials and their quality, including by high-quality recycling of waste;

(g) prevents or reduces waste generation, including the generation of waste from the extraction of minerals and waste from the construction and demolition of buildings

(h) increases preparing for the re-use and recycling of waste;

(i) increases the development of the waste management infrastructure needed for prevention, for preparing for re-use and for recycling, while ensuring that the recovered materials are

recycled as high-quality secondary raw material input in production, thereby avoiding downcycling;

(j) minimises the incineration of waste and avoids the disposal of waste, including landfilling, in accordance with the principles of the waste hierarchy;

(k) avoids and reduces litter; or

(l) enables any of the activities listed in points (a) to (k) of this paragraph in accordance with Article 16.’

Types of substantial contribution

Based on the Taxonomy Regulation the JRC draft report⁴¹ defines four high-level categories to define substantial contribution to the circular economy. From a material life-cycle perspective, the first three categories represent one phase of the circular economy loop (production – use – recovery), while the fourth one applies all along the way. The four categories are:

- Circular design & production: design and produce products and materials with the aim of retaining long-term value and reducing waste; promoting dematerialization by making products redundant or replacing with radically different product or service;
- Circular use: life extension and optimized use of products and assets during use phase with the aim of retaining resource value and reducing waste to help improving usage and supporting service;
- Circular value recovery: capture value from products and materials in the after-use phase; and
- Circular support: develop enabling digital tools and applications, education and awareness raising programmes, and advisory services to support circular economy strategies and business models (see Figure 7).

Throughout the life-cycle, operators may reduce pressures on the environment compared to the current baseline by performing their activity in a more environmental-friendly way or by substituting harmful activities. This also involves manufacturing a product with significantly longer lifetime and designing it to help it retain value (especially at the end-of-life) compared

⁴¹ This report was provided as an initial reference for the PSF work and is now under internal review, hence not yet publicly available

to a similar linear product. Operating in this way would make a positive contribution. However, no activity supporting the transition to a circular economy is considered to improve the state of the environment directly because the environmental objective represents a response to reduce the environmental impact of an activity. Indeed, activities are deemed circular by comparison with the linear model and only act relatively to this baseline by reducing the pressure (or enabling such reduction).

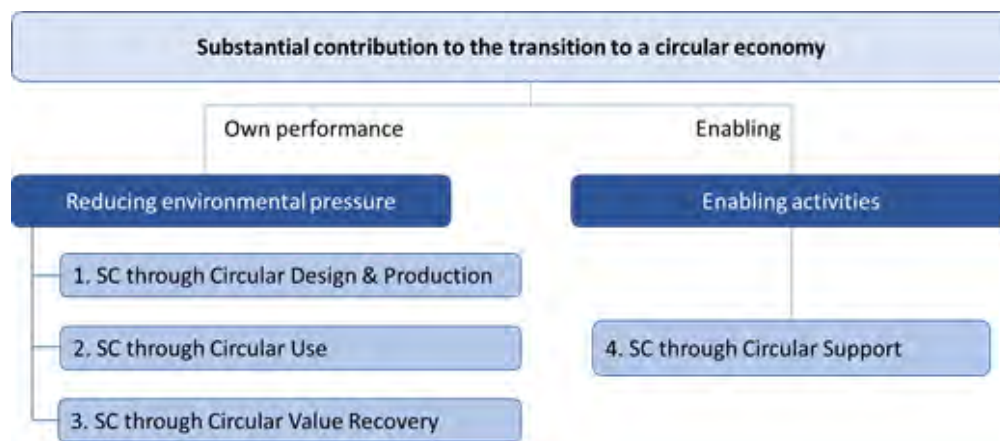


Figure 7: Types of Substantial contribution to the transition to a circular economy

Finally, activities can contribute to the circular economy objective by enabling other circular activities to take place and so reducing the pressure on the environment. Possible examples include advisory services, ICT tools for predictive maintenance, virtual marketplaces for second-hand products, and secondary materials, for instance, represent possible examples.

SC 1 - Circular design & production

Choices made during the design phase will have an impact throughout the life cycle of the product. The EU policy on the circular economy in general, and the Taxonomy Regulation specifically insists on the potential of the design and manufacture phases to enhance durability, reparability, upgradability, reusability, recyclability, and the use of non-hazardous, reusable, recyclable, traceable bio-sourced and secondary raw materials.

As such, the technical working group identified four types of issues that may be relevant depending on the activity:

- Expected lifetime of the product of the activity and its parts and materials (how long can products and materials be kept in use, through measures such as resource efficiency, durability, functionality, modularity, upgradability, easy disassembly, and repair).

- Materials used by the economic activity (designing out substances of concern; increasing the share of reusable, recyclable, traceable bio-sourced, compostable, and secondary raw materials; reducing the use of primary raw materials).
- Ensuring the products of the activity can be remanufactured, prepared for re-use, or recycled when reaching their end of life (through measures such as design for recyclability, traceability of materials contained in products).
- Production processes (and enabling technology) that reduce waste by closing material loops and introducing production residues and by-products of other processes (e.g. through industrial symbiosis) in a manner that goes beyond standard industry practice. Pooling resources and optimised logistics also contribute in that direction.

SC 2 - Circular use

Once products or services enter their use phase, several actions can be carried to optimize their lifetime and use. The substantial contribution to improving circular use can be split into two (not necessarily mutually-exclusive) categories:

- Life extension: Prolong the product or component lifetime (through maintenance, repair; reuse, refurbishment, remanufacture, and repurpose activities). The attention should be on the environmental cost of such a life extension compared to a product replacement (quantity of energy and resource needed, waste and pollution generated).
- Intensive use: Make the product's use more intensive, notably through innovative business models (e.g., through product-as-a-Service, pay-per-use, subscription, reuse and, sharing models, etc.). Attention should be paid to measuring offset effects on lifetime (e.g. increase intensity may lead to shortened lifetime, e.g.).

Longer and more intensive use of products both contribute to reducing the need for new products: if not one but two people can use one product instead of one, or if the product lasts twice longer, the need for a second similar product disappears, together with the associated environmental impact. Life-cycle considerations are key here.

SC 3 - Circular Value Recovery

Activities related to end-of-life, waste management, and waste valorisation ultimately reduce the pressure on the environment. First, they reduce the amount (and sometimes toxicity) of waste disposal. Second, by contributing to restoring with secondary raw materials the stock of materials available for human activities, they help reduce the pressure on virgin materials and

the impacts associated with extraction. The Waste Framework Directive⁴² establishes the waste hierarchy (i.e., a priority order in waste prevention and management): 1/ Prevention, 2/ Preparation for re-use, 3/ Recycling, 4/ Recovery, 5/ Disposal.

SC 4 - Circular Support

Activities reducing the environmental pressures through circular means can be fostered by enabling activities. There are two categories of enabling activities can be distinguished:

- Enablers that act on individual activities listed above (own performance activities for substantial contribution types 1, 2 and 3) to improve their impact. Examples include advisory services, activities providing (digital) tools for eco-conception, predictive maintenance, resource efficiency, development and manufacturing of equipment and machinery intended to enable circular production and waste management.
- Enablers that intervene at the interface between different activities. Indeed, as a material-stream-oriented objective, the circular economy requires to better handling the transfer of material between different operators, particularly when the waste of one operator can be a resource for another. Examples may include digital marketplaces for second-hand products or materials and activities involved in setting up industrial symbiosis strategy (e.g. installing of pipelines to transfer waste heat).

6.3. Clarifying substantial contribution to objective 5 - pollution prevention and control

This section describes how to develop a converging and coherent set of activity-specific criteria for defining substantial contribution to pollution Prevention and Control. This reduces the pressure in a DPSIR model and refers to the reduction of all emissions.

The starting point and guiding principle for the definition of these criteria is the overall ambition level for transition to a zero-pollution continent by 2050 which the taxonomy must aim to help achieve. This definition itself, builds on the related state of science and relevant (EU and international) strategies and policies, which already comprise a set of more concrete criteria,

⁴² <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32008L0098>

indicators and timelines. These are closer in nature to the TSC and should be fed into the definition of substantial contribution and DNSH.

On 12 May 2021, the European Commission adopted the EU Action Plan: 'Towards a Zero Pollution for Air, Water and Soil (and annexes)' - a key deliverable of the European Green Deal. The **zero-pollution vision for 2050** is for air, water and soil pollution to be reduced to levels no longer considered harmful to health and natural ecosystems, that respect the boundaries with which our planet can cope, thereby creating a toxic-free environment.

This is translated into key 2030 targets to speed up reducing pollution at source. These targets include:

- improving air quality to reduce the number of premature deaths caused by air pollution by 55%;
- improving water quality by reducing waste, plastic litter at sea (by 50%) and microplastics released into the environment (by 30%);
- improving soil quality by reducing nutrient losses and chemical pesticides' use by 50%;
- reducing by 25% the EU ecosystems where air pollution threatens biodiversity;
- reducing the share of people chronically disturbed by transport noise by 30%, and
- significantly reducing waste generation and by 50% residual municipal waste.

Defining substantial contribution

In the same way as for the environmental objective of circular economy, the TWG applied the methodological approach to determine and define a substantial contribution to pollution prevention and control was applied based on the concepts presented in the JRC draft report 'Development of the EU Sustainable Finance Taxonomy – A framework for defining substantial contribution for environmental objectives 3-6'⁴³. These concepts have proven to be successfully applicable in the work of the PSF and so were implemented identically without further developing or modifying the methodological approach.

In general terms, the impact of pollution on the environment can be classified according to the source of pollution or the type of pollution generated. The main sources of pollution are

⁴³ This report was provided as an initial reference for the PSF work and is now under internal review, hence not yet publicly available

industrial activities, transport, agriculture, municipal waste, and other decentralised sources of pollution (e.g. small combustion).

The concept of JRC's methodological approach to defining substantial contribution to the environmental objective pollution prevention and control is based on the Taxonomy Regulation and presented within this section. The Taxonomy Regulation (Article 2(10)) defines a pollutant as *'a substance, vibration, heat, noise, light or other contaminant present in air, water or land which may be harmful to human health or the environment, which may result in damage to material property, or which may impair or interfere with amenities and other legitimate uses of the environment.'*

Moreover, Article 14 of the Taxonomy Regulation specifies a list of means by which an activity can make a substantial contribution to this objective:

'An economic activity shall qualify as contributing substantially to pollution prevention and control where that activity contributes substantially to environmental protection from pollution by:

- a) preventing or, where that is not practicable, reducing pollutant emissions into air, water or land, other than greenhouse gasses;*
- b) improving levels of air, water or soil quality in the areas in which the economic activity takes place whilst minimising any adverse impact on, human health and the environment or the risk thereof;*
- c) preventing or minimising any adverse impact on human health and the environment of the production, use or disposal of chemicals;*
- d) cleaning up litter and other pollution; or*
- e) enabling any of the activities listed in points (a) to (d) of this paragraph in accordance with Article 16.'*

Types of substantial contribution

The JRC methodology identified four types of substantial contribution for an activity to substantially contribute to the environmental objective of pollution prevention and control (See Figure 4):

- 1. SC 1A: preventing or, where that is not practicable, reducing direct emissions of pollutants** to air, water and land. Activities with high direct pollution emissions (in sectors such as agriculture, transport, manufacturing, etc.) can reduce the pressure they directly exert on the environment compared to the baseline.

2. **SC 1B: designing out indirect pollution.** Activities manufacturing products or providing services with high emissions over their life-cycle can reduce the overall pressure exerted on the environment by designing the product or service in such a way that reduces or eliminates these emissions. This includes:
 - emission from the use phase (for instance, considering a car manufacturing activity tackling and minimizing the emissions of its cars during use phase);
 - emissions from the end-of-life phase (for instance, a battery manufacturer reducing potential environmental impacts of the end-of-life product or ensuring safe recovery)
 - upstream emissions if relevant (an activity selecting materials or components that have lower emissions during the extraction or production phase).
3. **SC 2: cleaning up pollution.** Activities performing remediation may directly improve the state of the environment. For instance, the remediation of a former industrial site where land is polluted with chemicals or technologies cleaning litter pollution from the ocean.
4. **SC 3: enabling any of the activities above.** An activity, for instance, providing solutions to measure or abate pollutants' emissions (e.g. manufacturing of NOx filters).

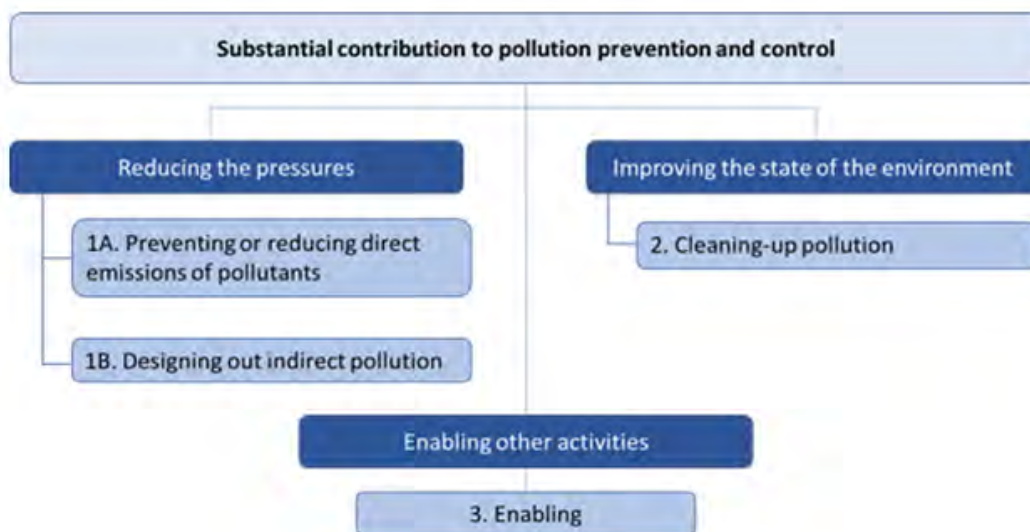


Figure 8: Types of substantial contribution to pollution prevention and control

SC 1A - Reducing direct emissions of pollutants

Some activities are directly responsible for emitting of large amounts of pollutants into the air, land or, water. This can either be point pollution (e.g. plants emitting SOx into the atmosphere) or diffuse pollution (e.g., agriculture responsible for the deposition of NH3 emissions in the soil

across the fields, as well as water pollution due to nitrogen runoff). Those direct emissions can be reduced with incremental improvements (for instance, improving the processes to reduce or better filter the pollutant emissions), or transformational change (removing the pollutions with paradigm change, for instance, switching from a diesel car to an electric vehicle for a transport operator).

SC 1B – Designing out indirect pollution

Choices made during the design phase will impact the life cycle of the product. This type of substantial contribution recognizes some activities' ability to limit/avoid pollution caused during the upstream and downstream life cycle stages. This type of substantial contribution covers activities that can limit/avoid pollution generated in the upstream phase of their operation (e.g., by selecting components that have lower emissions during the extraction or production phase or by reducing the amount of feedstock materials used) and in the downstream phase (e.g. resource-efficient end-of-life treatment of the products manufactured) are covered under this type of substantial contribution.

SC 2 - Cleaning up pollution

Activities remediating polluted water bodies (also refer to the Water objective – Section D), land and air have a positive impact and contribute to the pollution prevention and control objective by directly improving the state of the environment.

SC 3 – Enabling activities

Several activities may contribute to the pollution objective by enabling a reduction in the pressure on the environment or by improving the state of the environment. Examples of such activities include:

- Providing equipment or technologies to prevent or reduce the emissions of other activities (e.g. installation of a piece of depollution equipment), traceability solutions or solutions for remediation, as well as managing of take-back schemes for products at their end-of-life.
- Activities providing information or advice: for instance, consultancy services for environmental-friendly product design, information or training to users for proper management of products during their use-phase and end-of-life

6.4. Clarifying substantial contribution to Objective 6 – The protection and restoration of Biodiversity and Ecosystems

This section describes how to develop a converging and coherent set of activity-specific criteria for defining substantial contribution and do no significant harm to biodiversity and ecosystems

For the ambition statement to become operational and to inform the development of the technical criteria for biodiversity, some terms need to be elaborated. Ambition levels may need to be defined by ecosystem (for example drawing on ecosystem specific targets), the terms “sufficient and adequate” levels of biodiversity protection and restoration as well as “good ecological condition” need to be defined in terms of both quantity and quality; and (for restoration in particular), will need to be defined against a baseline.

The EU Biodiversity Strategy for 2030 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 biodiversity framework at the 15th Conference of the Parties to the Convention on Biological Diversity.” The ambition should be that, “by 2050 **all of the world’s ecosystems are restored, resilient, and adequately protected**. The world should commit to the biodiversity net-gain⁴⁴ principle to give nature back more than it takes. As part of this, the world should commit to no human-induced extinction of species.”

The EU Strategy for 2030 sets as a milestone, the objective “to ensure that **Europe’s biodiversity will be on the path to recovery by 2030** for the benefit of people, the planet, the climate and our economy, in line with the 2030 Agenda for Sustainable Development and with the objectives of the Paris Agreement on Climate Change.” The overall ambition is to ensure **by 2030 no deterioration in conservation trends and status** of all protected habitats and species and to ensure that **at least 30% of species and habitats** not currently in favorable status are in that category or show a strong positive trend. Moreover, the

⁴⁴ The definition of net gain which the MDB’s including the EIB use is as follows: Biodiversity Net Gain is an approach to development that leaves biodiversity in a better state than before. Biodiversity Net Gain relies on the application of the mitigation hierarchy to avoid, mitigate or compensate for biodiversity losses. Biodiversity Net Gain must be defined relative to an appropriate reference scenario.

forthcoming EU Nature Restoration Plan⁴⁵ aims to “bring diverse and resilient nature back to all landscapes and ecosystems. This means reducing pressures on habitats and species” and ensuring **all management and use of ecosystems is environmentally sustainable and all ecosystems are in a good ecological condition.**

Defining Substantial Contribution

Implementing the EU legal framework for nature restoration requires clear and binding targets and timelines, as well as clear definitions and criteria on restoration and/or the sustainable use⁴⁶ of ecosystem services.

The starting point for the definition is Art.15 of the Taxonomy Regulation (TR) which states that “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.” (see Article 15 of the Taxonomy Regulation for the full text)

General consideration for breaking down the headline ambition level

To inform the development of the technical criteria for biodiversity:

- ambition levels at an economic activity level may need to be defined by ecosystem, ensure terrestrial, marine and freshwater systems are mentioned and differences between them defined where appropriate;
- restoration needs to be defined against a baseline and/or end-state; and

⁴⁵ The current understanding is that the corresponding legal draft is expected towards the end of this year. The Impact Assessment is currently still under preparation.

⁴⁶ "Sustainable use" means the use of components of biological diversity in a way and at a rate that does not lead to the long-term decline of biological diversity, thereby maintaining its potential to meet the needs and aspirations of present and future generations.

- the term “adequate” levels of biodiversity protection and restoration as well as the “good conditions of ecosystems” referred to in Art.15, need to be defined in terms of quantity and quality

For the purpose of providing additional guidance on these concepts and definitions, the team working on environmental objective 6 are currently preparing an informal glossary, which could serve as a “living” reference document for sector teams.

The EU Biodiversity Strategy already provides for a set of qualitative and quantitative targets, which can inform the definition of *significant contribution and do no significant harm*⁴⁷ to biodiversity at activity level (Annex A2: Relevant targets & reference points for headline objectives).

Substantial contribution types

The methodology initially and for lack of more elaborate guidance followed to develop TSC for biodiversity was that from the draft JRC report on substantial contribution to objectives 3 to 6 (“Taxo4 report”). The Taxo 4 report defines three types of SC to Biodiversity (excluding enabling activities) as follows:

- SC 1: Activities that actively or passively improve the condition of ecosystems or maintaining it in good condition.
- SC 2A: Activities that are undertaken in such a way that the pressure they are responsible for are kept to a sustainable level, i.e. a level below which there is no harmful effect on the ecosystem.
- SC 2B: Activities that are undertaken in such a way that the pressure on the environment is much lower than the baseline (i.e. if a similar activity was taking place instead), but are higher than the sustainable level and thus have a harmful effect on the ecosystems compared to no activity taking place (reduction of biodiversity or ecosystem services).

The SC types have now been developed further, based on a substantial review of relevant practices and references frameworks and reflecting initial discussions from sector teams. ‘This

⁴⁷ as well as, for the further development of the taxonomy currently discussed in SG3, low-impact and significant harm to

has led to the development of a new and updated classification system for types of substantial contribution to the biodiversity objective, as described in Table 1 below’.

To facilitate a clear understanding of how SC types can be applied to a given environmental objective for specific economic activities, we have interpreted them to cover semi-natural or natural ecosystems (SC1) and managed ecosystems (SC2), and have provided greater disaggregation in terms of the types of contribution that can be made. In Table 1 we summarise in a stepwise approach, how an economic activity can deliver a substantial contribution to the biodiversity and ecosystem objective. In the following sections we show how and why these definitions have been adjusted to become more fit for the purpose of informing the development of SC (and DNSH) criteria using four questions:

1. Does the type of activity comply with the Art.15 definition of SC?
2. Can we associate the type of activity with (any of) the categories defined below (SC1-3)?
3. Can we apply existing targets (Annex A2: Relevant targets & reference points for headline objectives)?
4. Can we provide the required break-down definitions for ecosystem specific ambition, restoration baseline and the desired state of protection and ecosystem condition?

Table 4: Stepwise approach to determine if an activity can make a substantial contribution to the biodiversity objective

SC 1A Does the economic activity in its own right <u>directly</u> maintain or protect the good ecological condition of specific ecosystem(s)	yes	SC 1A	CONSERVE STATE of (semi-) natural ecosystems
	no	Economic activity cannot make a SC under SC 1A, go to SC 1B	
SC 1B Does the economic activity in its own right <u>directly</u> and substantially improve the condition of an ecosystem compared to its current condition? Progress needs to be assessed against the baseline condition and reference reporting period ⁴⁸ .	yes	SC 1B	IMPROVE STATE of (semi-) natural ecosystems
	no	Economic activity cannot make a SC under SC 1B, go to SC 2A	
SC 2A Does the economic activity in its own right allow for a sustainable use of a managed ecosystems? This should include robust scientific information and recognised	yes	SC 2A	MAINTAIN SUSTAINABLE USE of managed ecosystems

⁴⁸ CBD “Comment on Baselines for SBSTTA 24 Item 3”

national/EU/international references indicating a quantitative threshold within which the **existing** economic activity is able to achieve a sustainable use of the ecosystem(s), as defined in the CBD⁴⁹. The existing activity⁵⁰ shall also:

- not result in net increase of pressure on natural resource;
- prove through third party verification that it can respect this threshold over time.
- have reached compliance with best-in-class sector standards

SC 2B

Does the economic activity or measure lead in its own right to a reduction of the existing pressure on the managed ecosystem, contributing to reach the sustainable use level and complying with requirements under SC 2A?

The activity or measure shall also:

- Be commensurate in level and time to the relevant environmental objective; and
- be accompanied by a credible and time-bound plan to reach the sustainable use level;

Progress needs to be assessed against the baseline condition and reference reporting period^{51,52}.

SC 3

Does an economic activity or measure significantly contribute to mitigating⁵³ the damage/impact caused by a previous activity/measure (“legacy impact”)

This is only applicable if:

- a) The economic activity or measure has an effect of net reduction of the pressure already exerted by an existing activity.
- b) An adaptive management system based on a monitoring plan is in place to verify reduction of pressure over time.
- c) Impact/damage that is being mediated happened before the remediation activity (with a clear reference to the baseline period and baseline condition)⁵⁴ and is not directly related to it
- d) The mitigation activity is not required by law

no	Economic activity cannot make a SC under SC 2A, go to SC2B	
yes	SC2B*	REDUCE PRESSURE on managed ecosystems
no	Economic activity cannot make a SC under SC 2B, go to SC3	
yes	SC 3**	REDUCE PRESSURE Mitigation of a previous impact
no	Economic activity cannot make a SC.	

Note: * Only the expenditure related to the transition to the sustainable use level can count as SC. ** Only the expenditure related to the mitigation activity or measure can count as SC.

⁴⁹ CBD, Art. 2 defines “sustainable use” as follows: Art 2: “‘Sustainable use’ means the use of components of biological diversity in a way and at a rate that does not lead to the long-term decline of biological diversity, thereby maintaining its potential to meet the needs and aspirations of present and future generations.”

⁵⁰ Existing Activities are intended as those where land use change and/or morphological modification of water body has already occurred in the past.

⁵¹ CBD “Comment on Baselines for SBSTTA 24 Item 3”

⁵² CBD “Comment on Baselines for SBSTTA 24 Item 3”

⁵³ The EU Guidance on Integrating Ecosystems and their Services into Decision-Making Summary for Policymakers in Government and Industry adopted by the European Commission also explicitly discusses the mitigation hierarchy and conditions applicable to mitigation activities. https://ec.europa.eu/environment/nature/ecosystems/pdf/8461_Summary%20EU_Guidance_Draft_02_17.07.2020.pdf

⁵⁴ For guidance on baseline condition and period, please refer to the “Comment on Baselines for SBSTTA 24 Item 3”

The logic for the above table, and thus the elaboration of the Taxo 4 methodology is based on the following key factors.

1. There is a material difference between (semi-) natural ecosystems (such as a native forest) and those which are subject to a high degree of modification (such as grazed land). Both have important biodiversity, but the desired end state for the ecosystem requires a nuance in approach when developing TSC.
2. Maintaining state (where already good) and improving state (where poor) are important in both (semi-) natural and managed ecosystems
3. Reducing pressures on ecosystems is an important activity that should be supported through the Taxonomy, but only where a substantial and genuine state change is realised, rather than small, incremental changes that do not deliver on the headline ambition level.
4. There are cases where one economic activity may be addressing and mitigating the legacy harmful impact of another. These activities should be supported by the Taxonomy, but are specific in nature and different from an activity improving its own performance.

In the stepwise approach, SC 1A and B focus on (semi-) natural systems to maintain state (1A) and improve state (1B). SC 2A and B focus on managed systems where the ecosystem is not natural, and relies on management for its maintenance (such as high nature value farmland). The distinction here is to maintain the sustainable management of these ecosystems where their state is good (2A); or to improve the state of these ecosystems by ensuring that management activities are such that pressures on the ecosystem are reduced to a sustainable use level (2B). SC3 allows for those activities that may be remediating or addressing a legacy impact caused by a previous economic activity, with a focus on addressing the legacy pressures caused.

In theory, the SC 2 type activities are more or less straight forward, as there is indeed a level of pressure acceptable to the ecosystem that matches its regeneration capacity. **In practice**, however, identifying this level of sustainable use for each economic activity is not a minor task. The MAES⁵⁵ has made substantial progress in describing the state of ecosystem services in

⁵⁵ The Biodiversity Strategy called on Member States to map and assess the state of ecosystems and their services in their national territory with the assistance of the European Commission. This ongoing work is part of the EU methodology to map, assess and achieve good condition of ecosystems so they can deliver benefits such as climate regulation, water regulation, soil

Europe but is not geared to provide a specific threshold of acceptable impact for each ecosystem type and for each type of economic activity⁵⁶. The state of knowledge in this regard differs between types of ecosystems: for the marine environment very little is known compared to terrestrial ecosystems. Some activities like fisheries have been subject to years of research that allowed the identification of maximum levels of fishing effort for specific populations of commercial species. Despite all the effort in deriving these thresholds they require constant monitoring and update and they are difficult to apply to regulate fishing activities in practice. Identifying these thresholds of sustainable use for all kinds of economic activities is extremely complex. We are simply unable to understand and measure the level of acceptable pressure in all conditions for all ecosystems and their complicated connections.

As a result, this SC Type should be treated with caution and **applied only where sufficient research and data has allowed the identification of a sustainable level of pressure, i.e. a level that matches the regeneration capacity of the affected ecosystem.**

Regarding SC 3, any intervention/measure that can reduce the operational impacts on biodiversity of an existing infrastructure (e.g. wildlife passages on a road etc.) would reduce the pressure and could be considered as a SC, if measurable conservation outcomes with that activity can be demonstrated. Only the expenditure (be in OPEX or CAPEX) related to the interventions/measures that directly contribute to reducing the pressure would be counted as taxonomy aligned.

The specific case of offsetting

Offsetting is the process or practice of compensating for an impact incurred by a particular activity, by implementing another activity that helps to mitigate that same impact. It is not the process of substitution with a cleaner activity. It is an add-on as compensation to an activity that is not providing a direct substantial contribution to an environmental objective.

- Compensation takes place in the same area/ecosystem where the activity is causing a pressure;

health, pollination and disaster prevention and protection. The final assessment has to be adopted by the end of 2021 to support the legally-binding biodiversity restoration targets. [Mapping and Assessment of Ecosystems and their Services - MAES - Environment - European Commission \(europa.eu\)](#).

⁵⁶ In addition, the pressure on the ecosystem can come from several activities (whether these are part of the same sector / category of activities or from different sectors), while taxonomy criteria in principle define a maximum level of pressure for a single activity / installation / asset.

- Offsetting can take place in another location, which, from a biodiversity point of view is problematic as ecosystems have different tipping points and pressures cannot be compensated or “exchanged” across ecosystems (unlike climate).

In the biodiversity context, the Business and Biodiversity Offsets Programme (BBOP), an international collaboration for the development of offset methodologies, defines biodiversity offsets as *‘the measurable conservation outcomes resulting from actions designed to compensate for significant residual adverse biodiversity impacts arising from project development after appropriate prevention and mitigation measures have been taken. The goal of biodiversity offsets is to achieve no net loss and preferably a net gain of biodiversity on the ground with respect to species composition, habitat structure, ecosystem function and people’s use and cultural values associated with biodiversity’*⁵⁷.

Two examples:

- In the context of climate mitigation where emissions caused by one activity are offset by paying for the implementation of an activity which reduces GHG emissions (the purchasing of offsets).
- In the context of biodiversity and ecosystem management where the degradation, loss or destruction of a habitat or ecosystem is offset by the restoration of habitat or an ecosystem in another location.

Offsetting is relatively common practice in a number of economic sectors, particularly those where there is limited (or economically limited) potential to mediate a given impact, such as construction on greenfield sites, mining, etc. However, the Taxonomy does not seek to mimic industry standards, but instead, aims to define, on a scientific basis, the steps and activities necessary to ensure the EU’s environmental objectives are met and supported (not undermined) by green finance.

There are various reasons that make the use offsetting inappropriate as a means to deliver substantial contribution to an environmental objective in the Taxonomy.

1. Offsetting was not considered suitable for the climate mitigation objective, which sets precedence for consistency in the Taxonomy. For Climate Mitigation and Adaptation, the Technical Expert Group (TEG) who supported the Commission in the

⁵⁷ Business and Biodiversity Offsets Programme (BBOP): Biodiversity Offset Design Handbook | BES-Net (besnet.world)

development of the first Delegated Act of the Taxonomy, considered that offsetting was not an appropriate means by which an activity could contribute substantially to the stabilisation of greenhouse gas emissions. Equally offsetting would not enable the economic activity to be consistent with the long-term temperature goal of the Paris Agreement unless compensated emissions were higher than those caused by the activity and were achieved within the same year/short term time period of the activity – i.e. no lag-time. This sets a clear precedent for the relevance of offsets in the definition of substantial contribution to the other environmental objectives of the Taxonomy.

- 2. Offsetting as an approach is the last step of the mitigation hierarchy, after harm has taken place.** The mitigation hierarchy is a corner stone of impact assessment and is routinely applied in the context of Environmental Impact Assessment (EIA) to reduce the potential impact of projects. The practice is embedded and clearly mentioned in the EIA Directive⁵⁸ and the Habitats Directive. In addition, it is widely applied in financial institutions (not least because observing the hierarchy is required by IFC performance standard 6, EIB Standard 3, EBRD PR 6, WB ESS)⁵⁹. In the mitigation hierarchy, offsets are the last resort set of measures in the series of essential sequential steps that must be taken **to limit any negative impacts** on biodiversity. Therefore, it seems obvious to associate the application of the mitigation hierarchy to a DNSH requirement and, as such, not sufficient to determine a SC⁶⁰.

- 3. Offsetting activities are separate and distinct from impacting activities and are separated in the Taxonomy NACE structure.** Offsetting is, by its very nature, the recognition that an impact will occur through the implementation or operation of that activity, and cannot be avoided. Thus, in order for the impact to ‘net out’, it needs to be countered by another activity that takes place elsewhere (i.e. the offset). In the context of

⁵⁸ Directive 2014/52/EU, Art.5, para 1: *‘Where an environmental impact assessment is required, the developer shall prepare and submit an environmental impact assessment report. The information to be provided by the developer shall include at least: (c) a description of the features of the project and/or measures envisaged in order to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment’.*

⁵⁹ International Finance Corporation’s Guidance Note 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources. January 1 , 2021 (updated June 27, 2019), p.10-11.

⁶⁰ More recently, an EU Guidance on Integrating Ecosystems and their Services into Decision-Making Summary for Policymakers in Government and Industry has been adopted by the European Commission. https://ec.europa.eu/environment/nature/ecosystems/pdf/8461_Summary%20EU_Guidance_Draft_02_17.07.2020.pdf

the Taxonomy, this creates a separation between an activity that causes the impact and an activity that causes the improvement⁶¹. The Taxonomy technical screening criteria are developed at the economic activity level. The Taxonomy avoids taking any stance on aggregate performance whether at company, objective or sector level, even if in practice the implementation of multiple economic activities may be carried out by a single entity. In Taxonomy terms then **the impacting economic activity cannot provide a substantial contribution to an objective through the activities of another offsetting economic activity**. While a company may well choose to or be obliged by law to invest in offsets and may wish to include that in their sustainability reporting or communications, the taxonomy definition of the companies' other activities is not affected by this. For the offsets to be "taxonomy compliant", they in and of themselves need to be in compliance with the taxonomy for the offsetting activity. The other economic activities of the company are evaluated against their own criteria.

- 4. Offsetting processes are not guaranteed to remediate residual impacts caused by harmful activities⁶².** Specific limitations on the adoption of offsets to achieving no net loss or net gain of biodiversity and ecosystem services are spelled out in the OECD report on offsetting⁶³. Compared to other instruments for biodiversity conservation and sustainable use, most biodiversity offset schemes are still fairly nascent in their application, and there is much to be learned from existing experience. The evidence available to date points to somewhat mixed results in terms of the environmental effectiveness of existing biodiversity offset schemes⁶⁴.

It is important to note that conservation or restoration activities have a rightful place in the Taxonomy as economic activities that, subject to specific TSC, make a SC to biodiversity. In some cases, conservation and /or restoration are financed by companies or investors as a means of offsetting an impact on biodiversity occurring as a result of another economic activity.

⁶¹ For example the generation of coal-fired power releasing significant GHG emissions being offset through the planting of trees. The two activities are (impacting) coal fired power generation, and (offsetting) the planting of trees – afforestation.

⁶² <https://zslpublications.onlinelibrary.wiley.com/doi/full/10.1111/acv.12173>

⁶³ This information is from the "Policy highlights paper", which draws on this full report: OECD (2016), Biodiversity Offsets: Effective Design and Implementation, OECD Publishing, Paris. <http://dx.doi.org/10.1787/9789264222519-en>

⁶⁴ Tucker, G.M., Qu tier, F. & Wende, W. (2020) Guidance on achieving no net loss or net gain of biodiversity and ecosystem services. Report to the European Commission, DG Environment on Contract ENV.B.2/SER/2016/0018, IEEP, Brussels. <https://ec.europa.eu/environment/nature/biodiversity/nnl/pdf/NNL%20Guidance%20-%20July%202020%20-%20Final.pdf>

As the Taxonomy Regulation supports the flow of green finance, it is appropriate to consider the relationship between the funder and the biodiversity enhancing activity – i.e. whether the conservation or restoration activity is taking place in isolation, or whether it is being financed as a result of a company seeking to offset their impact. In the latter case, the company causing the impact can still not claim SC for the impacting activity through offsetting, for the aforementioned reasons. But the context in which the activity is taking place remains important in deciding whether or not an SC is being delivered compared to the counterfactual.

In conclusion, the following practical considerations can be made for the development of TSC:

1. **If an economic activity causes significant harm, it cannot be considered Taxonomy aligned (Art. 3b TR), or seek alignment through offsetting.** Because a) significant harm has occurred; b) the offsetting activity is almost always different from the economic activity which has caused harm⁶⁵. In this case, reference to offsetting should be limited to the scope of DNSH technical criteria, when embedded in the existing legal framework.

2. Activities like conservation or restoration of ecosystems have a rightful place in the Taxonomy as economic activities that, subject to specific TSC, make a SC to biodiversity. Nevertheless, when conservation and /or restoration are implemented with the purpose of offsetting they can **only** be counted as DNSH and have to fulfil the following conditions, which should form part of the TSC for DNSH:

The offsetting activity has explicitly committed to, and includes the practices necessary to obtain **net gain** of biodiversity in areas with high biodiversity value, including (i) habitat of significant importance to Critically Endangered and/or Endangered species⁶⁶; (ii) habitat of significant importance to endemic and/or restricted-range species; (iii) habitat supporting globally significant concentrations of migratory species and/or congregatory species; (iv)

⁶⁵ As an example, mining as an activity cannot deliver an SC to biodiversity as it is directly impactful. Nevertheless, a 'mining company' may own land, assets, or invest in another economic activity which can deliver SC to biodiversity, such as a restoration activity somewhere else on their site, or at the end of the life of the mine. This does not make the economic activity of mining taxonomy aligned by extension.

⁶⁶ As listed on the International Union for the Conservation of Nature (IUCN) Red List of Threatened Species. [IUCN Red List of Threatened Species](#)

highly threatened and/or unique ecosystems; and/or (v) areas associated with key evolutionary processes⁶⁷.

- The offsetting activity has explicitly committed to, and includes the practices necessary to obtain **no net loss** of biodiversity in all other areas, unless the specific national legislation requires ‘net gain’.
- The offsetting activity has to lead to ecological equivalence and be additional, permanent, verifiable, enforceable and transaction costs need to be reasonable⁶⁸.

What is the impact of excluding offsetting as “substantial contribution” from the Taxonomy?

Some particularly harmful economic activities will not be able to claim SC to Biodiversity, as the application of the mitigation hierarchy at any level (including offsetting) can only lead to compliance with DNSH criteria. This should be acknowledged and explained on an activity-by-activity basis.

This does not preclude companies, which are investing in or generating their turnover from offsetting activities to be recognised under the Taxonomy, but they may also find that some parts of their investments cannot be taxonomy aligned as they cause significant harm. Reporting at the economic activity level ensures that both good and harmful activities can be identified.

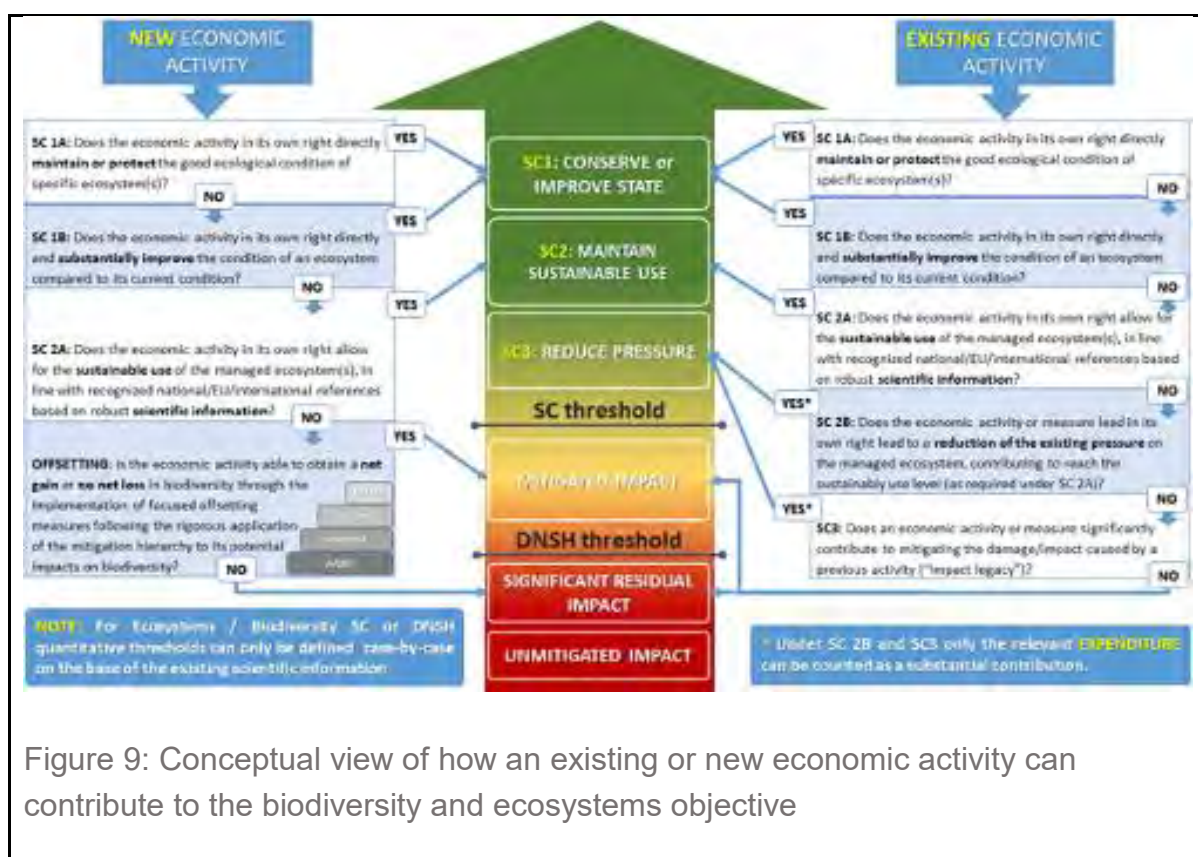
How that translates into actual decision making in relation to the rating and financing of, or investment in, a company, is in no way precluded by the taxonomy and its differentiated (rather than aggregated net approach, as suggested by an application of offsets to the definition of “substantial contribution”) consideration of individual activities. As a transparency instrument, the taxonomy merely provides the basis for defining the share of a company’s activities considered significantly harmful (i.e. as per the current definition of the taxonomy as falling below the DNSH threshold), significantly contributing and “in-between” (notwithstanding further developments of the taxonomy in terms of the ongoing work of subgroup 3 exploring the scope for developing a “significantly harmful” and a “no significant impact” taxonomy).

⁶⁷ These criteria are adopted in the IFC Performance Standards (PS6 - Biodiversity Conservation and Sustainable Management of Living Natural Resources- 2012 version) and commonly used for biodiversity impact assessment.

⁶⁸ OECD (2016): Biodiversity Offsets Effective design and implementation <https://www.oecd.org/environment/resources/Policy-Highlights-Biodiversity-Offsets-web.pdf>

Conclusion

Figure 9 provides an illustrative description that encompasses all the different elements of potential SC to biodiversity in the context of the Taxonomy. It distinguishes the point between DNSH, and SC with a necessary space in-between. It should be used in the context of understanding how and where the Taxonomy supports the protection and restoration of biodiversity and ecosystems, and where it does not. It acts as a guide to determine where an activity may fall within the biodiversity Taxonomy logic, and complements the stepwise process set out in Table 4 when assessing if and how an economic activity can deliver an SC to the biodiversity objective.



6.5. Future horizontal analysis of adaptation

The first Delegated Act of the Taxonomy Regulation establishes technical screening criteria for the objectives of Climate Change Mitigation (CCM) and Climate Change Adaptation (CCA). The criteria included for adaptation are largely generic in nature, reflecting the work and recommendations of the Technical Expert Group and the resultant adoption into legislation by the Commission.

During the work of the platform and the TWG, we have had the opportunity to reflect on the way in which adaptation has been addressed so far through the Taxonomy and in the context of the developing methodological framework surrounding the other four objectives of the Taxonomy. Some of the activities listed in Part B of this report are prioritised to deliver substantial contribution to the Climate Change Adaptation objective, and all others will have DNSH criteria for Adaptation. These are presented in line with those that appear in the first Delegated Act in order to provide consistency, continuing to build knowledge and understanding of the Adaptation Taxonomy within financial markets. Since the original in-depth work of the TEG was carried out, and since the public consultations were held on the first technical screening criteria for Adaptation, a new EU Adaptation Strategy has been finalised and a new EU Climate Law has been adopted.

Building a future headline ambition framework for climate change adaptation

It may also be useful to establish more clearly the headline ambition level of the adaptation objective, to improve the understanding and usability of the Adaptation Taxonomy. The following text describes the linked Taxonomy, Union and National adaptation laws that might inform the development of such a headline ambition document in line with what has been done for the Taxo 4 objectives. Such a document can also clarify the approach to the important issue of maladaptation. The following information could be included into a headline ambition document in the future, pulling together the 1st DA adaptation approach and that used in the preparation of adaptation criteria by the TWG. It could then form part of the methodological framework for future adaptation criteria.

Alignment with Taxonomy Regulation

The [Taxonomy Regulation](#) states that “an economic activity that pursues the environmental objective of climate change adaptation should **contribute substantially to reducing or preventing the adverse impact of the current or expected future climate, or the risks of such adverse impact**, whether **on that activity itself or on people, nature or assets**. That environmental objective should be interpreted **in accordance with relevant Union law and [the Sendai Framework for Disaster Risk Reduction 2015–2030](#)** (*Recital 25*). It furthermore specifies, that an activity shall qualify as contributing substantially to climate change adaptation where that activity includes adaptation solutions that reduce either the risk of the adverse impact or the actual adverse impact of the current climate and the expected future climate without increasing the risk if an adverse impact on people, nature or assets. (*Article 11*).

Most relevant elements of Union law (as of July 2021) are the [Communication ‘Forging a climate-resilient Europe - the new EU Strategy on Adaptation to Climate Change’](#) and the [European Climate Law](#) (Article 4.)⁶⁹.

On the international level, the [Paris Agreement](#) includes the global goal on adaptation to enhance adaptive capacity and resilience and to reduce vulnerability, with a view to contributing to sustainable development. Likewise, the [Sendai Framework for Disaster Risk Reduction 2015–2030](#), explicitly mentioned in Recital 25 sets global goals towards preventing and reducing disaster risks, including those arising due to climate change.

The adaptation headline ambition should align the [Taxonomy Regulation](#) objective on adaptation with the goals of the relevant EU and international policies as detailed below, as well as translate those goals to the economic activity context. It builds on the previous methodological work carried out by the Technical Expert Group and would add the alignment with the recently updated or adopted EU policies.

Alignment with relevant Union Law

The [European Climate Law](#) Article 4 on adaptation objective aims to ensure **continuous progress in enhancing adaptive capacity, strengthening resilience and reducing vulnerability** to climate change in accordance with Article 7 of the Paris Agreement.

[The EU Strategy on adaptation to climate change](#), which is a non-mandatory strategic level policy and sets out the direction of action on adaptation on the EU level. It has been revised in 2021 in alignment with the EU Green Deal call for more ambitious EU adaptation action. The long-term vision set by the strategy is: **“the EU will be a climate-resilient society, fully adapted to the unavoidable impacts of climate change. This means that by 2050 (..) we will have reinforced adaptive capacity and minimised vulnerability to climate impacts,** in line with the Paris Agreement and the European Climate Law.” (Ch. 2). In practice it means that we will have to adapt faster, smarter and in a more systemic way. When applied to the economic activity context, this vision implies the achievement of a climate-resilient functioning of the economic activities and full adaptation to those climate change impacts, which

⁶⁹ Note: European Union strives to mainstream adaptation in all relevant sector (and other) policies, therefore where available more specific sector goals on adaptation should be taken into account when developing the taxonomy, however, these specific targets align with the key Union Law goals and are not included in the headline ambition definition in detail

cannot/will not be avoided through ambitious mitigation action because of the level of historical GHG emissions, which have already locked in climate change impacts for decades to come.

Alignment with the international frameworks

Article 7 of the [Paris Agreement](#) is the basis for the adaptation goals defined in the EU policies and defines the overarching global goal as “**enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change**, with a view to contributing to sustainable development and ensuring an adequate adaptation response (..)”.

Furthermore, the Taxonomy Regulation specifically refers to [The Sendai Framework for Disaster Risk Reduction 2015–2030](#) as the guiding international policy. The overarching goal of the Sendai Framework is to “**prevent new and reduce existing disaster risk** through the implementation of integrated and inclusive economic, structural, legal, social, health, cultural, educational, environmental, technological, political and institutional **measures that prevent and reduce hazard exposure and vulnerability to disaster, increase preparedness for response and recovery, and thus strengthen resilience.**” It further sets out seven global targets on reducing disaster mortality, reduction of population affected, reduction of economic losses and impacts on GDP, limiting damage to infrastructure and provision of essential services, improved access to early warning systems and disaster risk data, as well as enhancing the national and international action on disaster risk reduction.

In the spirit of the Paris Agreement and Sendai Framework, the Taxonomy is to include activities and Substantial Contribution criteria in support of the implementation of adaptation measures, which unequivocally contribute to and enable the prevention and reduction of exposure and vulnerability to climate-related hazards and help achieve high level of resilience and adaptive capacity of people, of nature, of cultural heritage, of assets and of economic activities.

Alignment with national and sub-national adaptation action

The [European Climate Law](#) mandates the Member States to “**develop and implement adaptation strategies and plans** that include comprehensive risk management frameworks, based on robust climate and vulnerability baselines and progress assessments” (Art. 4.1). [The EU Strategy on adaptation to climate change](#) further states that **adaptation is a “whole-society endeavour”** and therefore “**it is vital for the private and public sectors to work together more closely, in particular on financing adaptation.**”

The adaptation efforts by economic actors operating the activities included in the Taxonomy shall align with the national (and relevant subsidiary e.g. regional and local) adaptation

strategies and plans to eliminate miscoordination, misalignment and at worst counterproductive adaptation actions, as well as to avoid maladaptation. Instead, high alignment should be promoted to help accelerate the achievement of the national (and relevant subsidiary e.g. regional and local) adaptation strategies and plans, while increasing the resilience of the economic activities at the same time.

Avoiding maladaptation

In addition, the [EU Strategy on adaptation to climate change](#) calls for the avoidance of maladaptation: “support the private sector to **identify risks and steer investment towards action on adaptation and resilience (and avoid maladaptation)**”. In Taxonomy context, **maladaptation is to be avoided in all its forms** and is defined as: “Actions that may lead to increased *risk* of adverse climate-related outcomes, including via increased *GHG* emissions, increased *vulnerability to climate change*, or diminished welfare, now or in the future” (IPCC AR5 and Special Report: Global Warming of 1.5 °C) and includes 12 broad types of maladaptation as defined by IPCC:

Table 5: A selection of examples of actual or potential maladaptive actions from this report⁷⁰

Broad type of maladaptive action	Examples in AR5
Failure to anticipate future climates. Large engineering projects that are inadequate for future climates. Intensive use of non-renewable resources (e.g., groundwater) to solve immediate adaptation problem	22.3, 22.4.8.5
Engineered defenses that preclude alternative approaches such as EBA	Box CC-EA; 15.2.2
Adaptation actions not taking wider impacts into account	22.4.5.8, 25.4.2, and 26.9.4
Awaiting more information, or not doing so, and eventually acting either too early or too late. Awaiting better “projections” rather than using scenario planning and adaptive management approaches	7.5.1.2.2, 8.5.2, and 16.5.2
Forgoing longer term benefits in favor of immediate adaptive actions; depletion of natural capital leading to greater vulnerability	13.2.1.3; 22.4.5.8; 25.9.1
Locking into a path dependence, making path correction difficult and often too late	16.3.2; FAQ 25.1
Unavoidable ex post maladaptation, e.g., expanding irrigation that eventually will have to be replaced in the distant future	17.5; see also 5 and 6 above
Moral hazard, i.e., encouraging inappropriate risk taking based, e.g., on insurance, social security net, or aid backup	17.5 and 29.8
Adopting actions that ignore local relationships, traditions, traditional knowledge, or property rights, leading to eventual failure	12.3, 12.5.2; 26.9.4
Adopting actions that favor directly or indirectly one group over others leading to breakdown and possibly conflict	13.1.1 and 13.1.4
Retaining traditional responses that are no longer appropriate	21.3.2 and 22.4.5.8
Migration may be adaptive or maladaptive or both depending on context and the individuals involved	26.2.1, 26.8.3, 29.3.3, 29.6.2.4

Note: These examples of maladaptation represent a set of cases found in the report that might help the readers to understand the rich range of circumstances in which maladaptive actions might arise. They do not represent a formal categorization of type of maladaptation.

The avoidance of all maladaptation is an important element of the taxonomy headline ambition for adaptation.

⁷⁰ Source: IPCC AR5 Impacts, Adaptation and Vulnerability

6.6. Understanding the scope of economic activities and the link with assets

During the development of technical screening criteria, a number of questions arose around the scope and boundaries of an economic activity – specifically the distinction between a company, and activity and assets.

Technical screening criteria are developed for **economic activities**. These are laid out in the Delegated Act(s) using economic activity descriptions which are based on NACE codes

- An **economic activity** can involve operating, installing or using **multiple assets** that are essential components necessary to execute that activity. For example:
 - Example 1: A telecommunications manufacturer may have injection moulding facility, metal plating facility, assembly. The facilities used would be considered as **assets** in the context of executing the economic activity.
 - Example 2: An agricultural operation may have hedgerows (as field boundaries), areas that are not cropped, next to rivers, as well as cropped land. All of these are **assets** in the context of operating the heterogeneous activity of farming.
- These assets may be within scope of the technical screening criteria to ensure a substantial contribution to a given environmental objective depending on the activity boundary. i.e. certain activities (and subsequent TSC) might be limited to (or even exclude) certain processes or assets that companies might actually consider part of the economic activity described through NACE.
- There are however other '**assets**' and '**activities**' which are owned or operated by the **company** which are not material or essential to the execution of the economic activity. Examples may include other activities such as restoration, afforestation, agriculture, that happen on land owned or operated by a company.
- The **company** could claim taxonomy alignment for some of these other activities and associated assets, but under a different NACE and not part of the main/other activity of the company. These may be on 'non operated land'.
 - Example: Mining as an **activity** may in future be able to claim taxonomy alignment against criteria set for mining.
 - The mining **company** may be able to claim taxonomy alignment with some of their other activities not linked to the mining activity. This could be expenditure related to such other activities, e.g. restoration.

- The mining **company** could not claim that mining as an **activity** is taxonomy aligned (and as such claim that revenue from its mining activities is partly or fully taxonomy aligned) by virtue of other restoration activities that the company operates.

Part A – Annex

I. Annex A1 - Application of the methodology to identify priority activities

This annex outlines the application of the methodology used to prioritise and select activities for inclusion within the first batch of work for the Technical Working Group.

i. Sustainable use and protection of water and marine resources

Indicators used to establish priority activities

Indicators	
Chemical pressures / Pollution	Oxygen demanding pollutants and nutrients (bio-degradable organic compounds in suspended, colloidal, or dissolved form)
	Synthetic organic compounds (pesticides, detergents, food additives, pharmaceuticals, insecticides, paints, fibres, P CBs, solvents, PAHs, and VOCs,)
	Oil
	Pathogens (viruses, bacteria)
	Inorganic pollutants (heavy metals, mineral acids, inorganic salts, other metals, complexes of metals with organic compounds, cyanides, sulphates, etc.)
Physical pressures	Water Footprint (life cycle approach)
	Groundwater (drinking water, agriculture, mining activities, ...)
	Surface water
	Hydro-morphological elements of water bodies (river continuity, morphological conditions, seafloor integrity)
	Other physical pollutants (thermal pollution, radioactive pollutants, light pollution, and noise/vibration, suspended solids and sediments)

	Microplastics and marine litter
Biodiversity & ecosystems	Marine habitats
	Marine plants
	Marine animals (except birds)
	Freshwater habitats
	Freshwater fishes

Note: the impact indicators used in the assessment did not address explicitly the aspect of “contributing to mitigating the effects of floods and droughts”, which is one of the means to protect water resources listed in the taxonomy regulation.

Value chain considerations

From the 12 activities selected value chain considerations were particularly relevant to the following two activities:

1. Extraction of crude petroleum
2. Extraction of natural gas

Given the possibility to shift to low-impact sources of energy, the best way to reduce environmental impacts from those activities is to substitute for them. On this basis, it was proposed to **de-prioritise** them.

Electricity generation was included as priority under other objectives (and TEG recommendations on climate mitigation), so the Taxonomy will provide a clear incentive for the shift. Electricity generation did not necessarily need to be prioritised under the water objective.

Resulting list

The table below presents the proposed list of priority activities identified applying the methodology for this environmental objective.

1	Growing of non-perennial crops
2	Growing of perennial crops
3	Manufacture of chemicals and chemical products

4	Inland passenger water transport
5	Inland freight water transport
6	Sea and coastal passenger water transport
7	Sea and coastal freight water transport
8	Manufacture of rubber and plastic products
9	Manufacture of fabricated metal products + machinery and (electrical) equipment
10	Manufacture of leather and leather related products

ii. Transition to a circular economy

Indicators used to establish priority activities

Indicators
Raw Material Consumption (RMC) impact
Production impact
Use phase impact
Hazardous waste generation impact
Non-hazardous waste generation impact
Landfilling impact

Value chain considerations

From the 12 activities considered, value chain considerations were particularly relevant to the following two activities:

1. Manufacture of coke and refined petroleum products
2. Manufacture of rubber and plastic products

Manufacture of coke and refined petroleum products

Given the possibility to shift to low-impact sources of energy, the greatest impact reduction can be achieved by substituting this activity. While it is possible that some further impact reductions could be achievable by performing the manufacture of coke and refined petroleum

products differently, this is not sufficient to justify its prioritisation. On this basis, it was proposed to de-prioritise it.

Coke and refined petroleum products are used in manufacturing processes and many manufacturing activities were already included in the list. Criteria in the manufacturing sector could encourage a shift away from those raw materials towards renewable feedstock and/or hydrogen from renewable sources (instead of coke). So, the reduction of pressure can be achieved by having criteria for other manufacturing activities and, possibly, by including enabling activities.

Manufacture of rubber and plastic products

Plastics can be substituted out to a large extent, depending on the use. Still, it is likely that some plastic will remain necessary, and there is an improvement opportunity 'within' the activity – renewable feedstock. In any case, rubber is still relevant, so the activity was not de-prioritised.

Resulting list

The table below presents the list of priority activities identified applying the methodology for this environmental objective.

1	Manufacture of rubber and plastic products
2	Manufacture of computer, electronic and optical products
3	Manufacture of electrical equipment
4	Manufacture of textiles
5	Manufacture of wearing apparel
6	Construction of buildings
7	Manufacture of leather and related products
8	Manufacture of food products
9	Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials
10	Civil engineering
11	Manufacture of chemicals and chemical products

iii. Pollution prevention and control

Indicators used to establish priority activities

Indicators	
Pollution of air	SOx (sulphur oxides)
	NOx (nitrogen oxides)
	CO (carbon monoxide)
	PM (particulate matter)
	Heavy metals
	POPs (persistent organic pollutants)
	VOCs (volatile organic compounds)
	ODS (ozone depleting substances)
	NH3 (ammonia)
	Other (hazardous) chemicals regulated by REACH and CLP and their compounds (e.g. SVHC, chlorine, fluorine, bromine, iodine, asbestos, cyanides, other CMRs, PBTs, EDCs)
	Other physical pollutants (heat, noise, light, radiation, odour)
Pollution of water	Oxygen demanding pollutants and nutrients (bio-degradable organic compounds in suspended, colloidal, or dissolved form)
	Synthetic organic compounds (pesticides, detergents, food additives, pharmaceuticals, insecticides, paints, fibres, PCBs, solvents, PAHs, and VOCs,)
	Oil
	Pathogens (viruses, bacteria)
	Inorganic pollutants (heavy metals, mineral acids, inorganic salts, other metals, complexes of metals with organic compounds, cyanides, sulphates, etc.)
	Microplastics and plastic particles
	Other physical pollutants (heat, radiation, light, noise/vibration, suspended solids and sediments)
Pollution of soil	Inorganic pollutants
	Organic compounds, including POPs, pesticides, pharmaceuticals and antibiotics
	Nitrogen and phosphorous compounds
	Other (physical) pollutants (vibrations, microplastics and plastic particles)

Value chain considerations

From the 12 activities selected, value chain considerations were particularly relevant for the following two activities:

1. Extraction of crude petroleum and natural gas

2. Manufacture of pesticides and other agrochemical products

Extraction of crude petroleum and natural gas

Shift to low-impact sources of energy: the most effective way of reducing polluting impacts associated with the extraction of crude petroleum and natural gas is to substitute for them. While it is possible that some further impact reductions could be achievable by performing these activities differently, the improvement potentials are much smaller than those offered by viable substitution options (e.g., renewable energy activities) and thus the case for prioritising them was difficult to justify. Extraction of crude petroleum and natural gas **were thus de-prioritised.**

Electricity generation as well as other fossil fuel using economic activities (e.g., road transport activities) were already included in the list.

Manufacture of pesticides and other agrochemical products

Many of the concrete improvement opportunities identified by the assessment (under the water, pollution and ecosystems objectives) concerned the reduction in the use of pesticides⁷¹. The replacement activity (growing of crops, if done using low footprint practices) was already included in the list. Manufacture of pesticides and other agrochemical products **could thus be de-prioritised.**

The two slots freed up in the list by the de-prioritisation of the above-mentioned two activities could be filled by two of the four following activities:

1. Water transport
2. Animal production
3. Manufacture of leather and leather related products
4. Manufacture of glass and glass products

It was proposed to include **water transport** and **animal production.**

⁷¹ E.g. "Adapting agricultural practices can go a long way in reducing those pollutants. This includes minimizing the use of fertilizers and pesticides (which, if done strictly, could even be considered as transformative change), better regulation of when fertilizers and pesticides may be applied, sufficiently large buffer stripes next to water bodies, contour planting and contour ploughing, and other measures." (p.52, table 17)

Resulting list

The table below presents the list of priority activities identified applying the methodology for this environmental objective.

“Manufacture of basic chemicals, fertilisers and nitrogen compounds, plastics and synthetic rubber in primary forms” was not included because part of “Manufacture of chemicals and chemical products” that was already included.

1	Crop production (including support activities for crop production)
2	Manufacture of chemicals and chemical products
3	Other passenger land transport; freight transport by road and removal services; individual traffic
4	Manufacture of fabricated metal products + electrical and electronic equipment + motor vehicles and transport equipment
5	Manufacture of basic pharmaceutical products and pharmaceutical preparations
6	Electric power generation ⁷² , transmission and distribution
7	Manufacture of textiles + Manufacture of wearing apparel
8	Manufacture of soap and detergents, cleaning and polishing preparations, perfumes and toilet preparations
9	Manufacture of cement, lime and plaster
10	Water transport
11	Animal production

iv. Protection and restoration of biodiversity and ecosystems

Indicators used to establish priority activities

Indicators
Marine habitats
Marine plants
Marine animals (except birds)
Freshwater habitats

⁷² Including electricity generation from renewables

Freshwater fishes
Terrestrial habitats
Terrestrial plants (including freshwater plants)
Terrestrial animals (including freshwater animals except fishes and birds)

Value chain considerations

Among the activities prioritised, there was no activity that need specific attention for its value chain considerations and the possibility to be de-prioritised and substituted. Resulting list

The table below presents the list of priority activities identified applying the methodology for this environmental objective.

1	Crop production
2	Animal production
3	Tourism, sports and leisure activities
4	Forestry and logging
5	Construction including conversion from other land uses
6	Passenger or freight land transport
7	Hydropower (dams, weirs, run-off-the-river)
8	Marine fishing
9	Water transport
10	Wind, wave and tidal power
11	Manufacture of food and beverage products

v. Activities directly improving the state of the environment / healing the environment

The activities selected with the methodology above need to be complemented by activities that do not have significant impact but significantly contribute to directly improving the state of the environment (activities “healing the environment”). Quantitative data was more difficult to find for them and the mapping onto the indicators was not always be straightforward. For this reason, the consultant’s assessment included an identification of such activities for each objective, but relied on qualitative assessments and expert judgement. The following sections

provide an indication of the types of activities and/or related NACE codes identified, but no ranking was provided for them. The PSF was invited to select up to 4 activities that directly improve the state of the environment.

Sustainable use and protection of water and marine resources

E36: Water collection, treatment and supply⁷³

E37: Sewerage

E38: Waste collection, treatment and disposal activities; materials recovery

E39: Remediation activities and other waste management services

Implementation of nature-based solutions for flood risk prevention and protection for both inland and coastal waters

Construction of flood risk prevention and protection infrastructure for inland and coastal floods

Transition to a circular economy

E36: Water collection, treatment and supply

E37: Sewerage

E38: Waste collection, treatment and disposal activities; materials recovery

E39: Remediation activities and other waste management services

C33.1: Repair of fabricated metal products, machinery and equipment

E39.00: Remediation activities and other waste management services

G45.20: Maintenance and repair of motor vehicles

G45.40: (Sale), maintenance and repair of motorcycles and related parts and accessories

S95: Repair of computers and personal and household goods

⁷³ Including sustainable urban drainage systems.

Pollution prevention and control

E36: Water collection, treatment and supply

E37: Sewerage

E38: Waste collection, treatment and disposal activities; materials recovery

E38.1: Waste Collection

E38.3: Materials recovery

E39: Remediation activities and other waste management services

Protection and restoration of biodiversity and ecosystems

O, I, R: Conservation or restoration of habitats (sometimes in connection with low impact tourism)

02.40: Forest fire fighting

39: Remediation activities

II. Annex A2: Relevant targets & reference points for headline objectives

The following lists describe the relevant targets and reference points that support the definition of the headline objectives for the Taxo 4 objectives. They draw on the Taxonomy Regulation and other EU and international commitments.

i. Objective 3: Sustainable use and protection of water and marine resources

Selection of water related targets in Europe (legally binding or commitments)

- Achieve and maintain good status of all water bodies in Europe, in particularly good ecological, hydro-morphological and chemical status (Water Framework Directive (2000/60/EC))
- Protect, conserve, enhance and restoring all forms of water (inland surface, ground, coastal and transitional) as well as the ecosystems and the biodiversity in and around

this bodies of water to support this natural capital (7th EAP, PO 1 (EC, 2013); 8th EAP (draft))

- Protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes (SDG 6.6 (UN, 2016))
- Collecting and treatment of urban waste water to protect the environment in the EU from the adverse effects of urban waste water (Urban Waste Water Treatment Directive (91/271/EEC))
- Substantially decrease the leakage level across the extent of water supply (distribution) network -water supply zone level, district metered area(s) (DMAs) or pressure managed area(s) (PMAs)- to a threshold that is well below 1.5.⁷⁴
- Assess and manage flood risks, aiming to reduce the adverse consequences for human health, environment and cultural heritage (Floods Directive (2007/60/EC))
- Prevent or significantly reduce water stress (7th EAP, PO 2 (EC, 2013))
- Keep water abstraction below 20% of available renewable water resources (Roadmap to a resource efficient Europe (EC, 2011))
- Long-term protection of available water resources by re-use of water in agricultural irrigation (Water Reuse Regulation (2020/741))
- Substantially contributing to a zero-pollution ambition (EU Action Plan: 'Towards Zero Pollution for Air, Water and Soil') for a toxic free-environment, including for water, and protecting the health and well-being of citizens from environment-related risks and impacts (8th EAP (draft)) and (Bathing Water Directive (2006/7/EC))
- Reducing and further preventing water pollution by nitrates from agricultural sources (Nitrates Directive (91/676/EEC))
- Keeping well below set concentration thresholds of certain chemical substances that pose a significant risk to the environment or to human health in waters or biota in the EU, including cadmium, lead, mercury and nickel, and their compounds; benzene, polyaromatic hydrocarbons (PAH) and several pesticides. (33 substances are identified as priority substances plus recently identified substances of concern) (Environmental Quality Standards Directive (2008/105/EC))
- Phasing out of hazardous substances as initially agreed at the Fourth International North Sea Conference in Esbjerg, 1995

⁷⁴ The leakage level is either calculated using the Infrastructure Leakage Index (ILI) rating method and the threshold value equals to or is lower than 1.5 or is calculated using another appropriate method in accordance with Article 4 of Directive (EU) 2020/2184 of the European Parliament and of the Council.

- Preventing and limiting indirect discharges (after percolation through soil or subsoil) of pollutants into groundwater (Groundwater Directive (Directive 2006/118/EC))
- Protect water for human consumption from contamination (Drinking Water Directive (98/83/EC)) and toxic material (7th EAP, PO3 (EC, 2013))
- Substantially increase water use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater (SDG 6.4 (UN, 2016))
- Implement integrated water resources management at all levels, including through transboundary cooperation as appropriate (SDG 6.5 (UN, 2016))
- Substantially contributing to the targets of the EU Biodiversity Strategy inter alia to restore at least 25,000 km of free-flowing rivers (EU Biodiversity Strategy, 2030)
- Substantially contributing to sustainable development and growth of aquaculture (EU Strategic Guidelines on Aquaculture)

Selection of marine related targets in Europe (legally binding or commitments)

- Protection and restoration of marine ecosystems and the services they provide (EU Biodiversity strategy - COM/2020/380 final)
- Substantial contribute to necessary measures to achieve or maintain good environmental status in the marine environment (Directive 2008/56/EC as amended by 2017/845 and Decision 2017/848; Directive 2000/60/EC)
- Conservation of natural habitats and of wild flora and fauna (Council Directive 92/43/EEC; Directive 2009/147/EC)
- Keep quality, their functions and occurrence of habitats and the distribution and abundance of species in line with prevailing physiographical, geographical and climatic conditions (Directive 2008/56/EC as amended by 2017/845 and Decision 2017/848)
- Minimise the impacts of ocean acidification (SDG 14.3 (UN, 2016))
- Prevention of the pollution of the (North) Sea by continuously reducing discharges, emissions and losses of hazardous substances thereby moving towards the target of their cessation within one generation (25 years) with the ultimate aim of concentrations in the environment near background values for naturally occurring substances and close to zero concentrations for man-made synthetic substances. The Esbjerg Declaration of the 4th International North Sea Conference in June 1994 allowed time for achieving this goal of cessation of discharges, emissions and losses of certain hazardous substances until 2020; and Cessation of discharges, emissions and losses of hazardous substances by 2020 (Fourth North Sea Ministerial Declaration 1995)

- Keep concentrations in the marine environment near background values for naturally occurring hazardous substances and close to zero for man-made synthetic substances (Directive 2000/60/EC; SDG 14.1 (UN, 2016))
- Do not contribute to rising pollution effects of concentrations of contaminants, and ensure that contaminants in fish and other seafood for human consumption do not exceed levels established by Community legislation or other relevant standards (Directive 2008/56/EC; Commission Decision 2017/848; SDG 14.1)
- Minimize human-induced eutrophication and its adverse effects (Directive 2008/56/EC as amended by 2017/845 and Decision 2017/848; Directive 2000/60/EC)
- Keep the level of marine litter to a level that does not cause harm to the environment (Directive 2008/56/EC, Commission Decision 2017/848; 7th EAP; SDG 14.1 (UN, 2016))
- By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution. (SDG 14 (UN, 2016))
- Introduction of energy, including underwater noise, is at levels that do not adversely affect the marine environment – footnote as proposed above (Directive 2008/56/EC; Commission Decision 2017/848)
- Keep the level of non-indigenous introduced species below a level that adversely affects the ecosystems (Directive 2008/56/EC, Commission Decision 2017/848; EU biodiversity strategy to 2020.)
- Keep populations of all commercially exploited fish and shellfish within safe biological limits (EU common fishery policy 2013; 7th EAP)
- Substantially reduce any negative impacts on sensitive species and habitats, including on the seabed through fishing and extraction activities (COM/2020/380 final)
- By-catch of species is eliminated or reduced to a level that allows species recovery and conservation (COM/2020/380 final and SDG 14)
- 10% of coastal and marine areas are conserved through systems of protected areas⁷⁵ and by 2030, 30% of EU land and EU seas areas is primarily managed for nature and biodiversity⁷⁶
- Safeguarding the seabed (Directive 2008/56/EC)

⁷⁵ CBD Aichi biodiversity target 11; SDG 14.5

⁷⁶ SDG 14 (UN, 2016)

- Negative impacts on sensitive species and habitats, including on the seabed through fishing and extraction activities, are substantially reduced to achieve good environmental status (SDG 14 (UN, 2016))
- Apply an ecosystem-based approach to the management of maritime activities (Directive 2008/56/EC; Directive 2014/89/EU)
- Highly diversified and sustainable coastal and maritime tourism in Europe (EU integrated maritime policy -Limassol Declaration)

ii. Objective 4: Transition to a Circular Economy

Selection of circular economy related targets in Europe (legally binding or commitments)

There is today no official EU commitment to reach a given level of material footprint. As part of the CE action plan released March 2020⁷⁷, the Commission committed to develop further the indicator and integrate in the CE framework monitoring: *“Indicators on resource use, including consumption and material footprints to account for material consumption and environmental impacts associated to our production and consumption patterns will also be further developed and will be linked to monitoring and assessing the progress towards decoupling economic growth from resource use and its impacts in the EU and beyond”*.

In the annex, listing future action, the Commission engages to “Updating the Circular Economy Monitoring Framework to reflect new policy priorities and develop further indicators on resource use, including consumption and material footprints” by 2021.

In the own initiative report by the EU Parliament of February 2021 on circular economy⁷⁸, the setting of targets is suggested in art 6 & 7:

6. Underlines the need for an absolute decoupling of growth from resource use; calls on the Commission to propose science-based binding EU mid-term and long-term targets for the reduction in the use of primary raw materials and environmental impacts; calls for setting the EU targets through a back-casting approach to ensure that policy objectives are on a credible path to achieve a carbon-neutral, environmentally sustainable, toxic-free and fully circular economy within planetary boundaries by 2050 at the latest;

⁷⁷ http://ec.europa.eu/environment/circular-economy/index_en.htm

⁷⁸ https://www.europarl.europa.eu/doceo/document/TA-9-2021-0040_EN.html

7. Calls on the Commission to propose binding EU targets for 2030 to significantly reduce the EU material and consumption footprints and bring them within planetary boundaries by 2050, using the indicators to be adopted by end of 2021 as part of the updated monitoring framework; calls on the Commission to build on the examples set by the most ambitious Member States while taking due account of differences in starting points and capabilities between the Member States;

The Council conclusions of Dec 2020 on Making the recovery circular and green, state in their point 89: “ Recalls the need to further improve the indicators or consider developing new ones in order to better cover, along the full value-chain, the life cycle of products and services, and the uptake of new and circular business models and approaches to manage resource consumption; in this regard encourages the Commission, in close cooperation with the Member States, to explore how these indicators could set a benchmark for an indicative EU circular economy goal;”

Input for target setting on material footprint and rebuilding natural capital – linked to the circular economy:

- [German Env agency UBA research](#) giving RMC limits of 7.8 Mt by 2030, 5.8 Mt by 2040 and 4.1 Mt by 2050 (see p.68-70). The Green-scenarios show that Germany can reduce its consumption of primary raw materials by up to **70% (versus 2010)** until 2050 through a combination of energy and material-efficiency measures, sustainable life-style changes, and the transformation to a renewable energy system without fossil energy carriers.
- [2020 Human Development Report by UNDP](#) gives around 10 tonnes per capita limit (see figure 5 p7)
- In [a paper developed in 2019](#), the EEB-FoEE-WU calls for halving the EU material footprint by 2030, using 2015 as a baseline. The paper also shares how one of the headlines aims of the Dutch government’s their circular economy strategy is to half the use of abiotic resources in the Netherlands by 2030 (using 2014 as a baseline). The Material footprint headline reduction target aiming to halve the EU material footprint by 2030, considering 13.7 tonnes per capita in 2015 as the baseline. The 50% reduction in material footprint can be further broken-down into the following targets starting with slower reductions in the early years 11.0 tonnes per capita by 2025 and 6.8 tonnes per capita by 2030 + a waste prevention target to cap total waste generation per capita of both commercial and municipal waste with setting specific sectoral prevention targets for priority product categories

- PBL Netherlands Environmental Assessment Agency Policy Report¹⁹ The preliminary government target for 2030 is a 50% decrease in the use of primary abiotic resources (minerals, metals and fossil fuels), while the target for 2050 is a fully circular economy in the Netherlands.
- EU Biodiversity Strategy for 2030: at least 25% of the EU's agricultural land must be organically farmed by 2030. https://ec.europa.eu/info/sites/info/files/communication-annex-eu-biodiversity-strategy-2030_en.pdf
- EU B@B Platform & the Farm to Fork Code of Conduct: The sector transforms its sourcing practices to ensure at least 25% of EU's agricultural land is organically farmed by 2030 and 100% by 2050. Reflecting the objectives of the EU Biodiversity Strategy for 2030.
- The Landfill Directive (2018 amendment) states '*Member States shall take the necessary measures to ensure that by 2035 the amount of municipal waste landfilled is reduced to 10% or less of the total amount of municipal waste generated (by weight)*'

iii. Objective 5: Pollution prevention and control

Selection of pollution related targets in Europe (legally binding or commitments)

The EU's zero pollution action plan (COM(2021) 400 final) includes the following 'vision' for 2050

- Air, water and soil pollution is reduced to levels no longer considered harmful to health and natural ecosystems and that respect the boundaries our planet can cope with, thus creating a toxic-free environment.

This vision is enacted in part through the following targets for 2030:

Under EU law, Green Deal ambitions and in synergy with other initiatives, by 2030 the EU should reduce:

1. by more than 55% the health impacts (premature deaths) of air pollution;
2. by 30% the share of people chronically disturbed by transport noise;
3. by 25% the EU ecosystems where air pollution threatens biodiversity;
4. by 50% nutrient losses, the use and risk of chemical pesticides, the use of the more hazardous ones, and the sale of antimicrobials for farmed animals and in aquaculture
5. by 50% plastic litter at sea and by 30% microplastics released into the environment;
6. significantly total waste generation and by 50% residual municipal waste.

The Sustainable Development Goals cover the following pollution targets with deadlines⁷⁹:

- By 2030, ensure sustainable food production systems and implement resilient agricultural practices.
- By 2030, substantially reduce the number of deaths and illnesses caused by hazardous chemicals, as well as due to the pollution and contamination of air, water and soil.
- By 2030, achieve universal and equitable access to safe and affordable drinking water.
- By 2025, prevent and significantly reduce marine pollution of all kinds.

Other EU frameworks in which pollution reduction is embedded:

- 8th EAP proposal COM(2020) 652
- Biodiversity strategy 2030 COM(2020)380 final
- Sustainable Use of Pesticides Directive (2009/128/EC)
- European Strategy for Plastics in a Circular Economy (COM(2018) 28)
- Chemical Strategy for Sustainability COM(2020)667
- Strategic Approach to Pharmaceuticals in the Environment COM(2019)128
- Circular Economy Action Plan COM(2020)98 final

iv. Objective 6: Protection and restoration of biodiversity and ecosystems

Selection of Biodiversity and Ecosystem related targets in Europe (legally binding or commitments)

UNEP targets set out in the context of the UN Decade on Ecosystems Restoration⁸⁰:

- Restoring 350 million hectares (3.5 million square kilometres) of degraded landscapes by 2030;
- Save 1 million animal and plant species currently threatened with extinction;
- Restoring wetlands to offer 14 percent of the mitigation potential needed to limit global warming by 2 degrees.

Targets as set out in the EU Biodiversity strategy to 2030 COM/2020/380 final):

⁷⁹ <https://www.pureearth.org/wp-content/uploads/2018/10/SDGPollutionLinks2018Final.pdf>

⁸⁰ <https://wedocs.unep.org/bitstream/handle/20.500.11822/30919/UNDecade.pdf?sequence=11>

- To reach land degradation neutrality by 2030, at least 30% of species and habitats not currently in favourable status are in that category or show a strong positive trend, and significant areas of degraded and carbon-rich ecosystems are restored; habitats and species show no deterioration in conservation trends and status;
- The decline in pollinators is reversed
- The risk and use of chemical pesticides is reduced by 50% and the use of more hazardous pesticides is reduced by 50%.
- At least 10% of agricultural area is under high-diversity landscape features.
- At least 25% of agricultural land is under organic farming management, and the uptake of agro-ecological practices is significantly increased.
- Three billion new trees are planted in the EU, in full respect of ecological principles.
- Prevent and respond to major forest fires and promote afforestation and reforestation.
- Significant progress has been made in the remediation of contaminated soil sites.
- At least 25,000 km of free-flowing rivers are restored
- There is a 50% reduction in the number of Red List species threatened by invasive alien species.
- The losses of nutrients from fertilisers are reduced by 50%, resulting in the reduction of the use of fertilisers by at least 20%.
- Cities with at least 20,000 inhabitants have an ambitious Urban Greening Plan.
- No chemical pesticides are used in sensitive areas such as EU urban green areas.
- The negative impacts on sensitive species and habitats, including on the seabed through fishing and extraction activities, are substantially reduced to achieve good environmental status.
- The by-catch of species is eliminated or reduced to a level that allows species recovery and conservation

Protected areas targets of the EU biodiversity strategy:

- Legally protect a minimum of 30% of the EU's land area and 30% of the EU's sea area and integrate ecological corridors, as part of a true Trans-European Nature Network.
- Strictly protect at least a third of the EU's protected areas, including all remaining EU primary and old-growth forests.
- Effectively manage all protected areas, defining clear conservation objectives and measures, and monitoring them appropriately.

Relevant SDG Targets

Goal 14 “Life Below Water” “Conserve and sustainably use the oceans, seas and marine resources for sustainable development”

- by 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution
- Minimise and address the impacts of ocean acidification

Goal 15 “Life on Land”: “Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss”

- By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, droughts and floods, and strive to achieve a land-degradation-neutral world – (indicator – proportion of land that is degraded over total land area)
- By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development – (Mountain Green Cover Index & coverage by protected areas of important sites for mountain biodiversity)

Part B: Feedback materials

This part of the document includes sectors and activities for which the PSF has been able to propose technical screening criteria for economic activities contributing to one or more of the environmental objectives of the Taxonomy. The results of this work are provided for open comment. They are provided in line with framework set out in the Taxonomy Regulation and following the methodology described in Part A of this document.

The Platform is not seeking feedback on the DNSH criteria that were already included in the first climate delegated act where these have relevance for similar activities in this call for feedback.

The proposed technical criteria cover the economic activities set out in Table 6-16 below.

Table 6 Sector team 1 – Agriculture, forestry and fishing

Agriculture, Forestry and Fishing							
Economic Activities	NACE codes	Mitigation	Adaptation	Water	Circular economy	Pollution	Biodiversity
Animal Production	A1.4						X
Crop Production	A1.1, A1.2						X
Forestry and logging	A2						X
Fishing	A3.11						X

Table 7 Sector teams 3,4,5 – Manufacturing

Manufacturing							
Economic Activities	NACE codes	Mitigation	Adaptation	Water	Circular economy	Pollution	Biodiversity
Manufacture of basic pharmaceutical products	C21					X	
Manufacture of basic pharmaceutical preparations	C21					X	
Manufacture of chemicals	C20					X	
Manufacture of chemical products	C20					X	
Manufacture of plastic packing goods	C22				X		
Manufacture of durable electrical and electronic equipment	C26, C27				X		
Manufacture of circular electrical and electronic equipment	C26, C27				X		
Resell and/or remanufacture of used electrical and electronic equipment	C26, C27				X		
Manufacture of equipment generating electricity and/or heat	C25, C28					X	
Manufacture of motor vehicles, trailers and semi-trailers	C29					X	
Manufacture of other transport equipment	C30					X	
Design, manufacture, remanufacture, and reselling of furniture	C31				X		
Manufacture of food products and beverages	C10, C11				X		X
Finishing of textiles	C13.3					X	
Manufacture, repair, refurbishment and resale of wearing apparel	C14				X		
Manufacture, remanufacture and reselling of footwear and leather goods	C15				X		
Tanning of leather	C15					X	

Table 8 Sector team 4 – Manufacturing (Enabling Activities)

Manufacturing (Enabling Activities)							
Economic Activities	NACE codes	Mitigation	Adaptation	Water	Circular economy	Pollution	Biodiversity
Manufacture of high, medium and low voltage electrical equipment that result in or enable substantial GHG emissions reductions	C.27.1, C.27.3, C.27.9.		X				
Manufacture of machinery enabling closed-loop systems, and high quality waste collection and waste management	C25, 26, C27, C28, J61, J.62, J.63				X		
Manufacture of machinery, equipment and solutions enabling a substantial contribution to the circular economy	C.22, C.25, C.26, C.27, C.28				X		
Manufacture of machinery, equipment and data solutions enabling a substantial contribution to pollution prevention and control	C25, 26, C27, C28, J61, J.62, J.63					X	
Manufacture of machinery, equipment and solutions enabling a substantial contribution the sustainable use and protection of water and marine resources	C25, 26, C27, C28, J61, J.62, J.63			X			

Table 9 Sector team 6 - Energy

Energy							
Economic Activities	NACE codes	Mitigation	Adaptation	Water	Circular economy	Pollution	Biodiversity
Environmental Refurbishment of electricity generation facilities that produce electricity from hydropower	D35.1						X
Electricity generation from bioenergy for protection and restoration of biodiversity and ecosystems	D35.1						X
Electricity generation using solar photovoltaic technology	D35.1					X	
Electricity generation using concentrated solar power (CSP) technology	D35.1					X	
Electricity generation from wind power	D35.1					X	
Electricity generation from ocean energy technologies	D35.1					X	
Electricity generation from hydropower	D35.1					X	
Electricity generation from geothermal energy	D35.1					X	
Electricity generation from natural gas	D35.1					X	
Electricity generation from renewable non-fossil gaseous fuels	D35.1					X	
Electricity generation from biogas	D35.1					X	
Power from cogeneration of heat/cool and power from solar energy	D35.1					X	
Power from cogeneration of heat/cool and power from geothermal energy	D35.1					X	
Power from cogeneration of heat/cool and power from natural gas	D35.1					X	
Power from cogeneration of heat/cool and power from renewable non-fossil gaseous fuels	D35.1					X	
Power from cogeneration of heat/cool and power from biogas	D35.1					X	

Table 10 Sector team 7 - Civil engineering

Civil Engineering							
Economic Activities	NACE codes	Mitigation	Adaptation	Water	Circular economy	Pollution	Biodiversity
Construction of civil engineering objects	F42				X		
Civil engineering for climate change adaptation	F42		X				
Maintenance of roads and motorways	F42				X		
Maintenance of bridges and tunnels (railway, road and cycling infrastructure)	F42				X		

Table 11 Sector team 7 – Buildings

Buildings							
Economic Activities	NACE codes	Mitigation	Adaptation	Water	Circular economy	Pollution	Biodiversity
Construction of new buildings and major renovations of buildings for the transition to a circular economy	F41				X		
Construction of new buildings and major renovations of buildings for protection and restoration of biodiversity and ecosystems	F41						X
Acquisition and ownership of buildings	L68						X
Demolition or wrecking of buildings and other structures	F43				X		

Table 12 Sector teams 4,7 - ICT

ICT							
Economic Activities	NACE codes	Mitigation	Adaptation	Water	Circular economy	Pollution	Biodiversity
Digital solutions exploiting space-based earth observations enabling climate change mitigation	J58.2, J61, J62, J63.1.1, M71, M72	X					
Digital solutions exploiting space-based earth observations enabling climate change adaptation	J58.2, J61, J62, J63.1.1, M71, M72		X				
Digital solutions exploiting space-based earth observations enabling the protection and restoration of biodiversity and ecosystems	J58.2, J61, J62, J63.1.1, M71, M72						X
Digital solutions exploiting space-based earth observations enabling pollution prevention, monitoring and control	J58.2, J61, J62, J63.1.1, M71, M72					X	
Digital solutions exploiting space-based earth observations enabling sustainable use of waters and marine resources, and their protection	J58.2, J61, J62, J63.1.1, M71, M72			X			
Provision of data-driven solutions enabling to prolong asset's lifetime, provide value chain material and product information, or enable product designers to make a substantial contribution to the circular economy	J61-63				X		
Provision of data-driven solutions enabling map and monitor water quality and scarcity, and manufacture of equipment enabling the efficient use and treatment of water resources	C25, 26, C27, C28, J61, J.62, J.63			X			

Table 12 Sector team 7 – Disaster risk management

Disaster Risk Management							
Economic Activities	NACE codes	Mitigation	Adaptation	Water	Circular economy	Pollution	Biodiversity
Emergency Services - Emergency Health Services	86.10, 86.90, 84.22		X				
Emergency Services - Disaster Response Coordination			X				
Emergency Services - Disaster Relief	88,99		X				
Emergency Services - Search and Rescue	84,25		X				
Emergency Services - Hazardous Materials Response	39		X				
Emergency Services - Firefighting	84.25, 02.40, 80.20, 52.23, 09.10		X				
Emergency Services - Technical Protection Response and Assistance	84,25		X				
Flood risk prevention and protection infrastructure for inland river and coastal floods	F42.91		X				
Implementation of nature based solutions (Nbs) for flood risk prevention and protection for both inland and coastal waters	F42.91			X			

Table 13 Sector team 8 – Transport

Transport							
Economic Activities	NACE codes	Mitigation	Adaptation	Water	Circular economy	Pollution	Biodiversity
Sea and coastal freight water transport	H50					X	
Sea and coastal passenger water transport	H50.10, N77.21, N77.34, N77.34					X	
Retrofit and upgrade of vessels for the transport of freight on vessels designed for operating on sea or coastal waters	H52.2, H50.2, C33.15					X	
Retrofit and upgrade of vessels for the transport of passengers on vessels designed for operating on sea or coastal waters	H52.2, H50.2, C33.15					X	
Urban and suburban passenger land transport	H49.31					X	
Inland freight water transport	H50.4					X	
Inland passenger water transport	H50.30					X	
Urban and suburban passenger land public transport	H49.31, H49.32, H49.39, N77.39, N77.11					X	
Transport by motorbikes, passenger cars and light commercial vehicles	H49.32, H49.39, N77.11					X	
Manufacturing of aircraft	C30.1	X					
Passenger air transport	H51.1, N.77.35	X					
Air transportation ground handling operations		X					

Table 14 Sector team 9 – Restoration, Remediation

Restoration, Remediation							
Economic Activities	NACE codes	Mitigation	Adaptation	Water	Circular economy	Pollution	Biodiversity
Conservation of habitats and ecosystems							X
Restoration of ecosystems for protection and restoration of biodiversity and ecosystems							X
Restoration of ecosystems for climate change adaptation			X				
Remediation activities enabling restoration of waterbodies	E39			X			
Remediation activities for the transition to a circular economy	E39				X		
Remediation activities for pollution prevention and control	E39					X	
Remediation activities enabling restoration of ecosystems	E39						X

Table 15 Sector team 9 – Tourism

Tourism							
Economic Activities	NACE codes	Mitigation	Adaptation	Water	Circular economy	Pollution	Biodiversity
Hotels, holiday, camping grounds and similar accommodation	I5510, I5520, I5530						X

Table 17 Sector team 10 – Water Supply and Sewerage

Water Supply and Sewerage							
Economic Activities	NACE codes	Mitigation	Adaptation	Water	Circular economy	Pollution	Biodiversity
Water supply	E36			X			
Desalination			X				
Urban Wastewater Treatment	E37			X			
Phosphorus recovery from wastewater	E37				X		
Production of alternative water resources	E37				X		
Sustainable urban drainage systems (SUDS)	E37			X			

Table 18 Sector team 10 – Waste Management

Waste Management							
Economic Activities	NACE codes	Mitigation	Adaptation	Water	Circular economy	Pollution	Biodiversity
Collection and transport of non-hazardous and hazardous waste	E38				X		
Separate collection and transport of hazardous waste	E38					X	
Treatment of hazardous waste as a means for pollution prevention and control	E38					X	
Treatment of hazardous waste as a means for material recovery	E38				X		
Recovery of bio-waste by anaerobic digestion and/or composting	E38				X		
Remediation of legally non-conforming landfills and abandoned or illegal waste dumps	E38					X	
Depollution and dismantling of end-of-life products for material recovery	E38				X		
Sorting and material recovery of non-hazardous waste	E38				X		
Preparation for re-use of end-of-life products and components they are made of having become waste					X		

Table 19 Sector team 4 – Services

Services							
Economic Activities	NACE codes	Mitigation	Adaptation	Water	Circular economy	Pollution	Biodiversity
Provision of electrical and electronic equipment through circular business models					X		
Provision of repair activities and maintenance services and of directly related activities					X		

1. Feedback questions

For each of the economic activities, please provide responses to the following questions. You can do this directly on the consultation web-page using the drop-down menus.

Specific questions on the draft TSC

1. Does your comment about the definition/boundary of the activity concern:

- The granularity of the activity? Yes / No [*Condition: if Yes, please specify*]
- The boundary of the activity? Yes / No [*Condition: if Yes, please specify*]
- The clarity with which the activity has been defined? Yes / No [*Condition: if Yes, please specify*]

If yes, please provide a brief scientific/technical explanation and rationale as well as supporting evidence (including links to published journals and articles) for your selection.

1. Do you consider the **ambition level** set by the proposed substantial contribution criteria to be appropriate? Y/N

If no, please provide an alternative suggestion with a brief scientific/technical explanation and rationale as well as supporting evidence (including links to published journals and articles) for your suggestion.

2. Are there any **key factors which have been omitted** from the draft proposed substantial contribution criteria or that **need better defining** that should be addressed? Y/N

If yes, please identify the missing aspects or the improved definitions together with a brief scientific/technical explanation and rationale as well as supporting evidence (including links to published journals and articles) for your suggestion(s).

3. Do you have any major concerns with respect to the ability to **implement** the proposed substantial contribution criteria? Y/N

If yes, please identify your concern(s) together with a brief explanation and rationale as well as supporting evidence (including links to published journals and articles) for your concern(s).

4. Do you consider that **the rationale and scientific evidence is sufficient and robust on which to base the criteria?**

If no, please identify your concern(s) together with a brief explanation and rationale as well as supporting evidence (including links to published journals and articles) for your concern(s).

5. Do the criteria for the activity **represent the state-of-the-art in technological and/or practice terms?**

If no, please identify your concern(s) together with a brief explanation and rationale as well as supporting evidence (including links to published journals and articles) for your concern(s).

6. Does the proposed DNSH criteria ensure no *significant* harm to the objective? Y/N

If no, what should the performance limit level be in your view?

Please provide a brief scientific/technical explanation and rationale as well as supporting evidence (including links to published journals and articles) for your suggestion:

7. Are there any **key factors which have been omitted** from the draft proposed DNSH criteria or that **need better defining** that should be addressed? Y/N

If yes, please identify the missing aspects or the improved definitions together with a brief scientific/technical explanation and rationale as well as supporting evidence (including links to published journals and articles) for your suggestion(s).

8. Do you have any major concerns with respect to the ability to **implement** (e.g. technical feasibility) the proposed DNSH criteria? Y/N

If yes, please identify your concern(s) together with a brief explanation and rationale as well as supporting evidence (including links to published journals and articles) for your concern(s).

Horizontal considerations with respect to the proposed TSCs

9. Where economic activities are linked (e.g. through the supply chain) or have similar characteristics, are the associated **substantial contribution criteria for a particular environmental objective suitably aligned and consistent**? Y/N

If no, please identify the specific instances (economic activities, substantial contribution criteria) where you consider there to be misalignments or inconsistencies together with a brief scientific/technical explanation and rationale as well as supporting evidence (including links to published journals and articles) for your suggestion(s).

10. For each environmental objective, is the **level of DNSH performance criteria consistent and aligned** across the different economic activities? Y/N

If no, please identify the specific instances (environmental objective, economic activities, DNSH criteria) where you consider there to be misalignments or inconsistencies together with a brief scientific/technical explanation and rationale as well as supporting evidence (including links to published journals and articles) for your suggestion(s).

General feedback on the draft report

11. Do you have any comments on the written report that you would like to make? Y/N

If yes, please provide brief comments.

2. Example Technical Screening Criteria Template

The following is an example of a technical screening criteria template to help you navigate the Annex to this report and in providing responses to the consultation questions.

Description of the activity

The activity is classified under NACE code XXX in accordance with the statistical classification of economic activities established by Regulation (EC) No 1893/2006.

Substantial contribution to X

xxxx

Do no significant harm ('DNSH')

(1) Climate change mitigation	
(2) Climate change adaptation	
(3) Sustainable use and protection of water and marine resources	
(4) Transition to a circular economy	
(5) Pollution prevention and control	
(6) Protection and restoration of biodiversity and ecosystems	

Rationale

xxx

Part B – Annex: Full list of Technical Screening Criteria (separate document)

The Annex with the full list of Technical Screening Criteria is available as a separate document.