

Biodiversity Conservation

Biodiversity, which includes the flora and fauna that enrich the environment around us, needs as much conservation as natural resources. Apraava Energy has been taking conscientious steps to assess, identify and protect the biodiversity around its sites and build awareness on biodiversity conservation among employees.

Some of our biodiversity conservation goals include sustained tree plantation and landscape development, conservation of flora and fauna around sites and usage of advanced pollution control technologies, and environmental practices to maintain air quality so as not to harm the ecosystems around our facilities. To this end, we have also created a biodiversity roadmap that outlines our short, medium and long-term vision. In March 2023, Apraava set up a Biodiversity Committee to support, plan, drive, execute and implement biodiversity-related initiatives at Apraava Energy.

Apraava Energy is a signatory to the India Business and Biodiversity Initiative (IBBI). As part of this commitment, we aim to develop a Biodiversity Index and Natural Capital Action Plan (NCAP) for all of our operational assets aligned with a long-term biodiversity strategy. One of the key action points of IBBI is awareness creation among various stakeholders around biodiversity conservation. Therefore, a first-of-its-kind biodiversity workshop was organised at the Apraava Energy corporate office in Mumbai in March 2023 for the twin purposes of awareness creation as well as seeking inputs on ways to improve our biodiversity strategy.

Apraava Biodiversity Committee was formed in line with IBBI's focus areas. The committee consists of cross-functional teams from assets, for which nominations were invited. The objectives under formation of the committee is not only to spread awareness on biodiversity but also to contribute in the projects associated with biodiversity management and develop nature-based solutions. Also, acknowledges the perspectives from cross-functional expertise on the aspect and impact on the environment as well as the communities.



Biological Diversity at JPL

Completion of Baseline Biodiversity Assessment at Jhajjar Power Limited for all three seasons

As per IBBI directives, JPL has conducted baseline biodiversity assessments across all three seasons in the JPL plant area, the township, and nearby villages within a 10-km buffer zone in order to map business linkages with biodiversity and related ecosystem services. Tree counting and carbon sequestration measurement was also a part of assessment along with the development of a Natural Capital Action Plan (NCAP). After assessing the habitats in the study area for three seasons i.e. monsoon, winter, and summer, following were the outcomes:

- | During the site assessment, four important ecosystems/habitats were enlisted. These are Greenbelt plantations, Ash Dyke, Reservoir, Natural Forest
- | Total floral species are 135 in number which includes 61 tree species, 25 shrub species, 30 herb species, 8 climbers and 11 tree species leading to rich and healthy floral species diversity
- | 222 faunal species were recorded with 167 species of birds, 38 species of butterflies, 10 species of mammals and 7 species of reptiles leading to rich and healthy faunal species diversity
- | Tree counting exercise indicated that JPL has grown more than 310,000 trees in the plant premises. Percentage of area under green belt as per survey is significant as per the statutory requirement.
- | The trees in plant and townships areas has sequestered around 33,000 tonnes CO₂ till the study period.
- | Biodiversity Index Score of JPL is 60 out of 100*
- | 15 NCAPs were developed to maintain species, habitat and ecosystem diversity; mitigate loss of biodiversity, and protect the integrity of ecological functions of the ecosystems

In consultation with CII, 15 NCAPs have been developed for high to medium impact and/or dependencies of the project with the objective of maintaining the diversity of species, habitats and ecosystems. Out of 15 NCAPs, 9 have been completed and 6 are under different stages of completion. Vital NCAPs include development of a wetland and butterfly park inside the JPL premises, removal of invasive species, mixed species plantation, awareness on biodiversity.

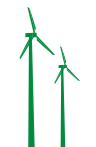
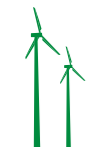
*Biodiversity Index of the site has been calculated by the use of modified City Biodiversity Index (CBI) methodology of the Convention of Biological Diversity (CBD). This methodology is a dynamic process, prepared for depicting the project area biodiversity status.

The biodiversity index helps in evaluation, planning, improving and reviewing the factory condition in biodiversity perspective. There were a total of 25 indicators used and each indicator is assigned a scoring range between zero and four. The key strengths of Biodiversity Index are:

- i. It is the only index that focuses on biodiversity and quality of ecosystem services
- ii. Its coverage is diverse and comprehensive, incorporating indicators on biodiversity, ecosystem services and good governance & management
- iii. The scores are quantitative; hence, it is possible to monitor the changes over a period

During the assessment, no Rare, Endangered and Threatened (RET) species of flora or fauna were recorded either from terrestrial or aquatic ecosystems in and around (a radius of 10 km) the study area. Also, no migratory routes of animals or birds were found and no breeding grounds and sensitive habitats were recorded within the area under assessment.

Biodiversity conservation helps in sustainable management and utilisation of species and ecosystems and is critical for business. Baseline assessment of biodiversity and ecosystem services helps in identifying site-specific risk areas linked to biodiversity and developing a structural approach for their enhancement through NCAPs directing biodiversity conservation. We are extending our biodiversity assessment exercise to our renewable energy assets as well.



NCAP Actions undertaken at JPL

Awareness Signage on Biodiversity



Mixed Species Plantation with Space



Butterfly Park Under Development



Conserving Natural Grassland



Training on Reptile Conservation



In-house Wetland Drain Under Construction



Invasive Plant Species Removal



Biodiversity Awareness and Sensitisation Workshop at Apraava Energy

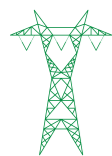
A biodiversity workshop was organised in March 2023 at Apraava Energy's Mumbai corporate office in collaboration with CII-ITC Centre Of Excellence For Sustainable Development (CII-CESD) and Godrej & Boyce Mfg. Co. Ltd. (G&B). Biodiversity experts from CII and G&B delivered a presentation on **'No Net Loss of Biodiversity Strategy'** and the **'Significance of Mangrove Conservation'**. On the second day of the workshop, the Apraava Biodiversity Committee visited the Vikhroli Mangroves in Mumbai to understand Godrej's initiatives towards mangrove conservation. Apraava Energy's Sustainability Working Group (SWG) members also participated in this workshop.

Key topics covered during the workshop were biodiversity and its conservation, JPL's Biodiversity Assessment Report and Natural Capital Action Plan (NCAP), the concept of no net loss of biodiversity, mangrove conservation, importance of mangroves, varieties of mangroves and the impact of anthropogenic activities on mangroves.

The workshop was beneficial for the biodiversity committee members as they learnt the importance of mangroves in environment protection and the role they play in mitigating the impact of climate change.



Apraava Biodiversity Committee's Visit to Vikhroli Mangroves





Installation of Bird Diverters

Our Transmission Line (TL) route in the state of Rajasthan passes through some patches where permanent water bodies are present and criss-crosses the flight routes of certain migratory birds such as the Great Indian Bustard (GIB), a critically endangered bird species in India.

Electrocution and collision of birds including the GIB with overhead power transmission lines is among the major cause of death of these birds. Bird flight diverters have been identified as one of the measures to avoid chances of collision of these birds with transmission lines. As per recent statutory guidelines, these diverters shall now be placed in identified stretches. This initiative is being carried out as a one-time measure and if any of them are found damaged or missing, they will be replaced. Newly installed diverters have a minimum life of three years.

Apraava Energy has installed bird flight diverters on sections of transmission lines that are in proximity to water bodies. This initiative will help to reduce the bird mortality caused due to the renewable energy infrastructure.

The total number of bird diverters installed by Apraava Energy so far is 89,980 at its various locations.

Apraava Energy has been pursuing the ambition of being a responsible power sector player consciously since its inception and in a more focused manner over the last decade. While this is reflected clearly in our business decisions—of not making any fresh fossil-fuel based project investments—it is being pursued just as consciously in the manner in which we optimise use of natural resources; constantly strive to make our operations more efficient; conduct sustained awareness drives and workshops, and undertake periodic assessments and surveys. We will continue to strive to contribute to India's biodiversity and environment conservation efforts as much as we fulfil its power needs.

