



EU TECHNICAL EXPERT GROUP ON  
SUSTAINABLE FINANCE

FINANCING A SUSTAINABLE  
EUROPEAN ECONOMY



USING THE  
**TAXONOMY**

**Supplementary Report 2019**  
by the Technical Expert Group on Sustainable Finance

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# 1. What is the Taxonomy?

**A Taxonomy is a classification tool to help investors and companies make informed investment decisions on environmentally friendly economic activities.** It can help to grow the clean economy of the future and substantially improve the environmental performance of industries we have today.

## WHAT IS THE EU TAXONOMY?

The EU Taxonomy is a list of economic activities with performance criteria for their contribution to six environmental objectives. Taxonomies are used in the investment industry and are demonstrated to help drive capital towards sustainability objectives.

To be included in the proposed EU Taxonomy, an economic activity must contribute substantially to at least one environmental objective and do no significant harm to the other five, as well as meet minimum social safeguards.<sup>1</sup> Technical screening criteria set requirements for determining *Substantial Contribution* and *Doing No Significant Harm (DNSH)*.

### The six Taxonomy environmental objectives:

- I. climate change mitigation;
- II. climate change adaptation;
- III. sustainable use and protection of water and marine resources;
- IV. transition to a circular economy, waste prevention and recycling;
- V. pollution prevention and control;
- VI. protection of healthy ecosystems.

The Taxonomy will be developed gradually. The Technical Expert Group (TEG) report covers activities that make a substantial contribution to climate change mitigation and adaptation. More activities will be added in the future, including activities that contribute significantly to other environmental objectives.

## HOW WILL IT BE USED?

Under the proposed Taxonomy regulation, institutional investors and asset managers marketing investment products as environmentally sustainable would need to explain whether, and how, they have used the Taxonomy criteria. Investors could state that they are seeking to invest in Taxonomy-eligible activities or disclose their own preferred approach to determine that their investment is environmentally sustainable.

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<sup>1</sup> Minimum social safeguards would apply to all Taxonomy eligible investments. For further details see the proposed Taxonomy regulation [https://ec.europa.eu/info/law/better-regulation/initiatives/ares-2017-5524115\\_en#pe-2018-3333](https://ec.europa.eu/info/law/better-regulation/initiatives/ares-2017-5524115_en#pe-2018-3333)

## HOW WAS IT DEVELOPED?

- Leading thinkers in the High-Level Expert Group on Sustainable Finance recommended a Taxonomy, as a key part of deep reforms to make finance more sustainable;
- The European Commission responded with a comprehensive plan of 10 actions to reform the financial system with 27 individual initiatives, (The Action Plan), of which an EU-wide Taxonomy was of the key legal proposals;
- A group of experts from finance, academia, civil society and industry (TEG) were appointed to identify initial economic activities and the level of environmental performance they must achieve;
- These experts were supported by almost 200 selected experts who provided input to create a proposed list of Taxonomy activities.

## WHAT IS INCLUDED?

- The TEG assessed known climate change mitigation opportunities and tested possible climate change adaptation activities for inclusion in the EU Taxonomy.
- Many economic activities are yet to be assessed by the TEG but can be assessed by the future Platform on Sustainable Finance.
- Some activities were not included in the Taxonomy if they could not make a substantial contribution or did not meet DNSH criteria.

*For a full description of the Taxonomy methodology, proposed economic activities and criteria, see the Taxonomy Technical Report.*

## THE TAXONOMY IS:

IS	IS NOT
A list of economic activities and relevant criteria	A rating of good or bad companies
Flexible to adapt to different investment styles and strategies	A mandatory list to invest in
Based on latest scientific and industry experience	Making a judgement on the financial performance of an investment – only the environmental performance
Dynamic, responding to changes in technology, science, new activities and data	Inflexible or static

### Taxonomy activities and criteria

Economic activities must meet screening criteria to be included in the Taxonomy. The screening criteria set requirements for:

- Substantial contribution to at least one environmental objective
- Doing no significant harm to the other environmental objectives

The criteria may include quantitative or qualitative thresholds that investors should expect companies to meet in the performance of the economic activities.

Entities must also meet minimum social safeguards in the performance of the activity.

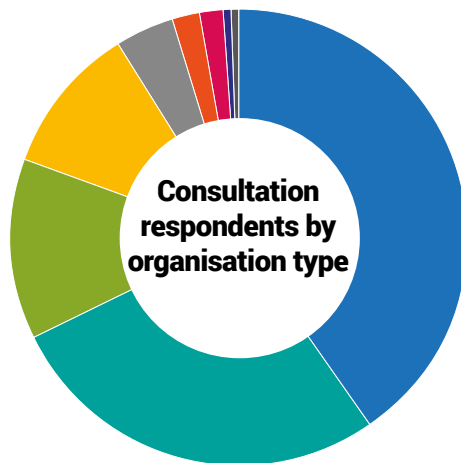


The TEG is grateful to the generous and extensive technical support from consultation respondents and additional experts, as well as the in-depth contributions from the sectoral Commission's Directorates-General and from the Joint Research Centre of the European Commission. Names of TEG members can be found via the Taxonomy Technical report.

### 35 TEG Members and Observers

#### 257 feedback responses

on screening criteria. 95% from Europe. A further 202 feedback responses on Taxonomy usability.

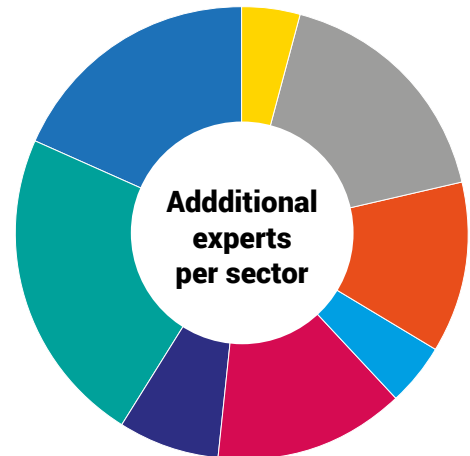


- Industry association
- Company, SME, micro-enterprise, sole trader
- Other
- Non-governmental organisation
- Consultancy, law firm
- Academic institution
- Think tank
- Consumer organisation
- Trade union

### 23 contributing on Taxonomy

#### 159 additional experts involved

from academia, research, industry, policy & regulation, law and civil society.



- Agriculture and forestry
- Manufacturing
- Electricity, gas, steam and air conditioning supply
- Water, sewerage, waste and remediation
- Transport
- Information and Communication Technologies (ICT)
- Climate change adaptation
- Objectives 3-6 (DNSH) assessment
- Additional support from TEG member organisations

## 2. Benefits of the Taxonomy

### WHY HAVE AN EU TAXONOMY?

Meeting Sustainable Development Goals (SDGs), the Paris Agreement commitments and other environmental goals will require substantial investments far beyond what the public sector can muster. Mobilising and re-directing private capital is necessary for meeting EU's climate, environmental and sustainability commitments.

At least EUR 175bn of additional investment is needed each year to help Europe respond to the climate mitigation challenge alone. Through financing or investment decisions, and through stewardship, investors can influence the decisions taken by corporations and other issuers of securities. These decisions have a direct impact on whether, and how, policy goals like the SDGs and the Paris Agreement are met.

Policy commitments provide important signals to corporations and other private companies, investors, banks and public entities about future economic trends, investment opportunities and risks. But for capital markets to contribute effectively to these overarching policy goals there is an increasing need to develop and strengthen the toolbox. The Taxonomy is one such powerful tool.

The EU Taxonomy will provide the following benefits to investors:

- **Provide clarity via a common language** for investors, issuers, policymakers and regulators. Investors can use it to express their expectations for their investment decisions. Companies and project developers can use it to plan and raise finance, developing the pipeline of sustainable investment opportunities. All can use it to avoid unintended greenwashing.
- **Help translate commitments to the Paris Agreement and the SDG's** for investors. The Taxonomy bridges the gap between international goals and investment practice, clearly signalling the types of activities that are consistent with the low-carbon transition, adaptation and other environmental objectives.
- **Save time and money for investors and issuers.** The criteria have been developed by environmental and industry experts and reference the latest EU and international thinking. This allows investors to focus on what they do best, understanding the risk and return of an investment.
- **Support different investment styles and strategies.** Investors marketing environmentally sustainable funds can invest in Taxonomy-eligible activities; engage companies on how they are progressing towards Taxonomy thresholds; or provide their own explanation for how they will achieve the fund's goals. Investing in Taxonomy-eligible activities is not mandatory.
- **Put environmental data in context.** Investors need to understand which companies are contributing to the low-carbon transition and which are building resilience to climate change, not just carbon footprints.
- **Avoid reputational risks.** By screening out economic activities that undermine broader environmental, climate and social objectives, investors can avoid reputational risk and ensure that their strategy is robust.
- **Deepen the conversation.** By focussing on economic activities, the Taxonomy provides a tool to understand company business models. Some business lines may be delivering on sustainability objectives, while others may not. This allows a sophisticated discussion around strategy and consistency with sustainability objectives.
- **Reward companies.** A science and evidence-based framework to define what is environmentally sustainable provides companies with clear direction. It will help companies access finance for R&D while rewarding those undertaking environmentally sustainable activities.

# 3. Using the Taxonomy

## WHO WOULD USE THE TAXONOMY?

Those marketing portfolio management, UCITS funds, alternative investment funds (AIFs), insurance-based investment products (IBIP), pension products and pension schemes as environmentally sustainable could use the Taxonomy in the design of their fund-products.<sup>2</sup> Disclosure on the investment methods and use of the Taxonomy for those products would be required but the Taxonomy has many related uses.

## HOW COULD THE EU TAXONOMY BE USED?

The Taxonomy can be used for expressing investment preferences, selecting holdings, designing green financial products, engaging with investees or measuring the environmental performance of an equity or bond fund, as well as for other products such as green use-of-proceeds project financing. Importantly, the Taxonomy is not mandatory for investment decisions and investors would be free to explain their alternative methodologies in their disclosures.

For each relevant product, investors would disclose the proportion of investments funding Taxonomy-eligible activities (or that would eligible under an alternative methodology).

This disclosure obligation is intended to align with the requirements of the recently approved *Regulation on Disclosures Relating to Sustainability Risks and Sustainable Investments*.<sup>3</sup> Under this regulation, which was approved in May 2019, financial market participants who offer a fund targeting sustainability objectives must disclose what these objectives are and the methodologies used to assess, measure and monitor progress against these objectives, as well as an assessment of the overall sustainability-related impact of the financial product. Investors have the option to use the taxonomy to explain how they intend to achieve one or more environmental objectives.

## VOLUNTARY TAXONOMY USERS

The Taxonomy can also be used on a voluntary basis by other financiers, companies and local authorities both within and outside the EU. For example:

- Banks could use the Taxonomy for green loans, project finance or private lending;
- International investors can also use the Taxonomy in their local markets, treating the criteria as a benchmark to compare local activities to high EU environmental standards and informing investment decisions appropriately;
- Companies and local authorities could use the Taxonomy to help them bring sustainable investment opportunities to the market, or to help them in their investment decisions.

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<sup>2</sup> The definition of financial market participant and financial product refer to the definition in the EU Regulation regarding disclosure of sustainability risks and sustainable investments, adopted in April 2019. (official link to latest version).

<sup>3</sup> [http://www.europarl.europa.eu/RegData/etudes/BRIE/2019/635572/EPRS\\_BRI\(2019\)635572\\_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/BRIE/2019/635572/EPRS_BRI(2019)635572_EN.pdf)



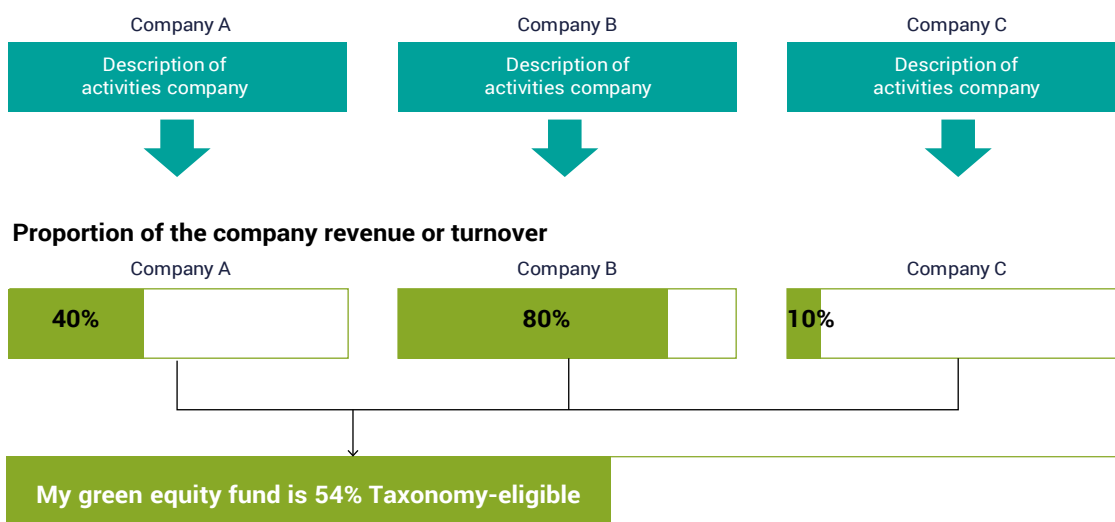
Uses and users of the Taxonomy		
	Disclosure obligations	Optional additional uses
<b>Asset Management</b>	<ul style="list-style-type: none"> <li>• UCITS funds: <ul style="list-style-type: none"> <li>• equity funds;</li> <li>• exchange-traded funds (ETFs);</li> <li>• bond funds</li> </ul> </li> <li>• Alternative Investment Funds (AIFs): <ul style="list-style-type: none"> <li>• fund of funds;</li> <li>• real estate funds;</li> <li>• private equity or SME loan funds;</li> <li>• venture capital funds;</li> <li>• infrastructure funds;</li> </ul> </li> <li>• Portfolio management.</li> </ul>	
<b>Insurance</b>	<ul style="list-style-type: none"> <li>• Insurance-based investment products (IBIP)</li> </ul>	Insurance
<b>Corporate &amp; Investment Banking</b>	<ul style="list-style-type: none"> <li>• Securitisation funds<sup>4</sup></li> <li>• Venture capital and private equity funds</li> <li>• Portfolio Management</li> <li>• Indices funds</li> </ul>	<ul style="list-style-type: none"> <li>• Securitisation</li> <li>• Venture capital and private equity</li> <li>• Indices</li> <li>• Project finance and corporate financing</li> </ul>
<b>Retail banking</b>		<ul style="list-style-type: none"> <li>• Mortgages</li> <li>• Commercial building loans</li> <li>• Car loans</li> <li>• Home equity loans</li> </ul>

<sup>4</sup> Securitisations, indices, venture capital or private equity conducted by investment banks do not fall under the scope of the regulation. They would not have to report on how they relate to the Taxonomy. However, the funds that replicate the indices, aggregate or package the green securitisations or private equity investments which are sold as AIFs, UCITS, EUVECA funds or EU SEF would have to disclose the extent to which they use the taxonomy.

# HOW INVESTORS WOULD USE THE TAXONOMY IN FIVE STEPS

1	Identify the activities conducted by the company, issuer or covered by the financial product (e.g. projects, use of proceeds) that could be eligible.
2	For each activity, assess whether the company or issuer meets the relevant criteria for a substantial contribution e.g. electricity generation <100g CO <sup>2</sup> /kWh.
3	Verify that the DNSH criteria are being met by the issuer. Investors using the Taxonomy would most likely use a due-diligence like process for reviewing the performance of underlying investees.
4	Conduct due diligence to avoid any violation to the social minimum safeguards stipulated in the Taxonomy regulation (article 13).
5	Calculate alignment of investments with the Taxonomy and prepare disclosures at the investment product level.

## How to apply the taxonomy to an equity portfolio



## WHAT INFORMATION IS NEEDED?

For the Taxonomy to work in practice, investors will need data about company or issuer performance on the Taxonomy activity criteria. Data markets will take some time to develop as issuers and ESG research and rating companies develop their systems. The data that will be needed includes:

<b>A</b>	Revenue breakdown by Taxonomy-eligible activities, or expenditure allocation to each Taxonomy-eligible activity
<b>B</b>	Performance against the technical screening criteria, or environmental management data where this is an acceptable proxy for compliance with the technical screening criteria - including DNSH assessment.
<b>C</b>	Management data on social issues: Labour rights policies, management systems, audits, reporting.

## WHAT SHOULD COMPANIES DO?

Companies are encouraged to provide Taxonomy related data to investors via the revised guidelines accompanying the Non-Financial Reporting Directive. The guidelines recommends that companies provide their revenues or turnover broken down according to the taxonomy's classification as well as how they meet DNSH criteria and their capital expenditure in taxonomy-eligible activities.

Companies and projects whose activities meet the taxonomy criteria can benefit from being eligible for both environmentally oriented equity and debt funds. That is also the case for those companies and projects that develop technologies and products that are critical for other sector companies to meet environmental objectives.

Companies or projects that work towards meeting the Taxonomy criteria over time can raise capital to finance the greening of their activities e.g. to lower the carbon intensity by issuing use-of-proceeds bonds or loans.

The Taxonomy can be used to identify revenues from sustainable activities as well as expenditures in improving the environmental performance of facilities. The taxonomy can help investors measure and increase how much they contribute to environmental objectives while saving them time and resources.

If an issuer's activities or technologies are not yet listed in the Taxonomy, they can still disclose how their activities relate to the Taxonomy, including whether they are already *low carbon*, *contribute to the Transition* or are *enabling* activities. They should also seek to have their activity reviewed by the planned Sustainable Finance Platform.

## Example: Cement manufacturing

A cement manufacturing company is looking to increase its environmental sustainability. Currently the company has greenhouse gas emissions of 0.6tCO<sub>2</sub>e/t of cement. The taxonomy includes the following criterion for when cement manufacturing is considered to have a substantial contribution to climate change mitigation: **0.498 tCO<sub>2</sub>e/t of cement**<sup>5</sup>

At this point in time, the cement manufacturer does not meet the technical criteria for climate change mitigation. These activities, and hence the revenues from cement manufacture, cannot be considered Taxonomy-eligible.

### Financing the transition:

The cement company is looking for capital to improve the environmental performance of its manufacturing facility and has drafted an investment plan to do this. If the environmental performance is improved to meet or exceed the threshold in the taxonomy criteria, and minimum social safeguards are met, banks or investors financing these activities can consider them eligible for the taxonomy.

### Taxonomy eligible activity

Once the facility meets the taxonomy criteria, including the minimum social safeguards, the whole activity at this facility can also be considered Taxonomy-eligible. If an investor seeks to disclose the percentage of a fund that is financing taxonomy-eligible activities, it can do so by calculating the share of company revenues associated with this facility.

## Example: Avoiding Significant Harm to other environmental objectives

A company produces electricity from off-shore wind. Off-shore wind energy is considered to substantially contribute to climate change mitigation.

However, to be Taxonomy eligible, the electricity generation must also be performed in such a way that no significant harm is caused to the other environmental objectives in its operation and production chain. To do this, investors should seek confirmation that:

1. The installation is designed to withstand current weather variability and future climate change, across a range of future climate scenarios in line with its expected lifetime and it is consistent with and does not hamper adaptation efforts at local level.
2. Underwater noise in the construction phase complies with local thresholds to minimise impact on local species;
3. The percentage of recyclable materials used in wind turbines is maximised and composite materials (e.g. carbon and glass fibres) are minimised; and,
4. The company is acting to minimise impacts on other ecosystems such as flight, habitat of birds and visual impact.

If an investor is satisfied with the confirmation it receives from the company responsible for the electricity generation assets, it can consider the activity to be Taxonomy eligible.

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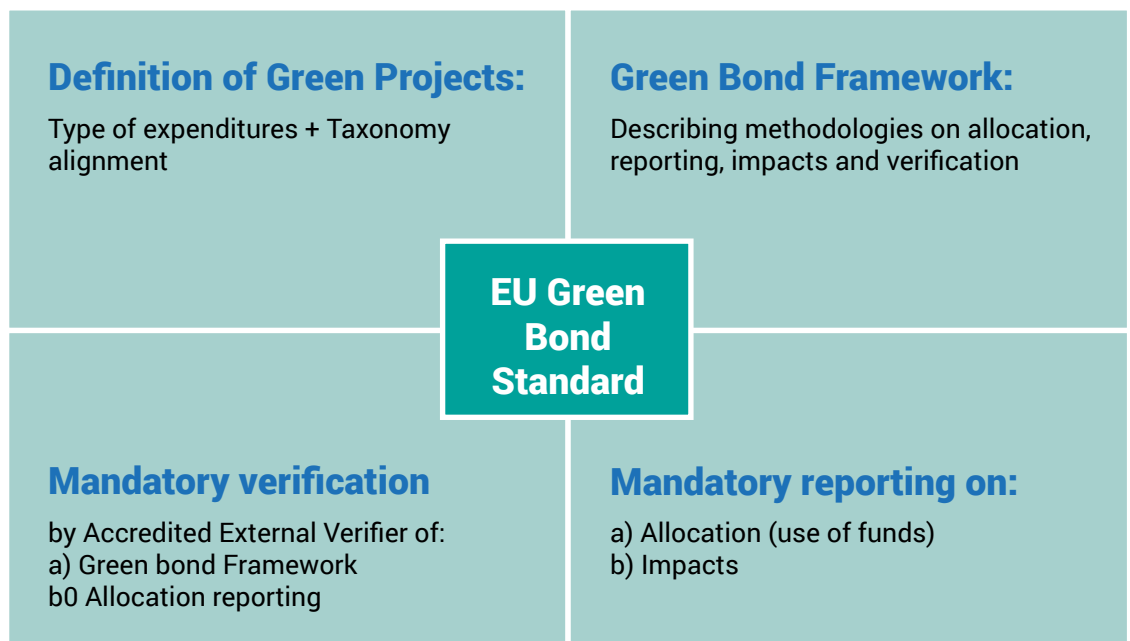
<sup>5</sup> Please see the full technical screening criteria for further details.

## HOW WILL THE TAXONOMY WORK WITH GREEN BONDS?

Green Bonds build on an issuer's voluntary commitment to disclose and report on how they create environmental benefits with the projects or activities funded by the bond proceeds. Issuers, investors and intermediators together have been governing the Green Bond Principles (GBP), which are the most commonly used international framework for green bonds.

The TEG proposes in its report on a potential EU Green Bond Standard (EU GBS) that green bond proceeds are used for green projects that significantly contribute to at least one of the environmental objectives while not substantially harming the others and meet the criteria and thresholds as defined in the taxonomy proposal.

While use of the EU GBS is voluntary, the use of the term 'EU Green Bond' is only permitted when all components of the GBS are met. The GBS allows the issuers to issue debt in line with the taxonomy, and the investor to invest in taxonomy aligned debt instruments in a safe and easy way. EU GBS gives the market stakeholders (issuers, investors, external reviewers, public authorities and civil society) four tools and practices:





## 4. What makes a substantial contribution to climate change mitigation?

To transition to a net-zero emissions economy, the EU must grow the low-carbon sector, encourage sequestration, decarbonise existing industry and avoid promoting activities which are incompatible with climate mitigation goals. The Taxonomy will reflect this by considering three kinds of activities as making a substantial contribution to climate change mitigation:

Type of activity	Technical screening criteria	Examples
<b>1) Activities that are already low carbon.</b> Already compatible with a 2050 net zero carbon economy	Likely to be stable and long-term	<ul style="list-style-type: none"> <li>• Zero emissions transport</li> <li>• Near to zero carbon electricity generation</li> <li>• Afforestation</li> </ul>
<b>2) Activities that contribute to a transition to a zero net emissions economy in 2050 but are not currently operating at that level.</b>	Likely to be subject to regular revision, tending towards zero emissions.	<ul style="list-style-type: none"> <li>• Building renovation;</li> <li>• Electricity generation &lt;100g CO<sub>2</sub>/kWh</li> <li>• Cars &lt;50g CO<sub>2</sub>/km</li> </ul>
<b>3) Activities that enable those above.</b>	Likely to be stable and long-term (if enabling activities that are already low carbon) or subject to regular revision tending to zero (if enabling activities that contribute to transition but are not yet operating at this level).	<ul style="list-style-type: none"> <li>• Manufacture of wind turbines</li> <li>• Installing efficient boilers in buildings</li> </ul>

The Taxonomy will not include efficiencies in activities which ultimately undermine climate mitigation objectives, such as coal-powered electricity generation. Improving the efficiency of these activities may provide short-term benefits, but they are not considered consistent with the aims of the Taxonomy.

## What are the EU's climate change mitigation objectives?








The Taxonomy regulation states that the Taxonomy must help to avoid dangerous anthropogenic interference with the climate system.

This is consistent with the Paris Agreement, which commits countries to limiting the global temperature increase to well below 2 degrees Celsius and pursuing efforts to limit the temperature increase to 1.5 degrees Celsius.

The EU and its Member States have legally binding climate targets for 2020 and 2030. By 2050 the EU aims to cut its GHG emissions with 80-95% compared to 1990. The European Commission's long-term decarbonisation strategy proposes that the EU aim for carbon neutrality by 2050 as part of global efforts. The European Commission's strategy and is currently under discussion by EU Member States.

## WHAT'S IN THE TAXONOMY?

The TEG has identified activities which can make a substantial contribution to climate change mitigation in the following sectors:

	<b>Agriculture and forestry</b>
	<b>Manufacturing</b>
	<b>Electricity, gas, steam and air conditioning supply</b>
	<b>Water, sewerage, waste and remediation</b>
	<b>Transport</b>
	<b>Information and Communication Technologies (ICT)</b>
	<b>Buildings</b>

# 5. What makes a substantial contribution to climate change adaptation?

To transition to a climate-resilient economy, the EU must reduce physical climate risks in all sectors of the economy, encourage the development of adaptation technology and practice, and avoid promoting activities that are incompatible with climate adaptation goals. The Taxonomy will reflect this by considering two kinds of activities as making a substantial contribution to climate change adaptation:

- Activities that are made more climate resilient by integrating measures to perform well under a changing climate; for example, enhancing soil water retention to reduce potential yield losses of non-perennial crop resulting from increased severity of droughts.
- Activities that enable adaptation in other economic activities: for example, the production of satellite systems for weather and climate related observation.

Adapting to climate change is location and context specific. The TEG recommends a process-based approach to ensure that economic activities can contribute to climate change adaptation.

Investors should look for implementation of three principles to understand whether an activity makes a substantial contribution to climate change adaptation:

- Principle 1:** The economic activity reduces all material physical climate risks to the extent possible and on a best effort basis. The activity must integrate measures aimed at reducing all material physical climate risks posed by current weather variability and future climate change, or it must reduce material risks to other economic activities and/or address systemic barriers to adaptation.
- Principle 2:** The economic activity does not adversely affect adaptation efforts by others. Activities should be consistent with adaptation needs in the applicable sector or region. Adaptation activities should not hinder adaptation by others.
- Principle 3:** The economic activity has adaptation-related outcomes that can be defined and measured using adequate indicators. When possible, the outcomes of adaptation activities should be monitored and measured against defined indicators for adaptation results.

## What are the EU's climate change adaptation objectives?

The EU's 2013 strategy on Adaptation to Climate Change aims to "contribute to a more climate-resilient Europe. This means enhancing the preparedness and capacity to respond to the impacts of climate change at local, regional, national and EU levels, developing a coherent approach and improving coordination." The strategy recognises that even under rapid decarbonisation scenarios, the impact of climate change will nonetheless increase in the coming years due to delayed impact of past and current greenhouse gas emissions. The EU therefore must take adaptation measures to deal with the unavoidable impacts and their economic, environmental and social costs.

## CLASSIFYING CLIMATE HAZARDS

The negative effects of climate changes include both chronic or slow onset changes (such as droughts, average temperature increase, and sea level rise) and acute changes (such as extreme rainfall, storm surges, flooding, heat waves, droughts and other weather –related extreme events). The TEG has developed an indicative classification of climate hazards which would be applied when responding to the principles.

Changes in climate patterns and in the frequency/severity of climate-related events that are:				
	Temperature-related	Wind-related	Water-related	Solid mass-related
<b>Chronic</b>	Changing temperature (air, fresh water, marine water)	Changing wind patterns	Changing precipitation patterns and types (rain, hail, snow/ice)	Coastal erosion
	Heat stress		Precipitation and/or hydrological variability	Soil degradation
	Temperature variability		Ocean acidification	Soil erosion
	Permafrost thawing		Saline intrusion	Solifluction
			Sea level rise	
			Water stress	
<b>Acute</b>	Heat wave	Cyclone, hurricane, typhoon	Drought	Avalanche
	Cold wave/frost	Storm (including blizzards, dust and sand storms)	Heavy precipitation (rain, hail, snow/ice)	Landslide
	Wildfire	Tornado	Flood (coastal, fluvial, pluvial, ground water)	Subsidence
			Glacial lake outburst	

# 6. How to avoid significant harm to other environmental objectives

## WHY ASSESS SIGNIFICANT HARM?

The *Do No Significant Harm* analysis is to ensure that the technical screening criteria and the Taxonomy itself does not include economic activities undermining any of the environmental objectives.

The approach focussed on identifying practices and criteria through which potential harm to environmental objectives can be mitigated. In cases where the TEG could not identify practices or criteria to mitigate potential harm, the activity was not included in the Taxonomy.

## WHAT ARE THE CRITERIA?

The vast majority of the screening criteria build from existing EU regulations. Companies and issuers with compliance and environmental management procedures in place should find it straightforward to demonstrate that they meet these requirements. International Taxonomy users can compare and adapt key thresholds or requirements to their own circumstances.

The remaining DNSH criteria supplement regulatory requirements, taking the form of quantitative or qualitative thresholds.



# 7. Anatomy of a Taxonomy activity

The Taxonomy includes economic activities that can make a substantial contribution to at least one environmental objective while doing no significant harm to the other environmental objectives.

## A TAXONOMY ACTIVITY AT A GLANCE:

The TEG developed a table that provides key information on the eligibility of activities for the Taxonomy. An example - Construction of new buildings is provided here:

Activity	Can climate change mitigation criteria change in future?	Do No Significant Harm criteria identified?				
		Adaptation	Water	Circular economy	Pollution	Ecosystems
Construction of new buildings	✓	✓	✓	✓	✓	✓

*This activity has been selected because it can make a substantial contribution to climate change mitigation. As there are potential negative impacts on climate change adaptation, water, waste, pollution and ecosystems, they need to be addressed by the company conducting this activity for the activity to be considered taxonomy-eligible.*

## DETAILED EXAMPLE OF ACTIVITY CRITERIA:

### Construction of new buildings

#### Principles for substantial contribution to climate mitigation

- Construction of energy and resource efficient new buildings can make a substantial contribution to climate change mitigation by reducing GHG emissions from the operational and construction phase of the building lifecycle and this should be measured by appropriate indicators of energy and GHG emissions both in the operational phase and along the lifecycle (including embodied emissions).
- The Taxonomy takes a transitional approach by relying on requirements set in current EU policies with a view to develop absolute thresholds for energy and carbon performance.

## Thresholds for substantial contribution to climate mitigation

- A new building is eligible when it meets national requirements for NZEB and EPC rating of B (or above). The appropriateness of both NZEB and EPC rating B thresholds will be subject to review after publication of a European Commission study in the autumn of 2019.
- To avoid lock-in and undermining the climate mitigation objective, the construction of new buildings for the purpose of occupation by fossil fuel extraction, transporting transport of fossil fuels or manufacturing of fossil fuels activities (either for actual extraction, transporting, manufacturing and/or administrative purpose) are excluded.
- If an alternative scheme, such as a commercial sustainability certification scheme or a similar national regulation or requirement in countries outside EU proves the respective scheme meets the performance criteria set in the Taxonomy in a defined location, compliance with the alternative scheme is accepted as a means to prove eligible with the Taxonomy criteria.

## Summary of Do No Significant Harm analysis for other environmental objectives

The main potential significant harm to the other environmental objectives from the construction of new buildings are determined by:

- The resilience of the building to identified climate related hazards across a range of climate scenarios, taking into account the need to not heightening risks to nearby activities and being consistent with the local climate adaptation plans
- The building siting: impacts on ecosystems if built on greenfield and especially if in a conservation area or high biodiversity value area; impacts on local air pollution and ecosystems if the building use entails large road transport demand.
- The actual economic life span of the building and of its component/materials: the environmental impacts from producing the building materials and components can be minimised by increasing the building life span adopting design solutions for adaptability and by maximising the future potential of building material reuse and recycling, adopting design solutions for ease of deconstruction as well as through careful selection of components/materials that prioritises recyclable materials and avoids hazardous substances.

## 8. How Taxonomy activities link up

The Taxonomy helps to define the universe of activities that will remain in a net-zero emissions economy in 2050 and beyond, and the types of activities that can support the transition to a low-emissions, climate resilient economy. The nature, pace and priorities for making this transition happen remains the remit of businesses, citizens and policy-makers at EU, Member State, Region and City level.

The way in which an electricity system is decarbonised may well differ across Europe depending on the characteristics of the available resources (e.g. wind or solar). Cities might choose not to prioritise low-emission vehicles at all, but rather aim for good public transport infrastructure and free up the road space for active modes of transport.


An economic activity cannot truly be considered sustainable independently from the wider system in which it operates. For example, the emissions reductions enabled by an electric vehicle depends on it being charged from low-carbon electricity sources and not adding to congested traffic conditions. They depend on whether, at end of life, the battery is reused or recycled in an environmentally sustainable way. Similarly, the well-being of people in cities does not just depend e.g. on the availability of low-emissions residential housing, but also on the access to low-emissions transport options to ensure access to the place of work and other vital services (shops, health facilities etc).


To contribute to environmental objectives in a substantial way, the different critical aspects of a system must be decarbonised and made resilient. This can cover the resources used by a system, the transformation processes undertaken by the system and the infrastructures that underpin these systems.

In general, investors can finance individual companies or projects rather than systems. The Taxonomy development approach has therefore aimed to identify activities that make a substantial contribution on their own but also enable the overall transition of critical systems such as the energy, transport, urban, water and food systems. However, the nature of the transition in each country or region is influenced by how entire systems evolve, including local strategies and policies. A Taxonomy eligible activity may only contribute to an individual country's or region's transition pathway when it is also coherent with the transition of the overall system the activity is part of.

It is important that investors consider the overall systems that activities are part of and the local transition pathways for such systems. By choosing to finance activities that are the most coherent with the transition of the overall system in their specific context, investors can maximise the sustainability impact of their investments, as the multiple individual activities reinforce each other and result in greater combined benefits.

# 9. What's in the Taxonomy?


 <b>Agriculture and Forestry</b>		Do No Significant Harm criteria identified?				
		Adaptation	Water	Circular economy	Pollution	Ecosystems
Can climate change mitigation criteria change in future?						
Growing of perennial crops	✓	✓	✓	✓	✓	✓
Growing of non-perennial crops	✓	✓	✓	✓	✓	✓
Livestock production	✓	✓	✓	✓	✓	✓
Afforestation		✓	✓		✓	✓
Rehabilitation, Restoration		✓	✓		✓	✓
Reforestation		✓	✓		✓	✓
Existing forest management	✓	✓	✓		✓	✓


 <b>Manufacturing</b>		Do No Significant Harm criteria identified?				
		Adaptation	Water	Circular economy	Pollution	Ecosystems
Can climate change mitigation criteria change in future?						
Manufacturing of low carbon technologies	✓	✓		✓	✓	
Manufacture of Cement	✓	✓	✓	✓	✓	✓
Manufacture of Aluminium	✓	✓	✓	✓	✓	✓
Manufacture of Iron and Steel	✓	✓	✓	✓	✓	✓
Manufacture of hydrogen	✓	✓	✓	✓	✓	✓
Manufacture of other inorganic basic chemicals	✓	✓	✓	✓	✓	✓
Manufacture of other organic basic chemicals	✓	✓	✓	✓	✓	✓
Manufacture of fertilizers and nitrogen compounds	✓	✓	✓	✓	✓	✓
Manufacture of plastics in primary form	✓	✓	✓	✓	✓	✓


 <b>Electricity, gas, steam and air conditioning supply</b>		Can climate change mitigation criteria change in future?	Do No Significant Harm criteria identified?				
			Adaptation	Water	Circular economy	Pollution	Ecosystems
Production of Electricity from Solar PV		✓	✓		✓		✓
Production of Electricity from Concentrated Solar Power		✓	✓	✓			✓
Production of Electricity from Wind Power		✓	✓	✓	✓		✓
Production of Electricity from Ocean Energy		✓	✓			✓	✓
Production of Electricity from Hydropower		✓	✓	✓	✓	✓	✓
Production of Electricity from Geothermal		✓	✓	✓		✓	✓
Production of Electricity from Gas Combustion		✓	✓	✓	✓	✓	✓
Production of Electricity from Bioenergy		✓	✓	✓	✓	✓	✓
Transmission and Distribution of Electricity			✓	✓	✓	✓	✓
Storage of Energy		✓	✓		✓		✓
Manufacture of Biomass, Biogas or Biofuels			✓	✓	✓	✓	✓
Retrofit of Gas Transmission and Distribution Networks			✓	✓	✓	✓	✓
District Heating/Cooling distribution		✓	✓	✓	✓	✓	✓
Installation and operation of Electric Heat Pumps			Not yet assessed				
Cogeneration of Heat/Cool and power from Concentrated Solar Power		✓	✓	✓			✓
Cogeneration of Heat/Cool and power from Geothermal Energy		✓	✓	✓	✓	✓	✓
Cogeneration of Heat/Cool and power from Gas Combustion		✓	✓	✓	✓	✓	✓
Cogeneration of Heat/Cool and power from Bioenergy		✓	✓	✓	✓	✓	✓
Production of Heating and Cooling from Concentrated Solar Power		✓	✓	✓			✓
Production of Heating and Cooling from Geothermal Energy		✓	Not yet assessed				
Production of Heating and Cooling from Gas Combustion		✓	✓	✓	✓	✓	✓
Production of heating and cooling from Bioenergy		✓	✓	✓	✓	✓	✓
Production of Heating and Cooling using Waste Heat		✓	Not yet assessed				


NYA\* = not yet assessed



 <b>Water, Waste and Sewerage remediation</b>		Can climate change mitigation criteria change in future?	Do No Significant Harm criteria identified?				
			Adaptation	Water	Circular economy	Pollution	Ecosystems
Water collection, treatment and supply		✓	✓	✓			✓
Centralized wastewater treatment systems		✓	✓			✓	
Anaerobic digestion of sewage sludge		✓	✓			✓	
Separate collection and transport of non-hazardous waste in source segregated fractions		✓	✓		✓	✓	
Anaerobic digestion of bio-waste		✓	✓			✓	
Composting of bio-waste		✓	✓			✓	
Material recovery from waste		✓	✓		✓	✓	
Landfill gas capture and energetic utilization		✓	✓			✓	
Direct Air Capture of CO <sub>2</sub>			Not yet assessed				
Capture of anthropogenic emissions			✓	✓	✓	✓	✓
Transport of CO <sub>2</sub>			✓	✓	✓	✓	✓
Permanent Sequestration of captured CO <sub>2</sub>			✓	✓	✓	✓	✓

 <b>Transport</b>		Can climate change mitigation criteria change in future?	Do No Significant Harm criteria identified?				
			Adaptation	Water	Circular economy	Pollution	Ecosystems
Passenger Rail Transport (Interurban)		✓	✓	✓	✓	✓	
Freight Rail Transport		✓	✓	✓	✓	✓	
Public transport		✓	✓		✓	✓	
Infrastructure for low carbon transport		✓	✓	✓	✓	✓	✓
Passenger cars and commercial vehicles		✓	✓		✓	✓	
Freight transport services by road		✓	✓		✓	✓	
Interurban scheduled road transport		✓	✓		✓	✓	
Inland passenger water transport		✓	✓	✓	✓	✓	
Inland freight water transport		✓	✓	✓	✓	✓	
Construction of water projects		✓	✓	✓	✓	✓	✓

		Do No Significant Harm criteria identified?				
 Information and Communication Technologies (ICT)	Can climate change mitigation criteria change in future?	Adaptation	Water	Circular economy	Pollution	Ecosystems
		Data processing, hosting and related activities	✓	Not yet assessed		
Data-driven solutions for GHG emissions reductions		Not yet assessed				

		Do No Significant Harm criteria identified?				
 Buildings	Can climate change mitigation criteria change in future?	Adaptation	Water	Circular economy	Pollution	Ecosystems
		Construction of new buildings	✓	✓	✓	✓
Renovation of existing buildings	✓	✓	✓	✓	✓	✓
Individual renovation measures, installation of renewable on-site and professional, scientific and technical activities	✓	✓		✓	✓	✓
Acquisition of buildings	✓	✓	✓	✓	✓	✓

Adaptation activities in six sectors were examined to demonstrate the substantial contribution criteria for climate change adaptation. Those activities are in the Agriculture, forestry and fishing; Electricity, gas, steam and air conditioning supply; Information and Communications Technology (ICT); Financial services and insurance; Professional, scientific and technical activities; Water supply, sewerage, waste management and remediation activities sectors. Once DNSH assessment are completed, activities making a substantial contribution to climate change adaptation can be added to the Taxonomy list. See the Technical Report for further details.



