



THE WEB OF LIFE

Inspiring biodiversity stories
from the Tata universe

INDEX

Indian Hotels Company Ltd.			
PROTECTING PANNA WITH THE PARDHI COMMUNITY	01		
.....			
Tata Coffee Ltd.			
PROTECTING THE 'FARMERS OF THE FORESTS' IN ANIMALAI HILLS	03		
.....			
Tata Projects Ltd.			
CREATION OF A FOREST TO FOSTER BIODIVERSITY	05		
.....			
Tata Steel Ltd.			
BIODIVERSITY MANAGEMENT AT WEST BOKARO MINES	07		
.....			
Tata Chemicals Ltd.			
SAVING THE 'VAHLI' WHALE SHARKS OF GUJARAT	09		
.....			
Jaguar Land Rover			
REDEVELOPING THE ATLANTIC FOREST IN BRAZIL	11		
.....			
Tata Steel Europe			
FACILITATING NESTING AND BREEDING OF COMMON TERNS	13		
.....			
Tata Chemicals Ltd.			
CONSERVING THE 'RAINFORESTS OF THE SEA' IN MITHAPUR REEF	15		
.....			
Tata Consulting Engineers Ltd.			
BUILDING A GREEN CAMPUS	17		
.....			
Tata Consultancy Services Ltd.			
CONSERVING URBAN BIODIVERSITY	19		
.....			
Tata Chemicals Ltd.			
ECOSYSTEM TRANSFORMATION BY MANGROVE PLANTATION	21		
.....			
Tata Motors Ltd.			
DEVELOPMENT OF A BIODIVERSITY-RICH WETLAND ON ROCKY BASALT	23		
.....			
Tata Power Company Ltd.			
WESTERN GHATS BIODIVERSITY HOTSPOT CONSERVATION	25		
.....			
Tata Coffee Ltd.			
CONSERVATION & MANAGEMENT OF ELEPHANT CORRIDORS IN COFFEE PLANTATIONS	27		
.....			
Kanan Devan Hills Plantations Company (P) Ltd.			
An associate company of Tata Consumer Products Ltd.			
THE SHOLA REGENERATION PROJECT	29		





There is no doubt that biodiversity loss is connected with human activity. Our demand for food and other resources is driving deforestation, leading to land-use change and encroachment on wildlife habitats. In order to prevent it, we have to re-imagine the way we produce and consume, the way we conduct our businesses. This will require governments, businesses and communities to come together to act in a concerted manner, guided by a robust and comprehensive environmental policy framework and accountability measures. At the Tata Group, we understand that it is our responsibility to build a better future and are doing our bit to preserve ecology and conserve species.

**AS MEMBERS OF THE NATURAL CAPITAL COALITION,
WE PLAYED A CRUCIAL ROLE IN FORMULATION OF THE NATURAL CAPITAL
PROTOCOL AND WERE AMONG THE FIRST COMPANIES GLOBALLY TO PILOT
THE NATURAL CAPITAL VALUATION PROTOCOL.**

We continue to remain committed to preserving our biodiversity and proactively engaging on all aspects of environmental and social change. I would like to personally thank all our Group companies that collaborated with us in this year's edition of Tata Sustainability Month.

Siddharth Sharma
Group Chief Sustainability Officer





We live in an intricately connected world. Deep connections exist between all life forms on earth and together, they make up 'The Web of Life'. The web sustains life on earth in several ways - providing food, water and other critical resources like medicines, regulating the quality of air and soil, providing flood and disease control, and offering aesthetic, spiritual and psychological benefits. To do this efficiently, there exist a million diverse lifeforms, each performing a different but vital function. This diversity of lifeforms on earth is termed as biodiversity.

There is mounting evidence that the health of the planet is declining at rates never seen before in human history. This destruction of nature undermines human health and well-being, societal resilience, and progress towards the Sustainable Development Goals (SDGs). It places severe costs on businesses and economies, and makes addressing other global challenges, such as climate change and social inequalities, significantly more difficult. The Tata Group recognises biodiversity as vital asset for sustainable economic growth and is committed to combating biodiversity loss by managing its impacts and dependencies. From sheltering and saving at-risk species in the hinterlands of India, to creating protected areas in UK; from working with tribals in forests to providing havens for biodiversity in urban concrete jungles; from coral reefs to hornbills and from whale sharks to wetlands, Tata Companies are walking the talk on biodiversity. This compilation provides a glimpse of 15 biodiversity-focussed initiatives by the Tata Group of Companies.

FROM SHELTERING AND SAVING AT-RISK SPECIES IN THE HINTERLANDS OF INDIA, TO CREATING PROTECTED AREAS IN UK; FROM WORKING WITH TRIBALS IN FORESTS TO PROVIDING HAVENS FOR BIODIVERSITY IN URBAN CONCRETE JUNGLES, TATA COMPANIES ARE WALKING THE TALK ON BIODIVERSITY.



Indian Hotels Company Ltd.

PROTECTING PANNA WITH THE PARDHI COMMUNITY

Historically, the Pardhi community used to hunt tigers as their core means of livelihood. After the ban on tiger hunting, the nomadic community was pushed to the fringes and survived by engaging in poaching. The Indian Hotels Company Limited (IHCL) collaborated with the Last Wilderness Foundation and the Panna Forest Department to pilot an inclusive tourism model that created alternate livelihood opportunities for the community as nature tour guides. The Pardhis' natural flair for tracking animals and reading the forests was leveraged to create a unique, authentic tourist experience called 'Walk with the Pardhis'.

Taj Safaris trained 15 youngsters from the community, two of whom have now been placed in Taj Safaris as Naturalists. Additionally, 15 women were trained to shape their culinary skills. A grant of INR 8,20,000 received through Tata Mumbai Marathon - United Way, two years ago was also invested in strengthening the community's communication skills, co-creating and embedding additional rural experiences to enrich the nature & cultural trail, and creating awareness & promotional materials.

Tourists have an opportunity to immerse themselves in local culture and enjoy an authentic engagement through the lens of a native and not just a naturalist.

With around 40 tigers in the reserve today, the collaboration of scientific expertise, professional marketing acumen and the natural talent of the community in understanding the jungle, has created a viable alternate means of livelihoods for the Pardhis. This is the first generation of Pardhi youth, who are living a life of dignity, earning a stable income, and are now contributing to the tourism economy.



FIFTEEN YOUNGSTERS

WERE TRAINED BY TAJ
SAFARIS TO BECOME NATURE
TOUR GUIDES

FIRST GENERATION

OF PARDHI YOUTH, WHO ARE
LIVING A LIFE OF DIGNITY &
EARNING A STABLE INCOME

The Pardhis' natural flair for tracking animals and reading the forests was leveraged to create a unique, authentic tourist experience called 'Walk with the Pardhis.'



Tata Coffee Ltd.

PROTECTING THE 'FARMERS OF THE FORESTS' IN ANIMALAI HILLS

Known for their role as seed dispersers, Hornbills are among the largest birds in Asian tropical forests and are essential for forest conservation. The Tata Coffee Hornbill Foundation was formed with a vision to create awareness among all stakeholders and the public about 'The Great Indian Hornbill' as well as to protect its habitat, and ensure its safety and population growth. Through multiple strategic reforestation interventions, the Foundation was successful in minimising the damage caused by habitat modification and fragmentation.

In partnership with Nature Conservation Foundation, Karnataka, the NCF Rainforest Research Station, Tamil Nadu and the Tamil Nadu Forest Department, a special study was undertaken to assess the impact of habitat modification on breeding biology and nesting behaviour of the Great Indian Hornbill. Insights from this study were used to design strategic interventions, which included increasing food plant diversity, protecting trees for nesting and roosting, and restricting human activity.

In addition to the endangered Great Indian Hornbill, Tata Coffee plantations are also home to the endemic Malabar Grey Hornbill. The observations of a recently conducted study estimate a population density of 2 to 3 Great Hornbills per square kilometre and about 11 Malabar Grey Hornbills per square kilometre in Tata Coffee estates, which are exceptionally good numbers. Another observation was that the diversity and abundance of hornbill food plants were lower in the modified habitat as compared to contiguous forests. Towards this, efforts are being taken to increase food plant diversity by planting native food plant species as coffee shade trees to sustain and increase the population of hornbills.



INCREASE IN
POPULATION
DENSITY OF THE
GREAT INDIAN
HORNBILL

SUCCESSFUL IN
MINIMISING
DAMAGE CAUSED
BY HABITAT
MODIFICATION

HORNBILL HABITAT
AT TATA COFFEE
PLANTATIONS FEATURED
IN 'OUR PLANET'
TV SERIES IN 2019

Great Hornbill density of 49 individuals per sq. km observed during the pre-nesting season and Malabar Grey Hornbill density of 136 individuals per sq. km observed in post-nesting season.



Tata Projects Ltd.

CREATION OF A FOREST TO FOSTER BIODIVERSITY

Dry and sub-humid lands, which include arid and semi-arid regions, grasslands, savannahs and Mediterranean landscapes, cover about 47% of the earth's terrestrial area. The main biodiversity challenges in such lands arise due to habitat conversion as well as poor soil and water management. Tata Projects' Medchal Plant in Hyderabad is located in a similar land zone.

To foster biodiversity in the region, Tata Projects decided to supplement the existing green cover. Towards this objective, it zeroed in on the Miyawaki technique, which is renowned for accelerated creation of a natural, wild and dense forest. It involves planting dozens of native species close together in a really small area. Not only does this enrich the green cover, it also reinforces the richness of the land and nurtures biodiversity.

377 saplings were planted in August 2018 covering an area of 100 sq. m. The species were chosen based on their ability to survive and grow in hot weather. They were supported with sticks, so they do not droop or bend. The ongoing maintenance includes de-weeding, cutting & pruning, spraying pesticides and fungicides as and when required, application of plant growth hormone once every month, soil filling and labelling, and sufficient watering.

A barren area has now been converted into a dense forest in quick time providing a plethora of benefits:

Fosters dry and sub-humid land's biodiversity

Ensures green cover | Improves air quality

Reduces carbon footprint | Recharges groundwater

Reduces temperature inside the forest and in the surrounding areas



377

SAPLINGS WERE
PLANTED IN AUGUST 2018

10

TIMES FASTER
PLANT GROWTH

30

TIMES DENSER
PLANTATION

“ There is major improvement in the fresh air, and a perceivable drop in temperature. Plus we regularly hear the sounds of birds chirping and the fragrance of the flowers is very aromatic. ”

- Mr. Nataraja C. B., Head of Medchal site



Tata Steel Ltd.

BIODIVERSITY MANAGEMENT AT WEST BOKARO MINES

Tata Steel realises the responsibility of the mining industry towards biodiversity management, and the need for all stakeholders to commit to better models for decision-making processes in land use and access. Towards this goal, Tata Steel collaborated with International Union for Conservation of Nature (IUCN) in 2011-12 to develop a potential framework for a Biodiversity Policy for the entire company and all its facilities. As part of this exercise, a comprehensive Biodiversity Management Plan (BMP) was developed for the West Bokaro Colliery (WBC) located in Ramgarh District, Jharkhand.

The suite of measures proposed in the plan included incorporation of some environmentally-oriented industrial land use to avoid, minimise, rectify, and/or compensate impacts to biodiversity resulting from mining activity at WBC. The measures proposed are intended to build on commitments already made in conjunction with the mines regulatory approvals and ongoing mitigation programmes already under way at the WBC.

Some of the initiatives undertaken at WBC include construction of Sir Dorabji Tata Biodiversity Park over an area of 100 hectares, a drinking water project based on rainwater harvesting with water treatment facility, a network of pipeline to provide drinking water to seven nearby villages, and promotion of biodiversity and sustainability through art and creativity by organising the 10th Annual Flower and Vegetable Show at the Sports Complex in West Bokaro. Over and above this, development of a nursery for native species, development of a Butterfly Park, Hibiscus Park, Spice Garden, Fountain Park and Miyawaki Plot, and initiatives for re-vegetation, top soil management and dump stabilisation have also been undertaken.



800 HECTARES OF
LAND UNDER
RESTORATION

SIR DORABJI TATA BIODIVERSITY
PARK DEVELOPED OVER AN AREA
OF 100 HECTARES

DEVELOPMENT OF NURSERY, BUTTERFLY PARK, HIBISCUS PARK,
SPICE GARDEN, FOUNTAIN PARK AND MIYAWAKI PLOT

“Sustainability lies at the heart of everything we do at Tata Steel. Biodiversity conservation is important for us. We are actively pursuing initiatives to achieve no net loss of biodiversity.”

– Mr. Manish Mishra, General Manager, West Bokaro, Tata Steel



Tata Chemicals Ltd.

SAVING THE 'VAHLI' WHALE SHARKS OF GUJARAT

A sudden surge in hunting of the Whale Shark was pushing the species towards extinction. Despite being granted the highest legal protection, saving the Whale Shark needed a massive attitudinal shift among the coastal fishing community. Tata Chemicals partnered with the Wildlife Trust of India, the Gujarat State Forest Department and International Fund for Animal Welfare to launch the 'Save the Whale Shark' campaign that followed a two-pronged approach - an awareness campaign and a scientific study.



The first part of the project roped in a much-revered spiritual leader, Shri Morari Bapu, as its ambassador to position the Whale Shark as 'Vahli' (the dear one) and highlighted the similarity of the Whale Shark coming to Gujarat's shores to breed with that of a daughter returning to her maternal home ('maika') for childbirth. This invoked an emotional response and fired-up the paternal protection instinct among the people. The second stage of the project focussed on research and study of the Whale Shark ecology for establishment of a scientific database using photo-identification, satellite tagging and collection of genetic samples. Till date, Tata Chemicals has invested a total of INR 3.13 crore towards the project.



787

WHALE SHARKS
RESCUED AND
RELEASED

'ZERO'

INCIDENTS OF
SHARK POACHING
ACHIEVED

FIRST TIME
IN INDIA

ESTABLISHMENT
OF WHALE SHARK
RESCUE PROTOCOL

The project has won a multitude of awards and its success has inspired two coastal states of India i.e. Kerala and Andhra Pradesh and one Union territory - Lakshadweep, to initiate similar conservation campaigns.



A photograph of a dense forest of tall, slender trees, likely Atlantic Forest trees, under a blue sky with light clouds. The trees are tall and thin with a distinctive tiered canopy structure. The background shows a lush green forest on a hillside. A thin white border frames the image.

Jaguar Land Rover

REDEVELOPING THE ATLANTIC FOREST IN BRAZIL

The Atlantic Forest, a South American forest that extends along the Atlantic coast of Brazil, has ecoregions characterised by a high biodiversity and endemism. Itatiaia in Brazil is located in a region within the Atlantic Forest Biome and has rare species that are principal components of the species richness and diversity encountered in these forests. Unfortunately, the area around Paraiba do Sul river, where these forests once stood, is now mostly covered with pasture lands with just a few remnants of the original forests.

In 2015, to contribute in a small way to revive this biodiversity rich habitat, Jaguar Land Rover (JLR) created a one hectare Permanent Protected Area (PPA) adjacent to its project site and worked in collaboration with Environmental Regulator and various departments to donate and plant over 1,600 native trees. Furthermore, the Company raised awareness on forest conservation through leaflets, signage and face-to-face communication within the premises.

These protected areas now provide habitat and protection from hunting for threatened and endangered species and help maintain ecological processes. JLR continues to maintain the 1,600 native Brazilian trees planted in 2016 and periodically replenishes trees that have died. In 2018 and 2019, an additional 100 and 240 trees were planted.

Going ahead, JLR plans to double the area under their care by adding another hectare of land closer to the river Paraiba do Sul. Also on the anvil, is a plan to conduct a wildlife assessment of fauna inhabiting the REVISMEP area - a cross state ecological designated improvement area aligned along the river Paraiba do Sul.



1,600 NATIVE
BRAZILIAN TREES
PLANTED IN 2016

ONE HECTARE
PERMANENT
PROTECTED AREA

PROTECTED AREAS NOW PROVIDE HABITAT AND PROTECTION FROM HUNTING FOR THREATENED AND ENDANGERED SPECIES AND HELP MAINTAIN ECOLOGICAL PROCESSES.

The Site was awarded a Leadership in Energy and Environmental Design (LEED) Gold standard for its building and construction practices. This was the first automotive manufacturing facility to be awarded this recognition in Brazil.





Tata Steel Europe

FACILITATING NESTING
AND BREEDING OF
COMMON TERNS

Driven by the commitment to enhance biodiversity at its sites, Tata Steel Europe in North Wales, in collaboration with Merseyside Ringing Group (MRG) transformed lagoons into a nature reserve by providing safe nesting sites for the Common Tern, a vulnerable bird species. The first safe nesting area for Common Terns was created in 1970 by deploying artificial rafts. After attracting 12 pairs of nesting terns in the first year of the project, over time a colony has grown and has become the largest Common Tern colony in Wales and one of the top five colonies in UK.

In 2011, Tata Steel Europe established a visitor walkway, bird observation hides, watch-tower and indoor & outdoor educational facilities at the site. Group excursions and school student visits are now a regular feature and the Company is happy to play host and ensure that the visitors have an enriching experience of engaging with nature.

Tata Steel provides ongoing assistance with the maintenance of the islands and reedbeds, which includes suppressing vegetation, as terns prefer to nest on bare, stony ground, maintaining protection from predation and covering the island nesting sites until the Common Terns return each spring.

The colony continues to be a major contributor to the Irish Sea Common Tern metapopulation, supporting an amber-listed species as specified in the Dee Estuary Special Protection Area. Due of its importance as a wetland habitat and as a prolific breeding location for Common Terns, the settlement pond complex was designated in UK law in 1999 as the 'Site of Special Scientific Interest' (SSSI).



412

COMMON TERN
PAIRS NESTED IN
THE AREA IN 2019

409

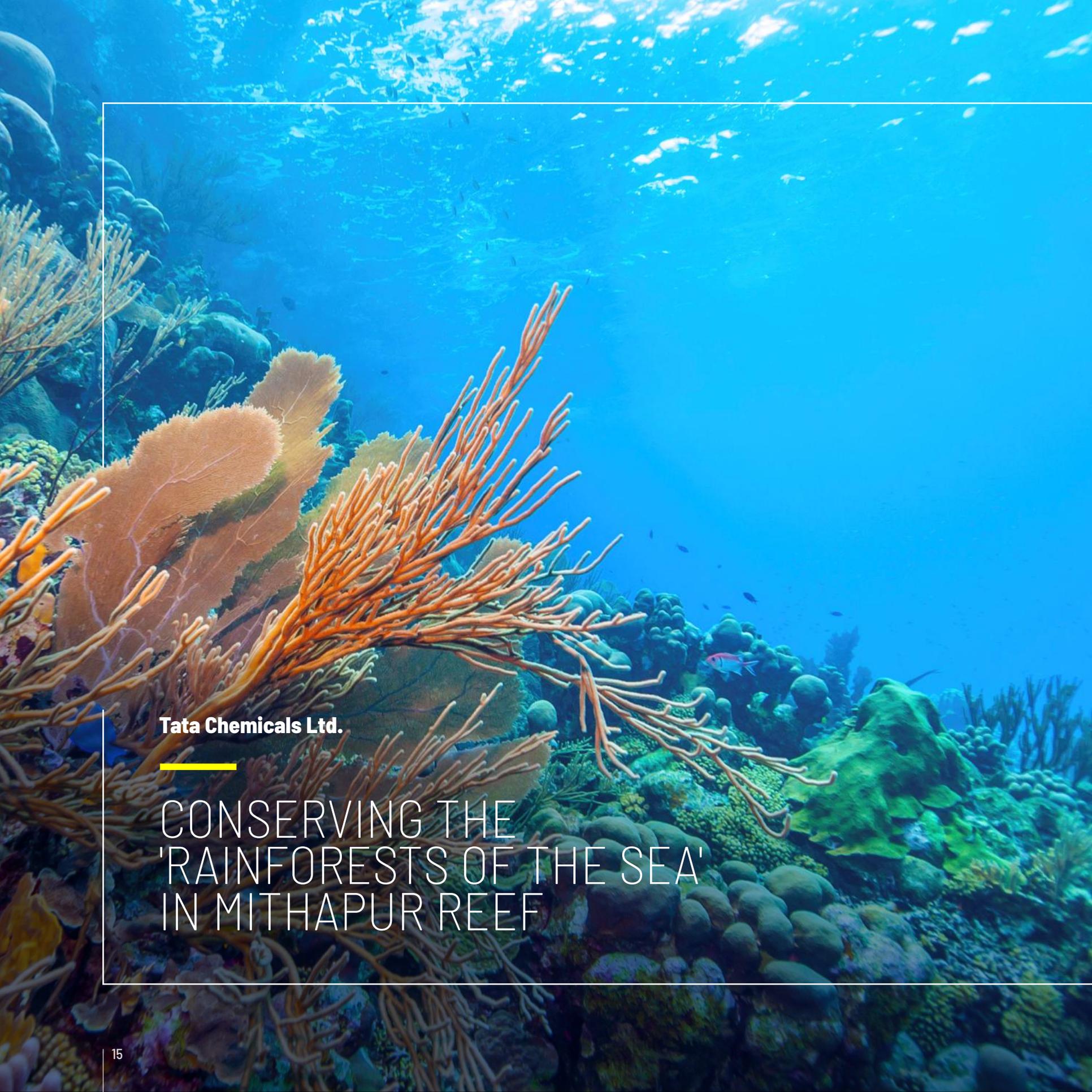
COMMON TERN CHICKS
SUCCESSFULLY
REARED

30+

SPECIES
OF BIRDS
FOUND

For its initiative and efforts, Tata Steel Europe was conferred the Prince of Wales Award for Conservation in 1971.



A vibrant underwater scene of a coral reef. The foreground is dominated by large, branching orange and yellow corals. In the mid-ground, there are green and brown corals, and several small blue and pink fish are visible. The background shows a deep blue ocean with sunlight filtering through the water from the surface.

Tata Chemicals Ltd.

CONSERVING THE 'RAINFORESTS OF THE SEA' IN MITHAPUR REEF

Coral reefs, often termed as “rainforests of the sea”, sustain a great array of marine biodiversity and support the livelihoods of coastal communities. Tata Chemicals' Mithapur plant is located near the Gulf of Kutch Marine National Park that shelters coral reefs and is a biodiversity hotspot. Based on field observations and literature review, it was concluded that the coral reefs of Gujarat, including the Mithapur coral reef, need conservation support as the natural regeneration process is slow.

To address this, Tata Chemicals, in collaboration with the Wildlife Trust of India and with support from the Gujarat State Forest, initiated the Coral Reef Restoration Project to increase the live coral cover in the Mithapur Reef. Conservation efforts included mapping of reef boundary and biodiversity, coral transplants, development of artificial reef structures, and developing a coral nursery. A Scientific Advisory Council and a Governing Council were formed to facilitate implementation of the same.

The pioneering project included a first-time attempt to transport live coral fragments over a distance of more than 1,200 km - from Lakshadweep Islands to Mithapur Reefs. The project also involved creation of artificial reef and development of a coral nursery. The project is currently in its third phase and as of March 2020, a total investment of INR 1.20 crore has been made.

The project has been instrumental in creation of 2,438 sq. mt. of additional hard surface area in the form of artificial reef structures. These conservation efforts have been truly win-win as they have enhanced fish catch in the project and have increased fish diversity.

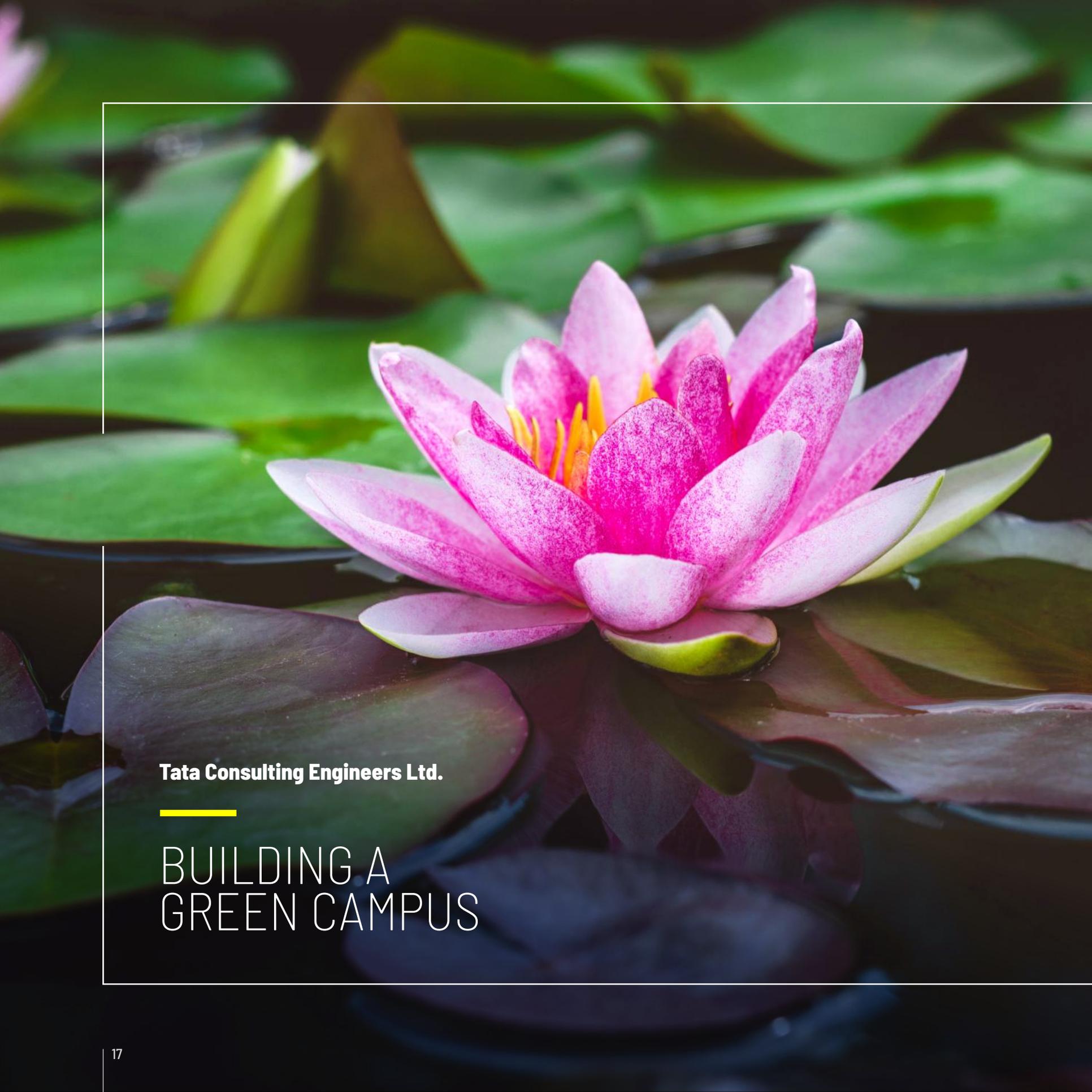


4%
INCREASE IN
LIVE CORAL
COVER

16%
INCREASE IN
FISH DIVERSITY
IN THE AREA

2,438 SQ.MT
OF ADDITIONAL AREA IN
THE FORM OF ARTIFICIAL
REEF STRUCTURES

Awareness and training sessions were conducted for reef dependent fishermen, on the importance of coral reef conservation for their livelihoods and on methods to monitor coral reef health.



Tata Consulting Engineers Ltd.

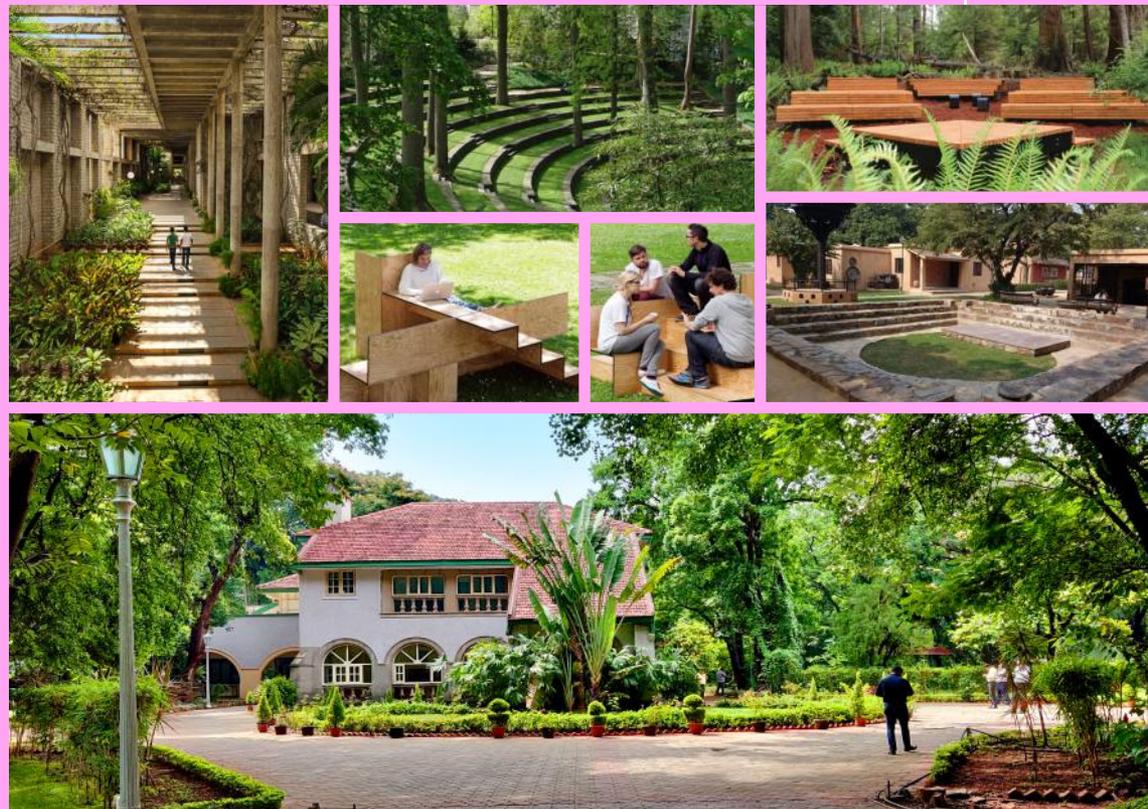
BUILDING A
GREEN CAMPUS

With the goal of building a campus that responds actively to its natural surroundings, while embodying design features that encourage an active & exciting way of learning for the participants, Tata Sons Private Ltd. initiated the development of the Tata Management Training Centre in a way that not just meets business objectives, but also contributes in enhancement and conservation of biodiversity.

The Campus has the charm of a heritage structure similar to the ones in the British colonial era, with 70-75% of its area shaded with canopy of trees. Other distinctive features of the site include lawns, pruned hedges, stone furniture, sculptures, flower beds and lily ponds. A sensitive approach for development of the Campus was adopted, and a plan was created with the objective of recreating and rejuvenating the ecosystem by accomplishing regenerative landscape, retaining and conserving biodiversity, and creating wetland ecosystem through native landscape.

The landscape of the site now includes three buildings along with wetlands ecosystem, a bird hotspot and recreational greens. The site is home to trees such as Peltophorum, Gulmohur and Sandalwood that provide a spreading canopy on campus. The Peltophorum trees, with brittle branches have abundant pockets to house bird nests and are usually filled with parrots. The Barn Owl family is a permanent resident near the mausoleum. The Bamboo and Chandan grove along the trail of the west boundary is a bird hotspot.

The outdoor gym, outdoor classroom, amphitheatre, play courts and informal meeting spaces constructed around the flora and fauna, provide people with an opportunity to connect with nature and cherish the outdoors.



**70-75% OF
AREA SHADED
WITH CANOPY
OF TREES**

**THE PROPERTY IS
HOME TO RARE
TREES LIKE
SANDALWOOD**

**A BARN OWL FAMILY
IS A PERMANENT
RESIDENT OF THE
BIRD HOTSPOT**

Through this initiative, the Company has managed to convert the TMTCCampus into a space that not just meets the business objectives, but also contributes to enhancement and conservation of biodiversity, right amidst the busy & bustling city of Pune.



Tata Consultancy Services Ltd.

CONSERVING URBAN BIODIVERSITY

Large landscapes in urban areas play a significant role in restoring, protecting & conserving urban biodiversity. These urban green spaces are becoming an increasingly important refuge for native biodiversity. Tata Consulting Services Ltd. operates through major urban townships and campuses across the country, which are owned or leased campuses. All these sites have been developed as Biologically Diversified Urban Landscapes and today are home to over 453 species of flora and 164 species of fauna.

Biodiversity mapping has been carried out for all campuses and species recorded for flora and fauna were enlisted. Based on the biodiversity mapping, site-specific Biodiversity Action Plans were formulated and effectively implemented through: Flora & Fauna Conservation Programmes and Wildlife Rescue & Release Programmes.

Flagged off in 2009-10 with 8 campuses, the Programme has been implemented at 18 campuses and since then, is a part of designing and planning of new campuses. Consistent efforts of TCS towards butterfly conservation through Butterfly Zones, have resulted in a dramatic increase in their species. The effective implementation of Wildlife Rescue & Release Programme at TCS Indore Campus resulted in successful release of creatures like Russell's viper and Nilgai into their natural wild habitat. Plus, as a part of Conservation of Sacred Snake Grove at the TCS New Campus in Kochi, there were sightings of endangered species such as Cuon alpinus (Indian Dhole) and Viverricula indica (Small Indian Civet Cat).

This comprehensive development programme has received widespread appreciation and recognition from bodies such as CII, BCCI, ICC, State Biodiversity Boards of Kerala & Maharashtra, and the Indian Green Building Council.



18
CAMPUSES UNDER
BIOLOGICALLY
DIVERSIFIED URBAN
LANDSCAPES

70
SPECIES OF
BUTTERFLIES
RECORDED

600+
SPECIES OF
FLORA &
FAUNA
CONSERVED

For the first time in the history of Indian Chamber of Commerce, Kolkata, TCS became the first company from the Service Sector to qualify for an Environmental Excellence Award in 2018, for its Kochi campus.





Tata Chemicals Ltd.

ECOSYSTEM TRANSFORMATION BY MANGROVE PLANTATION

"It is indeed a pleasure to see the once barren mud flats at the Rukshmani creek now thriving with lush mangrove growth. The fish and crab population in the creek have improved and the site is teeming with birdlife. The project has not only improved the environmental landscape but has also improved our life." This is how a local person living at Dwarka describes the transformation achieved by the Tata Chemicals Mangrove Plantation Project at Rukshmani creek site, located about 20 km from Mithapur.

Mangroves play an important role in filtering land runoff and controlling coastal erosion. Besides providing a critical habitat for marine species and terrestrial wildlife, including many finfish and shellfish species, they also regulate flooding and act as a sink for absorbing pollutants brought down by the rivers. The fact that mangroves have one of the highest carbon sequestration rates amongst all plant species makes their propagation very important.

As part of its drive to strengthen coastal ecosystems, Tata Chemicals took up the Mangrove Plantation Project at Rukshmani creek site near Dwarka. A similar project for rejuvenation of mangroves was undertaken at Sundarbans, where there was huge destruction due to the Aila storm. In both locations, the approach was to link the conservation project with creation of livelihood opportunities for local communities.

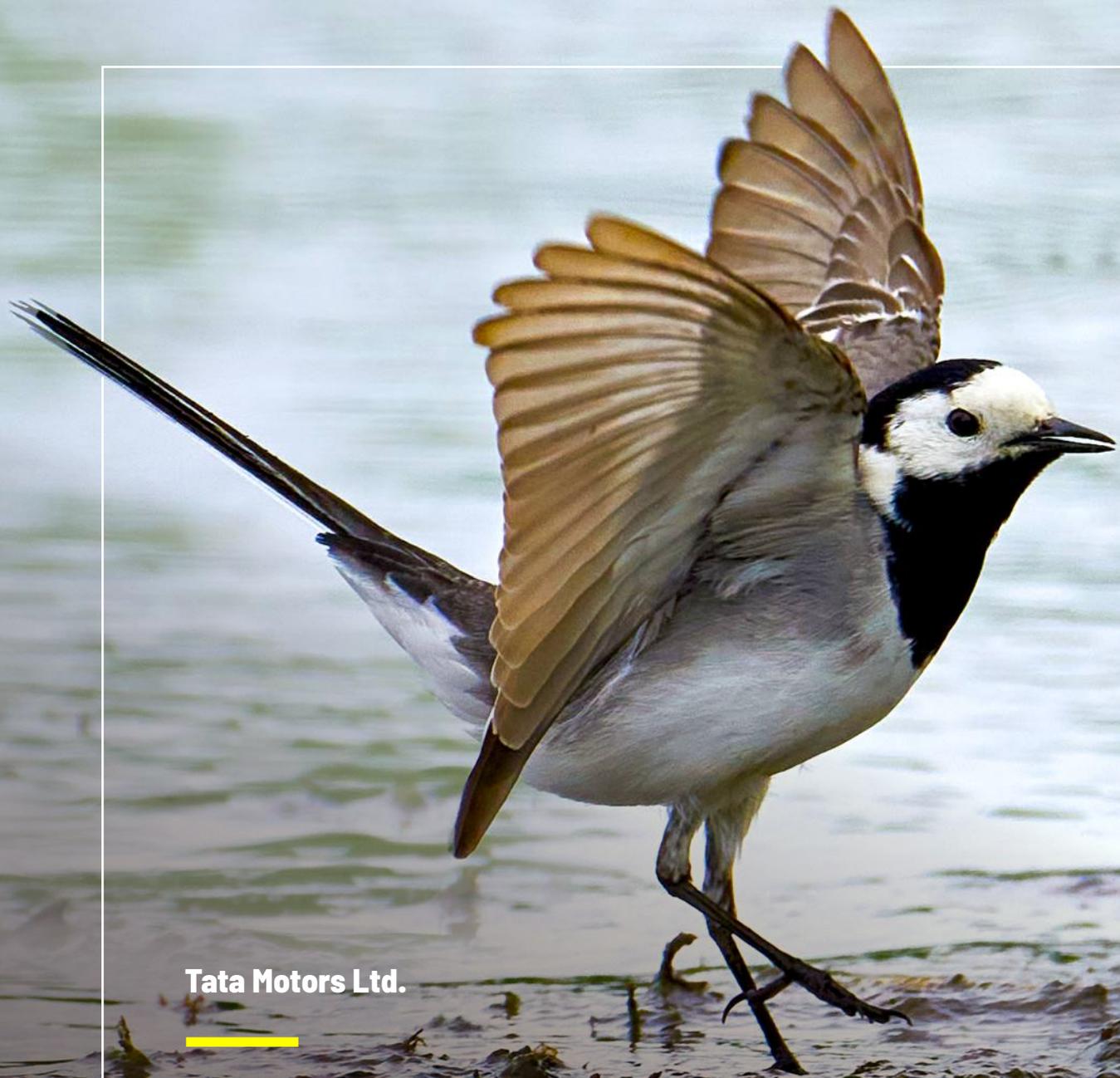
The site is now a source of seafood for the fishing community at Rupen Bandar, especially during the monsoon season when fishing at sea is banned. The number of birds recorded here has gone up from 9 species at the beginning of the project, to 32 species.



AT DWARKA, MANGROVE COVER HAS BEEN SUCCESSFULLY RESTORED OVER 50 ACRES

6.18 LAKH MANGROVES HAVE BEEN PLANTED IN SUNDARBANS

The project has given a much needed boost to rural livelihood through development of agriculture, agri-allied activities like goat farming, poultry fish farming. Planting mangroves has also contributed to the habitat conservation of the tigers as well as the longevity of Sundarbans.



Tata Motors Ltd.

DEVELOPMENT OF A BIODIVERSITY-RICH WETLAND ON ROCKY BASALT

In the 1960's, Tata Motors took an unprecedented bold decision to develop a green island next to its factory in Pimpri, even before the manufacturing facilities were set up. Today, this rocky area is covered in a green carpet with 1,50,000 trees and is home to over 48 bird species and 16 butterfly species. The lakes play host to storks, cranes, herons, egrets and moor hens. The transformation of the entire landscape is a believe-it-or-not story.

Greening a barren hard rocky basalt landscape was a significant challenge. Starting with water, a weir was constructed to retain water from the seasonal monsoon stream, which drains into the Pavana river. Having created a perennial water resource, these water bodies served as the nucleus for transforming the landscape. What this means in 'wetland' terms is that the margins or banks of the lakes remain constant, and the marshy areas, which developed in the shallows came to provide a stable ecological habitat for wading aquatic birds. Drum nurseries were also set up, using empty barrels from the Plant. The saplings raised in these nurseries were planted in pits excavated in hard rock and filled with topsoil from nearby agricultural land, and have since grown into a massive green belt around the water bodies.

Today, the project area comprises 245 acres of tree plantation, four ponds and two lakes. A total of 98 indigenous tree species and 49 exotic tree species have been listed and their distribution recorded. A 2016 survey recorded the presence of 48 bird species in the project area along with 16 species of butterfly and 7 kinds of reptiles.



48 BIRD SPECIES
IN THE
PROJECT AREA

1,50,000 TREES ACROSS FOUR
MANUFACTURING
LOCATIONS AT PUNE

WINNER OF BOMBAY NATURAL HISTORY SOCIETY'S (BHNS) 2006 GREEN GOVERNANCE AWARD

A large colony of Painted Stork and Grey Heron are residents throughout the year and raise offspring, which is a testament to the protected and undisturbed conditions in the area.



Tata Power Company Ltd.

WESTERN GHATS BIODIVERSITY HOTSPOT CONSERVATION

The Western Ghats are part of the four biodiversity hotspots in India since they have a remarkable number of endemic plant and animal species. However, this diverse biological haven is under tremendous pressure from a variety of human activities. Since 1975, Tata Power has undertaken a series of initiatives to ensure effective biodiversity management within and beyond the purview of their business operations in the Western Ghats.

Tata Power has been planting tree saplings in its catchment areas since 1975, and over 8-9 lakh seeds and saplings are planted every year. The company also participated in the Government of Maharashtra's tree plantation programme. Over and above this, Tata Power has also initiated aqua diversity study of lakes, base lining & documentation of biodiversity and orchid propagation.

The Mahseer Conservation Program, which is Tata Power's flagship programme, was initiated with a triple fold objective of conservation of endangered species, improvement of hydro lakes and employment generation for local villages. As part of the programme, Tata Power hosted an International Conference on Conservation of the hump-backed Mahseer with global experts. Numerous programmes such as 'Pledge for Mahseer' and 'Save the Mighty Mahseer', have been undertaken by the Company to create awareness about the endangered species. The Programme has produced millions of fish seeds, which have been distributed to various states in India.

With consistent focus, Tata Power has been successful in executing initiatives that will continue to reap benefits in the years to come. The Company was awarded the 'Best Business Practices' Award for Mahseer Conservation Programme at the ACEF Leadership Awards.



300
FISHERY
SCIENTISTS
TRAINED

5
ENDEMIC AND
ENDANGERED SPECIES
OF ORCHIDS SELECTED
FOR MULTIPLICATION

5
NATIONAL
WORKSHOPS HELD
FOR KNOWLEDGE
EXCHANGE

Tata Power conducted a comprehensive assessment of the critically endangered Hump-back mahseer, which made Tata Power the only business globally to have helped get a scientific name for a critically endangered fish species and get it included in IUCN's critically endangered species list.

A photograph of two elephants in a lush green coffee plantation. The elephants are standing close together, with their trunks touching. The background is a dense field of green coffee plants. The image is framed by a white border.

Tata Coffee Ltd.

CONSERVATION &
MANAGEMENT OF ELEPHANT
CORRIDORS IN COFFEE
PLANTATIONS

In Coorg, Karnataka, where the coffee plantations of Tata Coffee are located, the largest congregation of elephants takes place during June-July every year wherein elephants move to various locations, leading to a rise in human-animal conflicts as well as damage to crops. To protect elephants, prevent human-animal conflicts and ensure safety of people working in coffee plantations at Coorg, Tata Coffee successfully executed a multifaceted strategy comprising innovative technology solutions and out-of-the-box ideas. The programme undertaken in collaboration with the State Governments and Forest Departments of Karnataka and Tamil Nadu, included:

- Mapping of conflict severity zones & GIS polygons created for elephant prone locations.
- Placing full-time wildlife trackers, who were trained to track, monitor and report elephant movements.
- A joint GPS survey of 274 km and deployment of drones and camera traps to monitor movement of wild animals.
- Development of early warning system comprising bulk SMS for the people staying in and around plantations, along with awareness programmes.

By using an integrated approach, formulated by deep understanding of the landscape, factoring in insights on animal behavior and deploying technology, Tata Coffee has been able to effectively manage free movement of elephants inside the plantations and has been able to avoid several human-animal conflicts.



310 HUMAN-ANIMAL
CONFLICTS IN 2019,
AS COMPARED TO
991 IN 2014

WON THE CII INDUSTRIAL
INNOVATION AWARD FOR
'SAFETY AT THE WORK
PLACE'

AS A FIRST FOR ASIA,
RADIO COLLARING OF
MTRIARCH WAS DONE
TO PREDICT MOVEMENT

By developing a deep understanding of the landscape, factoring in insights on animal behavior and deploying technology, Tata Coffee has been able to effectively manage free movement of elephants inside the plantations.



Kanan Devan Hills Plantations Company (P) Ltd.
An associate company of Tata Consumer Products Ltd.

THE SHOLA REGENERATION PROJECT

Shola forests are native to the Southern Western Ghats and are found only in the high altitude mountains of Karnataka, Kerala and Tamil Nadu. They are biodiversity hotspots and are home to unique plants and animals including 'endemics'. As part of the Company's holistic approach towards mainstreaming biodiversity conservation, in 1999, Tata Consumer Products Ltd. (erstwhile Tata Tea Ltd.) launched the 'Shola Regeneration Project' to preserve existing shola and regenerate degraded sholas in the region. Since 2005, the project is being continued by the Kanan Devan Hills Plantations Company (P) Ltd., an associate company of Tata Consumer Products Ltd.

Under the project, areas that had been degraded over the years were identified, and naturally germinated seedlings of native species were collected and nurtured under nursery conditions at the R&D nursery of the Company. Once they were robust, they were transferred to the planting spots during planting season. Community participatory planting was undertaken and training and awareness programmes were also conducted. In addition, watch and ward staff was engaged to record daily wildlife sightings at a micro field of 300 hectares. These sightings were reported to the forest and wildlife department.

A detailed scientific study undertaken in 2017 in the Shola regenerated areas confirmed that conservation and maintenance of biodiversity was enhanced due to the Shola Regeneration Project. In addition to the planetary services such as carbon sequestration and oxygen release, the consistent investment of time, effort and resources in biodiversity conservation has also had a positive impact on sustainable agricultural operations of the Company.



16,275 PLANTS HAVE BEEN PLANTED, INCLUDING 23 NATIVE TREE SPECIES

25 SPECIES OF ANURANS (FROGS) WERE RECORDED, OF WHICH NINE ARE FROM THE FIRST THREE CATEGORIES OF THE IUCN RED LIST

PRESERVATION OF WILDLIFE CORRIDORS HABITATS HAS MINIMISED MAN-ANIMAL CONFLICT

The World Wilderness Congress acknowledged the symbiotic and sustainable relationship developed by the Company with the larger biodiversity landscape in Munnar as the model for emulation by plantations in mainstreaming biodiversity conservation.



Tata Sustainability Group,
Tata Sons Private Limited, Army & Navy Building,
2nd Floor Mahatma Gandhi Road, Mumbai - 400001. India

 +91 22 66657566
 tatasustainabilitygroup@tata.com
 www.tatasustainability.com

