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Towards a clean and green energy future

Accelerating Solar and Wind Energy in India by Reducing Socio-ecological Risks

Rapid expansion of renewable energy is critical to meeting India's energy needs and addressing climate change. A new publicly available decision-support tool, SiteRight, helps policymakers, developers and financial institutions reduce unintended socio-ecological impacts and associated risks through lower impact siting of new solar and wind projects.

India aims to install 175 gigawatts (GW) of renewable capacity by the year 2022 and has the ambition to achieve 500 GW by 2030. Considering utility-scale on-shore wind and solar energy projects are expected to make up most of this target capacity (~420 GW), this transition to clean energy will require large areas of land.

If these projects are poorly sited, renewable energy footprint can adversely impact people and biodiversity, creating land conflicts that risk investments and slow renewable energy expansion. To avoid such conflicts, associated project delays, higher risks and costs, projects need to proactively consider potential impacts. Smart and lower impact siting is essential to the renewable energy sector's success.

At The Nature Conservancy, we believe in creating science-based solutions that advance economic development while conserving the environment. Along with our partners - Vasudha Foundation, Center for Study of Science, Technology and Policy and Foundation for Ecological Security - we are working to support the rapid expansion of renewable energy in India while ensuring minimal harm to places important for biodiversity and rural communities. We have developed a decision-support tool - SiteRight - to facilitate lower impact solar and wind energy siting.

SiteRight Tool

The SiteRight tool is created to identify areas where solar and wind development is less likely to encounter socio-ecological conflicts, thereby helping to reduce project delays and cost overruns. Developed now for the states of Madhya Pradesh and Maharashtra, the tool will be expanded to all Indian states in the near future.

What is lower impact siting?

Lower impact siting of solar and wind energy means adhering to the following principles that help minimize social and environmental impacts.

Proactively **assess impacts from siting early in the planning process** before significant project investments have occurred.

First **avoid** impacts to the extent possible and then minimize unavoidable impacts.

Understand competing land use demands and account for **cumulative impacts** while making decisions.

Ensure a **participatory process** that engages all stakeholders early and often, and transparently makes project-related information available in the public domain.

The SiteRight tool has three modules to support siting decisions in various contexts.



Awareness

Provides information on the extent of potential ecological conflicts and how much room there is to avoid these at state and pan-India level.



Site Assessment

Provides an assessment of potential sources of social and ecological conflicts for a user-defined area; can be used for an initial screening of potential project sites.

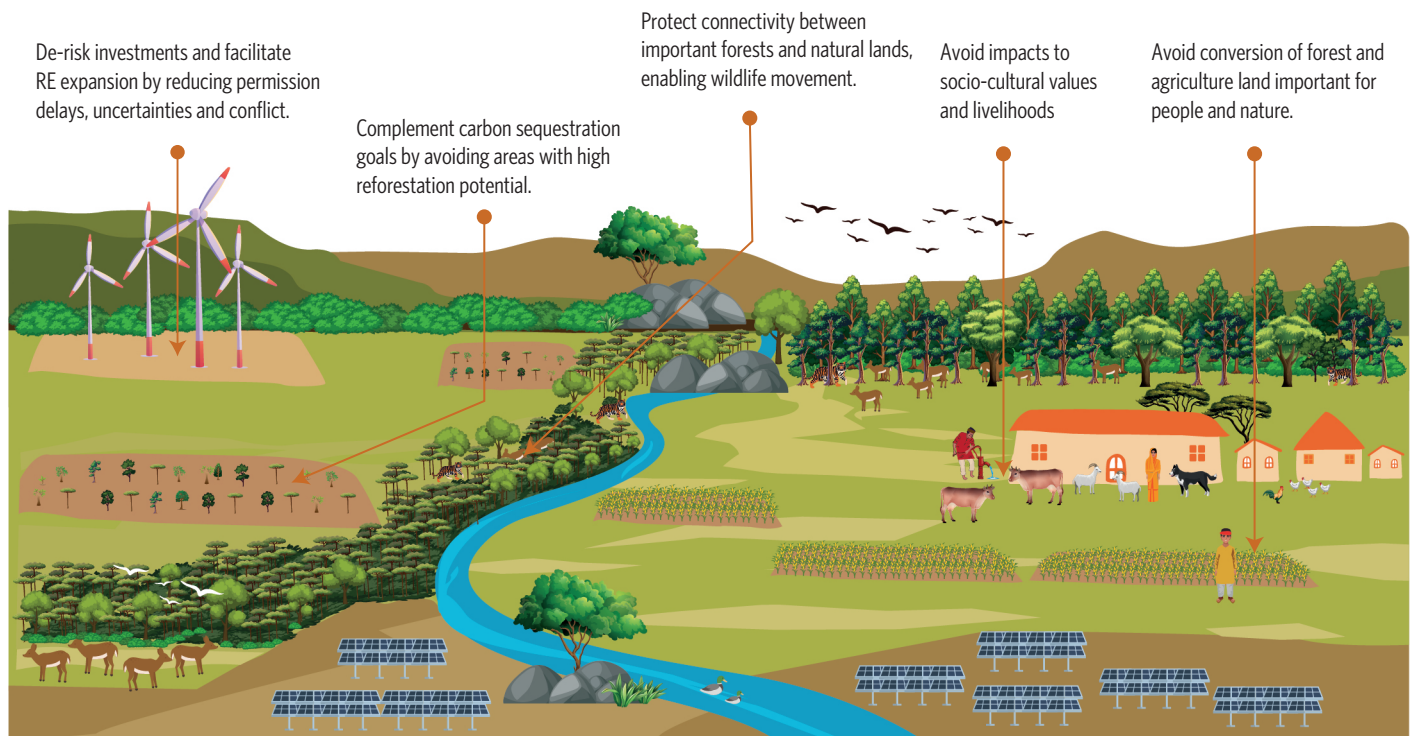


Planning

Helps identify lower conflict land parcels to meet a specific solar or wind energy goal at a state or a district level; can help government and businesses in long-term planning.

Benefits of lower impact siting

The SiteRight tool demonstrates that ambitious solar and wind development goals are achievable on sites with minimal risk of biodiversity or social conflicts. In fact, **India has more than 10 times the land needed for its 2022 goals and 4 times the 2030 goals that is potentially lower impact.** SiteRight can support various stakeholder groups by facilitating lower impact siting and benefit them in the following ways:



Policy-makers

Enable accomplishment of 2022 and 2030 goals with reduced risk for RE sector and expedited development; reduced regulatory burden for permitting and due diligence; coordinated approach ensures other policy goals are met in tandem.



Businesses

Reduce permitting time, project costs and delays; reduce reputational risk; open new avenues of financing; favorable perceptions with local communities and other stakeholders.



Financial Institutions

Reduce cost of implementing and ensuring compliance to environmental and social safeguards; reduce unforeseen risks to their investment; improve financial and operational performance; support a social license to operate.

Call To Action

Join us in building an India powered by clean and green energy and endowed with natural places, thriving biodiversity and people. This free and publicly-accessible tool can be used by anyone setting up or funding solar and on-shore wind energy projects.

Visit www.tncindia.in/siteright to get started.

As a science based non-profit, The Nature Conservancy is committed to conserving lands and water on which all life depends. Since 2015, The Nature Conservancy in India has been advancing projects to support India's efforts to develop win-win solutions for people and nature. TNC- India works closely with the Indian government research institutions, NGOs, private sector organisations and local communities to develop science-based on-the-ground, scalable solutions for securing food, water and clean air.

TNC-The Nature Conservancy Centre is a not-for-profit entity registered in India under the Companies Act with 80G certification.

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