ROLE OF INDUSTRIES IN BIODIVERSITY CONSERVATION: GODREJ CASE STUDY

Laxmikant Deshpande

Sr. Manager: Wetland Management and Sustainability, Plant 25, Godrej & Boyce Mfg Co Ltd, Vikhroli (W), Mumbai 400 079. Email: amartd@godrej.com

Godrej's Pirojshanagar Township, inhabited and used by 50,000 employees, residents and visitors every day, spread across Vikhroli in Mumbai is a role model of integrated sustainable habitat with more than a few thousand acres mangrove forest thriving along with industrial plants, commercial offices, schools, hospital and residential colonies. Godrej mangrove boasts of 1100+ plant species including 16+ mangrove and mangrove associate species, 82 butterfly species, 80 spider species, 75+ insect species, 208 bird species, 14 crab species, 7 prawn species and 22 fish species and several other terrestrial and coastal species. According to the research, Godrej mangroves have sequestered standing carbon stock of around 9,00,000 tons with an yearly incremental sequestration of 50,000 tons apart from providing other ecosystem services like prevention of coastline erosion, climate regulation, water storage, breeding nursery for fish, crabs and prawns, offering livelihood for the local fisher folk, and providing living laboratory for research and awareness.

Around 75% of Godrej campus is unconstructed, covered by natural forest, plantation, landscaped gardens and open spaces. Horticulture team promotes indigenous plant species and nurtures green cover on recycled water to an extent. It has developed Mumbai's largest terrace garden of around 100000 sq ft. Vertical gardens occupy some wall areas. These practices help in further enhancing green cover and lowering of ambient temperature.

The mangroves visited by 35000+ citizens in last four years, is scientifically managed with a three-pronged approach of Research, Conservation and Awareness. Since last 10 years, Godrej has facilitated 30+ mangrove biodiversity research projects undertaken by school students, graduate, post-graduate and Ph. D. students. These projects have offered

valuable insights to functioning of mangrove ecosystem. Godrej's mangrove conservation initiative is strongly supported by its environmental sustainability initiatives. The company has achieved 'water positive' status by reducing specific fresh water consumption by 34%, achieving reuse of recycled water upto 35% over of total water footprint and harvesting more than 45% of rainwater under 'Good & Green' initiative adopted in 2010. With a strong waste collection, segregation, composting and recycling system,100% of 10-12 tons of garbage per day is diverted from landfill and more than 99% industrial waste is recycled. Around 1000 tons of compost made in-house every year is used for landscaping and plantations. These two decisions of not dumping waste water and solid waste to Thane creek has offered a fresh lease of life to mangroves. Every Godrej employee visits mangrove forest under corporate induction program to understand and appreciate mangroves. Capacity building of every internal (employees, residents and school students) and external (vendors, suppliers, customers) stakeholders is given utmost importance. Besides five environmental awareness events conducted for Godrej township residents every year, nature clubs in Godrej's primary and high schools, every industrial plant includes awareness on environmental and social sustainability in its training calendar. The most unique aspect of Godrej Mangroves Project is inter-linkages of the traditional conservation approaches, modern industrial management systems and personal appraisal systems.

The mangrove conservation story started unfolding in 1940s with the purchase of Vikhroli village by Godrej family. Since then, it has seen remarkable phases of management approaches from philanthropy to research to on-site conservation to stakeholders' awareness to integration of mangrove project in industrial management system in last 70 years. Today, Godrej is not only the custodian of mangrove ecosystem but has integrated ecosystem conservation in its business model and management of Pirojshanagar campus through various tools and systems like ISO 14001:2004 certification, Kaizen Improvements System and Business Excellence Model. Godrej's traditional three pronged approached of Research, Conservation, Awareness for mangrove protection is now tightly woven into these industrial management systems ensuring sustainability of mangrove

conservation initiatives through rigorous planning, resource allocation, implementation and result based monitoring (RBM).

Recently, Godrej has developed a visual and informative mobile app for identification of 67 true mangrove and mangrove associate species of India with the help of leaf shape, flower color, species name and species geographical location in India. The App provides species description of plant parts like leaf, flower, root system along with type of tree, its uses, flowering and fruiting season. The App has a separate section describing key characteristics of mangrove ecosystem. Users can provide comments for the App improvement using feedback feature. The App, once downloaded, can be used offline and does not require internet connection. It was launched by Mr Devendra Fadnavis, Honorable Chief Minister, Maharashtra in FY 2017. So far has been downloaded by 4000+ users from 65 countries making it first of its kind in Asia and highest rated and downloaded mangroves mobile app of the world.

A unique 'City Biodiversity Index' on the Biodiversity Index for Godrej premises in collaboration with teams from CII-SGGBC & WWF India was conducted in 2015, which has scored 63 out of 92 total points. This survey is the third such survey in India, besides Hyderabad and Mira-Bhayander cities, and world over the first conducted by any corporate. This study offered insights on status of biodiversity of Godrej campus and way forward for its management.

In 2018, Godrej undertook camera trap study in mangroves area to understand mammalian diversity. The study conducted by Wildlife Conservation Society obtained insights on behavior of resident Golden Jackal and Boar populations. In last three years, a few Jackal-Human conflicts were reported. The study helped understanding reasons of this conflict and ways to mitigate it. Based on the study recommendations, Godrej has developed water holes for wildlife and undertaken an awareness campaign for its Township residents.

Sighting of snakes, monitor lizards in and around human habitation is one of the Township management challenges. In summer, residents report wild birds and jackals in distress. Godrej has engaged Resqink Association for Wildlife Welfare (RAWW) for

rescue and rehabilitation of wildlife in distress. In last two years alone, RAWW has rescued 90+ wild birds and animals, each case documented as per the Forest Department guidelines.

Key Learnings:

A review of Godrej experience of mangroves conservation offers following key learnings that may provide roadmap for any industry intending conservation of ecosystem in its campus:

- Define ownership of the ecosystem placing it in safe hands
- Create a dedicated and skilled team of professionals
- Follow holistic approach of protection, research, on-site conservation and awareness
- Follow both 'top to bottom' and 'bottom to top' approach to ensure participation of all stakeholders at all levels
- Ensure engaging both internal and external stakeholders for ecosystem conservation
- Link conservation efforts and teams with industrial processes as every industrial process directly or indirectly impacts ecosystems

Model of Godrej Company