

Solar, Biodiversity, Land Use: Best Practice Guidelines

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State of play

- 1. >45% RES and 1TW solar in 2030, 100% RES and 5TW solar by 2040
 - Need for the utility-scale solar deployment
- 2. Biodiversity loss:
 - 85% of global wetland areas are lost and 1 million animal species are endangered
 - In EU, >80% of continents habitats are under critical conditions
- 3. 80% of the EU land is used for settlement, agriculture, forestry and infrastructure



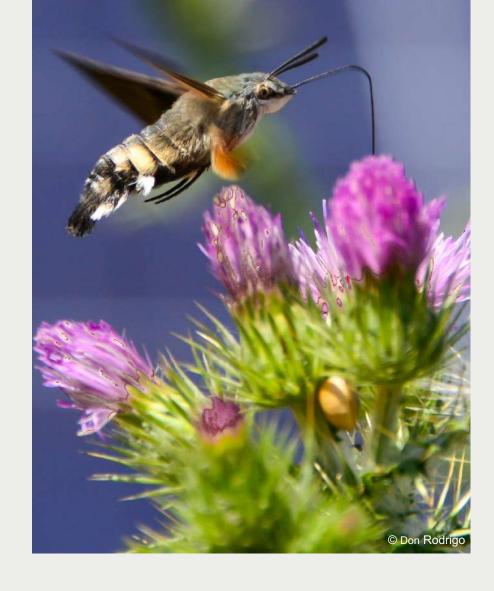
Key solar facts

- Solar takes up small land area relative to the EU's surface area:
 - → Supplying current EU power generation with solar energy would require only 0.26% of the EU land
 - → Whereas, agricultural land takes up 38% of the total land area of the EU
- Versatile technology:
 - → Innovative technologies (e.g. building-integrated PV, agrivoltaics, floating PV, etc.) can bring positive environmental benefits, minimise land competition concern and contribute to tackling climate change
- Solar PV projects can deliver positive impacts on biodiversity and improve soil health in comparison to conventional or monocultural agricultural uses



Overview of the report

- Overview of nature legislation at EU and national levels; and Member State examples
- Addressing the potential impacts on land use from solar PV projects and outlining key actions for suitable land identification
- Providing best practices:
 - solar PV projects and initiatives that protect and enhance biodiversity;
 - and best practice guidelines on how to incorporate environmental considerations across solar PV phases





> Artificial surfaces

> Water bodies

> Agricultural areas



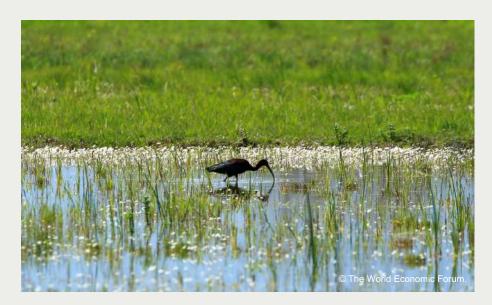




> Forests



> Wetlands



Toolbox: sustainable land use for solar PV projects

Example: artificial land

- Classification
- Potential benefits: biodiversity enhancement
- Assessment needed for some types of artificial land
 - > Port areas, car parks, areas nearby road and rail networks sealed land
 - Nearby ecological features to be assessed (forests, etc.)
 - Degraded land (construction sites, waste land)
 - Technical aspects such as grid availability
 - > Artificial sites like abandoned airports, etc. -
 - Appropriate site assessment and project design needed



Key recommendations

- More integrated spatial planning is required at a local level. This
 can help to identify suitable land for renewable energy project
 development
- Member States must publish guidelines on how to conduct the SEA and EIA in relation to solar projects and the Commission should ensure the circulation of SEA and EIA best practices in relation to solar PV
- A set of standardised methods and data on ecological features of areas across Member States is needed
- Appropriate training schemes must be provided for regional and local authorities to facilitate EIA and SEA implementation, and ensure a sufficient understanding of land use and its impacts.
- Responsible authorities conducting EIA/SEAs should create stakeholder engagement and facilitate discussions amongst the relevant experts, NGOs and local communities







Integrating environmental considerations into solar PV projects



Project Design

- Conduct base line assessments;
- Follow a mitigation hierarchy
- Prepare site-specific biodiversity management plan;
- Integrate environmental considerations;



Project Construction

- Maintain limited speed and number of vehicle movements;
- Limit soil sealing;
- Limit vegetation clearance and land stripping;
- Avoid bush/tree clearing, etc



Project O&M

- Avoid use of herbicides;
- Introduce grazing management;
- Ensure maintenance of plants and vegetation;
- Consider sustainable water usage, etc



Project Decommissioning

- Limit soil disturbance
- Limit vegetation clearance and land stripping
- Ensure safe disposal of solid and liquid waste, etc.
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Thank you for your attention.

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