

# **Annex II**

**DNSH** alignment

September 2025

#### Table 1

Afforestation

**Appropriation Account** 

23.22.02.81 23.31.04.10

**Expenditure category** 

Forestry

**EU Taxonomy Economic Activity** 

1.1 Afforestation

#### **NACE Code**

A2

EU Taxonomy Technical Screening Criteria		
Description	Establishment of forest through planting, deliberate seeding or natural regeneration on land that, until then, was under a different land use or not used. Afforestation implies a transformation of land use from non-forest to forest, in accordance with the Food and Agriculture Organisation of the United Nations ('FAO') definition of afforestation <sup>1</sup> , where forest means a land matching the forest definition as set out in national law, or where not available, is in accordance with the FAO definition of forest <sup>2</sup> . Afforestation may cover past afforestation as long as it takes place in the period between the planting of the trees and the time when the land use is recognised as a forest.	

#### **Alignment with Technical Screening Criteria**

A new national subsidy program will open in 2025 that supports establishment of forests on privately and publicly owned agricultural land and projects involving the establishment of forests on agricultural land owned by municipalities<sup>3</sup>. The agricultural land is converted into forest with permanent sequestration in the form of a conservation forest obligation (aka "fredskov").

The 2024 Agreement on the Implementation of a Green Denmark includes a commitment to the establishment of 250,000 hectares of new forest by 2045<sup>4</sup>. Afforestation according to the new subsidy program entails that recipients commit to permanent reclassification of the project areas from

<sup>&</sup>lt;sup>1</sup> Establishment of forest through planting or deliberate seeding on land that, until then, was under a different land use, implies a transformation of land use form non-forest to forest, FAO Global Resources Assessment 2020. Terms and definitions (version of Rome 2018: http://www.fao.org/3/18661EN/i8661en.pdf).

<sup>&</sup>lt;sup>2</sup> Land spanning more than 0,5 hectares with trees higher than five meters and a canopy cover of more than 10%, or trees able to reach those thresholds in situ. It does not include land that is predominantly under agricultural or urban land use, FAO Global Resources Assessment 2020. Terms and definitions (version of Rome 2018: http://www.fao.org/3/18661EN/i8661en.pdf).

<sup>&</sup>lt;sup>3</sup> The new subsidy program is under development (Draft Executive Order of April 2025) but forest management will be defined and governed by the Forest Act (LBK nr 690 af 26/05/2023-https://www.retsinformation.dk/eli/lta/2023/690).

<sup>&</sup>lt;sup>4</sup> Aftale om Implementering af et Grønt Danmark - https://www.regeringen.dk/media/13526/aftale-om-implementering-af-et-groent-danmark.pdf

- 1. Afforestation plan and subsequent forest management plan or equivalent instrument
- 1.1 The area on which the activity takes place is covered by an afforestation plan of a duration of at least five years, or the minimum period prescribed in national law, developed prior to the start of the activity and continuously updated, until this area matches the definition of forest as set out in national law or where not available, is in line with the FAO definition of forest.

The afforestation plan contains all elements required by the national law relating to environmental impact assessment of afforestation.

Substantial contribution to 1.2 Preferably through the afforestation plan, or if information is missing, climate change mitigation through any other document, detailed information is provided on the following points:

- (b) site preparation and its impacts on pre-existing carbon stocks, including soils and above-ground biomass, in order to protect land with high carbon stock<sup>26</sup>;
- land with high-carbon stock means wetlands, including peatland, and continuously forested areas within the meaning of Article 29(4)(a), (b) and (c) of Directive (EU) 2018/2001.; management goals, including major constraints;

agricultural land to forest as defined by The Forest Act<sup>56</sup> before the expiry of the project period<sup>7</sup>. The project area will be registered with permanent forest obligation ("fredskov") in the Danish Cadastre (land registration in Denmark).

The project area cannot be located on carbon-rich soils or on areas with a potential for wetlands, and the area must not already be forested. Applicants must obtain a permission to commence the project based on an environmental assessment of the project's impact on the environment or a screening decision stating that the project is not expected to have a significant impact on the environment<sup>8</sup>, cf. the Environmental Assessment Act<sup>9</sup>.

The proposed project area must have been used for commercial agricultural operations throughout the calendar year preceding the application year to be eligible 10. The project area cannot be located on carbon-rich soils or on areas with a potential for wetlands, and the area must not already be forested 11. The project area will be registered with permanent forest obligation ("fredskov") and the future forest management is defined by the Forest Act<sup>12</sup>.

description of the area according to its gazetting in the land registry; The developer must provide information about the proposed project in the environmental impact report, which appropriately demonstrates, describes and assesses the project's significant direct and indirect effects on the population and human health, cf. the Environmental Assessment Act<sup>13</sup>. The developer must provide information about the proposed project in the environmental impact report, which appropriately demonstrates, describes and assesses the project's significant direct and indirect vulnerability to risks of major accidents or disasters, cf. the Environmental Assessment Act<sup>14</sup>. Responsibility for restoration of environmental damage to protected species or habitats is regulated by § 59a-i of the Forest Act<sup>15</sup> and generally by the Environmental Damage Act<sup>16</sup>.

<sup>&</sup>lt;sup>26</sup> Land with high-carbon stock means wetlands, including peatland, and continuously forested areas within the meaning of Article 29(4)(a), (b) and (c) of Directive (EU) 2018/2001.

<sup>&</sup>lt;sup>5</sup> Draft Executive Order of April 2025, § 6, stk. 2

<sup>6</sup> LBK nr 690 af 26/05/2023 § 4 - https://www.retsinformation.dk/eli/lta/2023/690

<sup>&</sup>lt;sup>7</sup> Draft Executive Order of April 2025 § 11 stk. 1, nr. 2

<sup>8</sup> Draft Executive Order of April § 8 stk. 1, nr. 6

<sup>9</sup> LBK nr 4 af 03/01/2023 \( 16 \) and Bilag 2 - https://www.retsinformation.dk/eli/lta/2023/4

<sup>&</sup>lt;sup>10</sup> Draft Executive Order of April 2025 § 9 stk. 1

<sup>&</sup>lt;sup>11</sup> Draft Executive Order of April 2025 § 9, stk. 1

<sup>&</sup>lt;sup>12</sup> Draft Executive Order of April 2025 \( 6\), stk. 1 and \( 7\)

<sup>&</sup>lt;sup>13</sup> LBK nr 4 af 03/01/2023 § 20, stk. 4 - https://www.retsinformation.dk/eli/lta/2023/4

<sup>&</sup>lt;sup>14</sup> LBK nr 4 af 03/01/2023 \( 20, stk. 5 - https://www.retsinformation.dk/eli/lta/2023/4

<sup>&</sup>lt;sup>15</sup> LBK nr 690 af 26/05/2023 § 59a-i - https://www.retsinformation.dk/eli/lta/2023/690

<sup>&</sup>lt;sup>16</sup> LBK nr 923 af 18/06/2024 - https://www.retsinformation.dk/eli/lta/2024/923

- goals, including expected operations over the whole forest cycle;
- (e) definition of the forest habitat context, including main existing and intended forest tree species, and their extent and distribution;
- compartments, roads, rights of way and other public access, physical features including waterways, areas under legal and other restrictions;
- (g) measures deployed to establish and maintain the good condition of forest ecosystems;
- (h) consideration of societal issues (including preservation of landscape, consultation of stakeholders in accordance with the terms and conditions laid down in national law);
- assessment of forest related risks, including forest fires, and pests and diseases outbreaks, with the aim of preventing, reducing and controlling the risks and measures deployed to ensure protection and adaptation against residual risks;
- assessment of impact on food security;
- all DNSH criteria relevant to afforestation.
- 1.3. When the area becomes a forest, the afforestation plan is followed by a subsequent forest management plan or an equivalent instrument, as set out in national law or, where national law does not define a forest management plan or equivalent instrument, as referred to in the FAO definition of 'forest area with long-term forest management plan'27. The forest management plan or the equivalent instrument covers a period of 10 years or more and is continuously updated.

(d) general strategies and activities planned to reach the management After project completion (defined as the date of final payment of the grant), projects must continue to fulfil the obligations described in § 13 of draft Executive Order of April 2025 and fulfil the obligations of the Danish Forest Act and other relevant regulation e.g. EUDR, and Renewable Energy Directive (VEIII).

> Projects are required to be conducted in accordance with the practices described by draft Executive Order of April 2025<sup>17</sup> and in accordance with the Danish Forest Act once classified as forest 18. The activity follows the Pan-European Guidelines for Afforestation 19.

> Land with high carbon stock is not in scope for afforestation, as the proposed project area must have been used for commercial agricultural operations throughout the calendar year preceding the application year to be eligible<sup>20</sup>. Proposed project areas covered with forest are not eligible<sup>21</sup>. The Ministry for Green Transition confirms that management systems for eligible activities comply with the due diligence obligation and legality requirements laid down in Regulation (EU) No. 995/2010.

> Before final grant disbursement, applicants must submit documentation verifying implementation in accordance with the approved planting plan and document that the project area has been registered with permanent forest obligation ("fredskov") in the Danish Cadastre<sup>22</sup>.

> The recent forest carbon pool projection by Thomas Nord-Larsen et al. (2025) estimates significant net carbon uptake from the 250,000 ha of new forest by 2045. These findings confirm that GHG removals under the activity are consistently greater than under the business-as-usual baseline.

The alignment with Article 29(7), point (b), of Directive (EU) 2018/2001 will be addressed through the implementation of REDIII which is expected to be implemented 21.05.2025.

Calculation of climate benefits is based on the Danish forest inventory data which is in alignment with the 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories (10)2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories.

<sup>&</sup>lt;sup>27</sup> Forest area that has a long-term (ten years or more) documented management plan, aiming at defined management goals, and which is periodically revised

<sup>&</sup>lt;sup>17</sup> Draft Executive Order of April 2025

<sup>&</sup>lt;sup>18</sup> LBK nr 690 af 26/05/2023 - https://www.retsinformation.dk/eli/lta/2023/690

<sup>&</sup>lt;sup>19</sup> Draft Executive Order of April 2025 § 12, stk. 1, nr. 6.

<sup>&</sup>lt;sup>20</sup> Draft Executive Order of April 2025 § 9, stk. 1, nr. 4

<sup>&</sup>lt;sup>21</sup> Draft Executive Order of April 2025 § 7, stk. 1, nr. 7

<sup>&</sup>lt;sup>22</sup> Draft Executive Order of April 2025 § 11, stk. 1BEK nr 265 af 18/03/2024 § 28 - https://www.retsinformation.dk/eli/lta/2024/265

1.4 Information is provided on the following points that are not already documented in the forest management plan or equivalent system:

- (a) management goals, including major constraints<sup>28</sup>
- (b) general strategies and activities planned to reach the management goals, including expected operations over the whole forest cycle;
- (c) definition of the forest habitat context, including main existing and intended forest tree species, and their extent and distribution;
- (d) definition of the area according to its gazetting in the land registry;
- (e) compartments, roads, rights of way and other public access, physical features including waterways, areas under legal and other restrictions;
- (f) measures deployed to maintain the good condition of forest ecosystems;
- (g) consideration of societal issues (including preservation of landscape, consultation of stakeholders in accordance with the terms and conditions laid down in national law);
- (h) assessment of forest related risks, including forest fires, and pests and diseases outbreaks, with the aim of preventing, reducing and controlling the risks and measures deployed to ensure protection and adaptation against residual risks;
- all DNSH criteria relevant to forest management.
- 1.5. The activity follows the best afforestation practices laid down in national law, or, where no such best afforestation practices have been laid down in national law, the activity complies with one of the following criteria:

The climate benefit analysis is a part of the publication Thomas Nord-Larsen, Prescott Huntley Brownell II, and Vivian Kvist Johannsen (2025): Forest carbon pool projections - 2025, Department of Geoscience and Natural Resource Management, University of Copenhagen, Frederiksberg.

The prior business-as-usual practice is documented in the Internet Field Map (IMK) database. The proposed project area must have been used for commercial agricultural operations throughout the calendar year preceding the application year to be eligible. The analysis takes into account the specific geographical conditions of the projected areas.

The alignment with Article 29(7), point (b), of Directive (EU) 2018/2001 will be handled through the implementation of REDIII which is expected to be implemented 21.05.2025. The projection takes into account the scale and expected implementation timeline of the 250.000 ha afforestation.

Projects must be at least 1 hectare of continuous area to be eligible 23.

It is a precondition for imbursement of subsidy that the project area has been registered with permanent forest obligation ("fredskov") in the Danish Cadastre.

Operators are required to continue the projects beyond the project period and to ensure that the project is not subject to significant changes that affect its nature, objectives or implementation conditions<sup>24</sup>. If a protected forest is reclassified for other uses, the Forest Act requires that a forest of the same size must be established in its place ["replacement forest"]<sup>25</sup>.

The Danish Agency for Green Transition and Aquatic Environment monitors project compliance with the parts of the project plan which applies to the subsidy scheme.

<sup>28</sup> Including an analysis of (i) long term sustainability of the wood resource (ii) impacts/pressures on habitat conservation, diversity of associated habitats and condition of harvesting minimising soil impacts.

<sup>&</sup>lt;sup>23</sup> Draft Executive Order of April 2025 § 7, stk. 1, nr. 1

<sup>&</sup>lt;sup>24</sup> Draft Executive Order of April 2025 § 12

<sup>&</sup>lt;sup>25</sup> LBK nr 690 af 26/05/2023 - https://www.retsinformation.dk/eli/lta/2023/690

- (a) the activity complies with Commission Delegated Regulation (EU) No 807/2014<sup>29</sup>
- (b) the activity follows the "Pan-European Guidelines for Afforestation and Reforestation with a special focus on the provisions of the UN-FCCC"<sup>30</sup>
- 1.6. The activity does not involve the degradation of land with high carbon stock<sup>31</sup>.
- 1.7. The management system associated with the activity in place complies with the due diligence obligation and legality requirements laid down in Regulation (EU) No 995/2010 of the European Parliament and of the Council.<sup>32</sup>
- 1.8. The afforestation plan and the subsequent forest management plan or equivalent instrument provide for monitoring that ensures the correctness of the information contained in the plan, in particular as regards the data relating to the involved area.
- 2. Climate benefit analysis
- 2.1. For areas that comply with the requirements at forest sourcing area level to ensure that carbon stocks and sinks levels in the forest are maintained or strengthened over the long term in accordance with Article 29(7), point (b), of Directive (EU) 2018/2001 the activity complies with the following criteria:
  - (a) the climate benefit analysis demonstrates that the net balance of GHG emissions and removals generated by the activity over a period of 30 years after the beginning of the activity is lower than a baseline, corresponding to the balance of GHG emissions and removals over a period of 30 years starting at the beginning of the activity, associated to the business-as-usual practices that would have occurred on the involved area in the absence of the activity;

<sup>&</sup>lt;sup>29</sup> Commission Delegated Regulation (EU) No 807/2014 of 11 March 2014 supplementing Regulation (EU) No 1305/2013 of the European Parliament and of the Council on support for rural development by the European Agricultural Fund for Rural Development (EAFRD) and introducing transitional provisions (OJ L 227, 31.7.2014, p. 1).

<sup>&</sup>lt;sup>30</sup> Forest Europe Pan-European Guidelines for Afforestation and Reforestation with a special focus on the provisions of the UNFCCC adopted by the MCPFE Expert Level Meeting on 12-13 November, 2008 and by the PEBLDS Bureau on behalf of the PEBLDS Council on 4 November, 2008 (version of [adoption date]: https://www.foresteurope.org/docs/other\_meetings/2008/Geneva/Guidelines\_Aff\_Ref\_ADOPTED.pdf).

<sup>31</sup> Land with high-carbon stock means wetlands, including peatland, and continuously forested areas within the meaning of Article 29(4)(a), (b) and (c) of Directive (EU) 2018/2001.

<sup>&</sup>lt;sup>32</sup> Regulation (EU) No 995/2010 of the European Parliament and of the Council of 20 October 2010 laying down the obligations of operators who place timber and timber products on the market (OJ L 295, 12.11.2010, p. 23).

- (b) long-term climate benefits are considered demonstrated by proof of alignment with Article 29(7), point (b), of Directive (EU) 2018/2001.
- 2.2. For areas that do not comply with the requirements at forest sourcing area level to ensure that carbon stocks and sinks levels in the forest are maintained or strengthened over the long term in accordance with Article 29(7), point (b), of Directive (EU) 2018/2001 the activity complies with the following criteria:
  - (a) the climate benefit analysis demonstrates that the net balance of GHG emissions and removals generated by the activity over a period of 30 years after the beginning of the activity is lower than a baseline, corresponding to the balance of GHG emissions and removals over a period of 30 years starting at the beginning of the activity, associated to the business-as-usual practices that would have occurred on the involved area in the absence of the activity.
  - (b) the projected long-term average net GHG balance of the activity is lower than the long-term average GHG balance projected for the baseline, referred to in point 2.2, where long term corresponds to the longer duration between 100 years and the duration of an entire forest cycle.
- 2.3. The calculation of climate benefit complies with all of the following criteria:
  - (a) the analysis is consistent with the 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories(10)2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories (version of [adoption date]: https://www.ipccnggip.iges.or.jp/public/2019rf/). The climate benefit analysis is based on transparent, accurate, consistent, complete and comparable information, covers all carbon pools impacted by the activity, including above-ground biomass, below-ground biomass, deadwood, litter and soil, relies on the most conservative assumptions for calculations and includes appropriate considerations about the risk of non-permanence and reversals of carbon sequestration, the risk of saturation and the risk of leakage.
  - (b) the business as-usual practices, including harvesting practices, are ones of the following:

- a. the management practices as documented in the latest version of the forest management plan or equivalent instrument before the start of the activity, if any;
- the most recent business-as-usual practices prior to the start of the activity;
- c. the practices corresponding to a management system ensuring that carbon stocks and sinks levels in the forest area are maintained or strengthened over the long term as set out in Article 29(7), point (b), of Directive (EU) 2018/2001.
  - the resolution of the analysis is proportionate to the size of the area concerned and values specific to the area concerned are used.
  - ii. emissions and removals that occur due to natural disturbances, such as pests and diseases infestations, forest fires, wind, storm damages, that impact the area and cause underperformance do not result in non-compliance with Regulation (EU) 2020/852, provided that the climate benefit analysis is consistent with the 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories regarding emissions and removals due to natural disturbances.
- 2.4. Forest holdings under 13ha are not required to perform a climate benefit analysis.
- 3. Guarantee of permanence
- 3.1. In accordance with national law, the forest status of the area in which the activity takes place is guaranteed by one of the following measures:
  - (a) the area is classified in the permanent forest estate as defined by the FAO(11)
  - (b) Forest area that is designated to be retained as forest and may not be converted to other land use;

- (c) the area is classified as a protected area; the area is the subject of any legal or contractual guarantee ensuring that it will remain a forest
- 3.2. In accordance with national law, the operator of the activity commits that future updates to the afforestation plan and the subsequent forest management plan or equivalent instrument, beyond the activity that is financed, will continue to seek the climate benefits as determined in point 2. Besides, the operator of the activity commits to compensate any reduction in the climate benefit determined in point 2 with an equivalent climate benefit resulting from the conduct of an activity that corresponds to one of the forestry activities defined in this Regulation.

#### 4. Audit

Within two years after the beginning of the activity and every 10 years thereafter, the compliance of the activity with the substantial contribution to climate change mitigation criteria and the DNSH criteria are verified by either of the following:

- (a) the relevant national competent authorities;
- (b) an independent third-party certifier, at the request of national authorities or the operator of the activity.

In order to reduce costs, audits may be performed together with any forest certification, climate certification or other audit.

The independent third-party certifier may not have any conflict of interest with the owner or the funder, and may not be involved in the development or operation of the activity.

#### 5. Group assessment

The compliance with the criteria for substantial contribution to climate change mitigation and with DNSH criteria may be checked:

(a) at the level of the forest sourcing area(12) 'Sourcing area' means the geographically defined area from which the forest biomass feedstock is sourced, from which reliable and independent information is available and where conditions are sufficiently homogeneous to evaluate the risk of the sustainability and legality characteristics of the forest biomass. as defined in Article 2, point (30), of Directive (EU) 2018/2001;

(b) at the level of a group of holdings sufficiently homogeneous to evaluate the risk of the sustainability of the forest activity, provided that all those holdings have a durable relationship between them and participate in the activity and the group of those holdings remains the same for all subsequent audits.

#### **DNSH Criteria**

See Appendix  $A^{33}$  in The EU Taxonomy as adopted by the Commission on June 4, 2021 in the Delegated Act for climate change mitigation and climate change adaptation activities, namely:

The physical climate risks that are material to the activity have been identified from those listed in the table in Section II of this Appendix by performing a robust climate risk and vulnerability assessment with the following steps:

(a) screening of the activity to identify which physical climate risks from the list in Section II of this Appendix may affect the performance of the economic activity during its expected lifetime:

- (b) where the activity is assessed to be at risk from one or more of the physical climate risks listed in Section II of this Appendix, a climate risk and vulnerability assessment to assess the materiality of the physical climate risks on the economic activity;
- (c) an assessment of adaptation solutions that can reduce the identified physical climate risk.

The climate risk and vulnerability assessment is proportionate to the scale of the activity and its expected lifespan, such that:

## Alignment with DNSH Criteria

Denmark is a flat country with several thousand kilometres of coastline and countless islands. As one of the least elevated countries in the world, Denmark is particularly vulnerable to sea level and groundwater rise as a result of climate change. Denmark is expected to experience more extreme weather, and future storm surges are expected to become more powerful.

The physical climate risks material to the Kingdom of Denmark are monitored and assessed by the Danish Meteorological Institute (DMI) in the Climate Atlas<sup>39</sup> which informs the Danish Ministry of Climate, Energy and Utilities' assessment of Climate Risks<sup>40</sup>.

The DMI Climate Atlas assesses the physical climate risks to Denmark at municipal levels across RCP 2.6, RCP 4.5 and RCP 8.5 until year 2100. The risks assessed include precipitation, water levels, storm floods, temperature, wind, solar radiation, evaporation, fire hazard and drought. Given Denmark's location and topography, Denmark is expected to mainly be exposed to physical climate risks in the form of increased precipitation and floodings. Storm floods which occurred approximately every 20 years in the baseline scenario (1981-2010) are expected to occur every 3 years in RCP 2.6, every other year in RCP 4.5 and twice a year in RCP 8.5 by the last quartile of this century.

In 2023, the Danish Government presented the National Climate Adaptation Plan, which allocates approximately DKK 1.4 bn for measures aimed at reducing the impacts from increased water levels and storm floods and protecting infrastructure<sup>41</sup>.

Climate adaptation is a shared responsibility where the Government, municipalities, wastewater companies and landowners each carry out their own tasks<sup>42</sup>. Denmark is the first country in the world where all municipalities have committed to making climate adaptation and mitigation plans

Climate change adapta-

tion

<sup>33</sup> https://ec.europa.eu/sustainable-finance-taxonomy/assets/documents/CCM%20Appendix%20A.pdf

<sup>&</sup>lt;sup>39</sup> https://www.dmi.dk/klima-atlas/data-i-klimaatlas

<sup>40</sup> https://edit.mst.dk/media/vlub2l35/faktaark-7.pdf

<sup>41</sup> https://mim.dk/kampagner/klimatilpasning

<sup>42</sup> https://klimatilpasning.dk/kommuner-og-forsyning/national-klimatilpasning

- (a) for activities with an expected lifespan of less than 10 years, the assessment is performed, at least by using climate projections at the smallest appropriate scale;
- (b) for all other activities, the assessment is performed using the highest available resolution, state-of-the-art climate projections across the existing range of future scenarios<sup>34</sup> consistent with the expected lifetime of the activity, including, at least, 10 to 30 year climate projections scenarios for major investments.

The climate projections and assessment of impacts are based on best practice and available guidance and take into account the state-of-the-art science for vulnerability and risk analysis and related methodologies in line with the most recent Intergovernmental Panel on Climate Change reports<sup>35</sup>, scientific peer-reviewed publications, and open source<sup>36</sup> or paying models.

For existing activities and new activities using existing physical assets, the economic operator implements physical and non-physical solutions ('adaptation solutions'), over a period of time of up to five years, that reduce the most important identified physical climate risks that are material to that activity. An adaptation plan for the implementation of those solutions is drawn up accordingly.

For new activities and existing activities using newly-built physical assets, the economic operator integrates the adaptation solutions that reduce the most important identified physical climate risks that are material to that activity at the time of design and construction and has implemented them before the start of operations.

that meet the goals of the Paris Agreement<sup>43</sup>, and in 2024 96 of the 98 Danish municipalities had completed their plans<sup>44</sup>.

The recent Danish forest projection: Thomas Nord-Larsen, Prescott Huntley Brownell II, and Vivian Kvist Johannsen (2025): Forest carbon pool projections - 2025, Department of Geoscience and Natural Resource Management, University of Copenhagen, Frederiksberg. Includes a 50 year climate projection scenario for the 250.000 new forest.

The forest projection model for Denmark has been developed by the University of Copenhagen to reflect state of the art methods used for European forest projection. It is based on the EFISCEN-framework.

According to the Danish Planning Act the municipalities have the initial responsibility for spatial planning that protects infrastructure and facilities from damage due to physical climate changes. The Government monitors the municipal plans (and local plans) and has the authority to interfere where such plans deviate from national interests, including climate protection<sup>45</sup>. Local plans must include provisions on mitigation measures and whether such measures must be completed before the use of assets at risk of flooding or erosion is initiated.<sup>46</sup>

The Danish Planning Act requires that some projects are approved as part of the local plans where they are to be executed. Municipalities have the competence to require that relevant adaptation measures are implemented prior to project initiation.

The Technical University of Denmark assists the Danish Government with assessments of the so-For new activities and existing activities using newly-built physical assets, the cial and financial impacts of investments in climate adaptation<sup>47-48</sup>.

<sup>34</sup> Future scenarios include Intergovernmental Panel on Climate Change representative concentration pathways RCP2.6, RCP4.5, RCP6.0 and RCP8.5.

<sup>35</sup> Assessments Reports on Climate Change: Impacts, Adaptation and Vulnerability, published periodically by the Intergovernmental Panel on Climate Change (IPCC), the United Nations body for assessing the science related to climate change produces, https://www.ipcc.ch/reports/.

<sup>&</sup>lt;sup>36</sup> Such as Copernicus services managed by the European Commission.

<sup>43</sup> https://realdania.dk/projekter/klimaalliancen

<sup>44</sup> https://realdania.dk/nyheder/2024/06/dk2020-projekt-har-transformeret-kommunernes-klimaindsats

<sup>45</sup> LBK nr 572 af 29/05/2024 § 29 - https://www.retsinformation.dk/eli/lta/2024/572#P29

<sup>&</sup>lt;sup>46</sup> VEJ nr 10038 af 06/12/2024 section 6 - https://www.retsinformation.dk/eli/retsinfo/2024/10038

<sup>47</sup> https://backend.orbit.dtu.dk/ws/portalfiles/portal/268507361/Samfunds\_konomiske\_konsekvenser\_af\_oversv\_mmelser\_og\_investeringer\_i\_klimatilpasning\_final\_reduced.pdf

 $<sup>^{48}\</sup> https://www.dtu.dk/-/media/dtudk/nyheder/webnyheder/2024/11/rapport\_nationale\_skadesberegninger.pdf$ 

The adaptation solutions implemented do not adversely affect the adaptation efforts or the level of resilience to physical climate risks of other people, of nature, of cultural heritage, of assets and of other economic activities; are consistent with local, sectoral, regional or national adaptation strategies and plans; and consider the use of nature-based solutions<sup>37</sup> or rely on blue or green infrastructure<sup>38</sup> to the extent possible.

See Appendix  $B^{49}$  in The EU Taxonomy as adopted by the Commission on June 4, 2021 in the Delegated Act for climate change mitigation and climate change adaptation activities.

Environmental degradation risks related to preserving water quality and avoiding water stress are identified and addressed with the aim of achieving good water status and good ecological potential as defined in Article 2, points (22) and (23), of Regulation (EU) 2020/852, in accordance with Directive 2000/60/EC of the European Parliament and of the Council<sup>50</sup> and a water use and protection management plan, developed thereunder for the potentially affected water body or bodies, in consultation with relevant stakeholders.

Where an Environmental Impact Assessment is carried out in accordance with Directive 2011/92/EU of the European Parliament and of the Council (2) and includes an assessment of the impact on water in accordance with Directive 2000/60/EC, no additional assessment of impact on water is required, provided the risks identified have been addressed. The activity does not hamper the achievement of good environmental status of marine waters or does not deteriorate marine waters that are already in good environmental

The developer must demonstrate, describe and assess the significant direct and indirect impacts of the project on water and share this information with the authorities for their Environmental Impact Assessment of the project<sup>54</sup>. Projects' contribution to water conditions is also included in the project selection criteria<sup>55</sup>.

Applicants must obtain a permission to commence the project based on an environmental assessment of the project's impact on the environment or a screening decision stating that the project is not expected to have a significant impact on the environment<sup>56</sup>, cf. the Environmental Assessment Act<sup>57</sup>.

Sustainable use and pro-

tection of water and ma-

rine resources

<sup>&</sup>lt;sup>37</sup> Nature-based solutions are defined as 'solutions that are inspired and supported by nature, which are cost-effective, simultaneously provide environmental, social and economic benefits and help build resilience. Such solutions bring more, and more diverse, nature and natural features and processes into cities, landscapes and seascapes, through locally adapted, resource-efficient and systemic interventions'. Therefore, nature-based solutions benefit biodiversity and support the delivery of a range of ecosystem services. (version of [adoption date]: https://ec.europa.eu/research/environment/index.cfm?pg=nbs).

<sup>&</sup>lt;sup>38</sup> See Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: Green Infrastructure (GI) — Enhancing Europe's Natural Capital (COM/2013/0249 final).

<sup>&</sup>lt;sup>49</sup> https://ec.europa.eu/sustainable-finance-taxonomy/assets/documents/CCM%20Appendix%20B.pdf

<sup>50</sup> Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy 54 LBK nr 4 af 03/01/2023 § 20 stk. 4.1. - https://www.retsinformation.dk/eli/lta/2023/4

<sup>&</sup>lt;sup>55</sup> BEK nr 265 af 18/03/2024 Bilag 1 - https://www.retsinformation.dk/eli/lta/2024/265

<sup>&</sup>lt;sup>56</sup> BEK nr 265 af 18/03/2024 § 13 stk. 4 - https://www.retsinformation.dk/eli/lta/2024/265

 $<sup>^{57}</sup>$  LBK nr 4 af 03/01/2023 - <code>https://www.retsinformation.dk/eli/lta/2023/4</code>

	status as defined in point 5 of Article 3 of Directive 2008/56/EC of the European Parliament and of the Council <sup>51</sup> <sup>52</sup> , taking into account the Commission Decision (EU) 2017/848 <sup>53</sup> in relation to the relevant criteria and methodological standards for those descriptors.	
Transition to a circular economy		N/A
·	The use of pesticides is reduced and alternative approaches or techniques, which may include non-chemical alternatives to pesticides, are favoured, in accordance with Directive 2009/128/EC of the European Parliament and of the Council(13)Directive 2009/128/EC of the European Parliament and of the	Pesticides and fertilizer may not be used in the afforestation projects <sup>65</sup> . Afforestation projects on agricultural lands may use pesticides and fertilizer until September 1 in the first year prior to planting <sup>66</sup> .
	Council of 21 October 2009 establishing a framework for Community action to achieve the sustainable use of pesticides (OJ L 309, 24.11.2009, p. 71)., with exception of occasions where the use of pesticides is needed to control outbreaks of pests and of diseases.	The Rotterdam Convention is implemented in the EU by the PIC Regulation (EU) No 649/2012. The Minamata Convention is implemented in the EU by the Mercury Regulation (EU) 2017/852. The Montreal Protocol is implemented in the EU by the Regulation (EU) 2024/573 and Regulation (EU) 2024/590. These regulations are directly applicable as national law. Finally, in relation to active ingredients classified as 1a or 1b the Regulation (EC) 1107/2009 ap-
Pollution prevention and	The activity minimises the use of fertilisers and does not use manure. The activity complies with Regulation (EU) 2019/1009 of the European Parliament	plies as well as the national statutory order BEK nr 1503 af 10/12/2024.
control		Project areas will be registered with permanent forest obligation ("fredskov") covered by the Danish Forest Act. Compliance with requirements in the above mentioned regulations is ensured through the general rules in these regulations on approval and application of pesticides etc., and oversight and supervision by the Agency for Green Transition and Aquatic Environment and the Danish Environmental Protection Agency.
		Use of pesticides for new establishment of intense production of ornamental greens, Christmas trees, etc. on forested areas with permanent forest obligation ("fredskov") situated in Natura 2000 areas must be reported to the Agency for Green Transition and Aquatic Environment for assessment prior to initiation .

<sup>&</sup>lt;sup>51</sup> Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive) (OJ L 164, 25.6.2008, p. 19).

<sup>&</sup>lt;sup>52</sup> The definition laid down in point 5 of Article 3 of Directive 2008/56/EC provides in particular that good environmental status is to be determined on the basis of the qualitative descriptors laid down in Annex I to that Directive.

<sup>&</sup>lt;sup>53</sup> 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.

<sup>65</sup> Draft Executive Order of April 2025 § 12, stk. 1, nr. 5

<sup>66</sup> Draft Executive Order of April 2025 § 12, stk. 2

and of the Council<sup>58</sup> Regulation (EU) 2019/1009 of the European Parliament and of the Council of 5 June 2019 laying down rules on the making available on the market of EU fertilising products and amending Regulations (EC) No 1069/2009 and (EC) No 1107/2009 and repealing Regulation (EC) No 2003/2003 (OJ L 170, 25.6.2019, p. 1) or national rules on fertilisers or soil improvers for agricultural use.

Well documented and verifiable measures are taken to avoid the use of active ingredients that are listed in Annex I, part A, of Regulation (EU) 2019/1021<sup>59</sup> of the European Parliament and of the Council<sup>60</sup>, the Rotterdam Convention on the prior informed consent procedure for certain hazardous chemicals and pesticides in international trade<sup>61</sup>, the Minamata Convention on Mercury<sup>62</sup>, the Montreal Protocol on Substances that Deplete the Ozone Layer<sup>63</sup>, and of active ingredients that are listed as classification Ia ('extremely hazardous') or Ib ('highly hazardous') in the WHO Recommended Classification of Pesticides by Hazard<sup>64</sup>. The activity complies with the relevant national law on active ingredients.

Pollution of water and soil is prevented and cleaning up measures are undertaken when pollution occurs.

Project applicants must ensure that pesticides and fertilizer are not used on the project area for a period of five years after project completion. On project areas with undisturbed forest a declaration in the Danish Land Registry will impose an obligation to not use pesticides on the area<sup>67</sup>. Measures to prevent Invasive species are allowed in compliance with regulations on use of pesticides etc.<sup>68</sup>.

Any environmental damage to forests, such as pollution, is governed by the Environmental Damage  $\mathrm{Act}^{69}$ .

<sup>&</sup>lt;sup>58</sup> Regulation (EU) 2019/1009 of the European Parliament and of the Council of 5 June 2019 laying down rules on the making available on the market of EU fertilising products and amending Regulations (EC) No 1069/2009 and (EC) No 1107/2009 and repealing Regulation (EC) No 2003/2003 (OJ L 170, 25.6.2019, p. 1).

<sup>&</sup>lt;sup>59</sup> Which implements in the Union the Stockholm Convention on persistent organic pollutants (OJ L 209, 31.7.2006, p. 3.).

<sup>60</sup> Regulation (EU) 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants (OJ L 169, 25.6.2019, p. 45).

<sup>61</sup> Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade (OJ L 63, 6.3.2003, p. 29).

<sup>62</sup> Minamata Convention on Mercury (OJ L 142, 2.6.2017, p. 6.)

<sup>&</sup>lt;sup>63</sup> Montreal Protocol on Substances that Deplete the Ozone Layer (OJ L 297, 31.10.1988, p. 21).

<sup>64</sup> The WHO Recommended Classification of Pesticides by Hazard (version 2019), (version of [adoption date]: https://apps.who.int/iris/bitstream/handle/10665/332193/9789240005662-eng.pdf?ua=1).

<sup>67</sup> Draft Executive Order of April 2025 § 14, stk. 1, nr. 2

<sup>68</sup> Draft Executive Order of April 2025 \( \) 13, stk. 2, and \( \) 14, stk. 2

<sup>69</sup> LBK nr 923 af 18/06/2024 - https://www.retsinformation.dk/eli/lta/2024/923

In areas designated by the national competent authority for conservation or in habitats that are protected, the activity is in accordance with the conservation objectives for those areas.

There is no conversion of habitats specifically sensitive to biodiversity loss or with high conservation value, or of areas set aside for the restoration of such habitats in accordance with national law.

Detailed information referred to in points 1.2(k) (Afforestation plan) and 1.4(i) (Forest management plan or equivalent system) include provisions for maintaining and possibly enhancing biodiversity in accordance with national and local provisions, including the following:

- (a) ensuring the good conservation status of habitat and species, maintenance of typical habitat species;
- (b) excluding the use or release of invasive alien species;

(c) excluding the use of non-native species unless it can be demonstrated that:

- a. the use of the forest reproductive material leads to favourable and appropriate ecosystem conditions (such as climate, soil criteria and vegetation zone, forest fire resilience);
- the native species currently present on the site are not anymore adapted to projected climatic and pedo-hydrological conditions.
  - ensuring the maintenance and improvement of physical, chemical and biological quality of the soil:
  - ii. promoting biodiversity-friendly practices that enhance forests' natural processes;

The Minister of Environment prepares a Natura 2000 forest plan for the areas covered by the obligation as protected areas and shall set the objectives necessary to ensure or restore a favourable conservation status for the habitat types and species listed in Annexes I and II to the EC Habitats Directive and Annex I to the EC Birds Directive, as well as the measures necessary to meet the objectives<sup>70</sup>.

Projects may not use woody plants listed in the National List and the EU List of Invasive Species, cf. Executive Order No. 1285 of 12 November 2018 on the prevention and management of the introduction and spread of invasive alien species on the EU list and on a national list with trade bans, etc. for invasive species<sup>71</sup>.

If projects use tree species listed as "EU and OECD regulated tree species" in the current Executive Order on Forest Reproductive Material, seed and planting material must originate from certified stands or seed plantations (with the exception of own plants)<sup>72</sup>.

The project criteria's Appendix 2 includes a list of tree species for which provenances from those listed must be used. When using tree species listed in Appendix 2, projects are obliged to use woody plants that meet the provenance provisions regarding forest and seedling plants in Appendix 2, unless own material is used<sup>73</sup>.

Protection and restoration

of biodiversity and eco-

systems

<sup>70</sup> LBK nr 690 af 26/05/2023 § 14 and 15 - https://www.retsinformation.dk/eli/lta/2023/690

<sup>&</sup>lt;sup>71</sup> BEK nr 265 af 18/03/2024 § 18 stk. 2. - https://www.retsinformation.dk/eli/lta/2024/265

<sup>&</sup>lt;sup>72</sup> BEK nr 265 af 18/03/2024 Bilag 2 - https://www.retsinformation.dk/eli/lta/2024/265

<sup>&</sup>lt;sup>73</sup> BEK nr 265 af 18/03/2024 § 18 - https://www.retsinformation.dk/eli/lta/2024/265

- iii. excluding the conversion of high-biodiverse ecosystems into less biodiverse ones;
- iv. ensuring the diversity of associated habitats and species linked to the forest;
- ensuring the diversity of stand structures and maintenance or enhancing of mature stage stands and dead wood.

Source: Ministry of Climate, Energy and Utilities, Ministry for Urban and Rural Affairs and Ministry of Green Transition.

#### Table 2

Conversion of low-lying agricultural lands

## **Appropriation Account**

23.31.04.45

## **Expenditure Category**

2. Environmental protection and restoration activities

### **EU Taxonomy Economic Activity**

2.1. Restoration of wetlands

#### **NACE Codes**

The economic activities in this category have no dedicated NACE code as referred to in the statistical classification of economic activities established by Regulation (EC) No 1893/2006, but relate to class 6 of the statistical classification of environmental protection activities (CEPA) established by Regulation (EU) No 691/2011 of the European Parliament and of the Council and includes NACE code 10000 to 20200 (agriculture, hunting etc.).

	EU Taxonomy Technical Screening Criteria	Alignment with Technical Screening Criteria
Description	Restoration of wetlands refers to economic activities that promote a return to original conditions of wetlands and economic activities that improve wetland functions without necessarily promoting a return to pre-disturbance conditions, with wetlands meaning land matching the international definition of	Funding of projects to take carbon-rich lowland soils <sup>78</sup> out from agricultural use and rewet the lands to restore the natural hydrology to the greatest extent possible <sup>79</sup> . This is done by closing of drains, ditches, etc. The projects aim is to reduce emission.

<sup>&</sup>lt;sup>78</sup> Denmark ratified the Ramsar Convention on July 16, 1977 and has gradually implemented changes as they were agreed, most recently in 1994. Denmark has identified 28 Ramsar areas covering approx. 7.300 km² across approx. 6.000 km² marine areas and approx. 1.300 km² on land. All the Danish Ramsar areas are part of the NATURA 2000 network. For the most recent amendments, please see BKI nr 109 af 20/10/1994 at <a href="https://www.retsinformation.dk/eli/ltc/1994/109">https://www.retsinformation.dk/eli/ltc/1994/109</a>. For more information about Ramsar territories in the Kingdom of Denmark, please see https://sgavmst.dk/natur-og-jagt/naturbeskyttelse/international-naturbeskyttelse/ramsar-konventionen.

<sup>&</sup>lt;sup>79</sup> Projects eligible for national funding are defined by BEK nr 1206 af 26/09/2023 - <a href="https://www.retsinformation.dk/eli/lta/2023/1206">https://www.retsinformation.dk/eli/lta/2023/1206</a>. Funding may be granted under future legislation or decrees provided they meet the same criteria. Any such changes will be disclosed on <a href="https://www.nationalbanken.dk/en/government-debt/funding-strategy/green-bonds">https://www.nationalbanken.dk/en/government-debt/funding-strategy/green-bonds</a>.

wetland 74 or of peatland 75 as set out in the Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar Convention)<sup>76</sup>. The concerned area matches the Union definition of wetlands, as provided in the Commission Communication on the wise use and conservation of wetlands<sup>77</sup>.

#### 1. Restoration plan

climate change mitigation

#### 1.1. The area is covered by a restoration plan, which is consistent with the Ramsar Convention's principles and guidelines on wetland restoration<sup>80</sup>, until the area is classified as a wetland and is covered by a wetland management plan, consistent with the Ramsar Convention's guidelines for management planning for Ramsar sites and other wetlands<sup>81</sup>. For peatlands, the restora-Substantial contribution to tion plan follows the recommendations contained in relevant resolutions of the Ramsar Convention, including the resolution XIII/13.

- 1.2. The restoration plan contains careful consideration of local hydrological and pedological conditions, including the dynamics of soil saturation and the change of aerobic and anaerobic conditions.
- 1.3. All wetland management relevant DNSH criteria are addressed in the restoration plan.

The agreement from 18 November 2024 "Implementation of a Green Denmark" includes a commitment to conversion of 140,000 hectares of carbon-rich lowland soils, including peripheral areas, by 203083. Compensation for conversion is granted on the basis of a point system assessing the proposed projects' possibility of maximising the benefit to the overall conservation status and wise use of wetlands of the efforts and resources applied to wetland restoration in line with the Ramsar Principles and guidelines for wetlands restoration. All applicants must file a designated application form with the Danish Agency for Green Transition and Aquatic Environment including the registration of the proposed project area and the detailed project plan<sup>84</sup> in the Authority's database<sup>85</sup>. MiljøGIS<sup>86</sup>, where peatlands are registered.

Recipients commit to permanent reclassification of the project areas as low-lying areas which must remain grass or natural areas with natural water levels. Subsidy recipients must facilitate that any properties within the project area are reclassified in public registries to maintain natural hydrology to the greatest extent possible<sup>87</sup>.

<sup>74</sup> Wetlands include a wide variety of inland habitats such as marshes, wet grasslands and peatlands, floodplains, rivers and lakes, and coastal areas such as saltmarshes, mangroves, intertidal mudflats and seagrass beds, and coral reefs and other marine areas no deeper than six meters at low tide, as well as human-made wetlands such as dams, reservoirs, rice paddies and waste water treatment ponds and lagoons. An Introduction to the Ramsar Convention on Wetlands, 7th ed. (previously The Ramsar Convention Manual). Ramsar Convention Secretariat, Gland, Switzerland.

<sup>75</sup> Peatlands are ecosystems with a peat soil. Peat consists of at least 30% dead, partially decomposed plant remains that have accumulated in situ under waterlogged and often acidic conditions. Resolution XIII.12 Guidance on identifying peatlands as Wetlands of International Importance (Ramsar Sites) for global climate change regulation as an additional argument to existing Ramsar criteria, Ramsar convention adopted on 21-29 October 2018.

<sup>76</sup> The Convention on Wetlands of International Importance especially as Waterfowl Habitat (version of [adoption date]: https://www.ramsar.org/sites/default/files/documents/library/current\_convention\_text\_e.pdf).

<sup>77</sup> Communication from the Commission to the Council and the European Parliament of 29 May 1995 on wise use and conservation of wetlands, COM(95) 189 final.

<sup>80</sup> Ramsar Convention (2002) Principles and guidelines for wetland restoration. Adopted by Resolution VIII.16 (2002) of the Ramsar Convention (version of [adoption date]: https://www.ramsar.org/sites/default/files/documents/pdf/guide/guide-restoration.pdf).

<sup>81</sup> Ramsar Convention (2002) Resolution VIII.14 New Guidelines for management planning for Ramsar sites and other wetlands (version of [adoption date]: https://www.ramsar.org/sites/default/files/documents/pdf/res/key res viii 14 e.pdf).

<sup>83</sup> Aftale om Implementering af et Grønt Danmark - https://www.regeringen.dk/media/13526/aftale-om-implementering-af-et-groent-danmark.pdf

<sup>84</sup> BEK nr 1206 af 26/09/2023 § 9 - https://www.retsinformation.dk/eli/lta/2023/1206

<sup>85</sup> BEK nr 1206 af 26/09/2023 § 8 - https://www.retsinformation.dk/eli/lta/2023/1206

<sup>86</sup> https://mst.dk/erhvery/tilskud-miljoeviden-og-data/data-og-databaser/miljoegis-data-om-natur-og-miljoe-paa-webkort

<sup>87</sup> BEK nr 1206 af 26/09/2023 § 19 - https://www.retsinformation.dk/eli/lta/2023/1206

1.4. The restoration plan provides for monitoring which ensures the correctness of the information contained in the plan, in particular as regards the data relating to the involved area.

#### 2. Climate benefit analysis

- 2.1. The activity complies with the following criteria:
  - (a) the climate benefit analysis demonstrates that the net balance of GHG emissions and removals generated by the activity over a period of 30 years after the beginning of the activity is lower than a baseline, corresponding to the balance of GHG emissions and removals over a period of 30 years starting at the beginning of the activity, associated to the business-as-usual practices that would have soil nutrients, and contribute to habitats and biodiversity90. occurred on the involved area in the absence of the activity;
  - (b) the projected long-term average net GHG balance of the activity is lower than the long-term average GHG balance projected for the baseline, referred to in point 2.2, where long term corresponds to 100 years.
- 2.2. The calculation of climate benefit complies with all of the following crite-
  - (a) the analysis is consistent with the 2019 Refinement to the 2006 ticular, if the wetland definition used in that analysis differs from the cantly 93. wetland definition used in the national GHG inventory, the analysis the involved area. The climate benefit analysis is based on transparent, accurate, consistent, complete and comparable information, covers all carbon pools impacted by the activity, including above-

Applicants must submit a pre-study to be considered for funding. The pre-study must include 88

- Information on the condition of the project area at the time of application, including soil conditions, hydrology, drainage conditions and land use
- Calculations of the expected effect in relation to the reduction of CO<sub>2</sub> emissions (tons of CO<sub>2</sub> equivalents per ha) and in relation to nitrogen and phosphorus
- A description of the project's consequences, including for water levels and drainage conditions and land use, as well as drainage maps

At least 60 percent of the project area must be located on carbon-rich lowland soils with a minimum of 6 percent organic carbon content and registered as peatlands in MiliøGIS89.

Project funding is granted at the basis of a point system which, among other criteria, factors in the proposed projects' ability to contribute to climate change adaptation, improve waterways, manage

The Danish Agency for Green Transition and Aquatic Environment monitors project compliance with the parts of the project plan which applies to the subsidy scheme while The Danish Nature Agency monitors compliance with the parts of the project plan which applies to the Danish Nature Agency's climate low-lying projects<sup>91</sup>. The person authorized by the Danish Agency for Green Transition and Aquatic Environment must have access to the project area to conduct measurements of the effect on climate, nature and the aquatic environment, including taking soil and water samples<sup>92</sup>.

Grants for the implementation of a climate low-lying project can be required to be fully or partially repaid if the recipient has provided wrongful information or if the Danish Agency for Green Transi-IPCC Guidelines for National Greenhouse Gas Inventories<sup>82</sup>. In partion and Aquatic Environment assesses that the conditions for subsidies have changed signifi-

includes an identification of the different land categories covered by The purpose of the conversion projects is to achieve a reduction in CO<sub>2</sub> emissions<sup>94</sup>. The expected project impact in terms of CO<sub>2</sub> emissions reductions (tons of CO<sub>2</sub> equivalents per ha) is calculated as part of the project pre-studies. Projects that have a cost-effectiveness of more than DKK 8,533 per tonne of CO<sub>2</sub> equivalents reduced will not be considered cost-effective.

<sup>82 2019</sup> Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories (https://www.ipcc-nggip.iges.or.jp/public/2019rf/).

<sup>88</sup> BEK nr 1206 af 26/09/2023 § 9 - https://www.retsinformation.dk/eli/lta/2023/1206

<sup>89</sup> BEK nr 1206 af 26/09/2023 § 6 - https://www.retsinformation.dk/eli/lta/2023/1206

<sup>90</sup> BEK nr 1206 af 26/09/2023 § 13 and Bilag 1 - https://www.retsinformation.dk/eli/lta/2023/1206

<sup>91</sup> BEK nr 1206 af 26/09/2023 § 27 - https://www.retsinformation.dk/eli/lta/2023/1206

<sup>92</sup> BEK nr 1206 af 26/09/2023 § 19 - https://www.retsinformation.dk/eli/lta/2023/1206

<sup>93</sup> BEK nr 1206 af 26/09/2023 § 28 - https://www.retsinformation.dk/eli/lta/2023/1206

<sup>94</sup> BEK nr 1206 af 26/09/2023 § 2 - https://www.retsinformation.dk/eli/lta/2023/1206

ground biomass, below-ground biomass, deadwood, litter and soil. cludes appropriate considerations about the risks of non-permanence and reversals of carbon sequestration, the risk of saturation and the risk of leakage. For coastal wetlands, climate benefit analysis considers projections of expected relative sea level rise and the potential that the wetlands will migrate:

- (b) the business-as-usual practices, including harvesting practices, are one of the following:
  - a. the management practices as documented before the start of the activity, if any;
  - b. the most recent business-as-usual practices prior to the start of the activity.
    - i. the resolution of the analysis is proportionate to the size of the area concerned and values specific to the area concerned are used;
    - infestations, fires, wind, storm damages, that the climate benefit analysis is consistent with Agency's climate low-lying projects 98. the 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories regarding emissions and removals due to natural disturbances.

#### 4. Guarantee of permanence

4.1. In accordance with national law, the wetland status of the area in which the activity takes place is guaranteed by one of the following measures:

relies on the most conservative assumptions for calculations and in- The analysis is consistent with the 2019 refinement to the 2006 IPCC Guidelines, and includes an assessment covering all carbon pools. It calculates the expected impact on greenhouse gas emissions together with side effects such as changes in nitrogen and phosphorus leaching to the aquatic environment.

> The business-as-usual practices are documented by the project application, the classification of the current land use in public registries and in MiljøGIS.

Recipients commit to permanent reclassification of the project areas as low-lying areas which must remain grass or natural areas with natural water levels. Subsidy recipients must facilitate that any properties within the project area are reclassified in public registries to maintain natural hydrology to the greatest extent possible. Once approved and reclassified, the areas may not be converted to any other use 95.

The Danish Environmental Protection Agency must approve any changes to a project that has received commitment to a grant, budget and project period. Approval of a change requires that the changed project continues to comply with the criteria 96.

Grants for the implementation of a climate low-lying project can be required to be fully or partially ii. emissions and removals that occur due to nat- repaid if the recipient has provided wrongful information or if the Danish Environmental Protection ural disturbances, such as pests and diseases Agency assesses that the conditions for subsidies have changed significantly<sup>97</sup>.

impact the area and cause underperformance The Danish Agency for Green Transition and Aquatic Environment monitors project compliance do not result in non-compliance with the crite- with the parts of the project plan which applies to the subsidy scheme while The Danish Nature ria of Regulation (EU) 2020/852, provided that Agency monitors compliance with the parts of the project plan which applies to the Danish Nature

<sup>95</sup> BEK nr 1206 af 26/09/2023 § 19 - https://www.retsinformation.dk/eli/lta/2023/1206

<sup>&</sup>lt;sup>96</sup> BEK nr 1206 af 26/09/2023 § 20 - https://www.retsinformation.dk/eli/lta/2023/1206

<sup>97</sup> BEK nr 1206 af 26/09/2023 § 28 - https://www.retsinformation.dk/eli/lta/2023/1206

<sup>98</sup> BEK nr 1206 af 26/09/2023 § 27 - https://www.retsinformation.dk/eli/lta/2023/1206

- the area is designated to be retained as wetland and may not be converted to other land use;
- (b) the area is classified as a protected area;
- (c) the area is the subject of any legal or contractual guarantee ensuring that it will remain a wetland.
- 4.2. In accordance with the national law, the operator of the activity commits that future updates to the restoration plan, beyond the activity that is financed, will continue to seek the climate benefits as determined in point 2. Besides, the operator of the activity commits to compensate any reduction in the climate benefit determined in point 2 with an equivalent climate benefit resulting from the conduct of an activity that corresponds to one of the environmental protection and restoration activities defined in this Regulation.

#### 5. Audit

Within two years after the beginning of the activity and every 10 years thereafter, the compliance of the activity with the substantial contribution to climate change mitigation criteria and with the DNSH criteria are verified by either of the following:

- (a) the relevant national competent authorities;
- (b) an independent third-party certifier, at the request of national authorities or the operator of the activity.

In order to reduce costs, audits may be performed together with any forest certification, climate certification or other audit. The independent third-party certifier may not have any conflict of interest with the owner or the funder, and may not be involved in the development or operation of the activity.

#### 6. Group assessment

The compliance with the criteria for substantial contribution to climate change mitigation and with DNSH criteria may be checked at the level of a group of holdings sufficiently homogeneous to evaluate the risk of the sustainability of the forest activity, provided that all those holdings have a durable relationship between them and participate in the activity and the group of those holdings remains the same for all subsequent audits.

**DNSH Criteria** 

See Appendix A<sup>99</sup> in The EU Taxonomy as adopted by the Commission on June 4, 2021 in the Delegated Act for climate change mitigation and climate change adaptation activities, namely:

The physical climate risks that are material to the activity have been identified from those listed in the table in Section II of this Appendix by performing a robust climate risk and vulnerability assessment with the following steps:

- (d) screening of the activity to identify which physical climate risks from the list in Section II of this Appendix may affect the performance of the economic activity during its expected lifetime;
- (e) where the activity is assessed to be at risk from one or more of the physical climate risks listed in Section II of this Appendix, a climate risk and vulnerability assessment to assess the materiality of the physical climate risks on the economic activity;
- an assessment of adaptation solutions that can reduce the identified physical climate risk.

The climate risk and vulnerability assessment is proportionate to the scale of the activity and its expected lifespan, such that:

 (c) for activities with an expected lifespan of less than 10 years, the assessment is performed, at least by using climate projections at the smallest appropriate scale; Denmark is a flat country with several thousand kilometres of coastline and countless islands. As one of the least elevated countries in the world, Denmark is particularly vulnerable to sea level and groundwater rise as a result of climate change. Denmark is expected to experience more extreme weather, and future storm surges are expected to become more powerful.

The physical climate risks material to the Kingdom of Denmark are monitored and assessed by the Danish Meteorological Institute (DMI) in the Climate Atlas<sup>105</sup> which informs the Danish Ministry of Climate, Energy and Utilities' assessment of Climate Risks<sup>106</sup>.

The DMI Climate Atlas assesses the physical climate risks to Denmark at municipal levels across RCP 2.6, RCP 4.5 and RCP 8.5 until year 2100. The risks assessed include precipitation, water levels, storm floods, temperature, wind, solar radiation, evaporation, fire hazard and drought. Given Denmark's location and topography, Denmark is expected to mainly be exposed to physical climate risks in the form of increased precipitation and floodings. Storm floods which occurred approximately every 20 years in the baseline scenario (1981-2010) are expected to occur every 3 years in RCP 2.6, every other year in RCP 4.5 and twice a year in RCP 8.5 by the last quartile of this century.

In 2023, the Danish Government presented the National Climate Adaptation Plan, which allocates approximately DKK 1.4 bn for measures aimed at reducing the impacts from increased water levels and storm floods and protecting infrastructure <sup>107</sup>.

Climate adaptation is a shared responsibility where the Government, municipalities, wastewater companies and landowners each carry out their own tasks<sup>108</sup>. Denmark is the first country in the world where all municipalities have committed to making climate adaptation and mitigation plans that meet the goals of the Paris Agreement<sup>109</sup>, and in 2024 96 of the 98 Danish municipalities had completed their plans<sup>110</sup>.

The Danish Planning Act states that climate adaptation is a shared responsibility between the municipalities, which must identify and plan to protect infrastructure and facilities from damage due to

Climate change adapta-

tion

<sup>99</sup> https://ec.europa.eu/sustainable-finance-taxonomy/assets/documents/CCM%20Appendix%20A.pdf

<sup>105</sup> https://www.dmi.dk/klima-atlas/data-i-klimaatlas

<sup>106</sup> https://edit.mst.dk/media/vlub2l35/faktaark-7.pdf

<sup>107</sup> https://mim.dk/kampagner/klimatilpasning

<sup>108</sup> https://klimatilpasning.dk/kommuner-og-forsyning/national-klimatilpasning

<sup>109</sup> https://realdania.dk/projekter/klimaalliancen

 $<sup>^{110}\</sup> https://realdania.dk/nyheder/2024/06/dk2020-projekt-har-transformeret-kommunernes-klimainds at start and s$ 

(d) for all other activities, the assessment is performed using the highest available resolution, state-of-the-art climate projections across the existing range of future scenarios 100 consistent with the expected lifetime of the activity, including, at least, 10 to 30 year climate projections scenarios for major investments.

The climate projections and assessment of impacts are based on best practice and available guidance and take into account the state-of-the-art science for vulnerability and risk analysis and related methodologies in line with the most recent Intergovernmental Panel on Climate Change reports 101, scientific measures are implemented prior to project initiation. peer-reviewed publications, and open source 102 or paying models.

For existing activities and new activities using existing physical assets, the economic operator implements physical and non-physical solutions ('adaptation solutions'), over a period of time of up to five years, that reduce the most important identified physical climate risks that are material to that activity. An adaptation plan for the implementation of those solutions is drawn up accordingly.

For new activities and existing activities using newly-built physical assets, the economic operator integrates the adaptation solutions that reduce the most important identified physical climate risks that are material to that activity at the time of design and construction and has implemented them before the start of operations.

The adaptation solutions implemented do not adversely affect the adaptation efforts or the level of resilience to physical climate risks of other people, of nature, of cultural heritage, of assets and of other economic activities; are consistent with local, sectoral, regional or national adaptation strategies and

physical climate changes, and the Government, which must monitor the municipal plans and interfere where municipal plans deviate from national interest, including climate protection 111. Local plans must include provisions on mitigation measures and whether such measures must be completed before the use of assets at risk of flooding or erosion is initiated 112 and the Planning Act was recently amended to give municipalities the competence to require in local plans the establishment of flood protection measures as a condition for the commissioning of assets that must be protected against flooding 113 114.

The Danish Planning Act requires that projects are approved as part of the local plans where they are to be executed. Municipalities have the competence to require that relevant adaptation

The Technical University of Denmark assists the Danish Government with assessments of the social and financial impacts of investments in climate adaptation 115 116.

<sup>100</sup> Future scenarios include Intergovernmental Panel on Climate Change representative concentration pathways RCP2.6, RCP4.5, RCP6.0 and RCP8.5.

<sup>101</sup> Assessments Reports on Climate Change: Impacts, Adaptation and Vulnerability, published periodically by the Intergovernmental Panel on Climate Change (IPCC), the United Nations body for assessing the science related to climate change produces, https://www.ipcc.ch/reports/.

<sup>&</sup>lt;sup>102</sup> Such as Copernicus services managed by the European Commission.

<sup>111</sup> LBK nr 572 af 29/05/2024 § 29: https://www.retsinformation.dk/eli/lta/2024/572

<sup>112</sup> VEI nr 10038 af 06/12/2024 stk. 6: https://www.retsinformation.dk/eli/retsinfo/2024/10038

<sup>113</sup> LBK nr 572 af 29/05/2024 § 15, stk. 22: https://www.retsinformation.dk/eli/lta/2024/572

<sup>114</sup> VEJ nr 10038 af 06/12/2024 stk. 6: https://www.retsinformation.dk/eli/retsinfo/2024/10038

<sup>115</sup> https://backend.orbit.dtu.dk/ws/portalfiles/portal/268507361/Samfunds konomiske konsekvenser af oversy mmelser og investeringer i klimatilpasning final reduced.pdf

<sup>116</sup> https://www.dtu.dk/-/media/dtudk/nyheder/webnyheder/2024/11/rapport\_nationale\_skadesberegninger.pdf

plans; and consider the use of nature-based solutions  $^{103}$  or rely on blue or green infrastructure  $^{104}$  to the extent possible.

Project pre-studies are required to assess the project's consequences for water levels and drainage conditions, and must include drainage maps <sup>122</sup>. The project funding criteria include considerations of the projects' potential impact on the aquatic environment, waterways and drinking water <sup>123</sup>. Activities, other than grazing, on the part of the areas that is closer than 5 meters from open

Sustainable use and protection of water and marine resources See Appendix B<sup>117</sup> in The EU Taxonomy as adopted by the Commission on June 4, 2021 in the Delegated Act for climate change mitigation and climate change adaptation activities.

Environmental degradation risks related to preserving water quality and avoiding water stress are identified and addressed with the aim of achieving good water status and good ecological potential as defined in Article 2, points (22) and (23), of Regulation (EU) 2020/852, in accordance with Directive

103 Nature-based solutions are defined as 'solutions that are inspired and supported by nature, which are cost-effective, simultaneously provide environmental, social and economic benefits and help build resilience. Such solutions bring more, and more diverse, nature and natural features and processes into cities, landscapes and seascapes, through locally adapted, resource-efficient and systemic interventions'. Therefore, nature-based solutions benefit biodiversity and support the delivery of a range of ecosystem services. (version of [adoption date]: https://ec.europa.eu/research/environment/index.cfm?pg=nbs).

104 See Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: Green Infrastructure (GI) — Enhancing Europe's Natural Capital (COM/2013/0249 final).

<sup>117</sup> https://ec.europa.eu/sustainable-finance-taxonomy/assets/documents/CCM%20Appendix%20B.pdf

<sup>122</sup> BEK nr 1206 af 26/09/2023 § 9 - https://www.retsinformation.dk/eli/lta/2023/1206

<sup>&</sup>lt;sup>123</sup> BEK nr 1206 af 26/09/2023 § 13 - https://www.retsinformation.dk/eli/lta/2023/1206

2000/60/EC of the European Parliament and of the Council <sup>118</sup> and a water use and protection management plan, developed thereunder for the potentially affected water body or bodies, in consultation with relevant stakeholders

Where an Environmental Impact Assessment is carried out in accordance with Directive 2011/92/EU of the European Parliament and of the Council (2) and includes an assessment of the impact on water in accordance with Directive 2000/60/EC, no additional assessment of impact on water is required, provided the risks identified have been addressed. The activity does not hamper the achievement of good environmental status of marine waters or does not deteriorate marine waters that are already in good environmental status as defined in point 5 of Article 3 of Directive 2008/56/EC of the European Parliament and of the Council 119 120, taking into account the Commission Decision (EU) 2017/848 121 in relation to the relevant criteria and methodological standards for those descriptors.

watercourses, lakes over 100 m<sup>2</sup> and coastlines must be carried out in a manner that does not cause erosion of the areas <sup>124</sup>.

Denmark is divided into four water basin districts and 23 main watersheds <sup>125</sup>. The Minister of Environment prepares a 6-year water basin plan for each water basin district to inform authorities and the public about plans for improving the environmental status of the water bodies in the water basin district and the means to achieve the desired environmental status. The criteria for the content of water use and protection management plans is governed by the Water Planning Act <sup>126</sup>.

Transition to a circular economy

Peat extraction is minimised.

The project areas may not be used for growing crops, but permits the harvesting of biomass grown on the land surface or similar (e.g. grazing)<sup>127</sup>. Peat extraction is prohibited together with working the soil (e.g. ploughing).

<sup>118</sup> Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy

<sup>119</sup> Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive) (OJ L 164, 25.6.2008, p. 19).

<sup>120</sup> The definition laid down in point 5 of Article 3 of Directive 2008/56/EC provides in particular that good environmental status is to be determined on the basis of the qualitative descriptors laid down in Annex I to that Directive.

<sup>&</sup>lt;sup>121</sup> 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.

<sup>124</sup> BEK nr 1206 af 26/09/2023 § 13 - https://www.retsinformation.dk/eli/lta/2023/1206

<sup>125</sup> Vandområdeplanerne 2021-2027 - Styrelsen for Grøn Arealomlægning og Vandmiljø

 $<sup>^{126}</sup>$  LBK nr 126 af 26/01/2017 - https://www.retsinformation.dk/eli/lta/2017/126

<sup>127</sup> BEK nr 1206 af 26/09/2023 § 19 - https://www.retsinformation.dk/eli/lta/2023/1206

The use of pesticides is minimised and alternative approaches or techniques. The project areas may not be treated with pesticides, insecticides and the like 130. which may include non-chemical alternatives to pesticides are favoured, in accordance with Directive 2009/128/EC, with exception of occasions where the use of pesticides is needed to control outbreaks of pests and diseases. The activity minimises the use of fertilisers and does not use manure. The activity complies with Regulation (EU) 2019/1009 or national rules on fertilisers or soil improvers for agricultural use.

The project areas may not be treated with soil improvers or fertilizers, except for manure left onsite by grazing livestock. 131.

The project area may not be sprayed with insecticides, fungicides and other pesticides. The addition of additives for soil improvement (e.g., lime) is also prohibited.

Pollution prevention and control

Well documented and verifiable measures are taken to avoid the use of active ingredients that are listed in Annex I, part A, of Regulation (EU) 2019/1021 128, the Rotterdam Convention on the prior informed consent procedure for certain hazardous chemicals and pesticides in international trade, the Minamata Convention on Mercury, the Montreal Protocol on Substances that Deplete the Ozone Layer, and of active ingredients that are listed as classification Ia ('extremely hazardous') or Ib ('highly hazardous') in the WHO recommended Classification of Pesticides by Hazard 129. The activity complies with the relevant national implementing law on active ingredients.

The project undergoes an assessment of the possible risks of water and soil pollution by re-wetting the project area. In example the risk of nitrogen and phosphorus leaching to the aquatic environment by re-wetting the soil is assessed before project initiation.

Pollution of water and soil is prevented and cleaning up measures are undertaken when pollution occurs.

<sup>&</sup>lt;sup>128</sup> Which implements in the Union the Stockholm Convention on persistent organic pollutants (OJ L 209, 31.7.2006, p. 3).

<sup>129</sup> The WHO Recommended Classification of Pesticides by Hazard (version 2019), (https://apps.who.int/iris/bitstream/handle/10665/332193/9789240005662-eng.pdf?ua=1).

<sup>130</sup> BEK nr 1206 af 26/09/2023 § 19 - https://www.retsinformation.dk/eli/lta/2023/1206

<sup>131</sup> BEK nr 1206 af 26/09/2023 § 19 - https://www.retsinformation.dk/eli/lta/2023/1206

of biodiversity and ecosystems

Protection and restoration In areas designated by the national competent authority for conservation or in habitats that are protected, the activity is in accordance with the conservation objectives for those areas.

> There is no conversion of habitats specifically sensitive to biodiversity loss or with high conservation value, or of areas set aside for the restoration of such habitats in accordance with national law.

> The plan referred to in point 1 (Restoration plan) of this Section includes provisions for maintaining and possibly enhancing biodiversity in accordance with national and local provisions, including the following:

- (a) ensuring the good conservation status of habitat and species, maintenance of typical habitat species;
- (b) excluding the use or release of invasive species.

Participants in projects are obligated to permanent reclassification of the land from agricultural soils to wetlands in public registries. Once approved and reclassified, the areas may not be converted to any other use 132.

The projects aim is to convert low-lying high-carbon lands currently classified as agricultural land. This is incentivized by offering a significantly higher conversion compensation per hectare to land classified as agricultural land than what is offered for land classified as permanent grass (~43% of what is offered for agricultural land) or nature (~5% of what is offered for agricultural land)<sup>133</sup>.

Projects' potentially positive contribution to Natura 2000 and Annex IV species, cf. Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (the Habitats Directive) is included as a selection criteria 134. Projects' potentially positive contribution to connecting or establishing a buffer for habitat nature or projects located within Natura 2000 areas is also a selection criteria 135.

The project area must be kept as a grass-dominated or nature area with natural hydrology, creating potentially viable habitats for typical habitat species in wetlands. Projects potentially positive contribution to connecting or establishing a buffer of habitats for Annex 4 species/Red List species is included as a selection criteria 136.

The planting of plant species, invasive or not, is prohibited in the project area 137.

Source: Ministry of Green Transition.

<sup>132</sup> BEK nr 1206 af 26/09/2023 § 19 - https://www.retsinformation.dk/eli/lta/2023/1206

<sup>133</sup> BEK nr 1206 af 26/09/2023 § 17 - https://www.retsinformation.dk/eli/lta/2023/1206

<sup>134</sup> BEK nr 1206 af 26/09/2023 § 13 - https://www.retsinformation.dk/eli/lta/2023/1206

<sup>135</sup> BEK nr 1206 af 26/09/2023 Bilag 1 - https://www.retsinformation.dk/eli/lta/2023/1206

<sup>136</sup> BEK nr 1206 af 26/09/2023 § 13 - https://www.retsinformation.dk/eli/lta/2023/1206

<sup>137</sup> BEK nr 1206 af 26/09/2023 § 19 - https://www.retsinformation.dk/eli/lta/2023/1206

## Table 3

Subsidies for renewable energy (PV systems and other small WE systems) and taxation of electricity (exemption of PV-cells)

## **Appropriation Account**

29.25.12.25 38.22.01.20

## **Expenditure category**

Renewable energy

## **EU Taxonomy Economic Activity**

4.1 Electricity generation using solar photovoltaic technology

## **NACE Code**

D35.11

	EU Taxonomy Technical Screening Criteria	Alignment with Technical Screening Criteria
Description	Construction or operation of electricity generation facilities that produce electricity using solar photovoltaic (PV) technology.	Subsidy aimed at supporting the production of electricity from small-scale solar photovoltaic (PV) systems to increase the competitiveness against fossil fuel-based energy 138. Producers of electric
Substantial contribution to climate change mitigation	The activity generates electricity using solar PV technology.	ity from PV-systems will receive financial support through premiums on top of the market price.
		Tax exemption for electricity generation from solar energy for own consumption. Aims to promote the use and exploitation of renewable energy.
	DNSH Criteria	Alignment with DNSH Criteria
	See Appendix A <sup>139</sup> in The EU Taxonomy as adopted by the Commission on June 4, 2021 in the Delegated Act for climate change mitigation and climate change adaptation activities, namely:	Denmark is a flat country with several thousand kilometres of coastline and countless islands. As one of the least elevated countries in the world, Denmark is particularly vulnerable to sea level an groundwater rise as a result of climate change. Denmark is expected to experience more extreme
Climate change adaptation	The physical climate risks that are material to the activity have been identified from those listed in the table in Section II of this Appendix by perform-	weather, and future storm surges are expected to become more frequent and higher.
	ing a robust climate risk and vulnerability assessment with the following steps:	The energy sector is to a great extent considered equipped for the changing climatic conditions. More extreme weather, e.g. with stronger wind, changing precipitation (hail/ice/snow), may lead to a need to secure facilities against changed weather conditions. However, the consequences are

<sup>&</sup>lt;sup>138</sup> Not applicable for roof top solar systems.

<sup>139</sup> https://ec.europa.eu/sustainable-finance-taxonomy/assets/documents/CCM%20Appendix%20A.pdf

- (g) screening of the activity to identify which physical climate risks from the list in Section II of this Appendix may affect the performance of the economic activity during its expected lifetime;
- (h) where the activity is assessed to be at risk from one or more of the physical climate risks listed in Section II of this Appendix, a climate risk and vulnerability assessment to assess the materiality of the physical climate risks on the economic activity;
- an assessment of adaptation solutions that can reduce the identified physical climate risk.

The climate risk and vulnerability assessment is proportionate to the scale of the activity and its expected lifespan, such that:

- (e) for activities with an expected lifespan of less than 10 years, the assessment is performed, at least by using climate projections at the smallest appropriate scale;
- (f) for all other activities, the assessment is performed using the highest available resolution, state-of-the-art climate projections across the existing range of future scenarios 140 consistent with the expected lifetime of the activity, including, at least, 10 to 30 year climate projections scenarios for major investments.

The climate projections and assessment of impacts are based on best practice and available guidance and take into account the state-of-the-art science for vulnerability and risk analysis and related methodologies in line

assessed to be limited for PV panels in Denmark. Further, the vulnerable power supply network is largely made up of underground cables.

The physical climate risks material to Denmark are monitored and assessed by the Danish Meteorological Institute (DMI) in *Klimaatlas* <sup>145</sup> which informs the Danish Ministry of Climate, Energy and Utilities' assessment of Climate Risks <sup>146</sup>.

The DMI Klimaatlas assesses the physical climate risks to Denmark at municipal levels across multiple future RCP and SSP scenarios. The risks assessed include precipitation, water levels, storm floods, temperature, wind, solar radiation, evaporation, fire hazard and drought.

Given Denmark's location and topography, Denmark is expected to mainly be exposed to physical climate risks in the form of increased precipitation and floodings. Storm surges which occurred approximately once in 20 years in the baseline scenario (1981-2010) are expected to occur 9 times more frequently in SSP 1-2.6, 13 times more frequently under every SSP 2-4.5 and 34 times more frequently under SSP 5-8.5 by the end of this century (2071-2100).

In 2023, the Danish Government presented the National Climate Adaptation Plan, which allocates approximately DKK 1.4 bn for measures aimed at reducing the impacts from increased water levels and storm floods and protecting infrastructure <sup>147</sup>.

Climate adaptation is a shared responsibility where the Government, municipalities, wastewater companies and landowners each carry out their own tasks <sup>148</sup>. Denmark is the first country in the world where all municipalities have committed to making climate adaptation and mitigation plans that meet the goals of the Paris Agreement <sup>149</sup>, and in 2024 96 of the 98 Danish municipalities had completed their plans <sup>150</sup>. Offshore wind farms are given a license to produce electricity for 30 years for tender wind farms and 25 years for other wind farms, but ex-tensions of this are possible <sup>151</sup>.

<sup>140</sup> Future scenarios include Intergovernmental Panel on Climate Change representative concentration pathways RCP2.6, RCP4.5, RCP6.0 and RCP8.5.

<sup>145</sup> https://www.dmi.dk/klima-atlas/data-i-klimaatlas

<sup>146</sup> https://edit.mst.dk/media/vlub2l35/faktaark-7.pdf

<sup>147</sup> https://mim.dk/kampagner/klimatilpasning

<sup>148</sup> https://klimatilpasning.dk/kommuner-og-forsyning/national-klimatilpasning

<sup>149</sup> https://realdania.dk/projekter/klimaalliancen

<sup>150</sup> https://realdania.dk/nyheder/2024/06/dk2020-projekt-har-transformeret-kommunernes-klimaindsats

<sup>151</sup> https://www.retsinformation.dk/eli/lta/2018/1003

with the most recent Intergovernmental Panel on Climate Change reports <sup>141</sup>, scientific peer-reviewed publications, and open source <sup>142</sup> or paying models.

For existing activities and new activities using existing physical assets, the economic operator implements physical and non-physical solutions ('adaptation solutions'), over a period of time of up to five years, that reduce the most important identified physical climate risks that are material to that activity. An adaptation plan for the implementation of those solutions is drawn up accordingly.

For new activities and existing activities using newly-built physical assets, the economic operator integrates the adaptation solutions that reduce the most important identified physical climate risks that are material to that activity at the time of design and construction and has implemented them before the start of operations.

The adaptation solutions implemented do not adversely affect the adaptation efforts or the level of resilience to physical climate risks of other people, of nature, of cultural heritage, of assets and of other economic activities; are consistent with local, sectoral, regional or national adaptation strategies and plans; and consider the use of nature-based solutions <sup>143</sup> or rely on blue or green infrastructure <sup>144</sup> to the extent possible.

The Executive Order on Planning for Solar Systems Subject to Local Planning in the Open Countryside <sup>152</sup> requires that solar photovoltaic farms not be placed in the coastal zone least the municipal council justify the placement of the intended location, including information on the investigation of the possibilities of alternative locations for the farm.

The Danish Planning Act states that climate adaptation is a shared responsibility between the municipalities, which must identify and plan to protect infrastructure and facilities from damage due to physical climate changes, and the Government, which must monitor the municipal plans and interfere where municipal plans deviate from national interest, including climate protection <sup>153</sup>. Local plans must include provisions on mitigation measures and whether such measures must be completed before the use of assets at risk of flooding or erosion is initiated <sup>154</sup> and the Planning Act was recently amended to give municipalities the competence to require in local plans the establishment of flood protection measures as a condition for the commissioning of assets that must be protected against flooding <sup>155</sup> <sup>156</sup>.

The Danish Planning Act requires that projects are approved as part of the local plans where they are to be executed. Municipalities have the competence to require that relevant adaptation measures are implemented prior to project initiation.

The Technical University of Denmark assists the Danish Government with assessments of the social and financial impacts of investments in climate adaptation <sup>157</sup> <sup>158</sup>.

<sup>141</sup> Assessments Reports on Climate Change: Impacts, Adaptation and Vulnerability, published periodically by the Intergovernmental Panel on Climate Change (IPCC), the United Nations body for assessing the science related to climate change produces, https://www.ipcc.ch/reports/.

<sup>&</sup>lt;sup>142</sup> Such as Copernicus services managed by the European Commission.

<sup>143</sup> Nature-based solutions are defined as 'solutions that are inspired and supported by nature, which are cost-effective, simultaneously provide environmental, social and economic benefits and help build resilience. Such solutions bring more, and more diverse, nature and natural features and processes into cities, landscapes and seascapes, through locally adapted, resource-efficient and systemic interventions'. Therefore, nature-based solutions benefit biodiversity and support the delivery of a range of ecosystem services. (version of [adoption date]: https://ec.europa.eu/research/environment/index.cfm?pg=nbs).

<sup>144</sup> See Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: Green Infrastructure (GI) — Enhancing Europe's Natural Capital (COM/2013/0249 final).

<sup>152</sup> BEK nr 440 af 03/05/2024: https://www.retsinformation.dk/eli/lta/2024/440

<sup>153</sup> LBK nr 572 af 29/05/2024 \ 29: https://www.retsinformation.dk/eli/lta/2024/572#P29

<sup>154</sup> VEI nr 10038 af 06/12/2024 stk. 6: https://www.retsinformation.dk/eli/retsinfo/2024/10038

<sup>155</sup> LBK nr 572 af 29/05/2024 § 15, stk. 22: https://www.retsinformation.dk/eli/lta/2024/572#P29

<sup>&</sup>lt;sup>156</sup> VEJ nr 10038 af 06/12/2024 stk. 6: https://www.retsinformation.dk/eli/retsinfo/2024/10038

 $<sup>^{157}\</sup> https://backend.orbit.dtu.dk/ws/portalfiles/portal/268507361/Samfunds\_konomiske\_konsekvenser\_af\_oversv\_mmelser\_og\_investeringer\_i\_klimatilpasning\_final\_reduced.pdf$ 

 $<sup>^{158}\</sup> https://www.dtu.dk/-/media/dtudk/nyheder/webnyheder/2024/11/rapport\_nationale\_skadesberegninger.pdf$ 

Sustainable use and protection of water and marine resources		N/A
Transition to a circular economy	The activity assesses availability of and, where feasible, uses equipment and components of high durability and recyclability and that are easy to dismantle and refurbish.	Denmark has implemented Directive 2012/19/EU (the Waste from Electrical and Electronic Equipment (WEEE) Directive) <sup>159</sup> in the Electronic Waste Executive Order <sup>160</sup> which means that solar panels are covered by manufacturer responsibility for electronics and electronic products.  Manufacturers or suppliers who place solar panels on the Danish market must be registered in the manufacturer register with the Danish Producer Responsibility (DPA). When solar panels are decommissioned, the original manufacturer or supplier must either take back the solar panels themselves or bear the full cost of takeback through a third-party, and ensure that the used solar panels are processed in accordance with the regulations of the Electronic Waste Executive Order <sup>161</sup> , meaning that they must ensure that materials corresponding to at least 80% of the weight of the original solar panel are recycled <sup>162</sup> .  In 2022, 100% of the solar photovoltaic panels decommissioned in Denmark were utilized and 95% of the waste was recycled <sup>163</sup> .
Pollution prevention and control		N/A
Protection and restoration of biodiversity and ecosystems	See Appendix D <sup>164</sup> in The EU Taxonomy as adopted by the Commission on June 4, 2021 in the Delegated Act for climate change mitigation and climate change adaptation activities.  An Environmental Impact Assessment (EIA) or screening <sup>165</sup> has been completed in accordance with Directive 2011/92/EU. <sup>166</sup>	The Danish Act of Environmental Assessment (EAA) transposes the EIA Directive 169 and the SEA Directive 170 For projects on either annex 1 or 2 of EAA an EIA or a screening must be completed, before the developer commences the work. The development consent must describe any features of the project and/or measures envisaged either by the developer or as an obligatory result of other assessments to

<sup>159</sup> https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:02012L0019-20180704

<sup>&</sup>lt;sup>160</sup> BEK nr 1566 af 19/12/2022: https://www.retsinformation.dk/eli/lta/2022/1566

<sup>&</sup>lt;sup>161</sup> BEK nr 1566 af 19/12/2022: https://www.retsinformation.dk/eli/lta/2022/1566

<sup>162</sup> https://mst.dk/erhverv/rent-miljoe-og-sikker-forsyning/drikkevand-og-grundvand/grundvandsbeskyttelse/solceller-og-grundvandsbeskyttelse

<sup>163</sup> https://producentansvar.dk/statistik/elektronisk-udstyr-weee/miljoemaal-elektronik/

<sup>164</sup> https://ec.europa.eu/sustainable-finance-taxonomy/assets/documents/CCM%20Appendix%20D.pdf

<sup>&</sup>lt;sup>165</sup> The procedure through which the competent authority determines whether projects listed in Annex II to Directive 2011/92/EU is to be made subject to an environmental impact assessment (as referred to in Article 4(2) of that Directive).

<sup>&</sup>lt;sup>166</sup> For activities in third countries, in accordance with equivalent applicable national law or international standards requiring the completion of an EIA or screening, for example, IFC Performance Standard 1: Assessment and Management of Environmental and Social Risks.

<sup>&</sup>lt;sup>169</sup> EU Directive 2011/92/EU as amended by the EU Directive 2014/52/EU

<sup>&</sup>lt;sup>170</sup> EU Directive 2001/42/EU

Where an EIA has been carried out, the required mitigation and compensa- where appropriate, monitoring measures. tion measures for protecting the environment are implemented.

For sites/operations located in or near biodiversity-sensitive areas (including the Natura 2000 network of protected areas, UNESCO World Heritage sites and Key Biodiversity Areas, as well as their protected areas), an appropriate assessment <sup>167</sup>, where applicable, has been conducted and based on its conclusions the necessary mitigation measures <sup>168</sup> are implemented.

avoid, prevent or reduce and, if possible, offset significant adverse effects on the environment as well as, where appropriate, monitoring measures.

The Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment as amended was transposed by the Act 425/2016 on Environmental Assessment of plans and programs and of projects. The most recent consolidated version is Act 1976/2021. The Ministry of Transport has transposed separate legislation concerning major road-, bridges- and railway projects and the Ministry of Food, Agriculture and Fisheries has transposed separate legislation concerning intensive livestock breeding projects.

The development consent must also describe how these measures are implemented by the developer, and shall determine the procedures regarding the monitoring of significant adverse effects on the environment. The type of parameters to be monitored and the duration of the monitoring shall be proportionate to the nature, location and size of the project and the significance of its effects on the environment.

The EU Birds and Habitats directives are implemented in Denmark and, through the latest update of the Biodiversity strategy, the Natura 2000 is considered to be fully implemented. If activities are located in areas that are especially environmentally vulnerable or contain special natural assets that need protection, a full EIA will normally by required.

Not applicable for rooftop solar systems.

Source: Ministry of Climate, Energy and Utilities and Ministry of Taxation.

<sup>167</sup> In accordance with Directives 2009/147/EC and 92/43/EEC. For activities located in third countries, in accordance with equivalent applicable national law or international standards, that aim at the conservation of natural habitats, wild fauna and wild flora, and that require to carry out (1) a screening procedure to determine whether, for a given activity, an appropriate assessment of the possible impacts on protected habitats and species is needed; (2) such an appropriate assessment where the screening determines that it is needed, for example IFC Performance Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources.

<sup>168</sup> Those measures have been identified to ensure that the project, plan or activity will not have any significant effects on the conservation objectives of the protected area.

## Table 4

Subsidies for onshore wind, offshore wind and household wind systems

## **Appropriation Account**

29.25.12.15.

29.25.22.

29.25.23.10.

29.25.23.11.

29.25.23.13.

29.25.23.20.

29.25.23.14

## **Expenditure category**

Renewable energy

## **EU Taxonomy Economic Activity**

4.3 Electricity generation from wind power

## **NACE Code**

D35.11

	EU Taxonomy Technical Screening Criteria	Alignment with Technical Screening Criteria
Description	Construction or operation of electricity generation facilities that produce electricity from wind power.	Subsidy aimed at supporting the production of electricity from wind power to increase the competitiveness against fossil fuel-based energy. Subsidy is granted to producers of electricity using wind power from onshore and offshore wind farms.
		Subsidy aimed at supporting the production and development of electricity from small scale on- shore wind turbines. Producers of electricity from wind turbines receive financial support through premiums on top of the market price to increase the competitiveness against fossil fuel-based en- ergy.
Substantial contribution to climate change mitigation	The activity generates electricity from wind power.	The activity generates electricity from wind power.

#### **DNSH Criteria**

See Appendix A<sup>171</sup> in The EU Taxonomy as adopted by the Commission on June 4, 2021 in the Delegated Act for climate change mitigation and climate change adaptation activities, namely:

The physical climate risks that are material to the activity have been identified from those listed in the table in Section II of this Appendix by performing a robust climate risk and vulnerability assessment with the following steps:

 screening of the activity to identify which physical climate risks from the list in Section II of this Appendix may affect the performance of the economic activity during its expected lifetime;

## Climate change adaptation

- (b) where the activity is assessed to be at risk from one or more of the physical climate risks listed in Section II of this Appendix, a climate risk and vulnerability assessment to assess the materiality of the physical climate risks on the economic activity;
- (c) an assessment of adaptation solutions that can reduce the identified physical climate risk.

The climate risk and vulnerability assessment is proportionate to the scale of the activity and its expected lifespan, such that:

 (a) for activities with an expected lifespan of less than 10 years, the assessment is performed, at least by using climate projections at the smallest appropriate scale;

## Alignment with DNSH Criteria

Denmark is a flat country with several thousand kilometres of coastline and countless islands. As one of the least elevated countries in the world, Denmark is particularly vulnerable to sea level and groundwater rise as a result of climate change. Denmark is expected to experience more extreme weather, and future storm surges are expected to become more frequent and higher.

The energy sector is to a great extent considered to be well equipped for the changing climatic conditions. More extreme weather with stronger wind may lead to a need to secure facilities against changing weather conditions. However, the consequences are assessed to be limited, as the wind turbines are secured against high wind speeds. In case of storm and high wind speeds, the wind turbines will shut down, whereby electricity production ceases. Further, the vulnerable power supply network is largely made up of underground cables.

The DMI *Klimaatlas* assesses the physical climate risks to Denmark at municipal levels across multiple future RCP and SSP scenarios. The risks assessed include precipitation, water levels, storm floods, temperature, wind, solar radiation, evaporation, fire hazard and drought.

Given Denmark's location and topography, Denmark is expected to mainly be exposed to physical climate risks in the form of increased precipitation and floodings. Storm surges which occurred approximately once in 20 years in the baseline scenario (1981-2010) are expected to occur 9 times more frequently in SSP 1-2.6, 13 times more frequently under every SSP 2-4.5 and 34 times more frequently under SSP 5-8.5 by the end of this century (2071-2100).

In 2023, the Danish Government presented the National Climate Adaptation Plan, which allocates approximately DKK 1.4 bn for measures aimed at reducing the impacts from increased water levels and storm floods and protecting infrastructure 177.

Climate adaptation is a shared responsibility where the Government, municipalities, wastewater companies and landowners each carry out their own tasks <sup>178</sup>. Denmark is the first country in the world where all municipalities have committed to making climate adaptation and mitigation plans that meet the goals of the Paris Agreement <sup>179</sup>, and in 2024 96 of the 98 Danish municipalities had completed their plans <sup>180</sup>. Offshore wind farms are given a license to produce electricity for 30

<sup>171</sup> https://ec.europa.eu/sustainable-finance-taxonomy/assets/documents/CCM%20Appendix%20A.pdf

<sup>177</sup> https://mim.dk/kampagner/klimatilpasning

<sup>178</sup> https://klimatilpasning.dk/kommuner-og-forsyning/national-klimatilpasning

<sup>179</sup> https://realdania.dk/projekter/klimaalliancen

<sup>180</sup> https://realdania.dk/nyheder/2024/06/dk2020-projekt-har-transformeret-kommunernes-klimaindsats

(b) for all other activities, the assessment is performed using the highest available resolution, state-of-the-art climate projections across the existing range of future scenarios<sup>172</sup> consistent with the expected lifetime of the activity, including, at least, 10 to 30 year climate projections scenarios for major investments.

The climate projections and assessment of impacts are based on best practice and available guidance and take into account the state-of-the-art science for vulnerability and risk analysis and related methodologies in line with the most recent Intergovernmental Panel on Climate Change reports <sup>173</sup>, scientific peer-reviewed publications, and open source <sup>174</sup> or paying models.

For existing activities and new activities using existing physical assets, the economic operator implements physical and non-physical solutions ('adaptation solutions'), over a period of time of up to five years, that reduce the most important identified physical climate risks that are material to that activity. An adaptation plan for the implementation of those solutions is drawn up accordingly.

For new activities and existing activities using newly-built physical assets, the economic operator integrates the adaptation solutions that reduce the most important identified physical climate risks that are material to that activity at the time of design and construction and has implemented them before the start of operations.

The adaptation solutions implemented do not adversely affect the adaptation efforts or the level of resilience to physical climate risks of other people, of

years for tender wind farms and 25 years for other wind farms, but extensions of this are possible <sup>181</sup>.

The Danish Planning Act states that climate adaptation is a shared responsibility between the municipalities, which must identify and plan to protect infrastructure and facilities from damage due to physical climate changes, and the Government, which must monitor the municipal plans and interfere where municipal plans deviate from national interest, including climate protection <sup>182</sup>. Local plans must include provisions on mitigation measures and whether such measures must be completed before the use of assets at risk of flooding or erosion is initiated <sup>183</sup> and the Planning Act was recently amended to give municipalities the competence to require in local plans the establishment of flood protection measures as a condition for the commissioning of assets that must be protected against flooding <sup>184</sup> <sup>185</sup>.

The Danish Planning Act requires that projects are approved as part of the local plans where they are to be executed. Municipalities have the competence to require that relevant adaptation measures are implemented prior to project initiation.

adaptation plan for the implementation of those solutions is drawn up accordingly.

The Technical University of Denmark assists the Danish Government with assessments of the social and financial impacts of investments in climate adaptation <sup>186</sup> <sup>187</sup>.

The safety of wind turbines is regulated in Executive Order no. 648 of 31 May 2023 on technical certification and servicing of wind turbines <sup>188</sup>. The purpose of the Executive Order is to ensure wind turbines that are constructed on land, in territorial water, and in the exclusive economic zone, and which are used for the production of electrical energy, do not carry a risk to the safety and health of persons and livestock, as well as the security of property, when wind turbines are installed, maintained, or used. The Executive Order is amended periodically to ensure the continued safety of wind turbines.

<sup>172</sup> Future scenarios include Intergovernmental Panel on Climate Change representative concentration pathways RCP2.6, RCP4.5, RCP6.0 and RCP8.5.

<sup>&</sup>lt;sup>173</sup> Assessments Reports on Climate Change: Impacts, Adaptation and Vulnerability, published periodically by the Intergovernmental Panel on Climate Change (IPCC), the United Nations body for assessing the science related to climate change produces, https://www.ipcc.ch/reports/.

<sup>&</sup>lt;sup>174</sup> Such as Copernicus services managed by the European Commission.

<sup>181</sup> https://www.retsinformation.dk/eli/lta/2018/1003

<sup>&</sup>lt;sup>182</sup> LBK nr 572 af 29/05/2024 § 29: https://www.retsinformation.dk/eli/lta/2024/572#P29

<sup>183</sup> VEJ nr 10038 af 06/12/2024 stk. 6: https://www.retsinformation.dk/eli/retsinfo/2024/10038

<sup>184</sup> LBK nr 572 af 29/05/2024 § 15, stk. 22: https://www.retsinformation.dk/eli/lta/2024/572#P29

<sup>&</sup>lt;sup>185</sup> VEJ nr 10038 af 06/12/2024 stk. 6: https://www.retsinformation.dk/eli/retsinfo/2024/10038

<sup>186</sup> https://backend.orbit.dtu.dk/ws/portalfiles/portal/268507361/Samfunds\_konomiske\_konsekvenser\_af\_oversv\_mmelser\_og\_investeringer\_i\_klimatilpasning\_final\_reduced.pdf

<sup>187</sup> https://www.dtu.dk/-/media/dtudk/nyheder/webnyheder/2024/11/rapport\_nationale\_skadesberegninger.pdf

<sup>&</sup>lt;sup>188</sup> BEK nr 648 af 31/05/2023 - https://www.retsinformation.dk/eli/lta/2023/648

nature, of cultural heritage, of assets and of other economic activities; are consistent with local, sectoral, regional or national adaptation strategies and plans; and consider the use of nature-based solutions <sup>175</sup> or rely on blue or green infrastructure <sup>176</sup> to the extent possible.

Sustainable use and protection of water and marine resources

The Danish Act of Environmental Assessment (EAA) transposes the EIA Directive <sup>189</sup> and the SEA Directive. <sup>190</sup> For projects on either annex 1 or 2 of EAA an EIA or a screening must be completed, before the developer commences the work. The development consent must describe any features of the project and/or measures envisaged either by the developer or as an obligatory result of other assessments to avoid, prevent or reduce and, if possible, offset significant adverse effects on the environment as well as, where appropriate, monitoring measures.

The Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment as amended was transposed by the Act 425/2016 on Environmental Assessment of plans and programs and of projects. The most recent consolidated version is Act 1976/2021. The Ministry of Transport and Building has transposed separate legislation concerning major road-, bridges- and railway projects and the Ministry of Food, Agriculture and Fisheries has transposed separate legislation concerning intensive livestock breeding projects.

During the tendering process of a wind farm in Denmark, a Strategic Environmental Assessment (SEA) and an exhaustive Environmental Impact Assessment (EIA) of the designated area, export cable route, and grid connection is completed and fully consented before the bidding date. <sup>191</sup>

<sup>175</sup> Nature-based solutions are defined as 'solutions that are inspired and supported by nature, which are cost-effective, simultaneously provide environmental, social and economic benefits and help build resilience. Such solutions bring more, and more diverse, nature and natural features and processes into cities, landscapes and seascapes, through locally adapted, resource-efficient and systemic interventions'. Therefore, nature-based solutions benefit biodiversity and support the delivery of a range of ecosystem services. (version of [adoption date]: https://ec.europa.eu/research/environment/index.cfm?pg=nbs).

176 See Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: Green Infrastructure (GI) — Enhancing Europe's Natural Capital (COM/2013/0249 final).

<sup>&</sup>lt;sup>189</sup> EU Directive 2011/92/EU as amended by the EU Directive 2014/52/EU

<sup>190</sup> EU Directive 2001/42/EU

 $<sup>^{191}\</sup> https://ens.dk/sites/ens.dk/files/Global cooperation/Short\_materials/environmental\_impacts\_of\_offshore\_wind\_farms.pdf$ 

Transition to a circular economy	The activity assesses availability of and, where feasible, uses equipment and components of high durability and recyclability and that are easy to dismantle and refurbish.	The Danish EPA conducted a mapping in 2023 which showed that up to 85-90 percent of the materials in wind turbines are recycled <sup>192</sup> though turbine blades and turbine housings consisting of fiberglass and thermoset plastic are the most challenging components to recycle. The Danish EPA has issued a guidance document clarifying that wind turbines should be disposed of in accordance with the waste hierarchy, clarifying that it is not legal to deposit the turbine blades in landfills because there are environmentally better ways to dispose of the blades <sup>193</sup> .  The Danish tenders for the development of 6 GW offshore wind farms include requirements that concessionaries must use recyclable turbine blades and that LCAs covering both installation, operation and dismantling of the offshore wind farms must be conducted at the project level and verified by a third party <sup>194</sup> <sup>195</sup> .
Pollution prevention and control		N/A
Protection and restoration of biodiversity and ecosystems	See Appendix D <sup>196</sup> in The EU Taxonomy as adopted by the Commission on June 4, 2021 in the Delegated Act for climate change mitigation and climate change adaptation activities.	
	An Environmental Impact Assessment (EIA) or screening <sup>197</sup> has been completed in accordance with Directive 2011/92/EU. <sup>198</sup> Where an EIA has been carried out, the required mitigation and compensation measures for protecting the environment are implemented.	The EU EIA-directive (Directive 2014/52/EU) is implemented in Denmark. The directive requires an EIA for wind farms. See PV systems for information EU EIA. Not applicable for single turbines with a height less than 25 meters. During the tendering process of a wind farm in Denmark, an exhaustive Environmental Impact Assessment (EIA) of the designated area, export cable route, and grid connection is completed and fully consented before the bidding date. <sup>201</sup>
	For sites/operations located in or near biodiversity-sensitive areas (including the Natura 2000 network of protected areas, UNESCO World Heritage sites and Key Biodiversity Areas, as well as their protected areas), an appropriate	

<sup>192</sup> https://mst.dk/publikationer/2023/april/kortlaegning-af-maengder-og-behandlingsmuligheder-for-vindmoellevinger

<sup>193</sup> https://mst.dk/media/3kff4b5a/vejledende-udtalelse-om-haandtering-af-kompositmaterialeaffald-fx-udtjente-vindmoellevinger.pdf

 $<sup>^{194}\</sup> https://ens.dk/presse/energistyrelsen-er-klar-med-nyt-udkast-til-udbudsmateriale-6-gw-havvind-og-inviterer-til-udbudsmateriale-6-gw-havvind-og-inviterer-til-udbudsmateriale-6-gw-havvind-og-inviterer-til-udbudsmateriale-6-gw-havvind-og-inviterer-til-udbudsmateriale-6-gw-havvind-og-inviterer-til-udbudsmateriale-6-gw-havvind-og-inviterer-til-udbudsmateriale-6-gw-havvind-og-inviterer-til-udbudsmateriale-6-gw-havvind-og-inviterer-til-udbudsmateriale-6-gw-havvind-og-inviterer-til-udbudsmateriale-6-gw-havvind-og-inviterer-til-udbudsmateriale-6-gw-havvind-og-inviterer-til-udbudsmateriale-6-gw-havvind-og-inviterer-til-udbudsmateriale-6-gw-havvind-og-inviterer-til-udbudsmateriale-6-gw-havvind-og-inviterer-til-udbudsmateriale-6-gw-havvind-og-inviterer-til-udbudsmateriale-6-gw-havvind-og-inviterer-til-udbudsmateriale-6-gw-havvind-og-inviterer-til-udbudsmateriale-6-gw-havvind-og-inviterer-til-udbudsmater-til-udbudsm$ 

 $<sup>^{195}\</sup> https://www.kefm.dk/Media/638210643069728737/Till\%C3\%A6gsaftale\%20om\%20udbudsrammer\%20for\%206\%20GW\%20havvind\%20og\%20Energi\%C3\%B8\%20Bornholm\%20(002).pdf$ 

<sup>196</sup> https://ec.europa.eu/sustainable-finance-taxonomy/assets/documents/CCM%20Appendix%20D.pdf

<sup>&</sup>lt;sup>197</sup> The procedure through which the competent authority determines whether projects listed in Annex II to Directive 2011/92/EU is to be made subject to an environmental impact assessment (as referred to in Article 4(2) of that Directive).

<sup>&</sup>lt;sup>198</sup> For activities in third countries, in accordance with equivalent applicable national law or international standards requiring the completion of an EIA or screening, for example, IFC Performance Standard 1: Assessment and Management of Environmental and Social Risks.

<sup>&</sup>lt;sup>201</sup> https://eur-lex.europa.eu/eli/dir/2014/52/oj/eng

assessment <sup>199</sup>, where applicable, has been conducted and based on its conclusions the necessary mitigation measures <sup>200</sup> are implemented.

Source: Ministry of Climate, Energy and Utilities.

<sup>&</sup>lt;sup>199</sup> In accordance with Directives 2009/147/EC and 92/43/EEC. For activities located in third countries, in accordance with equivalent applicable national law or international standards, that aim at the conservation of natural habitats, wild fauna and wild flora, and that require to carry out (1) a screening procedure to determine whether, for a given activity, an appropriate assessment of the possible impacts on protected habitats and species is needed; (2) such an appropriate assessment where the screening determines that it is needed, for example IFC Performance Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources.

<sup>200</sup> Those measures have been identified to ensure that the project, plan or activity will not have any significant effects on the conservation objectives of the protected area.

## Table 5

Electricity transmission

**Appropriation Account** 

40.21.54

**Expenditure category** 

Renewable energy

**EU Taxonomy Economic Activity** 

4.9 Transmission and distribution of electricity

## NACE Code

D35.12

D35.13

	EU Taxonomy Technical Screening Criteria	Alignment with Technical Screening Criteria
	Construction and operation of transmission systems that transport the electricity on the extra high-voltage and high-voltage interconnected system. Construction and operation of distribution systems that transport electricity on high-voltage, medium-voltage and low-voltage distribution systems.	
Description	NACE codes in particular D35 12 and D35 13 in accordance with the statisti-	Energinet is the monopoly electricity and gas transmission system operator in Denmark and owns and maintains the electricity transmission system for high voltage.
	An economic activity in this category is an enabling activity in accordance with Article 10(1), point (i) of Regulation (EU) 2020/852 where it complies with the technical screening criteria set out in this Section.	
Substantial contribution to climate change mitigation	The dearnity complies that one of the femotioning enterior	Energinet's activities within electricity transmission are part of the Danish transmission system, which is interconnected with the European system.
		Energinet does not establish direct connections to power plants that are more greenhouse gas intensive than 100 g CO <sub>2</sub> e/kWh measured on a life cycle basis. The direct connections between the
	a. the system is the interconnected European system, i.e. the	power generation plants and the substations are constructed, owned and operated by the owner the power generation plants <sup>204</sup> .

 $<sup>^{204}\,\</sup>mathrm{For}$  further information see Nettilslutningsbekendtgørelsen  $\S 3$  and Elforsyningsloven

Switzerland and the United Kingdom, and its subordinated systems;

- more than 67% of newly enabled generation capacity in the system is below the generation threshold value of 100 gCO<sub>2</sub>e/kWh measured on a life cycle basis in accordance with electricity generation criteria, over a rolling five-year period;
- c. the average system grid emissions factor, calculated as the total annual emissions from power generation connected to the system, divided by the total annual net electricity production in that system, is below the threshold value of 100 gCO<sub>2</sub>e/kWh measured on a life cycle basis in accordance with electricity generation criteria, over a rolling five-year period;

Infrastructure dedicated to creating a direct connection or expanding an existing direct connection between a substation or network and a power production plant that is more greenhouse gas intensive than 100 gCO2e/kWh measured on a life cycle basis is not compliant.

Installation of metering infrastructure that does not meet the requirements of smart metering systems of Article 20 of Directive (EU) 2019/944 is not compliant.

- 2. The activity is one of the following:
  - a. construction and operation of direct connection, or expansion of existing direct connection, of low carbon electricity generation below the threshold of 100 gCO2e/kWh measured on a life cycle basis to a substation or network;
  - construction and operation of electric vehicle (EV) charging stations and supporting electric infrastructure for the electrification of transport, subject to compliance with the technical screening criteria under the transport Section of this Annex;
  - c. installation of transmission and distribution transformers that comply with the Tier 2 (1 July 2021) requirements set out in Annex I to Commission Regulation (EU) No 548/2014 and, for medium power transformers with highest voltage for

As the operator of the overall transmissions system, Energinet does not have any smart metering systems regulated under Article 20 of Directive (EU) 2019/944.

- equipment not exceeding 36 kV, with AA0 level requirements on no-load losses set out in standard EN 50588-1<sup>202</sup>.
- d. construction/installation and operation of equipment and infrastructure where the main objective is an increase of the generation or use of renewable electricity generation;
- e. installation of equipment to increase the controllability and observability of the electricity system and to enable the development and integration of renewable energy sources, including:
- f. sensors and measurement tools (including meteorological sensors for forecasting renewable production);
- g. communication and control (including advanced software and control rooms, automation of substations or feeders, and voltage control capabilities to adapt to more decentralised renewable infeed).
- h. installation of equipment such as, but not limited to future smart metering systems or those replacing smart metering systems in line with Article 19(6) of Directive (EU) 2019/944 of the European Parliament and of the Council<sup>203</sup>, which meet the requirements of Article 20 of Directive (EU) 2019/944, able to carry information to users for remotely acting on consumption, including customer data hubs;
- construction/installation of equipment to allow for exchange of specifically renewable electricity between users;
- construction and operation of interconnectors between transmission systems, provided that one of the systems is compliant.

For the purposes of this Section, the following specifications apply:

 a. the rolling five-year period used in determining compliance with the thresholds is based on five consecutive historical

<sup>&</sup>lt;sup>202</sup> CEI EN 50588-1 Medium power transformers 50 Hz, with highest voltage for equipment not exceeding 36 kV.

<sup>&</sup>lt;sup>203</sup> Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on rules for the internal market for electricity and amending Directive 2012/27/EU (OJ L 158/125, 14.6.2019),

years, in-cluding the year for which the most recent data are available:

- a 'system' means the power control area of the transmission or distribution network where the infrastructure or equipment is in-stalled;
- transmission systems may include generation capacity connected to subordinated distribution systems;
- distribution systems subordinated to a transmission system that is deemed to be on a trajectory to full decarbonisation may also be deemed to be on a trajectory to full decarbonisation;
- to determine compliance, it is possible to consider a system covering multiple control areas which are interconnected and with significant energy exchanges between them, in which case the weighted average emissions factor across all included control areas is used, and individual subordinated transmission or distribution systems within that system is not required to demonstrate compliance separately;
- f. it is possible for a system to become non-compliant after having previously been compliant. In systems that become non-compliant, no new transmission and distribution activities are compliant from that moment onward, until the system complies again with the threshold (except for those activities that are al-ways compliant, see above). Activities in subordinated systems may still be compliant, where those subordinated systems meet the criteria of this Section;
- g. a direct connection or expansion of an existing direct connection to production plants includes infrastructure that is indispensable to carry the associated electricity from the power generating facility to a substation or to the network.

**DNSH Criteria** 

Alignment with DNSH Criteria

See Appendix  $A^{205}$  in The EU Taxonomy as adopted by the Commission on June 4, 2021 in the Delegated Act for climate change mitigation and climate change adaptation activities, namely;

The physical climate risks that are material to the activity have been identified from those listed in the table in Section II of this Appendix by performing a robust climate risk and vulnerability assessment with the following steps:

See Appendix A<sup>206</sup> in The EU Taxonomy as adopted by the Commission on June 4, 2021 in the Delegated Act for climate change mitigation and climate change adaptation activities, namely:

The physical climate risks that are material to the activity have been identified from those listed in the table in Section II of this Appendix by performing a robust climate risk and vulnerability assessment with the following steps:

Climate change adaptation

- screening of the activity to identify which physical climate risks from the list in Section II of this Appendix may affect the performance of the economic activity during its expected lifetime;
- (b) where the activity is assessed to be at risk from one or more of the physical climate risks listed in Section II of this Appendix, a climate risk and vulnerability assessment to assess the materiality of the physical climate risks on the economic activity;
- (c) an assessment of adaptation solutions that can reduce the identified physical climate risk.

The climate risk and vulnerability assessment is proportionate to the scale of the activity and its expected lifespan, such that:

 (a) for activities with an expected lifespan of less than 10 years, the assessment is performed, at least by using climate projections at the smallest appropriate scale; Energinet conducts climate and vulnerability assessments in accordance with the process described in the taxonomy.

In 2024, Energinet conducted a comprehensive risk and vulnerability analysis, which included 4 scenarios related to extreme weather conditions:

- Extreme winter with heavy snowfall and severe frost
- Extreme precipitation and flooding in areas where flooding does not normally occur
- Heat wave over a long period of time
- Nationwide storm with wind speeds higher than what has previously been recorded in Denmark

The scenarios used were defined by the DEA (Dansh Energy Agency) as part of a joint risk and vulnerability assessment of the Danish energy system<sup>212</sup>. The climate scenarios were included to ensure security of energy supply in the face of more extreme weather events in the future.

Based on the analysis, several initiatives have been identified and implemented at Energinet. The results of the analysis were handed over to the DEA (Dansh Energy Agency) on the 27<sup>th</sup> of September 2024. The content and results of the analysis is confidential. Access to the analysis require a security clearance by PET and the DEA.

In 2024, Energinet reviewed and updated the internal processes and guidelines for handling weather-related incidents in connection with the planning, design and construction of new facilities. The guidelines are based on the EU Taxonomy's general technical screening criteria for climate adaptation and the European Commission's technical guidance on climate protection of infrastructure, both of which provide guidelines for the execution of climate risk and vulnerability analyses.

Energinet's assets do not have an expected lifespan of less than 10 years.

Energinet confirms that climate risk and vulnerability assessments are conducted and implemented, but the results are confidential.

Energinet confirms that adaptation solutions to address identified physical risks are in place, but the plans are confidential.

Energinet confirms that material physical risks are addressed, but the plans are confidential.

<sup>&</sup>lt;sup>205</sup> https://ec.europa.eu/sustainable-finance-taxonomy/assets/documents/CCM%20Appendix%20A.pdf

<sup>&</sup>lt;sup>206</sup> https://ec.europa.eu/sustainable-finance-taxonomy/assets/documents/CCM%20Appendix%20A.pdf

<sup>&</sup>lt;sup>212</sup> Beredskabsarbejdet afgrænset efter risici og sårbarheder - https://ens.dk/forsyning-og-forbrug/beredskabsarbejdet-afgrænset-efter-risici-og-saarbarheder

(b) for all other activities, the assessment is performed using the highest available resolution, state-of-the-art climate projections across the existing range of future scenarios<sup>207</sup> consistent with the expected lifetime of the activity, including, at least, 10 to 30 year climate projections scenarios for major investments.

Energinet confirms that adaptation solutions are implemented in a manner that does not adversely affect people, nature or other economic activities, but the detailed plans are confidential.

The climate projections and assessment of impacts are based on best practice and available guidance and take into account the state-of-the-art science for vulnerability and risk analysis and related methodologies in line with the most recent Intergovernmental Panel on Climate Change reports<sup>208</sup>, scientific peer-reviewed publications, and open source<sup>209</sup> or paying models.

For existing activities and new activities using existing physical assets, the economic operator implements physical and non-physical solutions ('adaptation solutions'), over a period of time of up to five years, that reduce the most important identified physical climate risks that are material to that activity. An adaptation plan for the implementation of those solutions is drawn up accordingly.

For new activities and existing activities using newly-built physical assets, the economic operator integrates the adaptation solutions that reduce the most important identified physical climate risks that are material to that activity at the time of design and construction and has implemented them before the start of operations.

The adaptation solutions implemented do not adversely affect the adaptation efforts or the level of resilience to physical climate risks of other people, of nature, of cultural heritage, of assets and of other economic activities; are consistent with local, sectoral, regional or national adaptation strategies and plans; and consider the use of nature-based solutions<sup>210</sup> or rely on blue or green infrastructure<sup>211</sup> to the extent possible

<sup>207</sup> Future scenarios include Intergovernmental Panel on Climate Change representative concentration pathways RCP2.6, RCP4.5, RCP6.0 and RCP8.5.

<sup>&</sup>lt;sup>208</sup> Assessments Reports on Climate Change: Impacts, Adaptation and Vulnerability, published periodically by the Intergovernmental Panel on Climate Change (IPCC), the United Nations body for assessing the science related to climate change produces, https://www.ipcc.ch/reports/.

<sup>&</sup>lt;sup>209</sup> Such as Copernicus services managed by the European Commission.

<sup>210</sup> Nature-based solutions are defined as 'solutions that are inspired and supported by nature, which are cost-effective, simultaneously provide environmental, social and economic benefits and help build resilience. Such solutions bring more, and more diverse, nature and natural features and processes into cities, landscapes and seascapes, through locally adapted, resource-efficient and systemic interventions'. Therefore, nature-based solutions benefit biodiversity and support the delivery of a range of ecosystem services. (version of [adoption date]: https://ec.europa.eu/research/environment/index.cfm?pg=nbs).

<sup>&</sup>lt;sup>211</sup> See Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: Green Infrastructure (GI) — Enhancing Europe's Natural Capital (COM/2013/0249 final).

Sustainable use and protection of water and marine resources	N/A
Transition to a circular economy	A waste management plan is in place and ensures maximal reuse or recycling at end of life in accordance with the waste hierarchy, including through contractual agreements with waste management partners, reflection in financial projections or official project documentation.  Energinet has a waste management plan in place tailored to ensure maximum reuse and recycling Energinet's waste in accordance with the waste hierarchy.
Pollution prevention and control	Overground high voltage lines:  (a) for construction site activities, activities follow the principles of the IFC General Environmental, Health, and Safety Guidelines <sup>213</sup> .  (b) activities respect applicable norms and regulations to limit impact of electromagnetic radiation on human health, including for activities carried out in the Union, the Council recommendation on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz) <sup>214</sup> and for activities carried out in third countries, the 1998 Guidelines of International Commission on Non-Ionizing Radiation Protection (ICNIRP) in the 2016 Executive Order on Exposure to Electromagnetic Fields at Work <sup>217</sup> which Energinet is obliged to observe.  Energinet does not use PCBs in activities and older PCB containing assets have been replaced <sup>218</sup> .
	Activities do not use PCBs polyclorinated biphenyls.

<sup>&</sup>lt;sup>213</sup> Environmental, Health, and Safety (EHS) Guidelines of 30 April 2007 (version of [adoption date]: https://www.ifc.org/wps/wcm/connect/29f5137d-6e17-4660-b1f9-02bf561935e5/Final%2B-%2BGeneral%2BEHS%2BGuidelines.pdf?MOD=AJPERES&CVID=jOWim3p).

<sup>&</sup>lt;sup>214</sup> Council Recommendation of 12 July 1999 on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz) (1999/519/EC) (OJ L 199, 30.7.1999, p.59).

<sup>&</sup>lt;sup>215</sup> ICNIRP 1998 Guidelines for limiting exposure to time-varying electric, magnetic and electromagnetic fields (up to 300 GHz) (version of [adoption date]: https://www.icnirp.org/cms/upload/publications/ICNIRPemfgdl.pdf).

<sup>216</sup> See https://en.energinet.dk/media/220opcl4/energinet-sustainability-report-2023.pdf page 13 and https://energinet.dk/media/pjdbkfev/om-magnetfelter-2023.pdf

<sup>&</sup>lt;sup>217</sup> BEK nr 472 af 25/05/2016 - https://www.retsinformation.dk/eli/lta/2016/472

<sup>&</sup>lt;sup>218</sup> See <a href="https://en.energinet.dk/media/220opcl4/energinet-sustainability-report-2023.pdf">https://en.energinet.dk/media/220opcl4/energinet-sustainability-report-2023.pdf</a> page 13.

See Appendix  $D^{219}$  in The EU Taxonomy as adopted by the Commission on June 4, 2021 in the Delegated Act for climate change mitigation and climate change adaptation activities.

An Environmental Impact Assessment (EIA) or screening<sup>220</sup> has been completed in accordance with Directive 2011/92/EU.<sup>221</sup>

Protection and restoration of biodiversity and ecosystems

Where an EIA has been carried out, the required mitigation and compensation measures for protecting the environment are implemented.

For sites/operations located in or near biodiversity-sensitive areas (including the Natura 2000 network of protected areas, UNESCO World Heritage sites and Key Biodiversity Areas, as well as their protected areas), an appropriate assessment<sup>222</sup>, where applicable, has been conducted and based on its conclusions the necessary mitigation measures<sup>223</sup> are implemented.

Energinet complies with relevant requirements and carries out assessments (Environmental Impact assessment) in accordance with applicable requirements and standards.

Directive 2011/92/EU, also known as the Environmental Assessment Directive, has been implemented in the Environmental Assessment Act, which lays down provisions for the cases in which environmental assessments or screening must be carried out. The Directive is thus applicable in Danish law, which Energinet is obliged to follow.

According to the EU's Technical Expert Group on Sustainable Finance Recommendations on the practical application of the EU Taxonomy, Energinet can be assumed to comply with the technical screening criteria in cases where they have been implemented in national legislation. Energinet can therefore be assumed to comply with this criterion.

The Danish environmental agency is approving authority regarding EIAs for Energinet's projects. The EIAs are publicly available at mst.dk<sup>224</sup>.

The assessments are an integrated part of the EIA preparation processes at Energinet. Specific assessments and measures are publicly available in the published EIAs and authority approvals published by the DEA<sup>225</sup>.

Source: Ministry of Climate, Energy and Utilities and Energinet.

<sup>&</sup>lt;sup>219</sup> https://ec.europa.eu/sustainable-finance-taxonomy/assets/documents/CCM%20Appendix%20D.pdf

<sup>&</sup>lt;sup>220</sup> The procedure through which the competent authority determines whether projects listed in Annex II to Directive 2011/92/EU is to be made subject to an environmental impact assessment (as referred to in Article 4(2) of that Directive).

<sup>&</sup>lt;sup>221</sup> For activities in third countries, in accordance with equivalent applicable national law or international standards requiring the completion of an EIA or screening, for example, IFC Performance Standard 1: Assessment and Management of Environmental and Social Risks.

<sup>&</sup>lt;sup>222</sup> In accordance with Directives 2009/147/EC and 92/43/EEC. For activities located in third countries, in accordance with equivalent applicable national law or international standards, that aim at the conservation of natural habitats, wild fauna and wild flora, and that require to carry out (1) a screening procedure to determine whether, for a given activity, an appropriate assessment of the possible impacts on protected habitats and species is needed; (2) such an appropriate assessment where the screening determines that it is needed, for example IFC Performance Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources.

<sup>223</sup> Those measures have been identified to ensure that the project, plan or activity will not have any significant effects on the conservation objectives of the protected area.

<sup>&</sup>lt;sup>224</sup> https://mst.dk/annonceringer?search=energinet

<sup>&</sup>lt;sup>225</sup> https://mst.dk/annonceringer

#### Table 6

Rail infrastructure operation, maintenance and renovation & rail infrastructure investment projects

#### **Appropriation Account**

28.63.04

28.63.05.10.22

28.63.05.10.51

28.63.05.20.51

28.63.08

#### **Expenditure category**

Clean transportation

#### **EU Taxonomy Economic Activity**

6.14 Infrastructure for rail transport

#### **NACE Code**

Description

F42.12

F42.13

H49.10

H49.2.0

#### **EU Taxonomy Technical Screening Criteria**

Alignment with Technical Screening Criteria

Construction, modernisation, operation and maintenance of railways and subways as well as bridges and tunnels, stations, terminals, rail service facilities 226, safety and traffic management systems including the provision of architectural services, engineering services, drafting services, building inspection services and surveying and mapping services and the like as well as the performance of physical, chemical and other analytical testing of all types of materials and products.

Rail infrastructure operation, maintenance and renovation and rail infrastructure investment projects.

Manufacture, installation, technical consulting, retrofitting, upgrade, repair, maintenance, repurposing of products, equipment, systems and software related to one of the following elements:

a. assembled railway track fixtures;

<sup>&</sup>lt;sup>226</sup> In accordance with Article 3, point (11), of Directive 34/2012/EU of the European Parliament and of the Council of 21 November 2012 establishing a single European railway area (OJ L 343, 14.12.2012, p. 32).

- rail constituents detailed in Points 2.2 to 2.6 to Annex II of Directive (EU) 2016/797.
- 3. The activity complies with one of the following criteria:
  - a. The infrastructure (as defined in Annex II.2 to Directive (EU) 2016/797 of the European Parliament and of the Council \*(1)) is either:
    - electrified trackside infrastructure and associated subsystems: infrastructure, energy, on-board control-command and signalling, and trackside control-command and signalling subsystems as defined in Annex II.2 to Directive (EU)2016/797;
    - ii. new and existing trackside infrastructure and associated subsys-tems where there is a plan for electrification as regards line tracks, and, to the extent necessary for electric train operations, as regards sidings, or where the infrastructure will be fit for use by zero tailpipe CO2 emission trains within 10 years from the beginning of the activity: infrastructure, energy, on-board control-command and signalling, and trackside control-command and signalling subsystems as defined in Annex II.2 to Directive (EU)2016/797;
    - iii. until 2030, existing trackside infrastructure and associated sub-systems that are not part of the TEN-T network \*(2) and its indica-tive extensions to third countries, nor any nationally, supranationally or internationally defined network of major rail lines: infra-structure, energy, on-board controlcommand and signalling, and trackside controlcommand and signalling subsystems as defined in Annex II.2 to Directive (EU) 2016/797;
  - The infrastructure and installations are dedicated to transhipping freight between the modes: terminal infrastructure and

In 2021, it was decided that all state operated Danish rail traffic must be zero emission by 2030. As part of Infrastructure Plan 2035<sup>227</sup>, 100% of the Danish state's railway trackside infrastructure and associated subsystems are planned to be either electrified or readied for battery train operation, with electrified line tracks taking up approximately 80% of the state network length and battery-operated line tracks taking up the remaining 20%.

The Danish railway system today is operated by a combination of electrified trains and diesel trains. The maintenance of the railway is a precondition for avoiding significantly increasing CO<sub>2</sub>-emissions from road traffic.

Banedanmark's infrastructure is dedicated to transhipping freight between modes as it connects important ports and roads on the TEN-T Core and Comprehensive Network e.g., the ports in Hirtshals, Frederikshavn, Aalborg, Aarhus, Esbjerg, and Copenhagen and the Rail-Road Terminals in Taulov, Padborg and Høje Taastrup.

Banedanmark's infrastructure is dedicated to the transfer of passengers from rail to rail or other modes, as all urban nodes connect via rail and connect to the rest of the country either via rail or road transport. In addition, the airports located in Copenhagen and Aalborg are connected via rail and are thereby dedicated to the transfer of passengers between modes.

Banedanmark's infrastructure is not dedicated to the transport or storage of fossil fuels. All transportation of dangerous goods on the Danish railway network, including fossil fuels, is strictly regulated by national regulations<sup>228</sup> and legislation<sup>229</sup>.

Substantial contribution to

climate change mitigation

<sup>&</sup>lt;sup>227</sup> https://www.bane.dk/da/Borger/Baneprojekter/Kommende-baneprojekter/Omstilling-af-Infrastrukturen-til-Batteritog

<sup>&</sup>lt;sup>228</sup> https://www.trafikstyrelsen.dk/lovlisteside/jernbanesikkerhed-love-og-regler/2023/jul/rid-2023

<sup>&</sup>lt;sup>229</sup> BEK nr 601 af 23/06/2009: https://www.retsinformation.dk/eli/lta/2009/601

superstructures for loading, unloading and transhipment of goods.

- Infrastructure and installations are dedicated to the transfer of passengers from rail to rail or from other modes to rail.
- The infrastructure is not dedicated to the transport or storage of fossil fuels

#### **DNSH Criteria**

See Appendix A<sup>230</sup> in The EU Taxonomy as adopted by the Commission on June 4, 2021 in the Delegated Act for climate change mitigation and climate change adaptation activities, namely;

The physical climate risks that are material to the activity have been identified from those listed in the table in Section II of this Appendix by performing a robust climate risk and vulnerability assessment with the following steps:

See Appendix A<sup>231</sup> in The EU Taxonomy as adopted by the Commission on June 4, 2021 in the Delegated Act for climate change mitigation and climate change adaptation activities, namely:

# Climate change adaptation

The physical climate risks that are material to the activity have been identified from those listed in the table in Section II of this Appendix by performing a robust climate risk and vulnerability assessment with the following steps:

- (d) screening of the activity to identify which physical climate risks from the list in Section II of this Appendix may affect the performance of the economic activity during its expected lifetime:
- (e) where the activity is assessed to be at risk from one or more of the physical climate risks listed in Section II of this Appendix, a climate risk and vulnerability assessment to assess the materiality of the physical climate risks on the economic activity;

#### Alignment with DNSH Criteria

Banedanmark has prepared a climate adaptation strategy 13<sup>237</sup> to help ensure preparedness for the effects of climate change. The strategy aims to ensure the robustness, functionality, and regularity of the railway, while minimizing the effects on train operation, costs and other consequences.

The strategy considers

- 1. Heavy and/or persistent rainfall, rain, and storm surge
- 2. Temperature fluctuations and extremes
- 3. Storm and wind

Banedanmark's strategy is currently being updated to also include a vulnerability assessment, risk assessment and measures for integrating climate adaption pathways such as extended supervision, traffic rules invoked in specific situations and physical changes typically in relation to other renewals in the area. In call cases the basis will be a risk assessment.

Banedanmark has identified the following physical risks as material:

- Temperature: Heat stress, Heat wave
- Wind: Changing wind patterns, Storm
- Water: Precipitation, Sea level rise, Drought, Heavy precipitation, Flood (coastal, fluvial, pluvial, ground water)
- Solid mass: Coastal erosion, Landslide

Banedanmark assesses the identified physical risks based on the specific location of the activity and anticipated likelihood of risks occurring. Potential physical risk impacts are quantified in the context of historical costs.

The key objective for risk planning is to maintain satisfactory safety levels at all times, which informs the development of a prioritized climate adaption plan with climate adaption pathways based

 $<sup>^{230}\</sup> https://ec.europa.eu/sustainable-finance-taxonomy/assets/documents/CCM\%20Appendix\%20A.pdf$ 

<sup>&</sup>lt;sup>231</sup> https://ec.europa.eu/sustainable-finance-taxonomy/assets/documents/CCM%20Appendix%20A.pdf

<sup>&</sup>lt;sup>237</sup> https://www.bane.dk/Om-Banedanmark/Baeredygtig-bane/Banedanmarks-Baeredygtighedsstrategi

 (f) an assessment of adaptation solutions that can reduce the identified physical climate risk.

The climate risk and vulnerability assessment is proportionate to the scale of the activity and its expected lifespan, such that:

- (c) for activities with an expected lifespan of less than 10 years, the assessment is performed, at least by using climate projections at the smallest appropriate scale;
- (d) for all other activities, the assessment is performed using the highest available resolution, state-of-the-art climate projections across the existing range of future scenarios<sup>232</sup> consistent with the expected lifetime of the activity, including, at least, 10 to 30 year climate projections scenarios for major investments.

The climate projections and assessment of impacts are based on best practice and available guidance and take into account the state-of-the-art science for vulnerability and risk analysis and related methodologies in line with the most recent Intergovernmental Panel on Climate Change reports<sup>233</sup>, scientific sessed in the design.

For existing activities and new activities using existing physical assets, the economic operator implements physical and non-physical solutions ('adaptation solutions'), over a period of time of up to five years, that reduce the most important identified physical climate risks that are material to that activity. An adaptation plan for the implementation of those solutions is drawn up accordingly.

For new activities and existing activities using newly-built physical assets, the economic operator integrates the adaptation solutions that reduce the most important identified physical climate risks that are material to that activity at the time of design and construction and has implemented them before the start of operations.

upon the vulnerability of the asset in question. In order to manage risk, other measures such as safety rules and traffic restrictions in situations with known dangerous weather will also be enforced.

For activities with an expected lifespan of less than 10 years, the design criteria will be aligned with the climate projections and undertaken in the climate adaption pathways.

Banedanmark uses the RCP8.5 projection scenario because the railway network is critical infrastructure and must be robust in the future. The assessment is based on projections and the results are validated based on historical data

Banedanmark has prepared a climate adaptation strategy13<sup>238</sup> which is currently being updated to also include measures for integrating climate adaption pathways such as extended supervision, traffic rules invoked in specific situations and physical changes typically in relation to other renewals in the area. In all cases the basis will be a risk assessment.

For each specific location a vulnerability assessment is undertaken, and appropriate climate factors and projections are included in the design of new activities.

All climate adaption solutions are screened according to Danish law and the cascade effect is assessed in the design.

<sup>&</sup>lt;sup>232</sup> Future scenarios include Intergovernmental Panel on Climate Change representative concentration pathways RCP2.6, RCP4.5, RCP6.0 and RCP8.5.

<sup>&</sup>lt;sup>233</sup> Assessments Reports on Climate Change: Impacts, Adaptation and Vulnerability, published periodically by the Intergovernmental Panel on Climate Change (IPCC), the United Nations body for assessing the science related to climate change produces, https://www.ipcc.ch/reports/.

<sup>&</sup>lt;sup>234</sup> Such as Copernicus services managed by the European Commission.

<sup>&</sup>lt;sup>238</sup> https://www.bane.dk/Om-Banedanmark/Baeredygtig-bane/Banedanmarks-Baeredygtighedsstrategi

The adaptation solutions implemented do not adversely affect the adaptation efforts or the level of resilience to physical climate risks of other people, of nature, of cultural heritage, of assets and of other economic activities; are consistent with local, sectoral, regional or national adaptation strategies and plans; and consider the use of nature-based solutions<sup>235</sup> or rely on blue or green infrastructure<sup>236</sup> to the extent possible.

See Appendix B<sup>239</sup> in The EU Taxonomy as adopted by the Commission on June 4, 2021 in the Delegated Act for climate change mitigation and climate change adaptation activities.

Environmental degradation risks related to preserving water quality and avoiding water stress are identified and addressed with the aim of achieving good water status and good ecological potential as defined in Article 2, points (22) and (23), of Regulation (EU) 2020/852, in accordance with Directive 2000/60/EC of the European Parliament and of the Council<sup>240</sup> and a water use and protection management plan, developed thereunder for the potentially affected water body or bodies, in consultation with relevant stakehold-

Sustainable use and protection of water and marine

resources

Where an Environmental Impact Assessment is carried out in accordance with Directive 2011/92/EU of the European Parliament and of the Council (2) and includes an assessment of the impact on water in accordance with Directive 2000/60/EC, no additional assessment of impact on water is required, provided the risks identified have been addressed. The activity does not hamper the achievement of good environmental status of marine waters or does not deteriorate marine waters that are already in good environmental status as defined in point 5 of Article 3 of Directive 2008/56/EC of the European Parliament and of the Council (3) (4), taking into account the Commission Decision (EU) 2017/848 (5) in relation to the relevant criteria and methodological standards for those descriptors.

EIAs are required for long distance railway traffic, according to the EIA-directive (Directive 2014/52/EU).

The Nature Conservation Act preserves certain natural habitats such as (but not limited to) meadows, bogs, and ponds. In the case of the new railway line between Copenhagen and Ringsted, 26 lakes and ponds were affected and replaced in the ratio 1:2, so now there are 62 lakes and ponds.

The Danish railway holds approximately 1200 km of water-bearing ditches that attract birds and mammals such as otters and foxes and at the same time help plants, amphibians, and fish to spread to other natural areas. To compensate for the barriers that a new railway cre-ates, fauna passages are established, allowing animals' safe passage across the tracks. On the new 56 km railway line between Copenhagen and Ringsted, 42 dry and 32 wet fauna passages have been constructed.

<sup>235</sup> Nature-based solutions are defined as 'solutions that are inspired and supported by nature, which are cost-effective, simultaneously provide environmental, social and economic benefits and help build resilience. Such solutions bring more, and more diverse, nature and natural features and processes into cities, landscapes and seascapes, through locally adapted, resource-efficient and systemic interventions'. Therefore, nature-based solutions benefit biodiversity and support the delivery of a range of ecosystem services. (version of [adoption date]: https://ec.europa.eu/research/environment/index.cfm?pg=nbs). <sup>236</sup> See Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: Green Infrastructure (GI) — Enhancing Europe's Natural Capital (COM/2013/0249 final).

<sup>&</sup>lt;sup>239</sup> https://ec.europa.eu/sustainable-finance-taxonomy/assets/documents/CCM%20Appendix%20B.pdf

<sup>&</sup>lt;sup>240</sup> Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy

Operators limit waste generation in processes related to construction and demolition and take into account best available techniques. At least 70 % (by weight) of the non-hazardous construction and demolition waste (excluding naturally occurring material referred to in category 17 05 04 in the European List of Waste established by Decision 2000/532/EC) generated on the construction site is prepared for reuse, recycling and other material recovery, including backfilling operations using waste to substitute other materials, in accordance with the waste hierarchy and the EU Construction and Demolition Waste Management Protocol<sup>241</sup>.

Transition to a circular economy

Operators use selective demolition to enable removal and safe handling of hazardous substances and facilitate reuse and high-quality recycling.

For manufacturing of constituents, the activity assesses the availability of and, where feasible, adopts techniques that support:

- (c) reuse and use of secondary raw materials and re-used components in products manufactured;
- (d) design for high durability, recyclability, easy disassembly and adaptability of products manufactured;
- (e) waste management that prioritises recycling over disposal, in the manufacturing process;
- information on and traceability of substances of concern throughout the life cycle of the manufactured products.

Banedanmark, recycles more than 99 per cent of its total waste volumes. In 2023, 99.3 percent was recycled, 0.52 percent was incinerated, and 0.18 percent landfilled.

Banedanmark requires that contractors provide monthly updates on all disposed materials divided by place of origin, waste type, waste recipient, quantities and associated documentation for receipt in the form of waybills and weighing slips. By construction completion, the contractor must provide a Green Report for the full project<sup>242</sup>.

Construction and demolition activities related to the Danish railways adhere to the EU Construction and Demolition Waste Management Protocol & Guidelines.

Pollution prevention and control

Where appropriate, given the sensitivity of the area affected, in particular in terms of the size of population affected, noise and vibrations from use of infrastructure are mitigated by introducing open trenches, wall barriers, or other measures and they comply with Directive 2002/49/EC of the European Parliament and of the Council<sup>243</sup>.

Measures are taken to reduce noise, dust and pollutant emissions during construction or maintenance works.

Directive 2002/49/EC on noise is implemented in Danish law. The latest noise mapping from 2022/23 shows, that based on the noise mapping using the CNOSSOS-EU method, it is estimated that approximately 3,700 people with a noise exposure Lden above 55 dB are severely disturbed by railway noise. In addition, it is estimated that approximately 900 people with a noise exposure during the night period Lnight above 50 dB have sleep disturbances because of railway noise.

For the EU mapping using NORD2000, it is estimated that approximately 6,350 people with a noise exposure Lden above 53 dB are severely disturbed by railway noise. In addition, it is estimated that approximately 3,800 people with a noise exposure during the night period Lnight above 45 dB have sleep disturbances because of railway noise. Compared with the noise mapping back in 2017 with Nord2000, it was estimated that approximately 28,500 people were greatly disturbed by noise.

<sup>&</sup>lt;sup>241</sup> EU Construction & Demolition Waste Management Protocol, September 2016: https://ec.europa.eu/docsroom/documents/20509/.

<sup>&</sup>lt;sup>242</sup> https://www.bane.dk/-/media/Bane/Dokumenter/Leverandoer/Teknisk-dokumentation/GAB/GAB-Miljoe/GAB-Miljoe.pdf

<sup>&</sup>lt;sup>243</sup> Directive 2002/49/EC of the European Parliament and of the Council of 25 June 2002 relating to the assessment and management of environmental noise - Declaration by the Commission in the Conciliation Committee on the Directive relating to the assessment and management of environmental noise (OJ L 189, 18.7.2002, p. 12).

The number of people exposed to noise using the Nord2000 method has thus been reduced significantly over the past six years, with 75% fewer people feeling severely disturbed. There has thus been a significant decrease in the number of people estimated to be disturbed by noise since the last mapping period between 2017 and 2022/23. The significant decrease in the number of severely disturbed people is mainly due to updated data for use in the calculation basis and more quieter trains.

Measures to reduce noise, dust, and emissions during construction or maintenance are included in the EIA process.

#### Protection and restoration activities along the Danish railway

**Environmental Impact Assessment** 

The Danish railway has 4.500 hectares of nature that provide habitats to more than 250 particularly endangered animals and plants, the so-called red list species.

In a 2021 biodiversity analysis performed by Banedanmark, six different types of natural areas along the railway were selected and prioritized, as they showed special significance for biodiversity if given the appropriate care and effort. Later that same year, a broad coalition of political parties agreed to the "Infrastructure Agreement 2035", in which DKK 150 million were allocated to promote biodiversity along railways and roads in the period 2022-2035.

On top of this political and financial commitment, Banedanmark contributes to the protection and restoration of biodiversity and ecosystems by complying with the EIA-directive (Directive 2014/52/EU) which is implemented in Denmark. The Directive requires EIAs for long distance railway traffic.

#### Natura 2000 areas

See Appendix D<sup>244</sup> in The EU Taxonomy as adopted by the Commission on June 4, 2021 in the Delegated Act for climate change mitigation and climate change adaptation activities.

An Environmental Impact Assessment (EIA) or screening<sup>245</sup> has been completed in accordance with Directive 2011/92/EU.246

Protection and restoration of biodiversity and ecosystems

Where an EIA has been carried out, the required mitigation and compensation measures for protecting the environment are implemented.

For sites/operations located in or near biodiversity-sensitive areas (including the Natura 2000 network of protected areas, UNESCO World Heritage sites and Key Biodiversity Areas, as well as their protected areas), an appropriate assessment<sup>247</sup>, where applicable, has been conducted and based on its conclusions the necessary mitigation measures<sup>248</sup> are implemented.

<sup>&</sup>lt;sup>244</sup> https://ec.europa.eu/sustainable-finance-taxonomy/assets/documents/CCM%20Appendix%20D.pdf

<sup>&</sup>lt;sup>245</sup> The procedure through which the competent authority determines whether projects listed in Annex II to Directive 2011/92/EU is to be made subject to an environmental impact assessment (as referred to in Article 4(2) of that Directive).

<sup>&</sup>lt;sup>246</sup> For activities in third countries, in accordance with equivalent applicable national law or international standards requiring the completion of an EIA or screening, for example, IFC Performance Standard 1: Assessment and Management of Environmental and Social Risks.

<sup>&</sup>lt;sup>247</sup> In accordance with Directives 2009/147/EC and 92/43/EEC. For activities located in third countries, in accordance with equivalent applicable national law or international standards, that aim at the conservation of natural habitats, wild fauna and wild flora, and that require to carry out (1) a screening procedure to determine whether, for a given activity, an appropriate assessment of the possible impacts on protected habitats and species is needed; (2) such an appropriate assessment where the screening determines that it is needed, for example IFC Performance Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources.

<sup>&</sup>lt;sup>248</sup> Those measures have been identified to ensure that the project, plan or activity will not have any significant effects on the conservation objectives of the projected area.

Natura 2000 areas are protected areas subject to the Birds Directive and the Habitats Directive. Activities in these areas are subject to extra strict requirements.

#### Annex IV of the Habitats Directive

The Habitats Directive obliges EU countries to protect endangered, vulnerable and often rare animal species and their habitats, even if they live outside the special protection areas. These species are listed in Annex IV of the Habitats Directive.

Maintenance of trackside vegetation is planned with the wildlife breeding season in mind, and Banedanmark's maintenance contractors are instructed to not clear vegetation and fell trees during the breeding season unless strictly necessary for safety reasons.

Construction is planned with the least disturbance to the mating season in mind and prior to the initiation of any new construction projects, a screening must be conducted to ensure that the stretch is not habitat to rare and endangered animals or colony-nesting birds<sup>249</sup>.

To compensate for the barriers that a new railway creates, fauna passages are established, allowing animals safe passage across the tracks. On the new 56 km railway line between Copenhagen and Ringsted, 42 dry and 32 wet fauna passages have been constructed.

#### The Nature Conservation Act

The Nature Conservation Act preserves certain natural habitats such as (but not limited to) meadows, bogs, and ponds. In the case of the new 56 km railway line between Copenhagen and Ringsted, 26 lakes and water holes were affected and replaced in the ratio 1:2, so that there now are 62 lakes and water holes instead.

#### The forest act

Nearly all Danish forests are forest reserves, and according to the Forest Act, forest reserves must be compensated, if affected. The compensation area must be between 110 and 200 per cent of the area where trees were cut down.<sup>250</sup>

Source: Ministry of Transportation

 $<sup>^{249}\</sup> https://www.bane.dk/-/media/Bane/Gamle/Om-Banedanmark/Baeredygtighedsstrategi/Beskyttelse-af-fauna-i-ynglesaesonen.pdf$ 

 $<sup>^{250}\</sup> https://www.bane.dk/da/Presse/Temaer/Biodiversitet/Naturen$ 

#### Table 7

Rail infrastructure operation, maintenance and renovation & rail infrastructure investment projects

#### **Appropriation Account**

40.21.42

#### **Expenditure category**

Clean transportation

#### **EU Taxonomy Economic Activity**

6.14 Infrastructure for rail transport

#### **NACE Code**

F42.12

F42.13

H49 10

H49 2 0

Description

# Construction, modernisation, operation and maintenance of railways and

subways as well as bridges and tunnels, stations, terminals, rail service facilities<sup>251</sup>, safety and traffic management systems including the provision of architectural services, engineering services, drafting services, building inspection services and surveying and mapping services and the like as well as the performance of physical, chemical and other analytical testing of all types of materials and products.

Manufacture, installation, technical consulting, retrofitting, upgrade, repair, maintenance, repurposing of products, equipment, systems and software related to one of the following elements:

a. assembled railway track fixtures;

**EU Taxonomy Technical Screening Criteria** 

#### **Alignment with Technical Screening Criteria**

Sund & Bælt, as a state-owned client company, is responsible for the ongoing construction and future operation and maintenance of the Fehmarnbelt Fixed Link between the island of Lolland in Denmark and the island of Fehmarn in Germany. The project is governed by Act 575 of 4 May 2015<sup>252</sup>.

The coast-to-coast project consists of the establishment of an approximately 18 km long immersed tunnel with a four-lane motorway and a two-track electrified railway. Proceeds from bonds issued under this framework will only be used for the funding of expenses related to the railway portion and its associated infrastructure

<sup>&</sup>lt;sup>251</sup> In accordance with Article 3, point (11), of Directive 34/2012/EU of the European Parliament and of the Council of 21 November 2012 establishing a single European railway area (OJ L 343, 14.12.2012, p.

<sup>&</sup>lt;sup>252</sup> LBK nr 1314 af 26/11/2024: https://www.retsinformation.dk/eli/lta/2024/1314#id1d6bf8fd-0330-48b7-9630-86bc7f17d70a

- rail constituents detailed in Points 2.2 to 2.6 to Annex II of Directive (EU) 2016/797.
- 1. The activity complies with one of the following criteria:

Substantial contribution to

climate change mitigation

- a. The infrastructure (as defined in Annex II.2 to Directive (EU) 2016/797 of the European Parliament and of the Council \*(1)) is either:
  - electrified trackside infrastructure and associated subsystems: infrastructure, energy, on-board control-command and signalling, and trackside control-command and signalling subsystems as defined in Annex II.2 to Directive (EU)2016/797;
  - iii. new and existing trackside infrastructure and associated subsys-tems where there is a plan for electrification as regards line tracks, and, to the extent necessary for electric train operations, as regards sidings, or where the infrastructure will be fit for use by zero tailpipe CO2 emission trains within 10 years from the beginning of the activity: infrastructure, energy, on-board control-command and signalling, and trackside control-command and signalling subsystems as defined in Annex II.2 to Directive (EU)2016/797;
  - iii. until 2030, existing trackside infrastructure and associated sub-systems that are not part of the TEN-T network \*(2) and its indica-tive extensions to third countries, nor any nationally, supranationally or internationally defined network of major rail lines: infra-structure, energy, on-board controlcommand and signalling, and trackside controlcommand and signalling subsystems as defined in Annex II.2 to Directive (EU) 2016/797;

The Fehmarnbelt Fixed Link will have a major impact on mobility and accessibility in Denmark and between Scandinavia and the rest of Europe. The rail section of the coast-to-coast project consists of an approximately 18 km long stretch of two-track electrified railway running inside two separate tubes of the immersed tunnel. Together with the upgrade of the hinterland railway connection, the entire railway line in the Fehmarnbelt-corridor will be electrified once the project is completed<sup>253</sup>.

The infrastructure is not dedicated to the transport or storage of fossil fuels<sup>254</sup>.

The Fehmarnbelt Fixed Link will provide greater flexibility and significant time savings for both passengers and freight. With the Fehmarnbelt Fixed Link, trains will have a 160 km shorter route between Scandinavia and the European continent. This will benefit regional traffic in Denmark by freeing up railway capacity between Zealand, Funen and Jutland, as most freight trains from Sweden/eastern Denmark currently travelling via Funen and Jutland to Hamburg will use the Fehmarnbelt Fixed Link.

The eastern corridor from Copenhagen across the Fehmarnbelt will supplement and relieve the existing western traffic corridor, which currently dominates traffic between Denmark and northern Germany. Overall, the Fehmarnbelt Fixed Link will provide much better access to Denmark's largest export markets and is expected to positively influence regional development as well.

The Fehmarnbelt Fixed Link (coast-to-coast) is one of the high-priority EU-funded projects in TEN-T, for the development of the trans-European rail network.

<sup>&</sup>lt;sup>253</sup> Detailed project description can be found in the EIA statement for the Fehmarnbelt Fixed Link (VVM-redegørelse): https://vvmdokumentation.femern.dk/da/VVM-redeg%c3%b8relse31fb.pdf?file-name=files/SAMLET/VVM-redeg%c3%b8relse.pdf

<sup>&</sup>lt;sup>254</sup> Please see the EIA statement Sections 3.1.1 and 3.1.2 (p. 28 f) for more information: https://vvmdokumentation.femern.dk/da/VVM-redeg%c3%b8relse31fb.pdf?filename=files/SAMLET/VVM-redeg%c3%b8relse.pdf

- b. The infrastructure and installations are dedicated to transhipping freight between the modes: terminal infrastructure and superstructures for loading, unloading and transhipment of goods.
- Infrastructure and installations are dedicated to the transfer of passengers from rail to rail or from other modes to rail.
- The infrastructure is not dedicated to the transport or storage of fossil fuels

#### **DNSH Criteria**

See Appendix A<sup>255</sup> in The EU Taxonomy as adopted by the Commission on June 4, 2021 in the Delegated Act for climate change mitigation and climate change adaptation activities, namely;

The physical climate risks that are material to the activity have been identified from those listed in the table in Section II of this Appendix by performing a robust climate risk and vulnerability assessment with the following steps:

See Appendix A<sup>256</sup> in The EU Taxonomy as adopted by the Commission on June 4, 2021 in the Delegated Act for climate change mitigation and climate change adaptation activities, namely:

#### Climate change adaptation

The physical climate risks that are material to the activity have been identified from those listed in the table in Section II of this Appendix by performing a robust climate risk and vulnerability assessment with the following steps:

- screening of the activity to identify which physical climate risks from the list in Section II of this Appendix may affect the performance of the economic activity during its expected lifetime;
- (b) where the activity is assessed to be at risk from one or more of the physical climate risks listed in Section II of this Appendix, a climate risk and vulnerability assessment to assess the materiality of the physical climate risks on the economic activity;

#### Alignment with DNSH Criteria

The most important physical climate risks to the Fehmarnbelt Fixed Link have been identified as:

- 1. Sea Level Rise
- 2. Coastal flooding and related risks, including erosion
- 3. Rainwater flooding related risks (heavy precipitation and flood)

The assessment of the implications of climate change for the Fehmarnbelt Fixed Link was originally carried out in connection with the environmental impact assessment (EIA) for the project, involving climate researchers from research institutes in the UK, Germany, Sweden and Den-mark, and based on IPCC climate scenarios.

In 2023, the project's technical advisor Rambøll-Arup-TEC carried out an additional high-level vulnerability assessment of the applicability of key climate change adaptation risks listed within Appendix A of the EU Taxonomy to the Fehmarnbelt project, confirming that the most significant risks include sea level rise, floods and heavy precipitation.

The results of the climate risk assessments have been integrated in the project design, taking into account the potential risks resulting from climate change over the lifetime of the infrastructure. Key measures to reduce these physical climate risks are included in the project's construction contract for the establishment of the tunnel portals and ramps.

The expected lifespan for the Fehmarnbelt Fixed Link is at least 120 years.

 $<sup>^{255}\,</sup>https://ec.europa.eu/sustainable-finance-taxonomy/assets/documents/CCM\%20Appendix\%20A.pdf$ 

 $<sup>^{256}\</sup> https://ec.europa.eu/sustainable-finance-taxonomy/assets/documents/CCM\%20Appendix\%20A.pdf$ 

 (c) an assessment of adaptation solutions that can reduce the identified physical climate risk.

The climate risk and vulnerability assessment is proportionate to the scale of the activity and its expected lifespan, such that:

- (a) for activities with an expected lifespan of less than 10 years, the assessment is performed, at least by using climate projections at the smallest appropriate scale;
- (b) for all other activities, the assessment is performed using the highest available resolution, state-of-the-art climate projections across the existing range of future scenarios<sup>257</sup> consistent with the expected lifetime of the activity, including, at least, 10 to 30 year climate projections scenarios for major investments.

The climate projections and assessment of impacts are based on best practice and available guidance and take into account the state-of-the-art science for vulnerability and risk analysis and related methodologies in line with the most recent Intergovernmental Panel on Climate Change reports<sup>258</sup>, scientific peer-reviewed publications, and open source<sup>259</sup> or paying models.

For existing activities and new activities using existing physical assets, the economic operator implements physical and non-physical solutions ('adaptation solutions'), over a period of time of up to five years, that reduce the most important identified physical climate risks that are material to that activity. An adaptation plan for the implementation of those solutions is drawn up accordingly.

For new activities and existing activities using newly-built physical assets, the economic operator integrates the adaptation solutions that reduce the most important identified physical climate risks that are material to that activity at the time of design and construction and has implemented them before the start of operations.

The EIA for the Fehmarnbelt project was developed based on best practices and available guidance. It aims to assess the environmental effects of the fixed connection over the Fehmarnbelt (coast-to-coast) and formed the basis for a public hearing in Denmark. The statement provides information for citizens, authorities, and politicians to evaluate the project's impacts on people, nature, and the environment, and to compare possible alternatives. It also ensures that the coast-to-coast project is designed and implemented in a way that minimises environmental impacts.

The preparation of the EIA statement and other necessary assessments, including technical and economic considerations, which was a prerequisite for the Minister of Transport, in consultation with the Minister of Environment, to propose the final technical solution for the fixed connection over the Fehmarnbelt to be adopted by the Danish Parliament through the submission of a construction law proposal.

The assessment of climate impacts in connection with the EIA was developed involving input from climate researchers from research institutes in the UK, Germany, Sweden and Denmark, and based on the IPCC climate scenarios as laid out in the IPCC's Fourth Assessment Report, scaled to Danish conditions by the Danish Meteorological Institute (DMI).

The Fehmarnbelt Fixed Link is protected against flooding both during the construction phase and when it opens, as this has been included in the project design from the beginning.

During construction, the production area at Rødbyhavn is protected by a surrounding dike, as well as high-water gates installed in the work harbour basins. The efficiency of these measures was con-firmed during the storm surge event of October 2023, where sea water levels at Rødbyhavn reached 182 cm above normal level.

Solutions addressing the most significant physical climate risks to the Fehmarnbelt project over the lifetime of the infrastructure are implemented as part of the ongoing construction works covered by the tunnel portal and ramps contract, as the main risks to the project relate to these activities. The solutions include:

appropriate structural design criteria to address the risks to the tunnel portal structures due to
potential rising sea levels, based on a forecasted sea level rise of 1.50 m over the project
lifespan

<sup>&</sup>lt;sup>257</sup> Future scenarios include Intergovernmental Panel on Climate Change representative concentration pathways RCP2.6, RCP4.5, RCP6.0 and RCP8.5.

<sup>&</sup>lt;sup>258</sup> Assessments Reports on Climate Change: Impacts, Adaptation and Vulnerability, published periodically by the Intergovernmental Panel on Climate Change (IPCC), the United Nations body for assessing the science related to climate change produces, https://www.ipcc.ch/reports/.

<sup>&</sup>lt;sup>259</sup> Such as Copernicus services managed by the European Commission.

The adaptation solutions implemented do not adversely affect the adaptation efforts or the level of resilience to physical climate risks of other people, of nature, of cultural heritage, of assets and of other economic activities; are consistent with local, sectoral, regional or national adaptation strategies and plans; and consider the use of nature-based solutions<sup>260</sup> or rely on blue or green infrastructure<sup>261</sup> to the extent possible

- flood protection mounds and removable flood barriers located at the tunnel portals on both Lolland and Fehmarn to address the risk of coastal flooding and erosion
- drainage systems within the tunnel portals to account for the risk of flooding due to extreme rainfall.

Like Sund & Bælt's other infrastructure, the Fehmarnbelt tunnel must be able to withstand a 10,000-year event. Sund & Bælt carries out climate risk analyses for its existing infrastructure at 10-year intervals to ensure that this level is maintained. Additional mitigating measures are implemented as needed in light of the climate developments.

The adaptation measures do not significantly affect the adaptation efforts or the level of resilience to physical climate risks of other people, nature, or cultural heritage in the surrounding area. Detailed assessments of the project's effects on the immediate area have been carried out, including Lolland, Fehmarn and the maritime area, to ensure consistency with relevant local, sectoral, regional or national plans and strategies.

The adaptation solutions rely on blue or green infrastructure to the extent possible. The flood protection mounds are a passive earthworks measure with no operational requirements for energy or water. Using elevated land as flood protection is one of the oldest flood management practices. The mounds have low impact on surrounding area and have been designed to minimise erosion risk. As a passive measure the mound has no operational energy requirements and minimal maintenance requirements, mainly relating to landscaping. Additionally, the mound offers an opportunity for coastal habitat restoration, especially regarding land birds. The design of the drainage systems includes surface ponds which can also provide habitat for birds 262.

Sustainable use and protection of water and marine resources

See Appendix  $B^{263}$  in The EU Taxonomy as adopted by the Commission on June 4, 2021 in the Delegated Act for climate change mitigation and climate change adaptation activities.

An EIA has been carried out which covers the entire Fehmarnbelt project. Appropriate measures have been carried out, as drainage from the activity may constitute an environmental degradation risk to the water quality<sup>265</sup>.

<sup>&</sup>lt;sup>260</sup> Nature-based solutions are defined as 'solutions that are inspired and supported by nature, which are cost-effective, simultaneously provide environmental, social and economic benefits and help build resilience. Such solutions bring more, and more diverse, nature and natural features and processes into cities, landscapes and seascapes, through locally adapted, resource-efficient and systemic interventions'. Therefore, nature-based solutions benefit biodiversity and support the delivery of a range of ecosystem services. (version of [adoption date]: https://ec.europa.eu/research/environment/index.cfm?pg=nbs).

<sup>261</sup> See Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: Green Infrastructure (GI) — Enhancing Europe's Natural Capital (COM/2013/0249 final).

<sup>&</sup>lt;sup>262</sup> Please see the EIA statement Chapters 12-14 for more information: https://vvmdokumentation.femern.dk/da/VVM-redeg%c3%b8relse31fb.pdf?filename=files/SAMLET/VVM-redeg%c3%b8relse.pdf
<sup>263</sup> https://ec.europa.eu/sustainable-finance-taxonomy/assets/documents/CCM%20Appendix%20B.pdf

<sup>&</sup>lt;sup>265</sup> Please see the EIA statement Chapters 12, 13, 21 and 22 for more information: https://vvmdokumentation.femern.dk/da/VVM-redeg%c3%b8relse31fb.pdf?filename=files/SAMLET/VVM-redeg%c3%b8relse.pdf

Environmental degradation risks related to preserving water quality and avoiding water stress are identified and addressed with the aim of achieving good water status and good ecological potential as defined in Article 2, points (22) and (23), of Regulation (EU) 2020/852, in accordance with Directive 2000/60/EC of the European Parliament and of the Council<sup>264</sup> and a water use and protection management plan, developed thereunder for the potentially affected water body or bodies, in consultation with relevant stakeholders.

Where an Environmental Impact Assessment is carried out in accordance with Directive 2011/92/EU of the European Parliament and of the Council (2) and includes an assessment of the impact on water in accordance with Directive 2000/60/EC, no additional assessment of impact on water is required, provided the risks identified have been addressed. The activity does not hamper the achievement of good environmental status of marine waters or does not deteriorate marine waters that are already in good environmental status as defined in point 5 of Article 3 of Directive 2008/56/EC of the European Parliament and of the Council (3) (4), taking into account the Commission Decision (EU) 2017/848 (5) in relation to the relevant criteria and methodological standards for those descriptors.

Operators limit waste generation in processes related to construction and demolition and take into account best available techniques. At least 70 % (by weight) of the non-hazardous construction and demolition waste (excluding naturally occurring material referred to in category 17 05 04 in the European List of Waste established by Decision 2000/532/EC) generated on the construction site is prepared for reuse, recycling and other material recovery, including backfilling operations using waste to substitute other materials, in accordance with the waste hierarchy and the EU Construction and Demolition Waste Management Protocol<sup>266</sup>.

Operators use selective demolition to enable removal and safe handling of hazardous substances and facilitate reuse and high-quality recycling.

For manufacturing of constituents, the activity assesses the availability of and, where feasible, adopts techniques that support:

Transition to a circular

economy

 reuse and use of secondary raw materials and re-used components in products manufactured; Waste generated in connection with the construction of the Fehmarnbelt Fixed Link is generally minimised, and there is no waste material in terms of concrete as any excess is recycled.

Waste is managed in accordance with applicable regulations, and the waste quantities do not exceed levels that can be handled either locally (similar to commercial waste) or nationally (concrete and metal waste, as well as asphalt and composite materials), potentially including minor quantities of mixed commercial waste.

In 2023, more than 86% of the total construction waste generated on the project was recycled.

All contractors are obliged to comply with the laws and regulations in force at any given time and the contractors' waste management system can be audited at any time.

<sup>&</sup>lt;sup>264</sup> Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy <sup>266</sup> EU Construction & Demolition Waste Management Protocol, September 2016: https://ec.europa.eu/docsroom/documents/20509/.

	<ul> <li>(b) design for high durability, recyclability, easy disassembly and adaptability of products manufactured;</li> <li>(c) waste management that prioritises recycling over disposal, in the manufacturing process;</li> <li>(d) information on and traceability of substances of concern throughout the life cycle of the manufactured products.</li> </ul>	
Pollution prevention and control	Where appropriate, given the sensitivity of the area affected, in particular in terms of the size of population affected, noise and vibrations from use of infrastructure are mitigated by introducing open trenches, wall barriers, or other measures and they comply with Directive 2002/49/EC of the European Parliament and of the Council <sup>267</sup> .	Noise and vibrations during the construction of the Fehmarnbelt Fixed Link are monitored continuously in accordance with the applicable regulation, as outlined in the EIA on the Danish side, and the requirements in the plan approval decision on the German side. The same goes for dust, where methods increasing such effects are avoided.
	Measures are taken to reduce noise, dust and pollutant emissions during construction or maintenance works.	Mitigating measures e.g. include a nine-meter-high barrier around the production facility at Rødby-havn, which reduces any emissions during the construction work <sup>268</sup> .
Protection and restoration of biodiversity and ecosystems	See Appendix $D^{269}$ in The EU Taxonomy as adopted by the Commission on June 4, 2021 in the Delegated Act for climate change mitigation and climate change adaptation activities.	An EIA has been carried out for the Fehmarnbelt project <sup>274</sup> . This includes an assessment of potential impacts on Natura 2000 sites in Denmark and Germany, as well as impacts on populations of protected species and habitat types in accordance with the relevant EU Directives <sup>275</sup> .
	An Environmental Impact Assessment (EIA) or screening <sup>270</sup> has been completed in accordance with Directive 2011/92/EU. <sup>271</sup>	The mitigation and compensation measures to be carried out in connection with the Fehmarnbelt project are outlined in the implementation statement supplementing the EIA. In addition to the legar requirements, Sund & Bælt follows a "building with nature" approach, the aim of which is that the
	Where an EIA has been carried out, the required mitigation and compensation measures for protecting the environment are implemented.	project ultimately results in more and better nature than before construction began.
	For sites/operations located in or near biodiversity-sensitive areas (including the Natura 2000 network of protected areas, UNESCO World Heritage sites and Key Biodiversity Areas, as well as their protected areas), an appropriate	The coast-to-coast project will result in a land take of protected nature areas, Strandholm Lake and 10 ponds on Lolland. The land take means that breeding and resting sites for amphibians, included in Annex IV of the Habitats Directive, are removed. The project's impacts are mitigated

<sup>&</sup>lt;sup>267</sup> Directive 2002/49/EC of the European Parliament and of the Council of 25 June 2002 relating to the assessment and management of environmental noise - Declaration by the Commission in the Conciliation Committee on the Directive relating to the assessment and management of environmental noise (OJ L 189, 18.7.2002, p. 12).

<sup>&</sup>lt;sup>268</sup> Please see the EIA statement Sections 13.7 and 14.7 for more information: https://vvmdokumentation.femern.dk/da/VVM-redeg%c3%b8relse31fb.pdf?filename=files/SAMLET/VVM-redeg%c3%b8relse.pdf

<sup>&</sup>lt;sup>269</sup> https://ec.europa.eu/sustainable-finance-taxonomy/assets/documents/CCM%20Appendix%20D.pdf

<sup>&</sup>lt;sup>270</sup> The procedure through which the competent authority determines whether projects listed in Annex II to Directive 2011/92/EU is to be made subject to an environmental impact assessment (as referred to in Article 4(2) of that Directive).

<sup>&</sup>lt;sup>271</sup> For activities in third countries, in accordance with equivalent applicable national law or international standards requiring the completion of an EIA or screening, for example, IFC Performance Standard 1: Assessment and Management of Environmental and Social Risks.

<sup>274</sup> The EIA statement is available at https://vvmdokumentation.femern.dk/da/VVM-redeg%c3%b8relse31fb.pdf?filename=files/SAMLET/VVM-redeg%c3%b8relse.pdf

<sup>&</sup>lt;sup>275</sup> Please see the EIA statement Chapters 10, 17 and 18: https://vvmdokumentation.femern.dk/da/VVM-redeg%c3%b8relse31fb.pdf?filename=files/SAMLET/VVM-redeg%c3%b8relse.pdf

clusions the necessary mitigation measures<sup>273</sup> are implemented.

assessment<sup>272</sup>, where applicable, has been conducted and based on its conthrough the establishment of open-air replacement nature, a new lake, new marsh areas, replacement ponds, fauna passages, etc. In addition, a new land area will be established with nature areas, ponds for amphibians, new beaches and paths. In total, replacement nature will be established in the proportion of roughly 1:3, including around 117 ha of open nature, 1.5 ha of marsh, up to 42 new ponds and 3.3 kilometres of watercourse.

> The aim for the compensation nature is to achieve a nature quality equivalent to the protected habitats covered by § 3 of the Nature Conservation Act. The established nature is continuously monitored to ensure that the required quality is achieved. In 2024, an area of 40 ha including the new Lungholm Lake and surrounding area established on Lolland as a replacement for Strandholm lake, which was removed to make room for the tunnel portal area, was registered by Lolland municipality as §3-protected nature.

> In addition to the required compensation, Sund & Bælt is implementing further initiatives to strengthen the conditions for nature and biodiversity in the surroundings of the project. This e.g. includes the creation of large, connected nature areas. In 2024, 42 hectares of agricultural land was permanently set aside and converted into wetlands, thereby restoring original ecosystems while reducing the nutrient load on the surrounding areas as well as nitrogen discharge to the sea. Furthermore, an area of 14 ha on the mounds surrounding the production facilities at Rødbyhavn was seeded with local plants to improve biodiversity and establish a green corridor<sup>276</sup>.

Source: Ministry of Transportation and Sund & Bælt

<sup>&</sup>lt;sup>272</sup> In accordance with Directives 2009/147/EC and 92/43/EEC. For activities located in third countries, in accordance with equivalent applicable national law or international standards, that aim at the conservation of natural habitats, wild fauna and wild flora, and that require to carry out (1) a screening procedure to determine whether, for a given activity, an appropriate assessment of the possible impacts on protected habitats and species is needed; (2) such an appropriate assessment where the screening determines that it is needed, for example IFC Performance Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources.

<sup>&</sup>lt;sup>273</sup> Those measures have been identified to ensure that the project, plan or activity will not have any significant effects on the conservation objectives of the protected area.

<sup>&</sup>lt;sup>276</sup> The full Implementation Statement is available at https://vvmdokumentation.femern.dk/da/Implementeringsredeg%C3%B8relse%20februar%2020159824.pdf?filename=files/Implementering/Implementeringsredeg%C3%B8relse%20februar%2020159824.pdf?filename=files/Implementering/Implementeringsredeg%C3%B8relse%20februar%2020159824.pdf?filename=files/Implementering/Implementeringsredeg%C3%B8relse%20februar%2020159824.pdf?filename=files/Implementering/Implementeringsredeg%C3%B8relse%20februar%2020159824.pdf?filename=files/Implementering/Implementeringsredeg%C3%B8relse% teringsredeg%C3%B8relse%20februar%202015.pdf

