

WHO WE ARE

The Applied Environmental Research Foundation (AERF) is a registered Non-Governmental Organization (NGO) based in Pune, India. Since its inception in 1994, AERF has been working towards biodiversity conservation on the ground. The Foundation applies the principles of 'community based conservation' and develops natural resource management models that actively involve local communities in the cause of forest protection to make conservation beneficial and to create a win-win situation for all the stakeholders.

OUR MISSION

To achieve biodiversity conservation on the ground through use of scientific tools, development of cutting edge solutions and multistakeholder engagement

WHERE WE WORK

India is home to two global biodiversity hotspots, namely the Western Ghats and the Eastern Himalayas. These two sites hold approximately 6% of the world's biodiversity and make up only 0.2% of the Earth's landmass. The northern part of the western ghats has been data deficient and overlooked by major conservation organisations in India due to the open access nature of forests and lack of legal protection in the form of protected areas. AERF has been highlighting the conservation significance of this part since last three decades and has implemented innovative solutions for conservation on the ground through various programmes and projects.

Mangroves are critical coastal ecosystems that provide a multitude of ecological, economic, and cultural benefits, making their conservation a matter of global significance. AERF is incentive based mechanisms to save privately owned mangroves in districts of Raigad, Ratnagiri and Sindhudurg which are facing significant threat due to pollution and apathy by the local community due to a troubled past and very stringent regulation. We are also working on creating sustainable mangrove-based value chains to generate recurrent income for the local community.

In central India, we are scaling up our certified NTFP value chain approach in the CFR forests by working extensively with the communities in few blocks of Chhattisgarh and eastern Maharashtra. We are also working on landscape level restoration in this geography.



CONSERVATION 2024 MILESTONES









PRIVATE FOR ESTS

Acres under Conservation Agreements

Giant trees under Conservation
Agreement

284490

Tonnes of carbon stored

PRIVATE MANGROVE

1400

Acres under Conservation Agreements

28676

Giant trees under Conservation
Agreement

763000

Tonnes of carbon stored

ECO-CHULLAH PLANTATION DISTRIBUTION

Eco-chullahs distributed

Saplings of native species planted across sites

First

Gold Standard®

Audit completed successfully

Species of native, RET & economically species selected for plantation

52375

Tonnes of carbon sequestered per year

11961

Tonnes of carbon sequestered per year



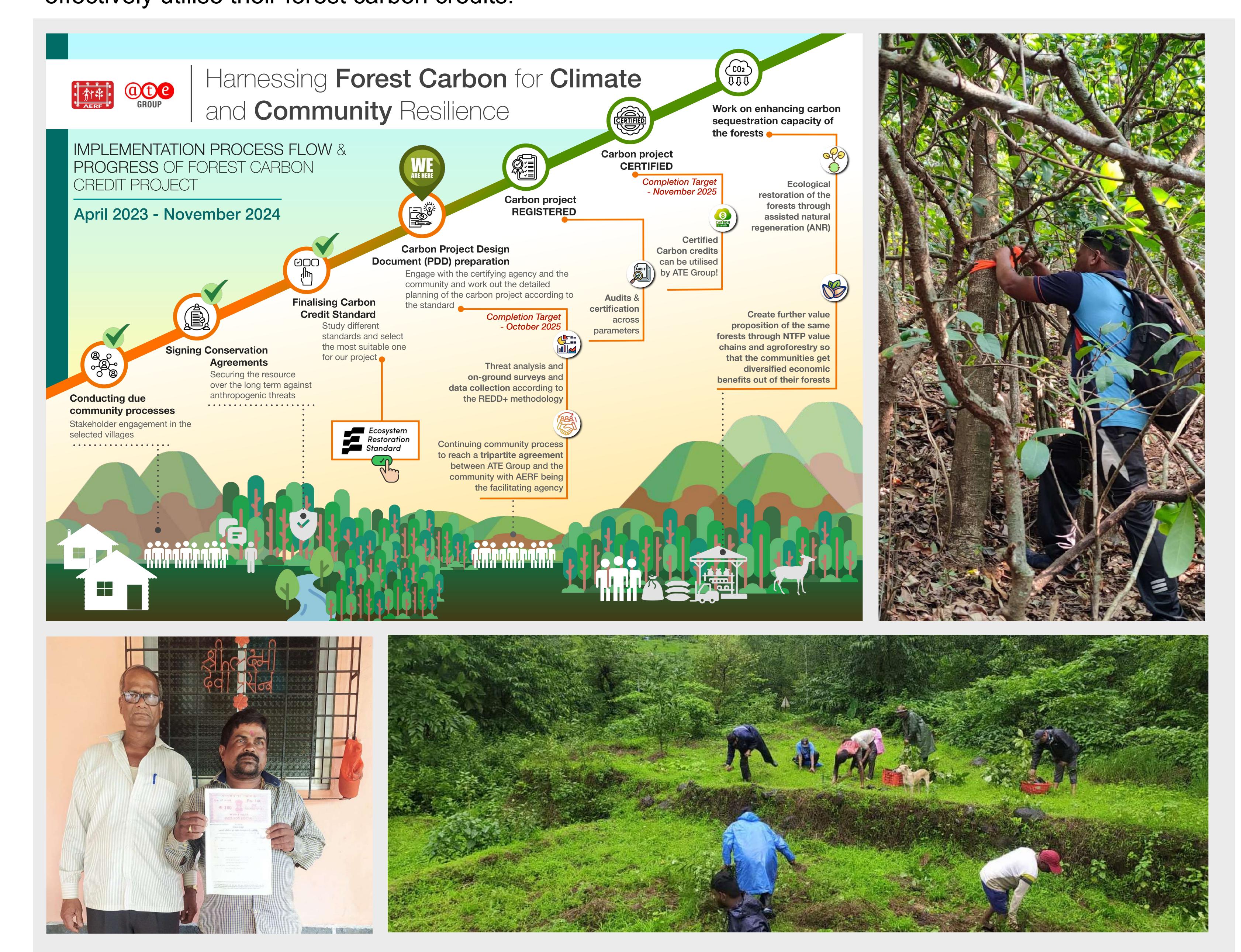
CONSERVATION & RESTORATION OF OPEN-ACCESS FORESTS OF THE WESTERN GHATS



Implementing the first **Forest Carbon** project of NWG in Sangameshwar in partnership with ATE Group



We partnered with ATE Group to implement a forest-based carbon credit project in Ratnagiri and Sindhudurg districts of the Sahyadri Konkan Corridor which is home to many threatened flora and fauna species including the Tiger. Almost 80% of the forests here are privately owned and thus under constant threat of degradation and logging. Through incessant community processes, we **succeeded in bringing the target of 1500 acres under conservation agreements this year** and completed critical biodiversity surveys and carbon stock assessments in these plots. We also engaged with 'Ecosystem Restoration Standards' which is the selected carbon certifying agency for our project and **started working on the project design document (PDD)**. We welcomed the leadership team of ATE Group to our site in December 2024 and showed them the project progress. Mr. Anuj Bhagwati - Head of ATE Group and Mr. Amit Chandra - Co-Founder of ATE Chandra Foundation keenly participated in community interactions and curiously asked questions to gain better perspective on the project. We were also glad to inform them that the project is on course to be registered and certified by November 2025, after which ATE Group can effectively utilise their forest carbon credits!



Restoration-based economy for CFR forests in Chhattisgarh with Harit Bharat Fund

AERF was awarded a grant from the Harit Bharat Fund which is an innovative funding mechanism for accelerating forest landscape restoration and promoting restoration-based economy in the country. AERF has already been working in the CFR landscape of Chhatisgarh and Maharashtra for establishing certified value chains, and our team made major inroads with the CFR Management Committee (CFRMC) of Mandri and Kanagaon villages. We held meetings with the CFRMC and created resource maps using participatory approach for each CFR, discussing various aspects like history of the villages and communities, resources available, and the biodiversity present in the CFRs. AERF's value chain approach has the potential to create a resilient and socially sustainable land restoration-based economy for local communities by creating viable business models that protect and restore these forests. We also established 2 nurseries of native plant species with economic and ecological significance in Mandri and Kanagaon. These nurseries are collectively home to nearly 6400 saplings of many indigenous species like Bibhitaki, Beeja, Haritaki, Imli and Arjuna among others. Our Chhattisgarh team led by Jayant Sarnaik also participated in the Landscape Restoration Policy dialogue conference where experienced government officials and development practitioners reiterated the

importance of moving ahead from stand-alone plantation strategies and creating market linkages to create sustainable forest-based livelihoods.













Conserving Agrobiodiversity in Sangameshwar forests in partnership with Bharat Agroecology Fund

AERF received the Bharat Agroecology Fund (BAF) grant to focus on revitalising sustainable agricultural practices in almost 25 villages in Amba, Sangameshwar and Vaibhawadi blocks. By promoting agroforestry, enhancing soil health, and conserving agrobiodiversity, AERF aims to improve land health, enhance livelihoods, and strengthen community resilience. This initiative will empower farmers, particularly women and indigenous communities, by building their capacity in sustainable practices, establishing market linkages, and fostering a return to traditional crop varieties. The project will also address the issue of crop-raiding by Indian Gaur, Sambar deer and the Wild Boar which makes Konkan farmers lose almost 20%-30% yield. We decided to try a novel approach called 'Farming for Wildlife' whereby we planted Khamdi (red rice) and Kodo millet in reserved farmlands selected by studying of the feeding behaviour and movement of the animals. We observed that Gaurs were consuming the rice and millets in these farmlands and were venturing less into other farms. Our approach was further validated when we got a call from Mr. Ratnakar Sangare who is a farmer from Bhekrewadi, saying that the crop raiding incidences in his farmland was down by almost 40% as compared to last year. The 'farming for wildlife' initiative by AERF in Wadi-Adhisthi and Kalmbaste villages demonstrates a promising strategy for reducing human-wildlife conflict through community involvement and adaptive management.





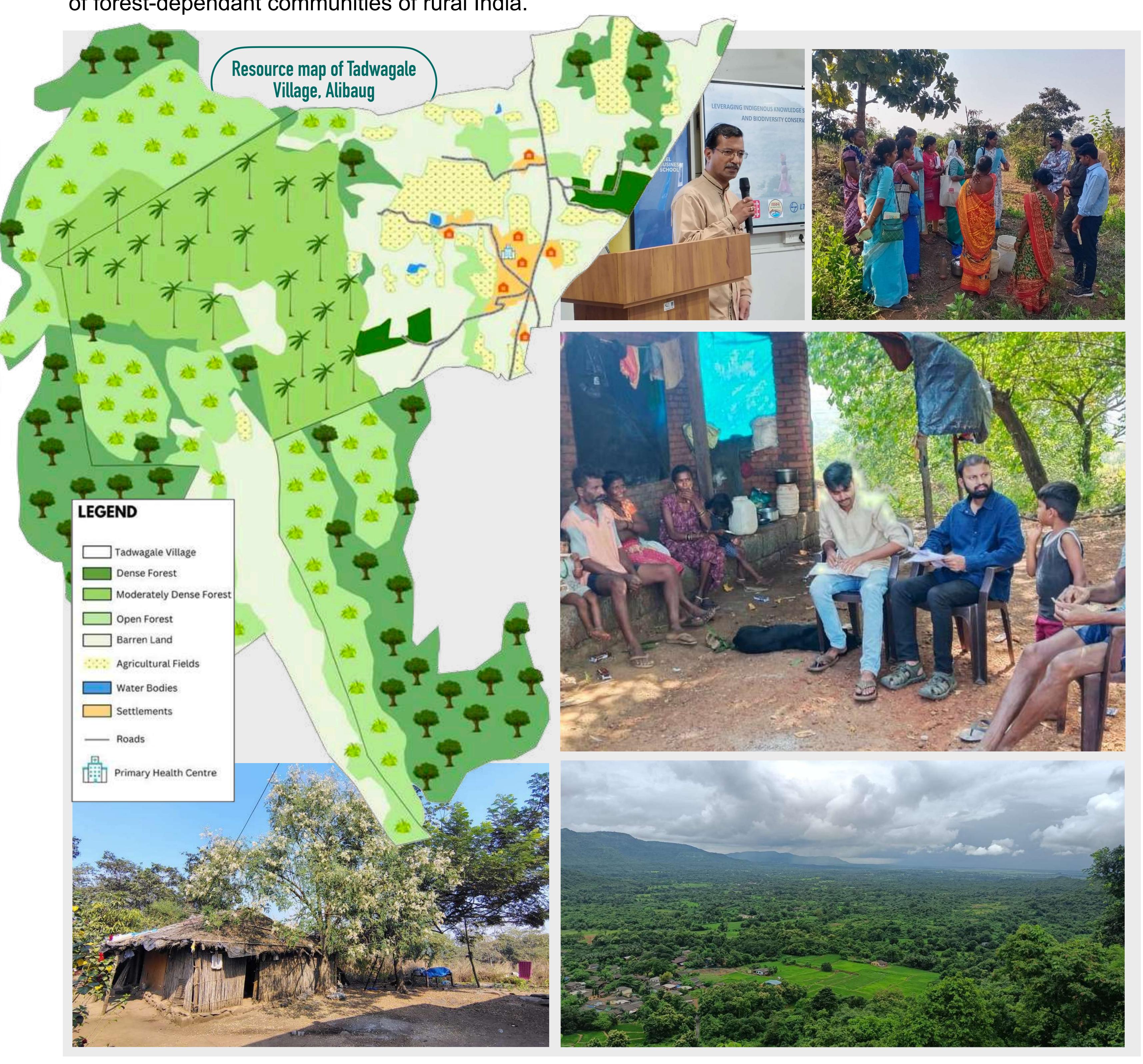


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Integrated Village Development Project (IVDP)

with LTIMindtree in Raigad district

LTIMindtree partnered with AERF to lead an 'Integrated Village Development Programme' (IVDP) in Raigad block where AERF, as a 'mother NGO' collaborated with other NGOs like Sakav, Pratham Infotech Foundation, EAGL and FUEL (Friends Union for Energising Lives) to implement transformative strategies in the tribal and rural communities of the block, impacting areas of livelihood, education and health. Having worked for more than a decade in this geography, AERF facilitated the implementation of strategies by carrying out baseline studies to provide a comprehensive foundation to the project. We also brought in the missing perspective of biodiversity conservation to the entire narrative, and worked on using sustainable agricultural practices and traditional crop varieties to develop effective NRM based livelihoods. Another focus was to leverage indigenous knowledge for community wellbeing and biodiversity conservation. We held many stakeholders meetings to calibrate individual processes and hosted our project partners from LTIMindtree at our sites to keep them abreast of the development. We are glad that our association has evolved into a bigger scope and we can delve into multi-sectoral linkages to improve the life of forest-dependant communities of rural India.





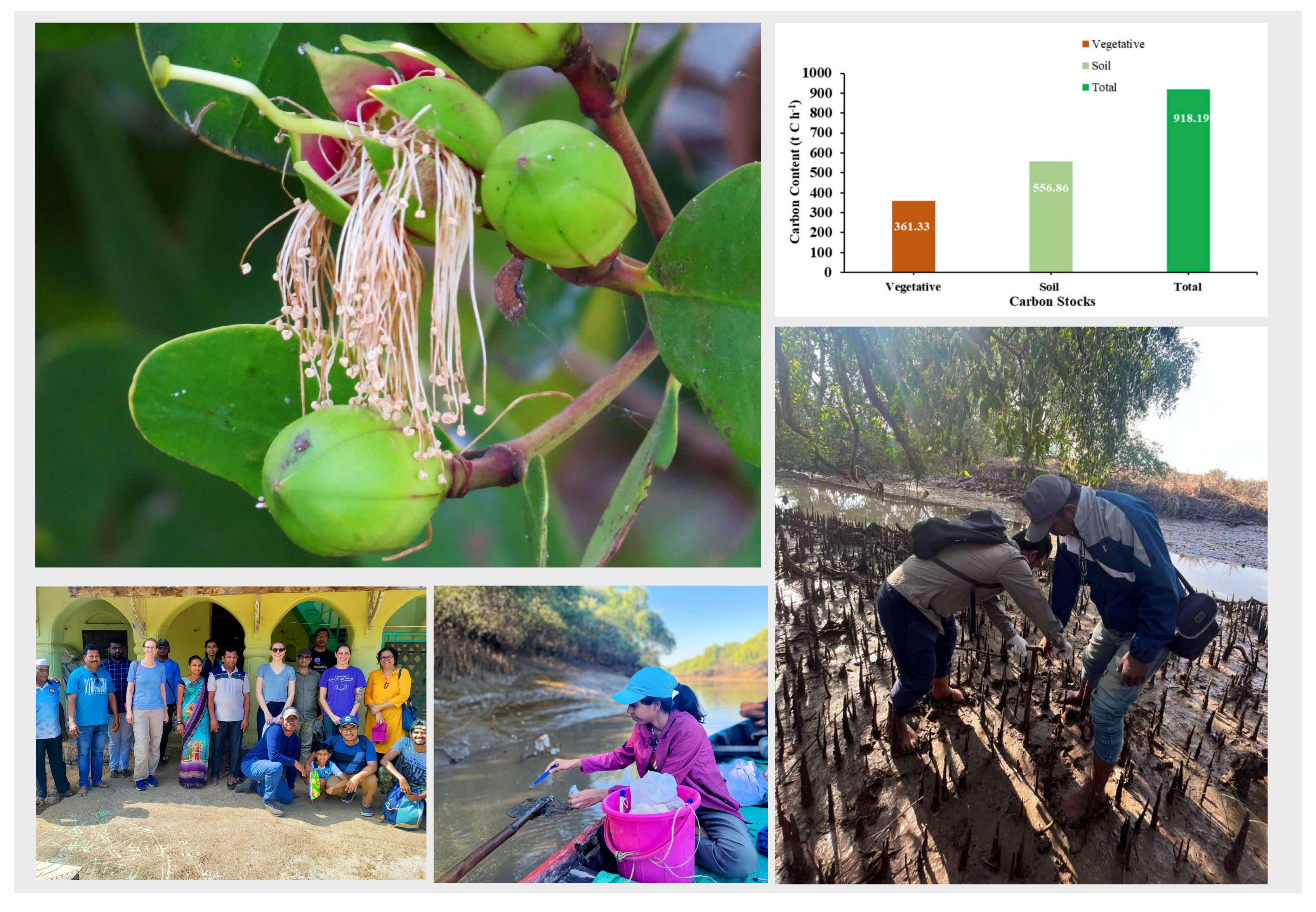
Conservation & restoration of Mangroves of Coastal Maharashtra

Apple Inc.



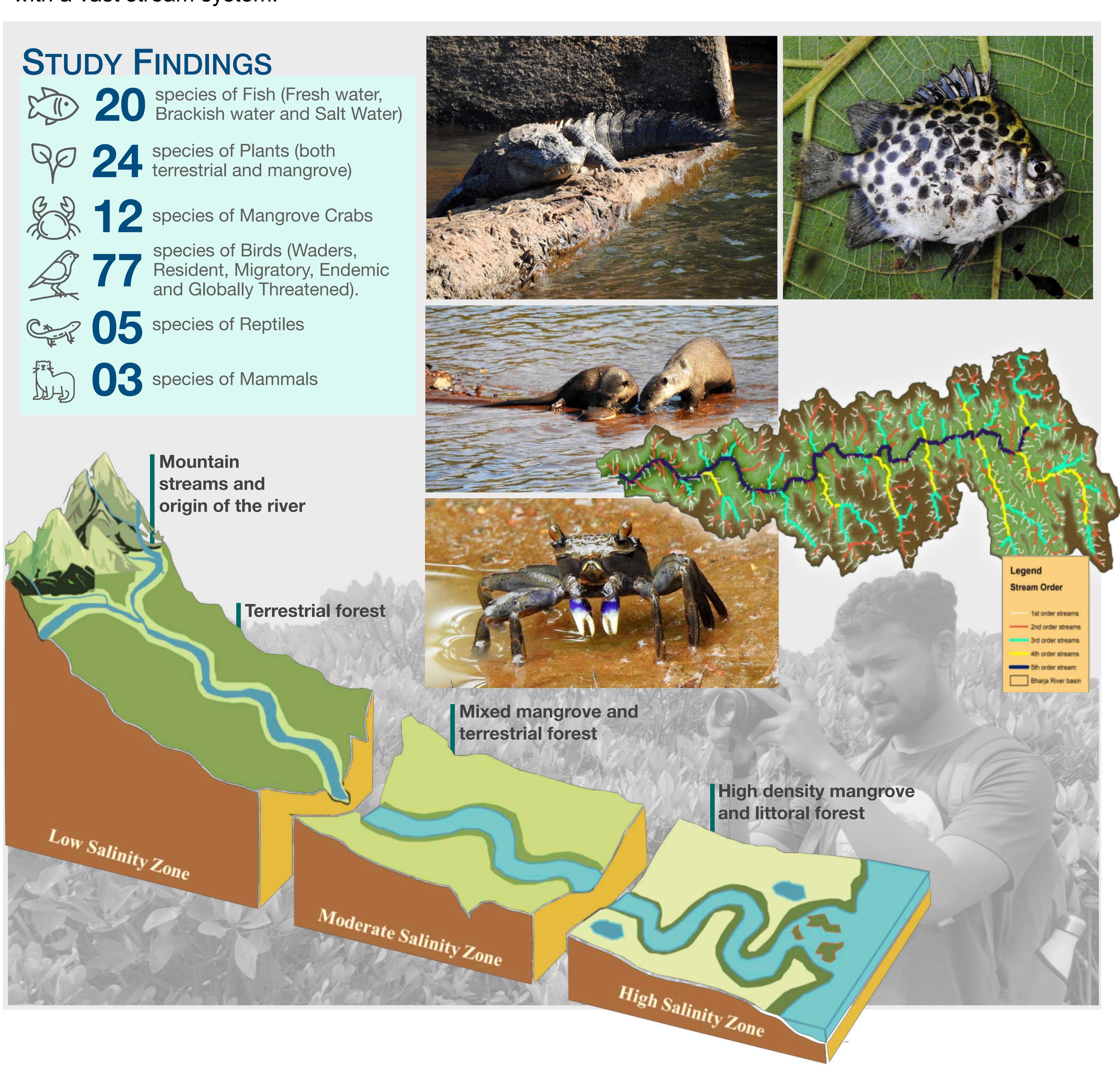
Exploring **Blue Carbon** in the mangroves of Raigad district in coastal Maharashtra with Apple Inc.

We have been conserving the mangroves of Raigad and Ratnagiri districts for more than 3 years with the support of global partners like Apple Inc. We further teamed up with Conservation International (CI) and Good Carbon, Germany to evaluate and assess the feasibility of setting up the first 'blue carbon' project in Maharashtra here. Their teams led by Dr. Jennifer Howard (VP Blue Carbon Programme at CI) and Dr. Nicola Rodewald (Director of NbS at Good Carbon) explored the mangroves and interacted with the communities to identify the possibility for setting up a blue carbon project. We together discussed methodologies for baseline data collection, definitions of degradation and essentials of Project Design Document (PDD) in the context of a blue carbon project. We further launched a study into the biomass accumulation and carbon sequestration dynamics of a mangrove ecosystem. Combining the vegetative carbon stock and soil carbon stock, the total ecosystem blue carbon stock of the selected mangrove ecosystem was estimated at 918.19 t C ha-1. Our team also assessed the species composition, density and carbon stock variability where Sonneratia apetala exhibited the highest biomass. These findings emphasised the significance of site-specific assessments and conservation of dense mangrove patches while taking the project ahead.



Implementing 'Conservation Assessment' study of river Bharja in Mandangad

During our initial field visits, we encountered a variety of rare and endangered fauna and flora in the Mandangad block, including species like the Smooth-coated otter (Vulnerable), Mugger (Vulnerable), and Monitor Lizard (Near Threatened) - all documented along the Bharja River. This was enough to warrant a a rapid conservation assessment along the River Bharja, which acts as a major support system for many life forms and ecosystems along its basin and is crucial for sustaining a healthy mangrove ecosystem. The river stands out due to its distinctive blend of freshwater and brackish water habitats, complemented by the presence of adjacent mangrove and mountain forest ecosystems. This confluence of habitats provides an ideal setting for diverse biodiversity, especially fish, to thrive, adapting to specific ecological niches within the river. We can also see this in the diverse range of vegetation along the river banks. This was a pioneering study which accurately uncovered the origin of this important river through GIS mapping and on-ground data collection. Along with documenting interesting flora and fauna, we also looked at major conservation threats like cattle grazing, sand mining, brick kilns and forest fires, which has helped us lay out the future course of study and conservation action in this major, yet severely understudied river with a vast stream system!





Mangrove Agroforestry with LTIMindtree in Mandangad

When mangroves encroach upon thriving agricultural fields, rendering them unproductive for any further use, it gives rise to a complicated relationship between the land owners and this important ecosystem. This in turn poses a serious challenge for mangrove conservation and it becomes imperative to repair this relationship on priority before any other intervention. Exploring salt-tolerant tree species that can provide sustainable income through NTFP (Non-timber Forest Produce) harvesting works well towards repairing this relationship and changing the stakeholders perspective towards the cause of mangrove conservation. Doing exactly that, we planted 3800 Karanj (Pongamia pinnata) saplings and 450 coconut saplings - both economically important species - on 67 acres of mangroves to benefit more than 400 households from 6 villages in Mandangad block. This has renewed the hope of landowners that their farmland can still have the potential to generate sustained income for them.



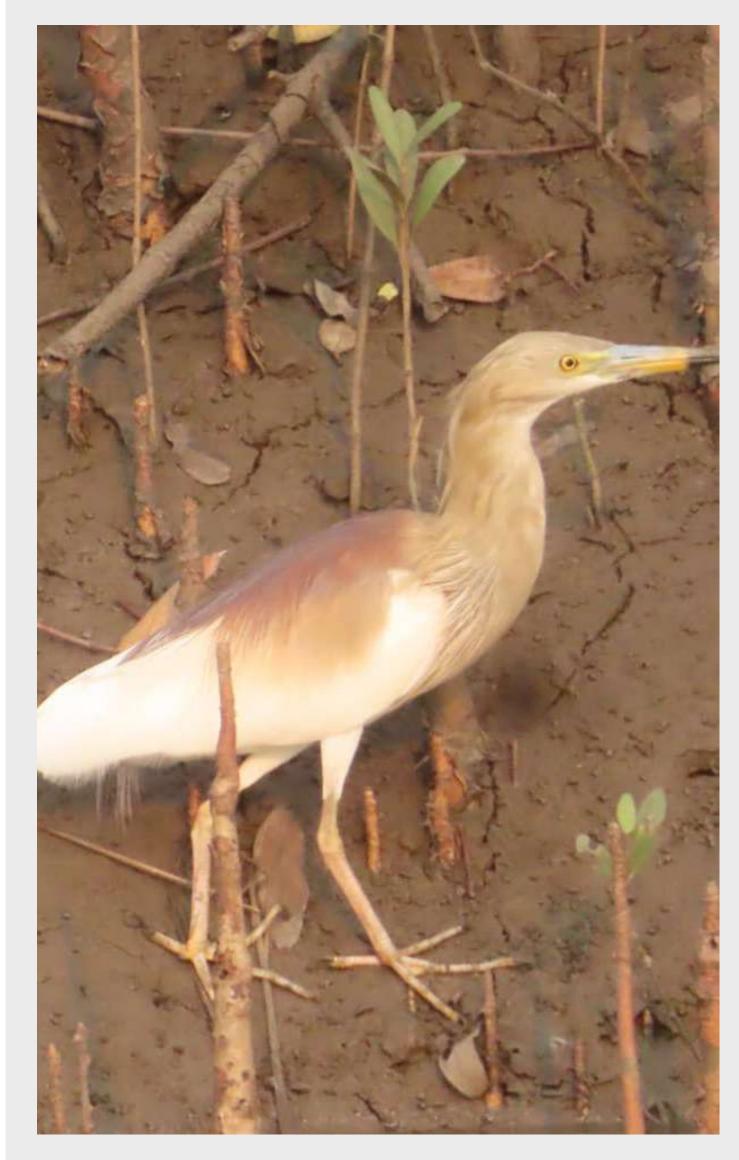


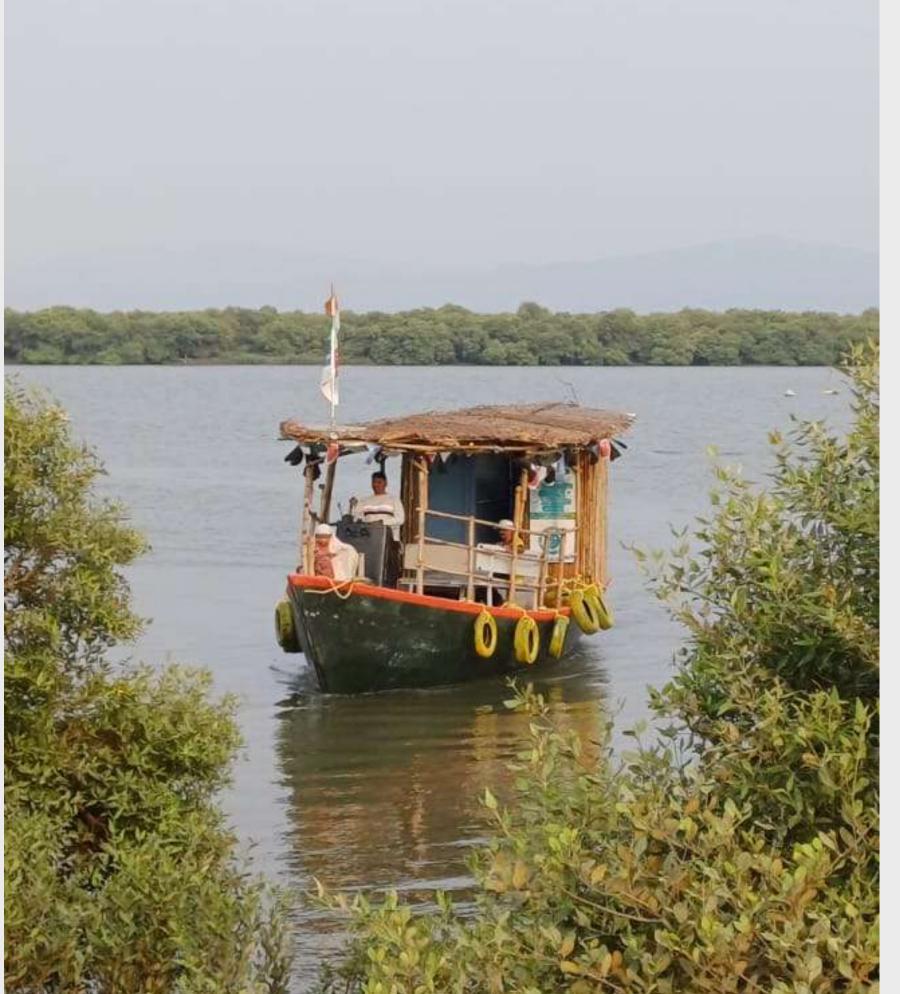
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Linking Mangrove conservation to **sustainable livelihoods** in Raigad and Ratnagiri districts

Tetragonula iridipennis, the Indian stingless bee plays a pivotal role in pollination both in Mangroves and land forest. Considering the threats to the bees and mangrove conservation, AERF has initiated a unique intervention with the help of LTIMindtree - "Bees For Mangroves" in Mandanagad. We have distributed 9 bee boxes to the community members of 6 villages of Mandangad block. The main objective is to improve the pollination of mangrove forest and simultaneously develop an alternative income generating opportunities to the local community members from this region.







Our boat Ambika set out on her mission to spread awareness about Mangroves by taking 4 groups of enthusiastic participants into the remote creeks of Alibaug in the midst of mangrove forests teeming with fish, crabs, birds and other associated biodiversity! The tours were facilitated by local community members who were honed by AERF's team members to adroitly navigated the participants towards a deeper understanding of this critical ecosystem.

Our initiative of 'Kandalvan Shiledar' or 'Mangrove Warriors' builds accountability by putting the onus of mangrove conservation on select community members and training them towards achieving this goal. In May 2024 we held a training and planning workshop for the 7 warriors engaged in this work since last year wherein the goal was to calibrate individual understanding of the mission and fill gaps of knowledge and perspective.







CONSERVATION & RESTORATION OF SACRED GROVES OF THE WESTERN GHATS



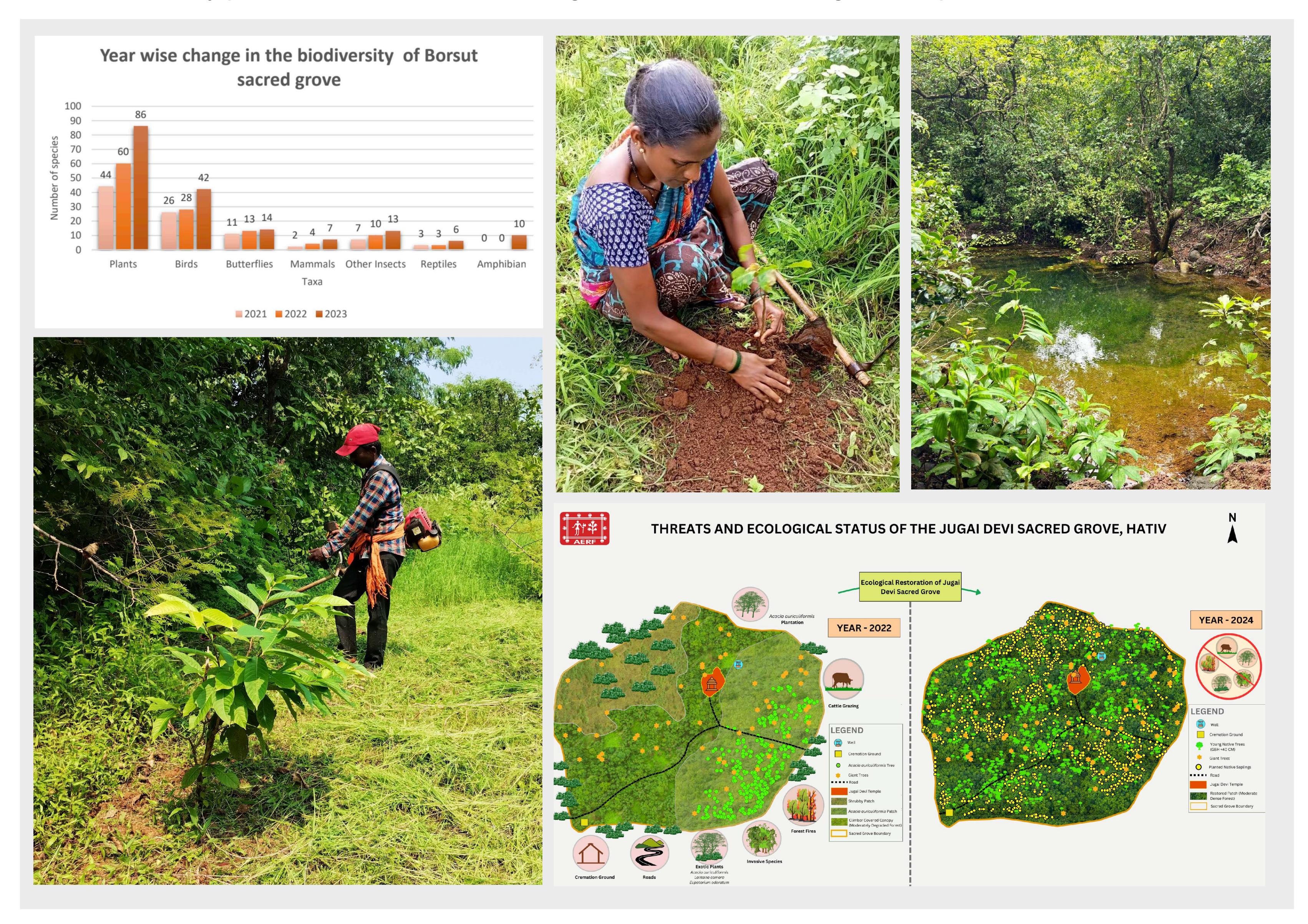
Restoration and management of sacred groves of Ratnagiri





Our project with ATECF for restoring the sacred groves of Sangameshwar entered its third year in 2024 and we continued caring for the sacred groves of Borsut, Nive Khurd, Hativ and Kule by implementing restoration measures over more than 30 acres. We provided 1000 mandays of work to 48 people to carry out activities like removal and clearing of exotic species, drawing fire lines, fencing, plantation of native species etc. We have been carefully monitoring biodiversity markers and tree growth in these forests. In 2021, the initial survey recorded 93 species of flora and fauna, which has impressively grown to 178 in June 2024! Furthermore, weed removal has aided natural growth of trees and we recorded 55% more trees having diameter more than 10cm. Our restoration work of Gavtale, Devhare and Wakavli sacred groves also progressed well under the WLT partnership. The restored ponds and water sources were filled to the brim this monsoon!

Temple renovation in sacred groves has always been a point of contention due to degradation caused by unsustainable construction practices. Fortunately, our numerous discussions with the community members bore fruit & they promised to not cut even a single tree while renovating the temples of Kule and Nive Khurd!



'Devrai Akhyaan' - compiling 3 decades of knowledge and experiences in one book...

AERF's Founder - Director Dr. Archana Godbole has garnered over 30 years of experience exploring and studying sacred groves of the world and also conserving and restoring these relic forests in India through AERF's interventions. Collating all this knowledge and experience, she published a Marathi book 'Devrai Akhyaan', where she talks at length about the concept of sacred groves, different sacred groves found globally and within India, community traditions and finally about AERF's work in conserving and restoring many groves in the Western Ghats of India. The 441 page book has been published by Prafullata Prakashan and was unveiled on 22nd June 2024 by well-known Marathi author Dr. Aruna Dhere who spoke very fondly of her association with Dr. Godbole and urged everyone to read the book in order to gain veritable knowledge about this rich tradition. It is available on e-commerce platform Amazon.



Earth Expeditions India - 11 years of exploring the theme of 'Species, Deities and Communities

We completed 11 years of hosting curious minds from Miami University, USA in the sacred groves of Northern Western Ghats in full monsoon glory...and holding discussions on the linkages between forest and biodiversity conservation and faith systems of the communities.





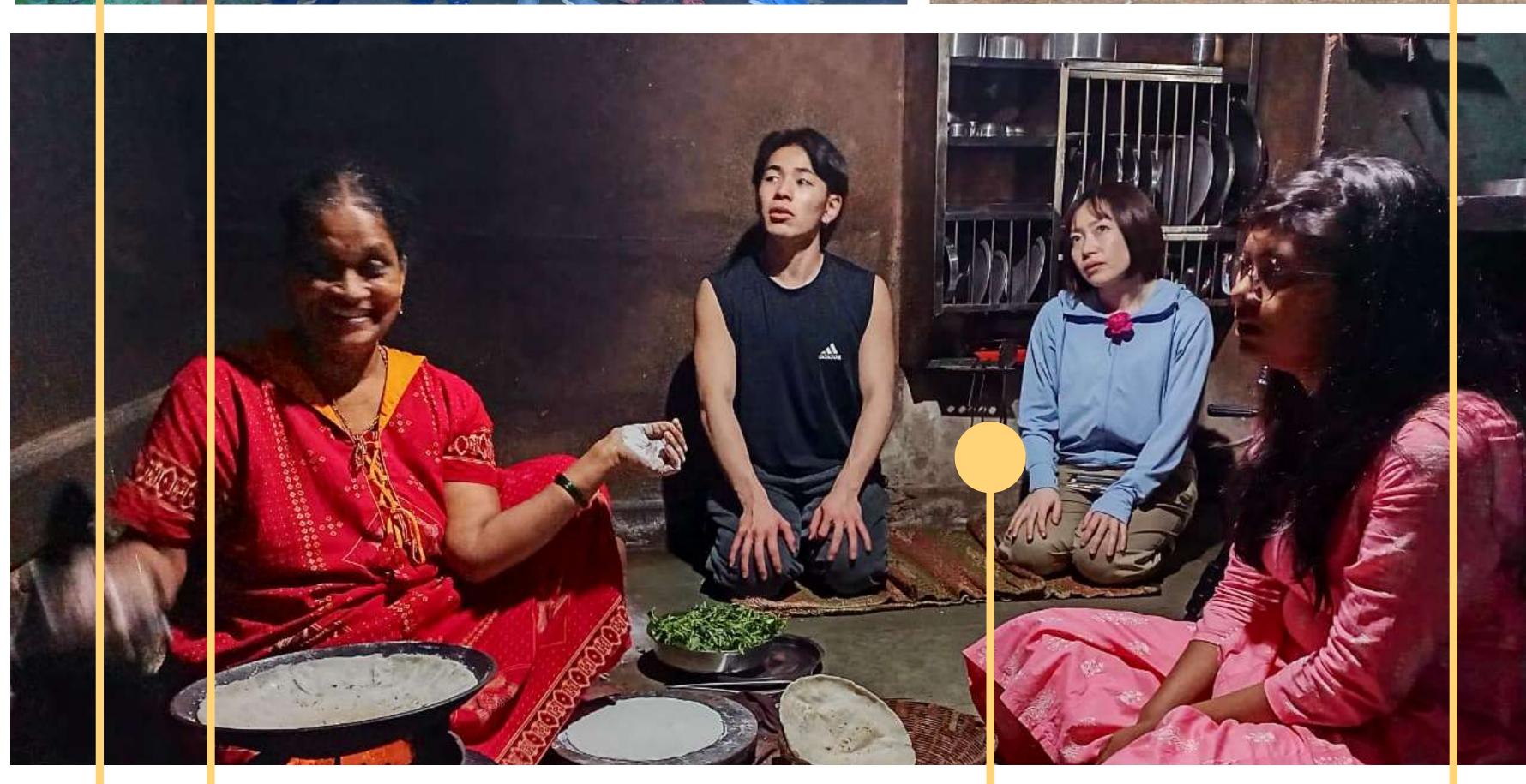
HOSTING PARTNERS AT OUR SITES













Anup Mahajan of LTIMindtree at our Alibaug site

Hosting senior journalists from various publications to show them our work

Mr. Anuj Bhagwati - Head of ATE Group and Mr. Amit Chandra - Co-Founder of ATE Chandra Foundation at our Ratnagiri site

Akiko Enomoto and Akitoshi Inoue from CI Japan at Sangameshwar under Daikin's 'Forests for Air' project

Mr. Jyotirmoy Bannerjee (MD) and Mr. Rahul Kulkarni from Sames Kremlin at Talmachi

Manjushree Tadwalkar at our Sangameshwar site getting information about the BAF project

OUR PARTNERS IN PROGRESS







Apple Inc.













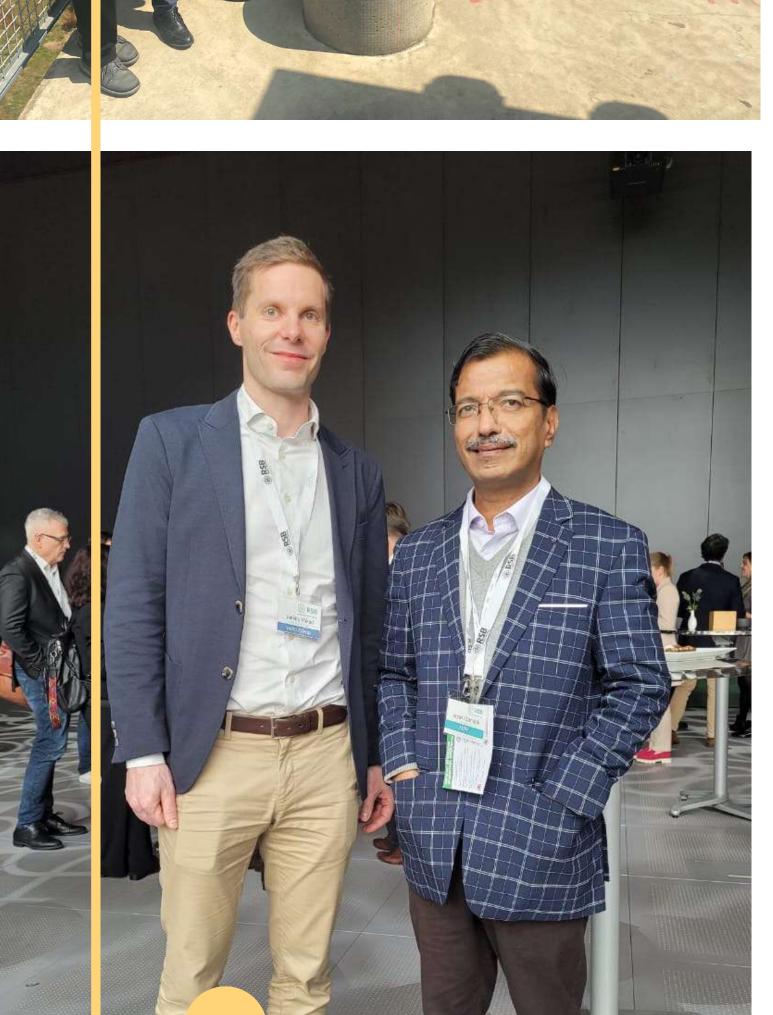






AERF GLOBALLY IN 2024















Attending the RSB annual conference on sustainable finance at CERN, @Geneva

Understanding German initiatives for socially-just energy transition @Cottbus

With Dr. Grethel Aguilar,
Director General of the IUCN
at Regional Conservation
Forum @Bangkok

Sharing expertise in building restoration economy with Restoration Academy India, @Gandhinagar

Celebrating milestones with other National Geographic explorers @Mumbai

With the Brainforest team @Zurich

Guiding upcoming IFS Officers at IGNAF in the first ever session conducted by experts from outside the IFS / IAS fraternity at FRI @Dehradun

NEW PARTNERSHIPS IN 2024



Partnership signed with **NbS Asia Hub** to cooperate for knowledge-sharing on Nature-based Solutions, sharing practices and case studies and promoting wider stakeholder dialogues.



AERF and Fakir Mohan
University from Balasore,
Odisha have signed an MOU
for collaborative research for
enhancing mangrove
conservation





OUR TEAM

Dr. Archana Godbole *Director*

Mr. Jayant Sarnaik Joint Director

Mr. Nilesh Bhujbal Sr. Accounts Officer

Mr. Bhalchandra Wadke Administrative Officer

Mr. Devendra Saralkar Legal Advisor

Ms. Prajkta Damle Jr. Accounts Officer

Ms. Soniya Narbekar *Jr. Accounts Officer*

Ms. Snehal Shinde Jr. Accounts Officer

Mr. Suhas Ghate *Programme In-charge*

Ms. Suchitra Naidu Communications Manager

Dr. Charuta Gole Research Coordinator

Mr. Kajal Barman *GIS Analyst*

Mr. Vyankatesh Raskatla Research Associate (GIS)

Ms. Tejaswini Adhav *GIS Analyst*

Mr. Omkar Pai Field Coordinator - Alibaug, Bhimashankar

Mr. Abhishek Nangare Field Coordinator - Talmachi

Mr. Rajeev Rahate Accounts Assistant

Mr. Sameer Thakar *Driver*

Mr. Devidas Jangam *Driver*

Mr. Ashish Gamare *Driver*

Mr. Anil Salve *Driver*

ALIBAUG TEAM

Mr. Kailas Gawand Sr. Resource Person

Mr. Bhavik Patil Resource Person

Mr. Sushant Misal Resource Person

Ms. Aditi Renake Field Researcher

Ms. Chaitali Patil Field Researcher

Dr. Twinkle Sathish Field Researcher

Ms. Trupti Kale Field Researcher

Mr. Vishnukant Kendre Field Researcher

Mr. Ajay Gawas Field Researcher

Mr. Chinmay Mankar Field Researcher

Mr. Siddharth Birmal Field Researcher

Mr. Sandesh Wavekar Field Assistant

Mr. Sachin Patil Field Assistant

Mr. Swanand Patil *Field Assistant* Mr. Prashant Patil Field Assistant

Mr. Sakshat Jaokar Jr. Field Researcher

VIDARBHA & CHATTISGARH TEAM

Mr. Karn Mahadik Operations Manager

Mr. Pankaj Bhure Social Business Officer

Mr. Sagar Deshpande Field Assistant

Mr. Pramod Hatwar Field Assistant

Mr. Pooja Sonloi Resource Person

Mr. Dhanu Bahekar Resource Person

TALMACHI TEAM

Mr. Vasant Sabale Resource Person

Mr. Uttam Sabale Field Assistant

Mr. Dnyaneshwar Sabale Field Assistant

BHIMASHANKAR TEAM

Mr. Kundalik Kondhawale Resource Person

Mr. Vishwanath Wayal Field Assistant

Mr. Amol Kokate Field Assistant

DEVRUKH TEAM

Mr. Gunwant Mahajan Sr. Field Coordinator

Mr. Sanjay Pashte Field Coordinator

Mr. Pranav Panvalkar Field Researcher

Mr. Lingeshwaran P K Field Researcher

Mr. Sachin Parsharam Field Assistant

Mr. Rajesh Jadhav Field Assistant

Mr. Nikhil Jambhale Field Researcher

Ms. Ruchi Bhadke Field Researcher Ms. Ganesh Rathod Field Researcher

Mr. Rohan Dhane *Project Assistant*

Mr. Rohan Jadhav *Field Assistant*

Mr. Shubham Rewale Field Assistant

Mr. Digambar Dhane Field Assistant

Mr. Dinesh Patere Field Assistant

Mr. Dhiraj Sutar *Field Assistant*

Mr. Dilip Rahate Field Assistant

Mr. Aniket Shinde Field Assistant

Mr. Aniket Zagade Field Assistant

Ms. Sakshi Mane Field Assistant

Mr. Sandeep Mane Field Assistant

Mr. Swapnil Maeen Field Assistant

Mr. Rakesh Rambade Field Assistant

Mr. Vidyadhar Rane Field Assistant

Mr. Vaibhav Jadhav Field Assistant

Mr. Rakesh Govalkar Field Assistant Mr. Pravin Patil Field Assistant

Mr. Adinath Devlekar Field Assistant

Mr. Ashish Ghadshi Field Assistant

Mr. Varad Jangam Office Admin

MANDANGAD TEAM

Mr. Akshay Gawade Field Coordinator

Mr. Vaibhav Bhujbal *Trainee Field Researcher*

Mr. Yash Kuthe *Trainee Field Researcher*

Mr. Rajkumar Lingayat Field Assistant

OUR FOREST GUARDIANS

Mr. Ratan Angre

Mr. Vinayak Sawant

Mr. Suresh Bavdhane

Mr. Rajaram Mosamkar

Mr. Dattaram Suvare

Mr. Gopinath Baeet

Mr. Dinesh Salvi

Mr. Murlidhar Chalke

Mr. Santosh Kamble

Mr. Jayesh Sawant

Mr. Ramesh Pawar

Mr. Ratnakar Sangare

Mr. Ravaji Dhumak

Mr. Ravindra Ghag Mr. Santosh Gholam

Mr. Bharat Chinchavalkar

Mr. Atmaram Kangane

Mr. Dhondu Kangane

Mr. Vijay Gothankar

Mr. Subhash Sawant

Mr. Vijay Kule

Mr. Deepak Ghagare

Mr. Ramesh Dhangade

Mr. Vishwas Patil

BOARD OF TRUSTEES

Dr. Archana Godbole

Dr. M.A.Pendse Mrs. Shruti Barve











Gloeophyllum striatum









