

Protecting World Heritage during the Energy Transition

[About](#) ▾ [World Heritage Essentials](#) ▾ [Wind Energy Essentials](#) ▾ [Protecting World Heritage](#) ▾ [Impacts of Wind](#)

National strategies and policies for the transition to renewable energy and initiatives for decarbonization are often based on the strategic principles and guidelines set in international agreements and directives. This is, for example, the case in the European Union policies, which have direct influence on national planning. Nevertheless, the implementation of the renewable energy related international agreements or EU directives are often not cross-checked and aligned with national policies and regulations protecting natural and cultural heritage, including or in addition to, World Heritage properties.

It is similarly important that the national policies, programmes and plans, and the accompanying national legal frameworks, include due consideration for the protection of heritage and provide full protection for World Heritage properties. In addition to establishing an appropriate legal framework, a proactive site management approach could effectively supplement the national legal tools and support and strengthen protection measures ensuring the preservation of World Heritage properties for future generations.

By ratifying the World Heritage Convention, States Parties commit to protect and effectively manage the World Heritage properties located on their territory. When implementing the Convention, States Parties should ensure the preservation of World Heritage properties through appropriate policies, legal, scientific, technical, administrative and financial measures. To best balance and harmonize this commitment with the needs and goals of reducing greenhouse gas emissions, including the development of renewable energy sources, States Parties should encourage the active engagement of all stakeholders concerned in related actions.

Understanding World Heritage properties and sharing information

As the energy transition moves forward, there is a need to enhance and strengthen the interaction between this goal and the aim goal of protecting World Heritage properties for future generations. This also includes enhancing knowledge about the World Heritage system and terminology (→ See part 1 on [World Heritage Essentials](#)). Even though World Heritage properties

are generally well researched, their role in relation to their wider cultural, social, environmental, and economic context is still often overlooked.

World Heritage Convention

The best strategy to reconcile the interests of World Heritage protection with those of wind energy development is to be fully transparent in the planning processes and to provide easy access to adequately detailed and up-to-date information on World Heritage properties and their Outstanding Universal Value (OUV), as well as the attributes that convey it. National authorities should therefore maintain national inventories/databases with information specific on World Heritage properties located on their territories. The information should be linked to national development databases and plans to facilitate the exchange of information between sectors and provide a tool for project proponents in the early screening process.

Information about World Heritage properties should also be included in national inventories for protected or listed cultural and natural heritage sites. The databases need to be aligned with each other and be stored and kept up to date by national authorities, such as national heritage protection agencies, site management teams and institutions to ensure the reliability of its content. Dedicated websites for the respective World Heritage properties are also efficient platforms in providing detailed information related to each site.

What should World Heritage related databases include?

Strengthening World Heritage protection in policies and legal frameworks

Many countries in the Europe and North American region play an active role in moving forward the international climate agenda, including through the adoption and implementation of global agreements (for example, the [Paris Agreement](#) and the [UN 2030 Agenda for Sustainable Development](#)) and the regional strategic directions (such as, the [European Green Deal](#) and the [EU Climate Action for 2050](#)). The countries are also adapting these international agreements and strategies on a national level and implementing them at national-, sub-national and local-levels. When ratifying and implementing international policies and legislation, specific consideration for World Heritage and other heritage should also be included.

Although the different strategies, policies and frameworks have common objectives, the means of implementation may vary from one country to another. Implementation, at times, can also conflict with existing commitments for the protection of World Heritage properties and the preservation of other protected natural and cultural heritage assets. In such cases, it is the responsibility of all – including the renewable energy sector – to ensure that development proposals respect the protection of World Heritage and improve the national policies towards a better harmonization.

National legal frameworks for the protection of World Heritage

Legal frameworks in Europe and North America typically include national- and/or federal-level protection mechanisms for natural and cultural heritage properties, stipulated in formal legislation, including laws, codes and regulations. The protection of World Heritage properties is often the subject of these laws and their accompanying regulations. Only a few countries have developed a specific World Heritage law, while others include references to 'sensitive', protected or heritage areas that may also designate World Heritage properties.

Potential national legal frameworks implementing the World Heritage Convention.

National legal frameworks for planning

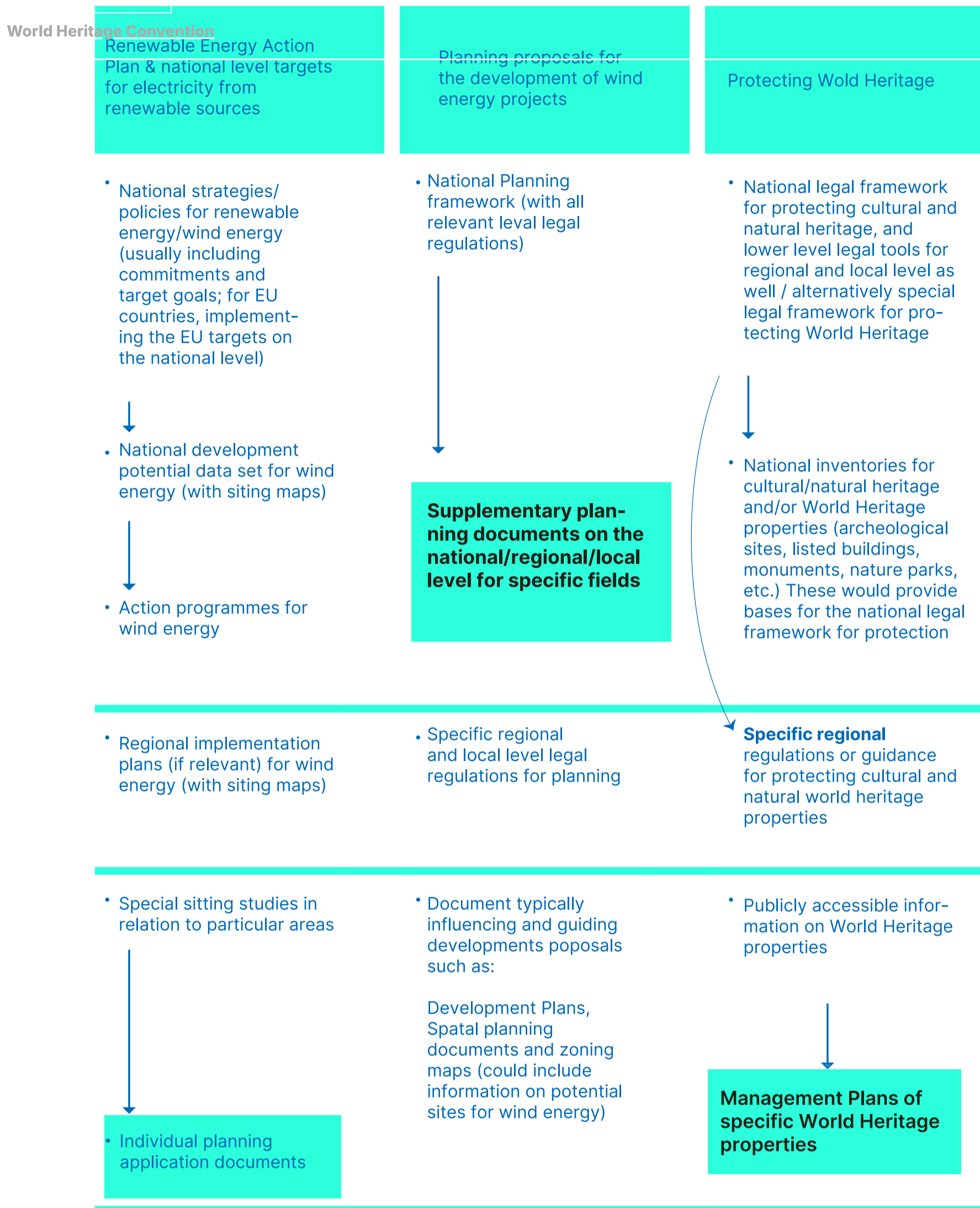
World Heritage Convention

Renewable energy projects, including the construction of wind farms, are subject to national legal frameworks that typically include national, regional, and local planning regulations, and supplementary planning documents. Project proposals are also evaluated against spatial planning documents and zoning plans (in general spatial planning coordinates practices and policies affecting spatial organization while relevant plans exist at the national, regional, and local levels).

Authorities responsible for planning decisions for wind energy projects operate mainly on regional and local levels, usually as part of a municipality administration. In addition, governmental and public specialized bodies responsible for the protection of natural and cultural heritage are often involved in the planning process, as statutory consultees or in an advisory role.

Legal tools and policy documents that typically regulate the planning framework in the case of wind energy projects include:

- International treaties and other type of documents related to renewable energy and wind energy (including European Union Directives, plans and programmes);
- National policy documents/ development plan and programmes (that include planned strategic outcomes and priorities, also in relation to the renewable energy transition and decarbonization);
- National planning framework (the highest-level policy document for managing change);
- Legal regulations for planning on the national/regional/local level (including measures related to impacts assessments: Strategic Environmental Assessments and/or Environmental and Social Impact Assessments);
- Legal regulations for the protection of environment, cultural and natural heritage/World Heritage properties (considering official databases for natural and cultural heritage);
- Regional strategies for renewable energy (including wind energy);
- Spatial planning documents (national/regional/local plans) with zoning maps;
- Supplementary planning documents (for expanding and specifying policies contained in higher level policy documents on a national/regional/local level);
- Guidance documents (that could exist at the national, regional and local level for renewable energy project planning and for the protection of natural and cultural heritage/World Heritage).



Hierarchy and potential connection points between different elements of the national legal framework relating to wind energy plans, spatial planning and the protection and management of World Heritage properties.

Additional image showing the action points for different authorities and other stakeholders. (The additional information could be visible after clicking on each relevant element in the original table.)

Potential issues concerning the legal framework for planning and development from a World Heritage perspective

- World Heritage Convention**
- The protection of World Heritage falls primarily under the responsibility of States Parties at all levels and sectors. The *Convention*, as an international legal instrument, becomes fully operational when adequately implemented and embedded in the national legal system. However, even when institutions and agencies tasked with the protection and management of World Heritage properties are involved in the development of wind energy strategies and policies on the local level, their advice might not necessarily be reflected at the regional, national and/or federal levels. In some cases, planning authorities and institutions lack awareness about the impact the policies, programmes and plans may have on World Heritage properties and their OUV. It would, therefore, be necessary to ensure that World Heritage considerations are integrated in national and/or federal databases, particularly regarding land-use zoning and spatial planning.
 - National or regional energy strategies and local development policies also need to carefully consider World Heritage protection and other levels of heritage protection in the identification of appropriate project sites for renewable energy and that measures incompatible with the protection of World Heritage are avoided.
 - A national legal framework for planning could be considered appropriate, if adequate guidance is provided on all levels for transparent and well-informed decision-making processes, and if compliance is ensured with international legal instruments, including the *World Heritage Convention*.
 - A legal framework in place for planning wind energy projects may not necessarily include specific measures for the protection of World Heritage properties and their OUV. This may weaken the national authorities' capacity to protect World Heritage in the decision-making process and may lead to a situation in which a decision taken is justifiable from a legal point of view but fails to comply with the State Party's obligations under the *World Heritage Convention*. Such complications are likely to cause delays in the project planning and construction phase.

Depending on the legal framework of a country, planning proposals of high public interest may receive derogation from the application process. They might undergo simplified legal processes and require less scrutiny, involving fewer authorities. Consequently, this may lead to an omission of the relevant institutions and authorities dealing with the protection of World Heritage properties in the process.

Consideration of World Heritage in national and local renewable energy plans and programmes

Case studies

Engaging in early planning for wind energy infrastructures

Starting an early dialogue between the wind energy project proponents and the relevant responsible organizations for World Heritage protection and management is a key step in wind energy planning. This might help to identify early on and prevent potential negative impacts of the wind energy project on World Heritage properties and enable improved coordination and a smooth communication flow.

One of the most effective early planning tools is the preparation of **Strategic Environmental Assessments (SEA)** for renewable energy and wind energy policies, plans and programmes, as it provides:

- enhanced planning security and cost efficiency for the wind energy industry;

World Heritage Convention

- avoiding extra costs and delays due to obligations to redesign or displace projects owing to impairments with World Heritage protection;
 - avoiding loss of investment in case the project must be abandoned or reduced in size after land has been acquired and plans have been developed due to impairments with World Heritage protection;
 - avoiding conflicts with national bodies responsible for the protection of a site or non-compliance with the provisions of the World Heritage Convention and the [Operational Guidelines](#) for its Implementation;
- possibility for the protection and enhanced management of World Heritage properties in a more strategic manner during the energy transition, also by:
 - avoiding negative impacts to the OUV of World Heritage properties and their attributes;
 - enhance the involvement and facilitate dialogue between relevant responsible organizations for the protection and management of World Heritage properties and the national/regional/local authorities responsible for planning, the wind industry and the local communities.

Potential or planned development of wind energy projects related to a specific World Heritage property could also be the topic of an SEA, as an initiative of the site management organization or other relevant authorities.

→ See Strategic Environmental Assessment in more detail in [Impacts of wind energy projects and their assessment](#)

The advantages of early communication between wind energy project proponents and the relevant national bodies have the potential to ensure:

- the timely identification of any relevant World Heritage related sensitivities and facilitate planning of the scope and focus of an on-site survey;
- the clarification of local conditions to set the basis for and feed into early design stages (screening and scoping phases of an impact assessment);
- the early identification of solutions to potential constraints, including mitigation measures or redesign (identifying and predicting impacts for an upcoming impact assessment).

How could relevant national authorities facilitate early communication with the wind industry?

How can the wind energy project proponents ensure that the World Heritage interest is recognized early in the project planning process?

Proactive conservation actions – enhancing management in view of the energy transition

Management systems and management plans

Management systems and management plans play an important role in the long-term preservation of World Heritage properties. When adequately informed and embedded in national, regional and local planning and legal frameworks, they can become proactive mechanisms for the assessment of potential and occurred change. Well-informed and effective management systems and plans are key tools to be used and consulted in early planning stages of wind energy installations. An up-to-date management plan and/or detailed description of the management system can serve as a key instrument for the identification and avoidance of potential conflicts with World Heritage requirements. Information should include explanations on measures protecting the OUV and refer to conservation objectives and action plans. The responsible national authorities, including the site management, should ensure that World Heritage management plans include information and appropriate measures in relation the buffer zone and the wider setting of World Heritage properties.

Why are World Heritage management systems and management plans important for wind energy projects?

Examples for Management Plans of World Heritage properties

Vulnerability assessment of World Heritage properties

In addition to the establishment of adequate management systems and the development of management plans for World Heritage properties, other scientific and management tools may be used to enhance the understanding of the features and attributes conveying the OUV of a property and to help better anticipate and prepare for potential changes/developments.

While the boundaries of a World Heritage property and its buffer zone are physical limitations and clearly define an area for protection, vulnerable and sensitive areas may also lay beyond these boundaries. Understanding and mapping attributes helps to assess these aspects of a site as well and allows sensitivity and vulnerability indicators to be linked to the physical elements in the environment, thus forming the basis for sensitivity mapping within the property and its wider setting.

→ See details about [the spatial boundaries of World heritage properties](#) and mapping attributes in [World heritage essentials](#) and [Note 1](#)

Undertaking a vulnerability assessment and mapping sensitive areas (if spatial data is relevant to specific attributes of the OUV of the World Heritage property) could be a process taking place during the preparation of a nomination for inscription on the World Heritage List. Nevertheless, it is possible to carry this assessment out at any time and also in the framework of an impact assessment. Another possible approach could be the systematic mapping at the national level of the vulnerability of all World Heritage properties in relation to the development of renewable energy/wind energy policies and strategies. This latter process could address the potential impacts of wind energy projects on the OUV and attributes of World Heritage properties and help to assess the risk of these projects (this exercise could be carried out in the frame of a Strategic Impact Assessment).

→ See [Note 2](#) for mapping sensitive areas and details about Strategic Impact Assessments in [Impacts of wind energy projects and their assessment](#).

How can the results of vulnerability assessments be used for wind energy project planning?

Monitoring World Heritage properties

Monitoring is an essential tool in an adequate World Heritage management system. On the one hand, it is an iterative process applied to track the implementation of management strategies and plans (assessing the effectiveness of measures put in place and ensuring that management strategies are adapted and revised as appropriate to ensure the protection of a World Heritage property and its OUV). On the other hand, monitoring is also a tool for identifying emerging threats and tracking changes in the state of conservation of World Heritage properties. These changes could be due to natural processes, natural and human-caused catastrophic events, but also development projects and other human-induced actions.

In addition to monitoring mechanisms established by the *World Heritage Convention*, World Heritage properties need to have site-specific monitoring in place as part of the management system to ensure their protection and long-term preservation.

The property level monitoring mechanisms need to assess:

- the general state of conservation of the property, specifically the OUV of the World Heritage property and the attributes which convey the OUV;
- the factors affecting the state of conservation;
- the effectiveness of conservation measures and management system.

Site-specific key monitoring indicators need to be developed in relation to the management plan and should extend not only to the World Heritage property, but also to its buffer zone and wider setting.

As adequate monitoring extends to recording changes induced by developments, an efficient monitoring mechanism could be put in place to effectively filter and alert on impacts (among them potential cumulative impacts) of wind energy infrastructures.

The agreed follow-up actions of specific wind turbines/wind farms already constructed are practical to be included systematically in the World Heritage monitoring system to ensure that the approved mitigation and enhancement measures of the project are adequately followed. This way, unexpected changes can be identified, and action taken. Furthermore, information on monitoring results feeds into the property's management cycle and informs future wind energy and other planned or proposed projects.

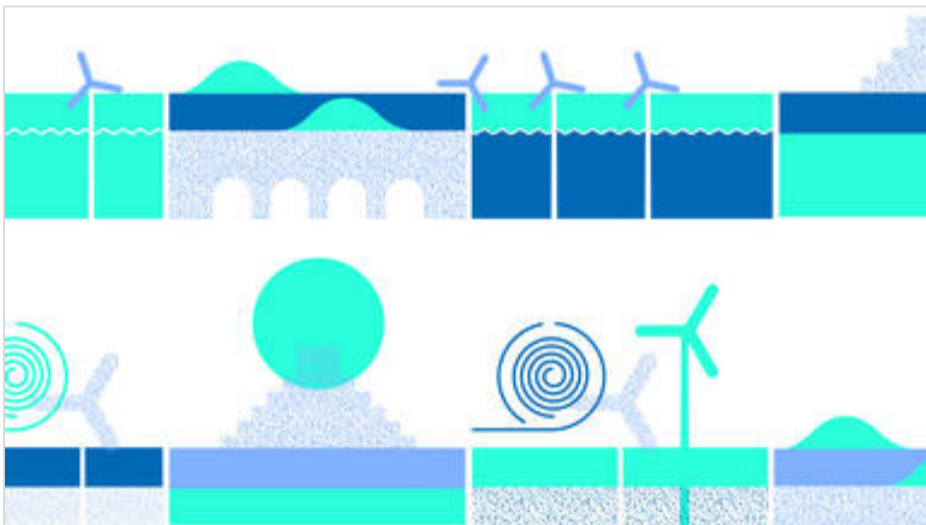
→ See for details [Impacts of wind energy projects and their assessment](#), especially '[Follow-up](#)' in the step-by-step guidance, and [Note 6](#) for cumulative impacts

Special monitoring tools for World Heritage properties

World Heritage Convention

Tool for monitoring the effectiveness of the management framework of a World Heritage property
(Source: Managing Natural World Heritage, UNESCO et al., 2011).

Other activities ^②



Wind Energy.



World Heritage and wind energy planning

Keywords ^②

[Wind](#) [Wind energy](#)

Partners

[Government of the Netherlands](#)

[© UNESCO World Heritage Centre 1992-2024](#)