

NOTE ACCOMPANYING THE MAPPING TOOL FOR SUPPORTING THE IDENTIFICATION OF “RENEWABLES GO-TO AREAS”

The Commission communication of 8 March 2022 “REPowerEU: Joint European Action for more affordable, secure and sustainable energy” calls on Member States to swiftly map, assess, and ensure suitable land and sea areas that are available for renewable energy projects, commensurate with their national energy and climate plans, the contributions towards the revised 2030 renewable energy target and other factors such as the availability of resources, grid infrastructure, and the targets of the EU Biodiversity Strategy.

The Commission proposal for a “Directive of the European Parliament and of the Council amending Directive (EU) 2018/2001 on the promotion of the use of energy from renewable sources, Directive 2010/31/EU on the energy performance of buildings and Directive 2012/27/EU on energy efficiency” and the “Commission recommendation on accelerating permitting for renewable energy projects and facilitating Power Purchase Agreements” adopted on 18 May 2022 also provide for the identification of ‘renewables go-to areas’. These are specific locations, whether on land or sea, particularly suitable for the installation of plants for the production of energy from renewable sources, other than biomass combustion plants, where the deployment of a specific type of renewable energy is not expected to have significant environmental impacts, in view of the particularities of the selected territory.

According to the proposal for a directive, in the identification of go-to areas Member States shall:

- give priority to artificial and built surfaces, such as rooftops, transport infrastructure areas parking areas, waste sites, industrial sites, mines, artificial inland water bodies, lakes or reservoirs, and, where appropriate, urban waste water treatment sites, as well as degraded land not usable for agriculture;
- exclude Natura 2000 sites and nature parks and reserves, the identified bird migratory routes as well as other areas identified based on sensitivity maps and the tools referred to in the next point, except for artificial and built surfaces located in those areas such as rooftops, parking areas or transport infrastructure;
- use all appropriate tools and datasets to identify the areas where the renewable energy plants would not have a significant environmental impact, including wildlife sensitivity mapping.

To support Member States in identifying such “renewables go-to areas” for the rapid deployment of new installations for the production of energy from wind and solar, the Energy and Industry Geography Lab, from May 2022, provides an attractive visual representation of consolidated information on a wide range of relevant energy and environmental factors.

The following datasets are now included in the Energy and Industry Geography Lab:

1. Natura 2000 sites
2. Nationally designated protected areas
3. Ecologically or biologically significant marine areas
4. Important bird areas
5. Key biodiversity areas
6. Underwater noise
7. Peatlands

8. Waste water treatment plants

Other relevant datasets will be added in the future. While Member States are responsible for the identification of the go-to areas, this mapping tool facilitates Member States in their task, by making available relevant datasets that extend across Europe in one single platform.

The mapping tool is thus intended as an enabling and empowering instrument to support planning choices by national and regional authorities who may not otherwise have immediate access to these datasets.

It seeks to complement the relevant legal framework by making available information relevant to the implementation of existing legal obligations and for the identification of go-to areas inside or near Member States' borders.

All the datasets are publicly accessible. This note provides further information on how to use the different data layers for the identification of go-to areas as well as data limitations and knowledge gaps. On the website of the Energy and Industry Geography Lab (<https://ec.europa.eu/energy-industry-geography-lab>) additional information is available such as the [data documentation and metadata](#) with information on data provider, spatial and temporal resolution, and usage conditions. In addition, the landing page also offers a [quickstart guide and a tutorial](#).

1. Natura 2000 sites

The Energy and Industry Geography Lab now displays the borders of Natura 2000 sites, as officially reported by Member States to the Commission.

a) Use of the layer

According to the proposal for a “Directive of the European Parliament and of the Council amending Directive (EU) 2018/2001 on the promotion of the use of energy from renewable sources, Directive 2010/31/EU on the energy performance of buildings and Directive 2012/27/EU on energy efficiency”, in the identification of go-to areas Member States shall exclude Natura 2000 sites.

According to Article 6(3) the Directive 92/43/EEC (the Habitats Directive) “any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public”.

Renewable energy projects, including those located outside Natura 2000 sites, likely to have a significant effects on the sites, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of their implications for the sites in view of the sites' conservation objectives and only be authorised if the integrity of the sites is not affected, subject to the provisions of Article 6(4).

Renewable energy projects located in go-to areas are subject to the Article 6(3) and 6(4) of the Habitats Directive, pending the finalisation of the co-decision process on the proposal for a “Directive of the European Parliament and of the Council amending Directive (EU) 2018/2001 on the promotion of the use of energy from renewable sources, Directive 2010/31/EU on the energy performance of buildings and Directive 2012/27/EU on energy efficiency”.

b) Limitations

The layer displays the borders of Natura 2000 sites, as officially reported by Member States to the Commission. The European dataset is updated once per year with a cut-off date of 15 December and the layer is uploaded during the second quarter of the following year.

The Energy and Industry Geography Lab provides a link to the Standard Data Forms of the sites, indicating habitats and species present in the sites as well as other relevant information, and they can be also directly accessed here: <https://natura2000.eea.europa.eu/>.

More information is available from the European Environment Agency: <https://sdi.eea.europa.eu/catalogue/biodiversity/eng/catalog.search#/metadata/8c89654c-636a-485f-90b4-3778ea4b7fa3>.

2. Nationally designated protected areas

The Energy and Industry Geography Lab now displays the borders of nationally designated protected areas, as officially reported by Member States to the European Environment Agency.

a) Use of the layer

While identifying go to areas for renewable energy projects, Member States should consider this data layer, in view of their obligations and targets under national legislation that are relevant for these areas.

According to the Commission proposal for a “Directive of the European Parliament and of the Council amending Directive (EU) 2018/2001 on the promotion of the use of energy from renewable sources, Directive 2010/31/EU on the energy performance of buildings and Directive 2012/27/EU on energy efficiency”, “in the designation of renewables go-to areas, Member States should avoid protected areas to the extent possible and consider restoration plans.”

b) Limitations

The European dataset is updated once per year with a reporting deadline of 15 March. More information is available from the European Environment Agency: <https://sdi.eea.europa.eu/catalogue/biodiversity/eng/catalog.search#/metadata/c0c9663b-ea1c-4068-b8b5-533f40539bdf>.

3. Ecologically or biologically significant marine areas

The Ecologically or biologically significant marine areas (EBSAs) are special areas in the ocean that support the healthy functioning of oceans and the many services that it provides. They have been and are being identified in the context of the Convention on Biological Diversity (CBD) as areas in need of protection.

a) Use of the layer

While identifying go to areas for renewable energy projects, Member States should consider this data layer, in view of their obligations and targets under the Convention on Biological Diversity that are relevant for these areas.

Member States should consider this data layer, in view of their obligation to exclude from renewables go-to areas the identified bird migratory routes as well as other areas identified based on sensitivity maps. They should also use the tools and datasets to identify the areas where the renewable energy plants would not have a significant environmental impact, including wildlife sensitivity mapping. In fact, EBSAs provide relevant information for the development of sensitivity maps.

b) Limitations

Please refer to: Ecologically or Biologically Significant Marine Areas (EBSAs) (cbd.int)

The EBSAs for the Northeast Atlantic have not been finalized in the context of the Conference of the Parties of the CBD and are therefore not yet included in the Energy and Industry Geography Lab.

4. Important bird areas

Source: Birdlife International.

Important Bird Areas (IBAs) have been identified through the application of quantitative ornithological criteria, grounded in up-to-date knowledge of the sizes and trends of bird populations. The use of common criteria creates consistency among, and enables comparability between, sites at national, continental and global levels. The sites selected as IBAs have true significance for the international conservation of bird populations.

a) Use of the layer

While identifying go to areas for renewable energy projects, Member States should consider this data layer, in view of their obligation to exclude from renewables go-to areas the identified bird migratory routes as well as other areas identified based on sensitivity maps. They should also use the tools and datasets to identify the areas where the renewable energy plants would not have a significant environmental impact, including wildlife sensitivity mapping. In fact, IBAs are relevant for the

identification of bird migratory routes and provide relevant information for the development of sensitivity maps.

b) Limitations

Please refer to: [BirdLife Data Zone](#).

5. Key biodiversity areas

Source: Birdlife International.

Key Biodiversity Areas (KBAs) are defined using science-based criteria published as an IUCN Standard and are compiled in the most comprehensive database of globally important sites. KBAs are home to critical populations of the world's threatened species. Species at risk include those that are identified as globally threatened on the IUCN Red List of Threatened Species. These are species with very small, geographically restricted or rapidly declining populations. The KBA criteria also identify vital sites for species with populations that are confined to small areas or form large aggregations at certain times of the year for breeding, feeding or migrating – since these species depend on the health of a limited number of key habitats.

a) Use of the layer

While identifying go to areas for renewable energy projects, Member States should consider this data layer, in view of their obligation to exclude from renewables go-to areas the identified bird migratory routes as well as other areas identified based on sensitivity maps. They should also use the tools and datasets to identify the areas where the renewable energy plants would not have a significant environmental impact, including wildlife sensitivity mapping. In fact, KBAs are relevant for the identification of bird migratory routes. KBAs provide relevant information for the development of sensitivity maps.

b) Limitations

Please refer to: <https://www.keybiodiversityareas.org/>

6. Underwater noise

The purpose of this indicator is to quantify the pressure on the environment, by making available an overview of all loud impulsive low and mid-frequency sound sources and continuous low-frequency sounds throughout the year, in regional seas.

a) Use of the layer

This dataset enables Member States to get an overview of the occurrence of all the activities that produce the relevant sounds that place pressure on the environment, and to establish the current level and trend of these impulsive sounds. It makes it easier to assess cumulative effects of the pressure on the environment.

While identifying go to areas for renewable energy projects, Member States should consider this data layer, in view of their obligation to exclude from renewables go-to areas areas identified based on sensitivity maps. They should also use the tools and datasets to identify the areas where the renewable energy plants would not have a significant environmental impact, including wildlife sensitivity mapping.

b) Limitations

Thresholds for underwater noise have not yet been agreed at EU level. These will be established according to Commission decision 2017/858.

7. Peatlands

This layer includes the location of peatland in the EU, as presented in the peatland maps of Europe from Tanneberger et al., 2017.¹ The article and underlying data can be accessed at: <http://mires-and-peat.net/pages/volumes/map19/map1922.php>.

a) Use of the layer

Peatlands are highly valuable carbon reservoir and sink but also a major source of emissions when degraded. While accounting for only about 3-5% percent of the EU land area, they store around 30 percent of terrestrial carbon, but their spatial distribution and C emissions remain very uncertain. While identifying go to areas for renewable energy projects, Member States should consider this data layer, in view of their obligation to exclude from renewables go-to areas areas identified based on sensitivity maps. They should also use the tools and datasets to identify the areas where the renewable energy plants would not have a significant environmental impact, including wildlife sensitivity mapping.

b) Limitations

The data layer on peatlands is based on individual national datasets. While a clear definition of peatland is applied, no strict criterion for minimum thickness of the peat layer has been adopted. The paper from Tanneberger et al., 2017 used also various approaches to close data gaps and estimate the range of peatland areas but the authors are confident that the dataset is reliable and complete.

¹ Tanneberger, F., C. Tegetmeyer, S. Busse, A. Barthelmes, and "and 55 Others", 'The Peatland Map of Europe', *Mires and Peat*, Vol. 19(22), 2017, pp. 1–17

8. Waste water treatment plants

This layer includes the location of urban wastewater treatment plans (UWWTPs) in the EU, as officially reported by Member States to the Commission.

a) Use of the layer

While identifying go to areas for renewable energy projects, Member States should consider this data layer in view of their obligation to give priority to artificial and built surfaces, such as rooftops, transport infrastructure areas, parking areas, waste sites, industrial sites, mines, artificial inland water bodies, lakes or reservoirs, and, where appropriate, urban waste water treatment sites, as well as degraded land not usable for agriculture. Sites of existing waste water treatment installations can be go-to areas to install wind and solar energy facilities and create synergies with economic activities already in place at these sites. For example, sites of existing urban wastewater treatment plans offer the opportunity to install wind and solar power and combine them with the energy production potential from urban wastewater. The same logic could apply to other industrial sites covered by the Industrial Emissions Directive (which is also available in EIGL).

b) Limitations

The dataset provides the general location of the waste water treatment plant for those plants which are covered by Directive 91/271/EEC (usually those above a population equivalent of 2.000). For the identification of renewables go-to areas a more detailed map, i.e. one with higher accuracy and precision, may be needed which is usually available at the permitting authority.

Access and metadata for tabular data

<https://www.eea.europa.eu/data-and-maps/data/waterbase-uwwd-urban-waste-water-treatment-directive-7/#tab-metadata>

Spatial data

Agglomerations <https://sdi.eea.europa.eu/catalogue/srv/eng/catalog.search#/metadata/51ab6e8a-aca0-4edd-8b62-b76f4fcfc1a2>

UWWTPs <https://sdi.eea.europa.eu/catalogue/srv/eng/catalog.search#/metadata/38ee29b5-70b1-4431-abf6-7c1aa3c50515>

Discharge points <https://sdi.eea.europa.eu/catalogue/srv/eng/catalog.search#/metadata/ad7571e1-b3cd-4994-bbd3-36f3eb21a011>

Dedicated map-viewer

<https://www.eea.europa.eu/themes/water/european-waters/water-use-and-environmental-pressures/uwwd/interactive-maps/urban-waste-water-treatment-maps-3>