



THE
BIODIVERSITY
CONSULTANCY



Mitigating Biodiversity Impacts Associated with Solar and Wind Energy Development. Guidelines for project developers.

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The renewable energy imperative

- Renewable energy a must if we want to limit global temperature rise to 1.5 degrees
- Renewable energy is one of the most effective and readily available solutions for reversing the trend of rising CO₂ emissions
- Wind and PV, with more electrification, can achieve 75% of the energy related emissions reductions needed
- However, if not carefully planned the expansion could lead to significant loss of biodiversity



Renewable energy risks

Many large-scale (> 10 MW) wind and solar projects already operate within Key Biodiversity Areas (Rehbein et al. 2020):

- 9% of existing wind farms (559) – another 162 in development
- 7% of existing solar (PV) farms (201) – another 152 in development

Kiesecker et al. (2019) estimate that over 3.1 million ha of KBAs and ranges of 1,574 threatened species could be impacted



IUCN response - Guidelines for project developers

- Two-year project focusing on the **mitigation of biodiversity impacts associated with solar and wind energy projects**
- Designed and managed by IUCN Business and Biodiversity Programme,
- Focuses on all biodiversity pressures linked to solar and wind infrastructure
- Scope of the Guidelines:
 - Biodiversity and ecosystem services
 - Entire life cycle of the project
 - Solar — PV and Concentrated
 - Wind — Onshore and offshore



IUCN response - Guidelines for project developers

- In collaboration with TBC and involving multiple stakeholders:
 - Industry: EDF, EDP, Shell New Energies, Wind Europe
 - NGOs: BirdLife, Fauna and Flora International, The Nature Conservancy, Wildlife Conservation Society, The Rich North Sea, American and Wind and Wildlife Institute
 - IUCN's commissions and regional offices
 - REN21 and Bangor University

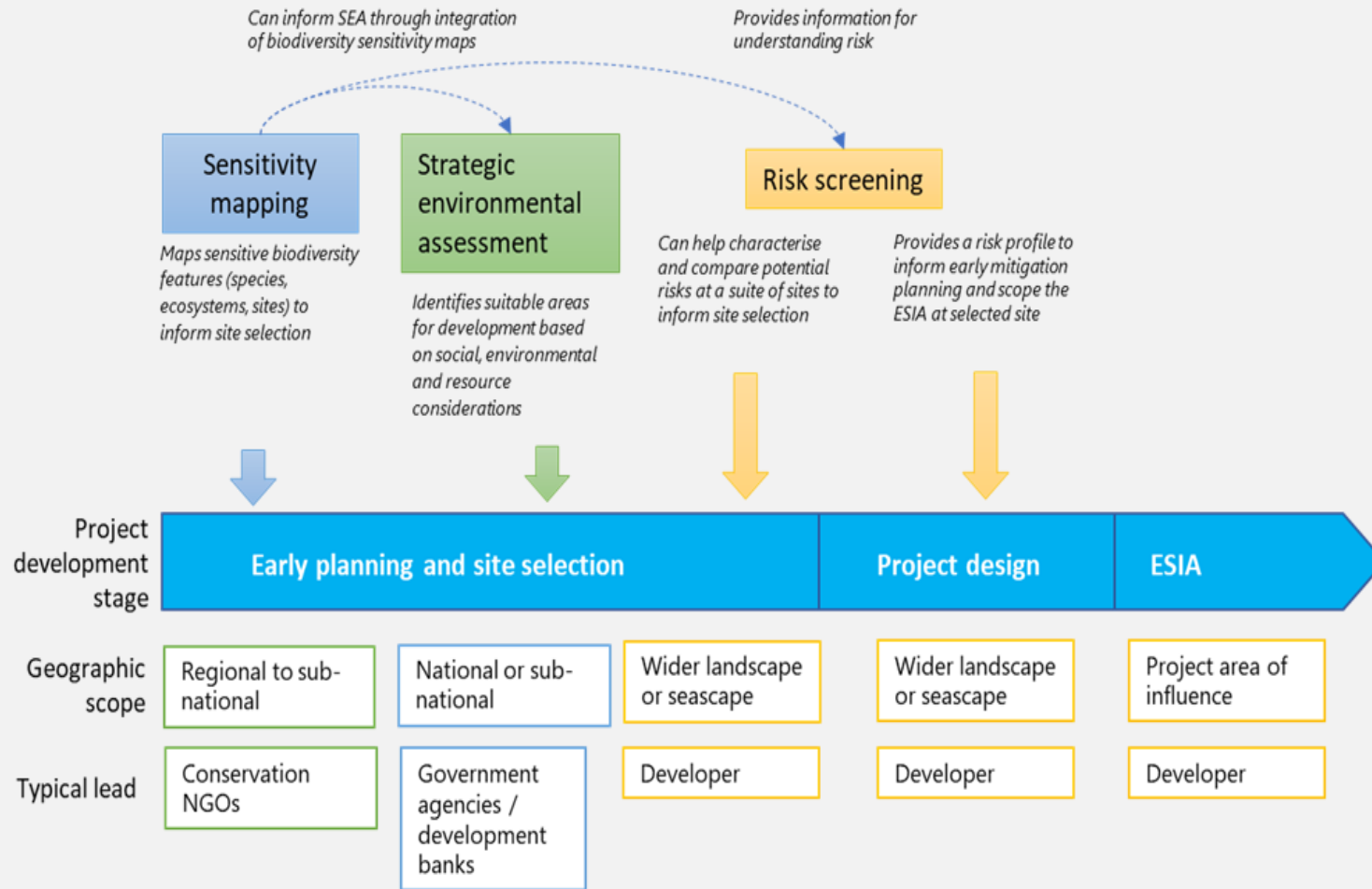


What makes these guidelines different?

- Developed through multi-stakeholder process
- Practical and industry-focused
- Strategic emphasis
- Mitigation Hierarchy framework
- Alignment with project lifecycle – from early planning through decommissioning/repowering
- Up to date, based on extensive evidence review – knowledge from industry experience, experts and literature, while recognising knowledge gaps
- Global – both established and emerging renewables markets
- Both onshore and offshore wind, plus solar – predicted to be bulk of future renewable energy development
- Comprehensive, but signposts other guidance and tools for context-specific detail

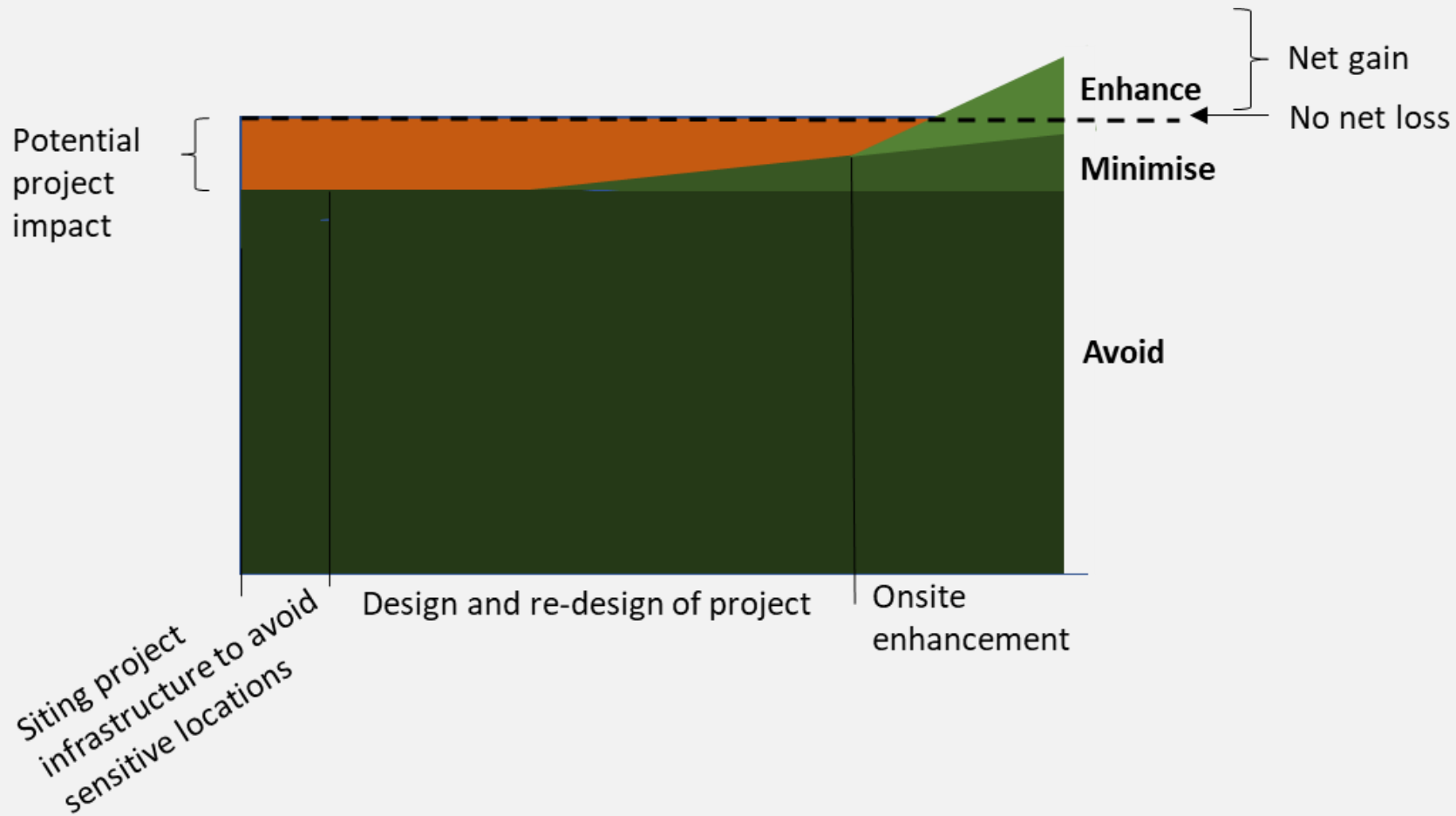


Key message – early screening and planning screening to AVOID impacts



- Relatively large land take and risk of intersecting with important bird and bat habitat and migratory corridors
- Potential for significant cumulative impacts along migration routes
- Risk screening by developers needs support from spatial planning informed by strategic environmental assessments and sensitivity maps
- Key roles for governments, funders and NGOs

Applying the mitigation hierarchy in an area of low biodiversity sensitivity



Potential for proactive conservation actions

- Going beyond the mitigation hierarchy to provide additional benefits to biodiversity and ecosystem services
- Wind and solar projects often have potential to maintain or improve biodiversity within the infrastructure matrix
- Essential also to consider ecosystem services and impacts on livelihoods and well-being of local people



Launch of the guidelines

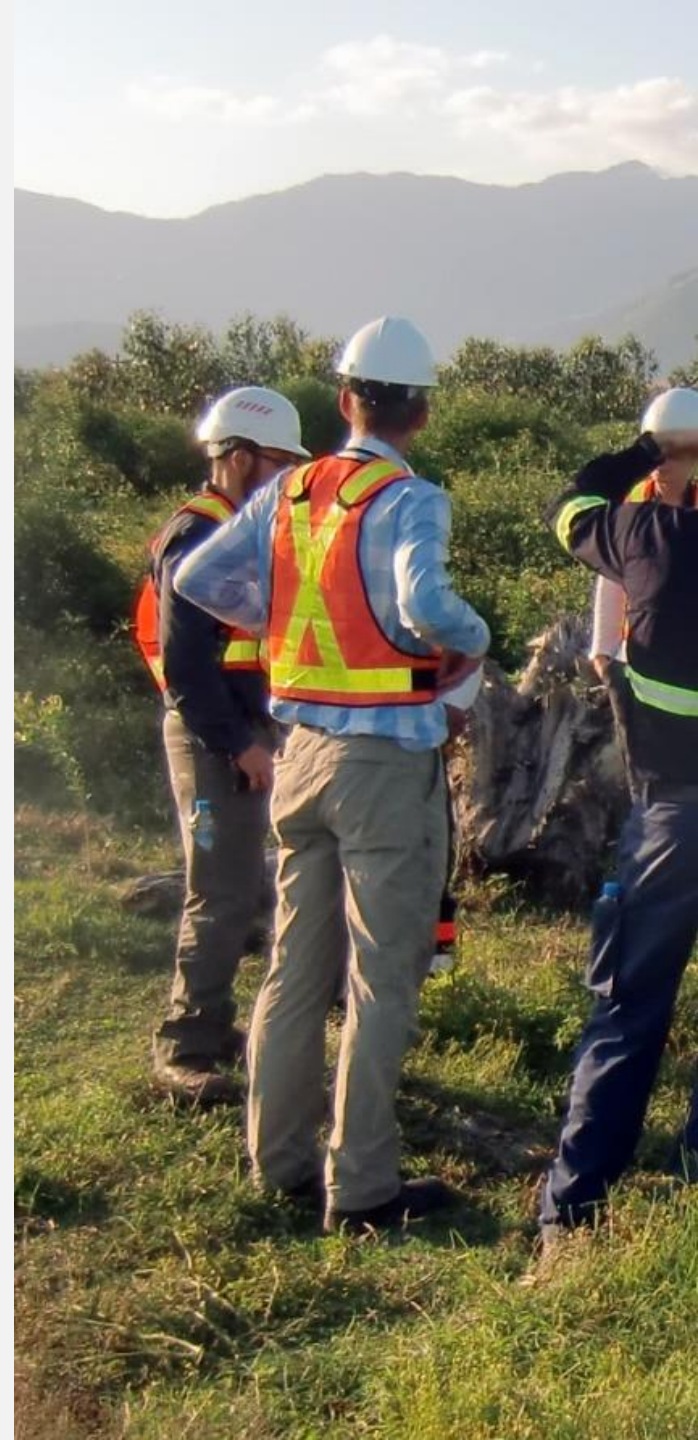
- Currently undergoing final review, followed by design & layout, and signoff by IUCN Editorial Board
- Official guideline launch planned in January 2021
- Presentation of key messages at IUCN World Conservation Congress and CBD COP in 2021 (dates to be confirmed)
- Supported by:
 - ✓ Tailored briefing notes, presentations and webinars for different audiences within businesses, with links to guidelines
 - ✓ Dedicated up-to-date web platform with additional resources and guidance materials
 - ✓ Early risk screening section on IBAT, IUCN, BirdLife, GBIF, UNEP-WCMC information platforms
 - ✓ Regular guideline updates to ensure it remains current and captures new technologies and new evidence of effective mitigation practices



Looking ahead

Some key topics and activities for further work include:

- Demonstrations of the effectiveness of the guidelines for mitigating biodiversity impacts associated with solar and wind energy development
- How spatial planning can help the move from site-based piecemeal mitigation towards a more strategic approach, identifying suitable low-risk zones for renewable energy development
- Potential impacts and mitigation for new renewables technologies (e.g. 'floatovoltaic' and floating offshore wind)
- Applying circular economy principles to solar and wind energy
- Creating a financing level playing field
- What system-level monitoring & evaluation could assess cumulative impacts



For more information, please contact

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