



Applied
Environmental
Research
Foundation



ANNUAL REPORT

The year when almost
everyone stayed home





ANNUAL REPORT 2020

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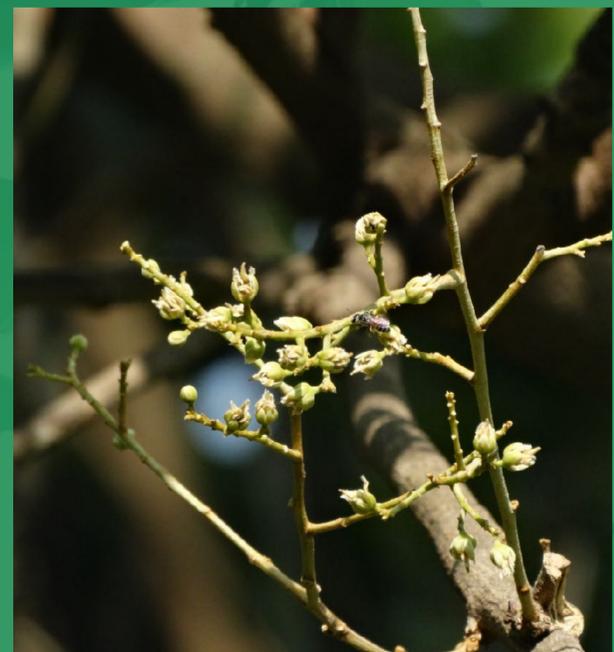
WHO WE ARE

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. AERF's projects are implemented in the Northern Western Ghats that form a part of a global biodiversity hotspot in India. Team AERF also works across the country for research, training, capacity building and networking for conservation.



OUR MISSION

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



MILESTONES 2020



869

Acres of forests brought under conservation management



8382

Acres of forests conserved in total **till date!**



546

Solar Lanterns distributed in 10 villages in Alibaug



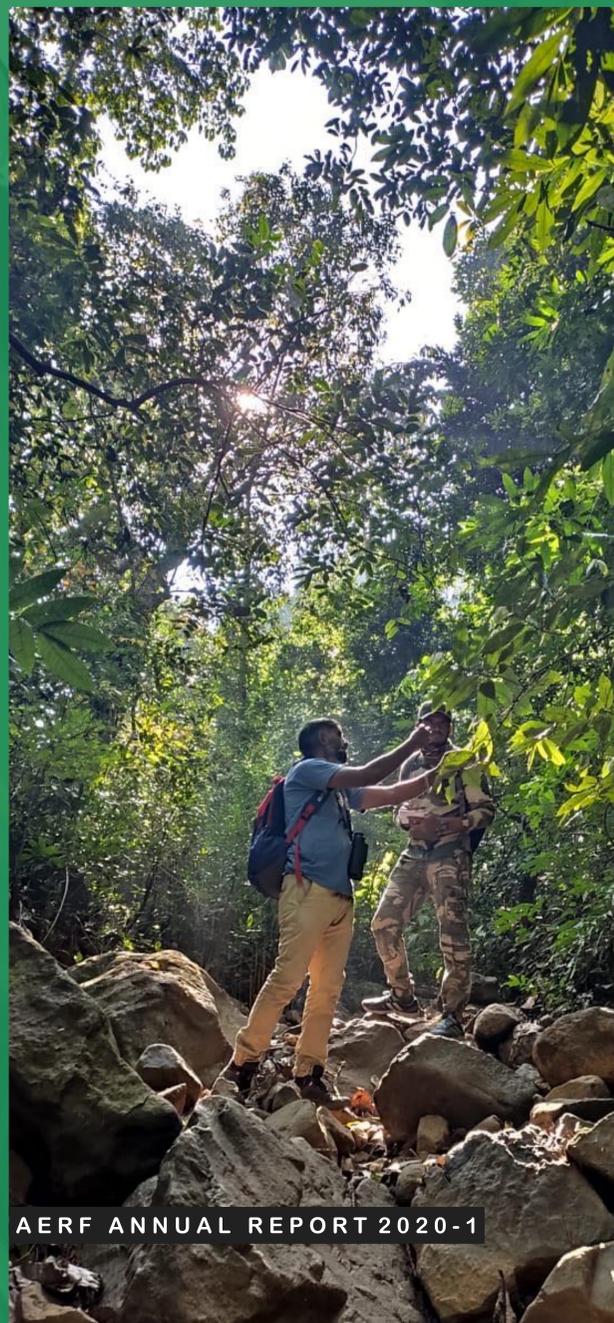
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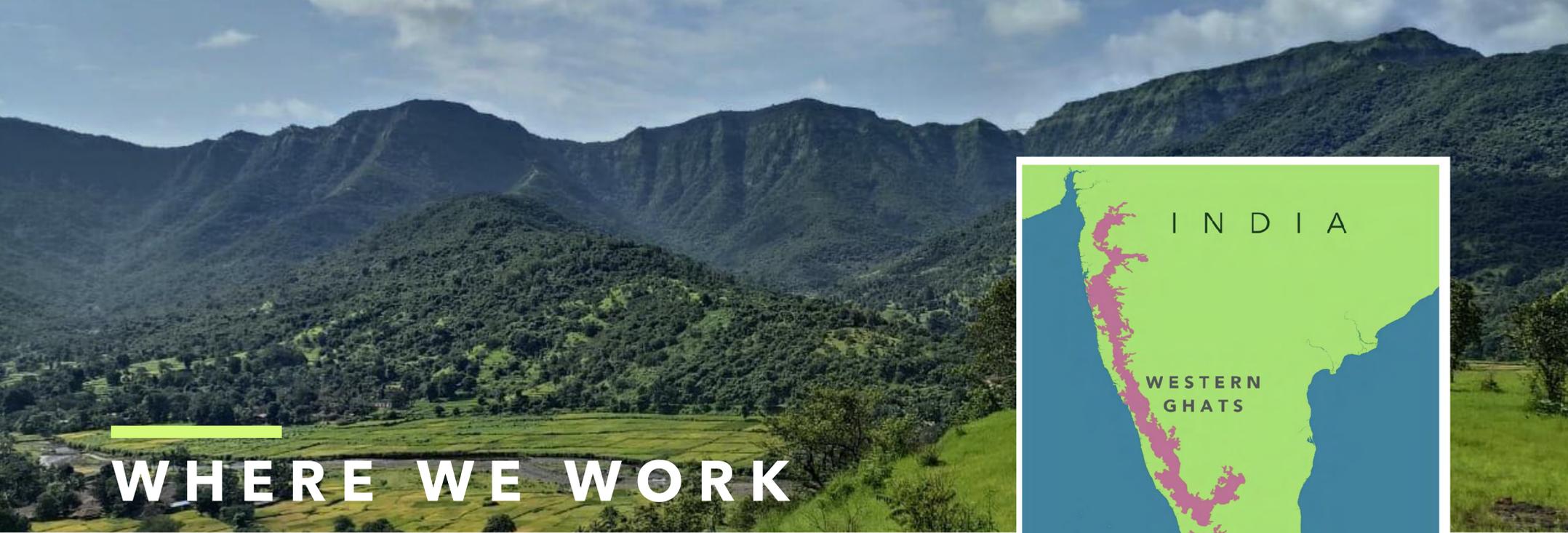
Biostoves distributed in 9 villages in Alibaug



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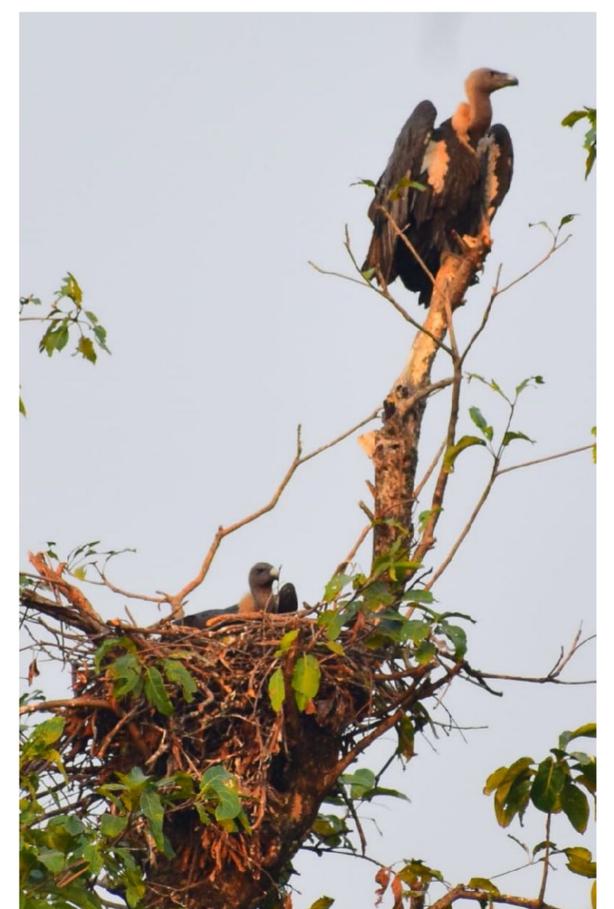
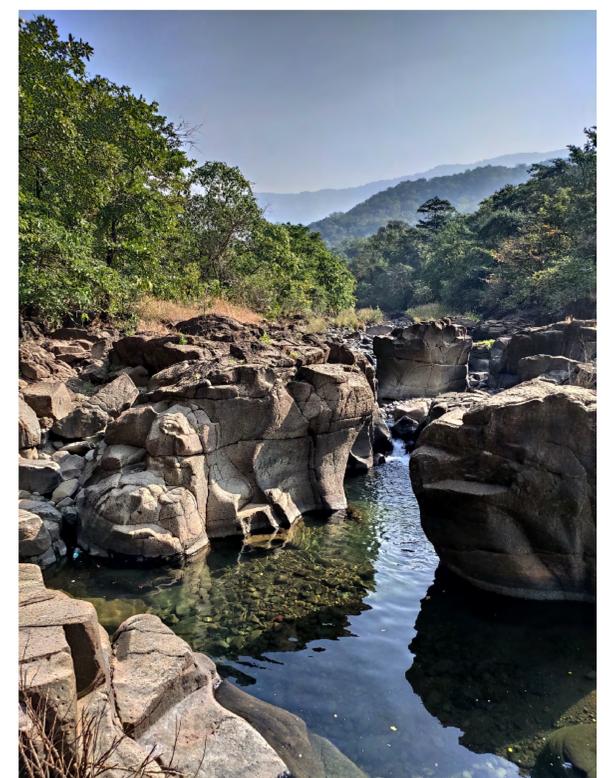
Giant Trees of 16 species documented for conservation from 17 hamlets





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. In the Western Ghats hotspot, the southern part has received more attention since the last four decades due to large number of protected areas suitable for conservation research. However, due to the open access nature of most of the landscape and lack of legal protection in the form of protected areas, northern part of the western ghats has been data deficient. AERF has been promoting the importance of this part since last two decades and could contribute to innovative solutions for conservation on the ground in this landscape through various programmes and projects.



THE NORTHERN WESTERN GHATS

- Part of the Western Ghats - a global biodiversity hotspot that is home to 2% of the world's biodiversity as designated by the United Nations (UN)
- A mountain range that supports an immense amount of biological diversity of approximately 5000 species of flowering plants and 600 species of birds, along with many RET mammals as well.
- A biodiversity haven with several acres of privately owned forests within crucial wildlife corridor zones which are under serious threat of logging, ignorance and apathy

OUR INTERVENTIONS

- | | |
|---|---|
|  BIODIVERSITY CONSERVATION AND RESTORATION |  MEDICINAL PLANT RESEARCH AND DOCUMENTATION |
|  BIODIVERSITY RESEARCH |  DOCUMENTING INDIGENOUS KNOWLEDGE |
|  ESTABLISHING VALUE CHAINS FOR FOREST DEPENDANT COMMUNITIES |  CAPACITY BUILDING OF LOCAL COMMUNITIES |





DIRECTORS' SPEAK

The year that wasn't...

We began 2020 enthusiastically in January looking forward to grand celebrations on having completed 25 years of conservation on the ground! It was a huge milestone for us and a great opportunity to express gratitude and celebrate with our team, our supporters, well-wishers and their families.

Also our programme of linking biodiversity with businesses was gaining momentum due to our session with corporate representatives from Pune. It created ground for long term engagement with some of them who appreciated our consistent work of conservation in the Northern Western Ghats over the past two decades. Partners like the World Land Trust UK expressed their support to link more corridors using 'conservation agreements' approach. Their support has been vital in scaling up forest-based enterprises resulting in a win-win for both communities and species conservation.

In the year 2020 we ventured into new territory - that of organic farming, with the objective of linking farming with conservation of forests. Promoting local agrobiodiversity and developing a stable remunerative market for such crops was on the cards since 2002 - when we first conducted a study of this nature in the northern western ghats. Trusted friends and partner EarthSong Foundation supported this new endeavour.

However since March 2020 things changed drastically with the pandemic and lockdowns became the new normal. It suddenly created an unforeseen challenge for all our grand plans and brought our momentum to a screeching halt! For us 'people of the soil' it was tremendously difficult to work from home and keep the flock together. Even so, we ideated around this challenge - we organized a couple of webinars and reached out to more than 200 participants from India and abroad.

Turns out that the pandemic was not the only hurdle awaiting us in 2020. In June we had cyclone Nisarg making landfall at Alibaug bringing devastation along the west coast of India. We could once again bank on our supporters like Vanaz Industries, who helped us reach out to 40 tribal hamlets around Alibaug with food and other essential commodities and services as well. We are proud of our team who worked diligently despite the pandemic and helped the most needy communities even before any Government aid could reach them!

We realized that serious events such as cyclones happening on the west coast of India should not be looked at as a freak event and in fact are a sign that climate change knocking on our doors hard.

September onwards, things opened up a bit and we tried to regain our momentum. New conservation agreements were signed, studies began, cashew orchards management and certification process started and on-site audits for Fair Wild organic certification was completed. Our Alibaug team enthusiastically collected information on mangroves and established rapport with fisherfolk. Working on proposals and reports happened in timely manner - thanks to our technologically advanced young team members. Field teams and field assistants learnt how to effectively use their smartphones to improve communication.

Globally, life has changed drastically and permanently due to pandemic. Many have lost their dear ones. Some of our team members suffered through the deadly infection but were lucky to have recovered fully. We all reiterated the need to save forests and allow space to other species. AERF floated the Species Distancing campaign to promote this very thought!

During this pandemic we often felt that it is extremely important to enhance the constituency of people who care for nature and biodiversity as the only answer to this challenge in front of us.

We are thankful to all supporters, funders, well-wishers and everyone who agree with this thought process and have supported us through these difficult times.

We are aware that conservation is work of generations and completing 25 years is important yet a small milestone in this journey. In this rapidly changing world of technology which is mainly focused on information and communication, the need to understand the undercurrent of environmental change is critical than at any time before. AERF will make use of sustainable technologies and materials to effectively deal with the new environmental challenges and thus make the earth in next 25 years a healthier place to live for all the species. We hope that you will join us in this effort.

Sincerely looking forward to a safe and healthy planet soon...

Dr. Archana Godbole and Mr. Jayant Sarnaik



We celebrated turning '25 years young' with gratitude, reflection and a new-found relevance of our mission!

It has been a challenging year to say the very least. The pandemic has rendered the best of us helpless and many have suffered loss and pain. For us, this was supposed to be our silver jubilee year, but instead, it came with unprecedented scenarios both for work, for teams and individuals.

Even so, we found solace in our work, and gained an important thing amidst this loss - PERSPECTIVE. Forest conservation is a continuous process and there is one thing this pandemic has taught us - that it is the most 'essential service', since our wellbeing, health, food and sheer survival depend on it! Many educated people now have started realizing the value of forests as lungs of our planet.

As nature, was flourishing in the absence of human interaction, almost half the year went by without us being in the midst of the very forests that we have vowed to save. However, this allowed us to look at our mission with a fresh perspective and we went back to the drawing board! We learnt how to leverage technology to educate people about our cause - since it has special relevance to the current global situation. Our field team got tech-savvy real fast and kept us connected with the forests. This was also the time when stories of integrity and faith emerged from within our team and from our supporters and donors who stood by us unconditionally.

When the lockdown eased in the second half of 2020 and we returned to the forests for our on-ground work, we reflected on personal lessons learnt during these trying times. We realized that as a team, our understanding of values such as 'degrowth', 'sustainability' and 'environmental ethics' has increased. This has filled us with hope that in the new world beyond this pandemic, understanding and support for our cause will have strengthened!

Then, on August 5th 2020, AERF completed 25 glorious years of conserving forests in the Western Ghats! We took this opportunity to thank the divinity in nature and around us, for keeping our mission going through highs and lows, and for keeping us healthy and able in the face of challenging times.

Today, we must acknowledge what this pandemic truly is - a second chance to re-learn lessons and do things right! Let us pledge to nurture our life-giving forests and work our way to a safe, symbiotic future.

COVID 19, CONSERVATION, & COPING MECHANISMS

Connecting virtually for conservation - AERF's first Webinar on 'Northern Western Ghats - why we should care' has set the stage for our online courses.

Being desk-bound for so many days during the COVID -19 lockdown was a new phenomenon for most of our team. Turning this into an opportunity, we put together our first webinar on 'Northern Western Ghats - why we should care' to communicate the conservation challenges and opportunities distinct to the area. Our director Archana Godbole spoke about the ecological importance of the northern western ghats and Joint-director Jayant Sarnaik explained the concept of 'green economy' and how it can be linked to conservation. It attracted bright minds from various walks of life and was very well-received - so much so that we had to organise a rerun for all the participants that we couldn't accommodate in the first session! This exercise gave us much satisfaction of continuing our mission of forest conservation, despite being miles away from them. It also laid the foundation for our upcoming course on 'Sacred Groves', along with other webinars and courses in the pipeline like EECA (Environmental Ethics and Conservation Action) and LCC (Leadership in Community-based Conservation).

Crowdfunding campaigns to highlight the link between forest conservation and infectious diseases.

Forests provide essential ecosystem services that our lives depend on. COVID-19 has added one more critical service to that list - that of 'disease containment' - conditional on us maintaining safe distance from the forests and its inhabitants! We created the 'Species Distancing Campaign' on GlobalGiving to educate the general public about this concept and to encourage them to help us bring more forests under conservation management.

Social distancing amidst COVID-19 is only an afterthought within a purely symptomatic treatment plan-and a desperate step that goes against our very nature of being social animals. What we need is inter-species distance rather than just being away from our own kind, using ready natural buffers - OUR FORESTS. The forests have always been extremely important as providers of essential ecosystem services that our lives depend on. COVID-19 has shown us that we need to save them to avert future pandemics even as we recover from the current one. Through this campaign, we intend to save at least 150 acres of vulnerable forests in the Western Ghats, India in order to create safe ecosystems for all us species! The idea of this campaign was much appreciated by our supporters globally, and we are extremely thankful to them for pushing the campaign towards success with their generous contributions!

You can also contribute to save more forests for a pandemic-free future by supporting our campaign number **47572** on GlobalGiving.

WEBINAR

NORTHERN WESTERN GHATS
and why we should care...

SPEAKERS

Dr. Archana Godbole
Dr. Godbole is a Plant Taxonomist and Ethnobiologist by training. She was awarded the Whitley Associate Award for her long term work on sacred groves besides many other accolades on the national and international platforms. She is also a Civil Society Observer for Asia-Pacific region on FIP of Climate, Investment Funds for the World Bank since 2012.

Jayant Sarnaik
Mr. Sarnaik is an innovative entrepreneur and conservation practitioner. He is National Geographic's Explorer and is the recipient of IUCN practitioner fellowship and Conservation Leadership award. He holds a patent in process technology for wastewater recycling. He has completed an Executive Education program in Social Entrepreneurship at Stanford University, USA.

MODERATED BY

Sangeeta Pandit
Sangeeta Pandit is an engineer with a management diploma and a corporate experience of close to 20 years in companies like Honeywell and AccelTree. She is associated with AERF as a consultant in an attempt to increase peoples connect with nature as she believes that we owe it to future generations to conserve nature.

Register here: t.ly/S630

A COVID-19 APPEAL by **AERF**

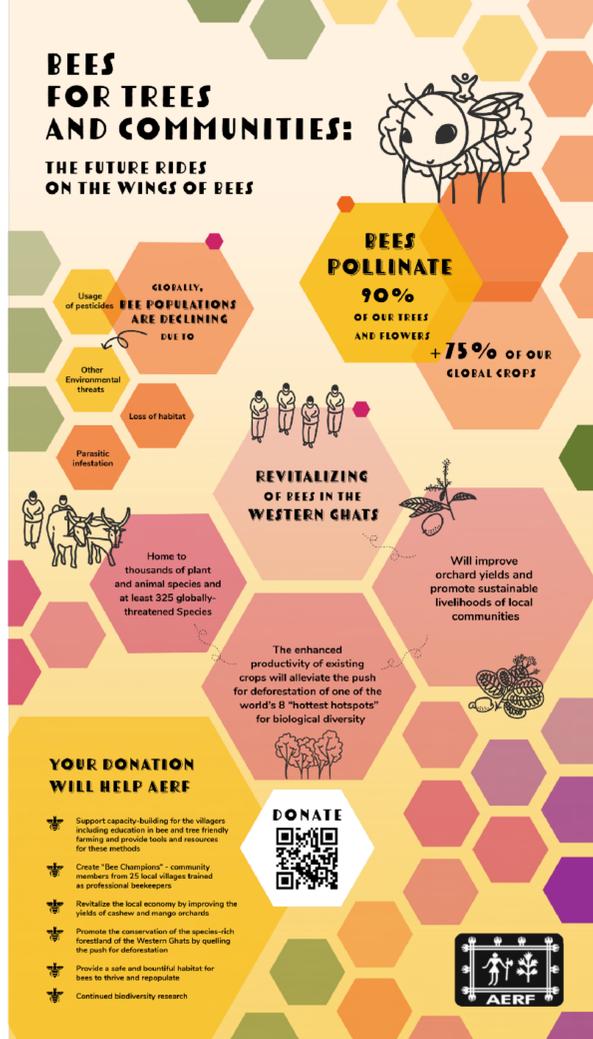
SPECIES DISTANCING CAMPAIGN

THE DISTANCING CAMPAIGN

Live & let live to live...



GlobalGiving
CAMPAIGN NUMBER
47572



The Earth Expeditions Programme goes online!

For the past 6 monsoons, we have hosted the Earth Expeditions India programme with 'Species, Deities and Communities' as its central theme. Each year a group of inspired and eager-to-learn participants from Miami University, USA visit us in the rain-drenched northern Western Ghats for 10 days of experiential learning. However, due to the pandemic, they couldn't be with us physically this year. Nonetheless, the teachers and facilitators at Project Dragonfly found a quick way around the problem and designed an online format for learning. Evidently, it was not the best way of engagement since it missed the key component of on-field experiences - but what amazed us is the eagerness to learn and the level of inspiration among the students! We worked with them through online discussions on various campaign ideas for bee conservation and sacred groves, and sure enough, the teams presented very creative outcomes to help communicate the campaigns better. Right from creating impressive graphics to weaving immersive stories, the creativity and imagination of the students was unparalleled! Incidentally, we had been pushing our online crowdfunding campaigns around this time, so their inputs for our 'Bee conservation' and 'Giant tree' campaigns on GlobalGiving platform proved to be very useful in making the narrative more impactful! The visual elements designed by them coupled with the storytelling approach definitely helped the cause reach more people.



The Giant Tree conservation initiative stands up for its supporters during these tough times



During the pandemic lockdown, our field team took every safe opportunity that was present to carry on the work and distributed direct incentive among some 40 giant tree owners already identified during earlier surveys. It was a token of recognition of their contribution in keeping these trees standing over generations. Quite a few owners were pleasantly surprised to receive this incentive as they did not imagine that one can receive economic benefits simply for keeping the trees standing! Our team also explained our 'value chain' approach to them and showed them the possibility of having sustainable incomes by saving giant trees. This generated a lot of enthusiasm and they directed us to giant trees that our researchers could not map earlier. As a result, our team tagged 19 new giant trees and rewarded their owners as well. Thus, when livelihoods across the country were getting affected during this pandemic, it was conservation that provided much needed monetary relief to these people! Such incidences are critical in dispelling false beliefs that conservation and economy cannot go hand in hand.

A heartwarming story from our travel kitty!

When you set out to explore the forests of the Western Ghats, stories of conservation can intercept and inspire you in the most humble of places! When our field researcher Akshay and Sanjay were on the lookout for giant trees, they came across an 83 year old man stationed beside a huge Artocarpus, watching over his farm. In the conversation that followed, he used fluent botanical terms like 'bryophytes' and 'angiosperms'. He went on to reveal that he had worked as a field and lab assistant at the Botany Department of a renowned college in Mumbai and explored many places of India in that capacity! He was using his knowledge and experience to conserve that particular giant tree and he was the 3rd generation to be doing so! Such experiences renew our belief in people and our cause and assure us that we are not alone in our long and arduous journey!

FACING A CHALLENGE WITHIN A CHALLENGE

Rebuilding the lives of the cyclone-hit communities of Alibaug

While the whole world was dealing with the pandemic, the local communities of coastal Maharashtra were additionally bracing themselves for the cyclone Nisarg which made landfall in Alibaug town in Raigad on June 3, 2020 as a 'severe cyclonic storm', bringing with it extreme destruction and loss of life, shelter and livelihood. The worst hit were the indigenous communities residing in the mountains and hills of Alibaug block. Due to their remote and inaccessible locations, it was very difficult for any government aid and relief material to reach them. However, we could not stop thinking about how we could help these communities - many of whom had supported us wholeheartedly in our conservation endeavours over the past decade. Even downhill, in village Mahajane, we faced a personal loss as the cyclone destroyed the carbon-neutral processing centre for making oil from sustainably harvested Karanja seeds. It was set up by AERF but managed completely by locals and had been a symbol of perfect symbiosis between conservation and entrepreneurship!

Without any delay, we diverted our resources and decided to help rebuild the lives of the cyclone-hit communities in Alibaug! In July, after 2 reconnaissance visits and incessant planning, our lads at AERF took it upon themselves to traverse this difficult road and provide the farthest communities with critical supplies of food, clothing, medicines, solar lights and shelter material. Our team reached out to a total of 335 households in 9 hamlets! We are proud of our team - Jyotirao, Omkar, Akshay, Karn and Kailas, Deepak and Sameer - who planned and executed the whole operation and brought back a lot of goodwill with them! We also rebuilt the Karanj seed processing centre gradually and brought the 'livelihood machine' back on track.

This additional challenge of the year 2020 made us realise that our resilience is only as strong as our willingness to help others in times of need!

MANY THANKS TO VANAZ
ENGINEERS LIMITED FOR
THEIR GENEROUS
CONTRIBUTION!





EXPLORATION

Gathering insights about ecosystem services provided by the sacred groves of the northern Western Ghats



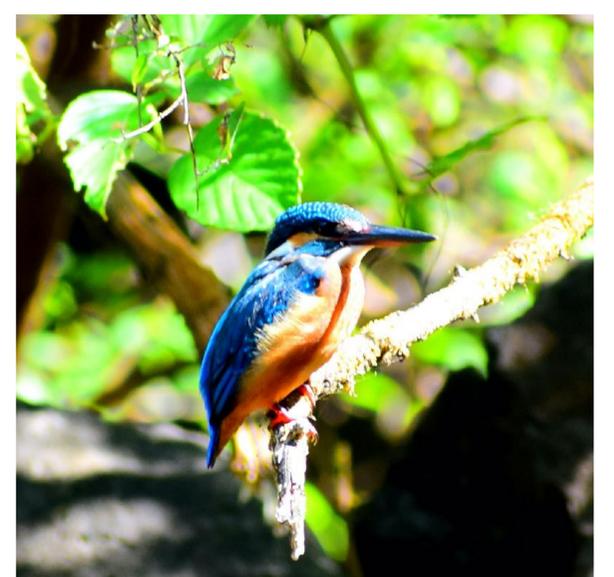
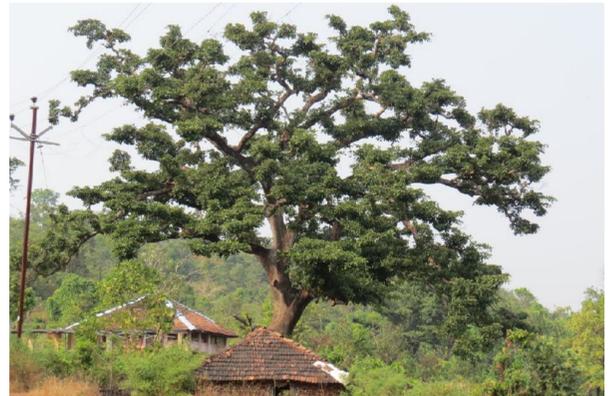
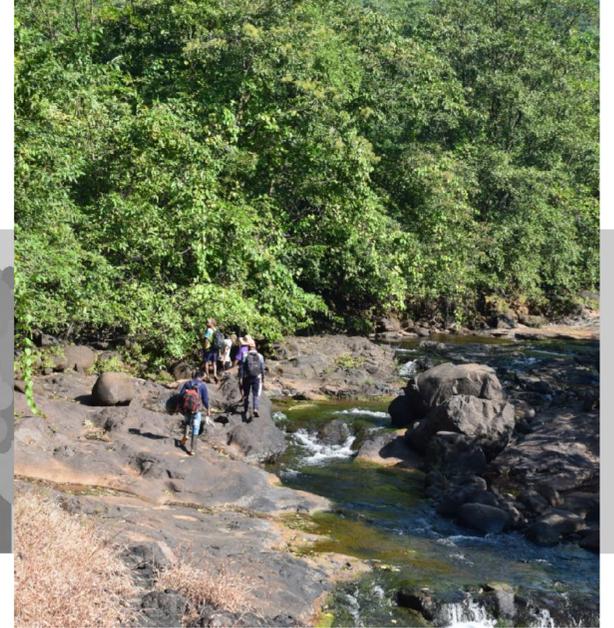
Ratnagiri and Sindhudurg districts still have sacred groves maintained by local communities. However it is evident that degradation of the sacred groves forests is common and there is an urgent need to look at the status of these groves. Though AERF has conducted detailed biodiversity assessments of more than 100 sacred groves, it is necessary to know the current status of ecosystem health and biodiversity of these groves. The repetitive surveys provide much needed insight for planning long term management and conservation action with people's meaningful engagement as well as help understand role of ecosystem services in sustaining conservation of these groves.

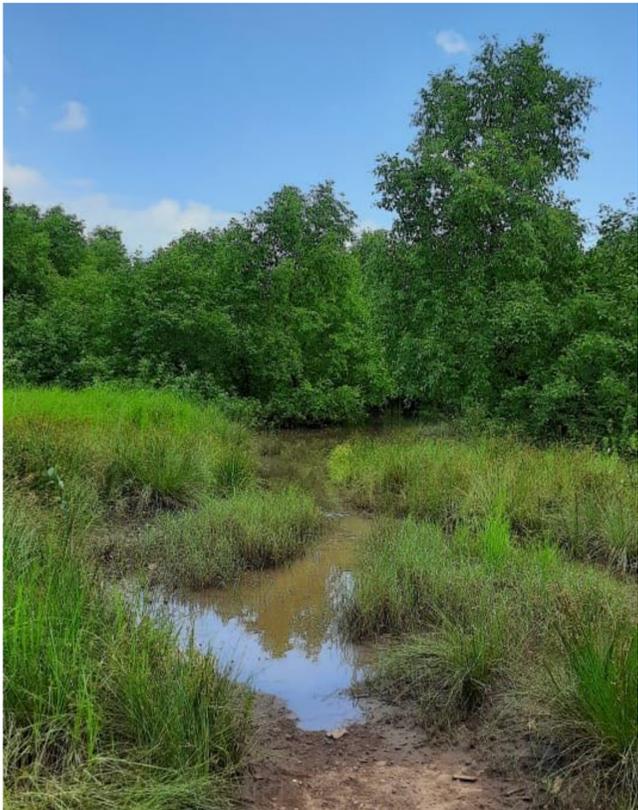
In 2020, with the help from World Land Trust, we completed surveys across 50 sacred groves in the 6 blocks of Ratnagiri, Sindhudurg and Raigad districts, namely - Khed, Kudal, Mandangad, Dapoli, Mhasalaand Mahad. The objective was to take stock of the biodiversity supported by these sacred groves and ecosystem services provided by them to the local communities and at regional level e.g. freshwater, pollination non-timber forest produce having potential for value chain development

Bird surveys reiterated the importance of large trees and sacred groves and their role in pollination of wild trees. Out of the 128 bird species recorded in all blocks, 20 were endemic to the Indian subcontinent and 7 to the Western Ghats. Apart from birds, our team also surveyed amphibians- who are bioindicators of environmental change in microhabitats. Out of the 20 species recorded, 5 are in the IUCN RedList. Additionally, the sites also showed great floral diversity and our team recorded 331 giant trees of economically important species like the *Terminalia bellirica*.

While the biodiversity surveys yielded promising results, the social surveys told us that the primary threat to these sacred groves is the diminishing belief system among the younger generation. These two factors make it clear that conservation action has to go hand in hand with awareness generation among the local communities, because they are at the core of participatory conservation action! We have been working with the communities to rebuild the belief system and our forest management plans work towards bringing direct benefits to them.

Importantly, the assessment of ecosystem services offered by the 50 sacred groves clearly underline their critical role in providing freshwater to the communities residing in remote areas of the Western Ghats. Out of 50 sacred groves surveyed, 30 sacred groves had perennial freshwater streams and in case of 4 sacred groves the local communities were totally dependent on the supply of freshwater for meeting their needs. Thus it is safe to conclude that there is significant potential to initiate and sustain conservation of sacred groves by emphasizing the role of key ecosystem services in addressing the basic needs of local communities such as freshwater.





Understanding the Mangrove ecosystem in coastal Alibaug

In February 2020, our team visited the coastal areas of Alibaug block to conduct a rapid socio-ecological assessment of mangrove forests. The coastal ecosystem of mangroves provides many benefits and services linked to climate-change adaptation. They are also one of the most carbon-rich ecosystems, sequestering significantly more carbon than terrestrial forests. Hence, this exploratory visit was insightful in many ways and the field team gained critical knowledge about the challenges and opportunities linked to conservation of this ecosystem.

When a dyke in coastal Alibaug burst in the year 1994, seawater invaded the entire agricultural landscape in 6 villages covering 8000 acres and over the years, mangroves established themselves in paddy fields of the local communities and affected their primary livelihoods. As a matter of consequence, the locals switched to fishing and aquaculture, but the incident created a huge opportunity and challenge for the cause of mangrove conservation. Any intervention will have to start with capacity building of the community and their knowledge enhancement about the importance of mangroves. Unfortunately, this lesson reached them the hard way when cyclone Nisarga hit Alibaug in June 2020 and thankfully, much of the damage was minimised due to mangroves being the first line of defence! We hope to make the community aware of the many other benefits and services provided by this ecosystem and also map mangrove resources for sustainable value chains to create a win-win situation for both communities and mangroves.

Exploring these mangroves was a highly enriching and refreshing experience with sightings of many spectacular birds and plants including the Near-Threatened Black-headed Ibis and the Eurasian Curlew! We are excited to ideate impactful conservation strategies for this critical ecosystem!



OPPORTUNITY TO DEVELOP NEW VALUE CHAINS



OPPORTUNITY CREATION AND CAPACITY BUILDING



STRENGTHENING THE FIGHT AGAINST CLIMATE CHANGE



OPPORTUNITY TO CONSERVE A CRITICALLY IMPORTANT HABITAT

Working towards climate resilient agriculture and food security



Our long time partner Mr. Sebastian Pole of Pukka herbs has been visiting AERF since 2012. He has witnessed the painstaking work that the team does for ensuring a continuous and progressive supply of certified NTFPs whilst maintaining the delicate balance with conservation and sustainability. Thus, when we brought 'climate-resilient agriculture' into the discussion, he was extremely supportive and had complete faith in us to scale up the approach.

In the first quarter of 2020, when he visited us at Sangmeshwar, it was in a new, additional capacity - as the founder of the charity 'Earthsong Foundation'

Earthsong Foundation focuses on progressive agro-ecological organic farming and how it can help maintain a healthy balance with regeneration of the forests. AERF is working with them to promote climate resilient and biodiversity-friendly agriculture in the northern Western Ghats. We are trying to promote cultivation of traditional food crops in agricultural fields while planting native multipurpose tree species in open patches of secondary forests Sangameshwar in order to build a climate-resilient and nutrition-rich food supply chain by conserving traditional varieties and healthy forests. Another objective is to make abandoned agricultural fields productive again and reduce encroachment into forest land.

We made a good start to this initiative by growing saplings of important medicinal plants like *Centella asiatica* and *Bapoca monneri* at our nurseries at Sadavli field station. We also procured 500kg of Waigaon Turmeric rhizomes known for their high-curcumin content. Our team identified farmers and finalized the sites for cultivation of Brahmi, Turmeric, Sesame and Ragi. Despite the many challenges brought on by the pandemic, we were successful in cultivating these crops under the guidance of our field expert and experienced agriculturist Sanjay Pashte! By the end of the year, we could plant 235 saplings of Brahmi at Devghar village along with Turmeric, Ragi and local rice varieties at various regenerated agricultural plots by teaming up with enthusiastic farmers. Notably, almost 7000 sqft. of the cultivated land belongs to a proud woman-farmer-entrepreneur - Mrs. Dildaar Patankar!



NEW VALUE CHAINS
REALISED AND
DEVELOPED



OPPORTUNITY
CREATION AND
CAPACITY BUILDING
IN AGRICULTURE

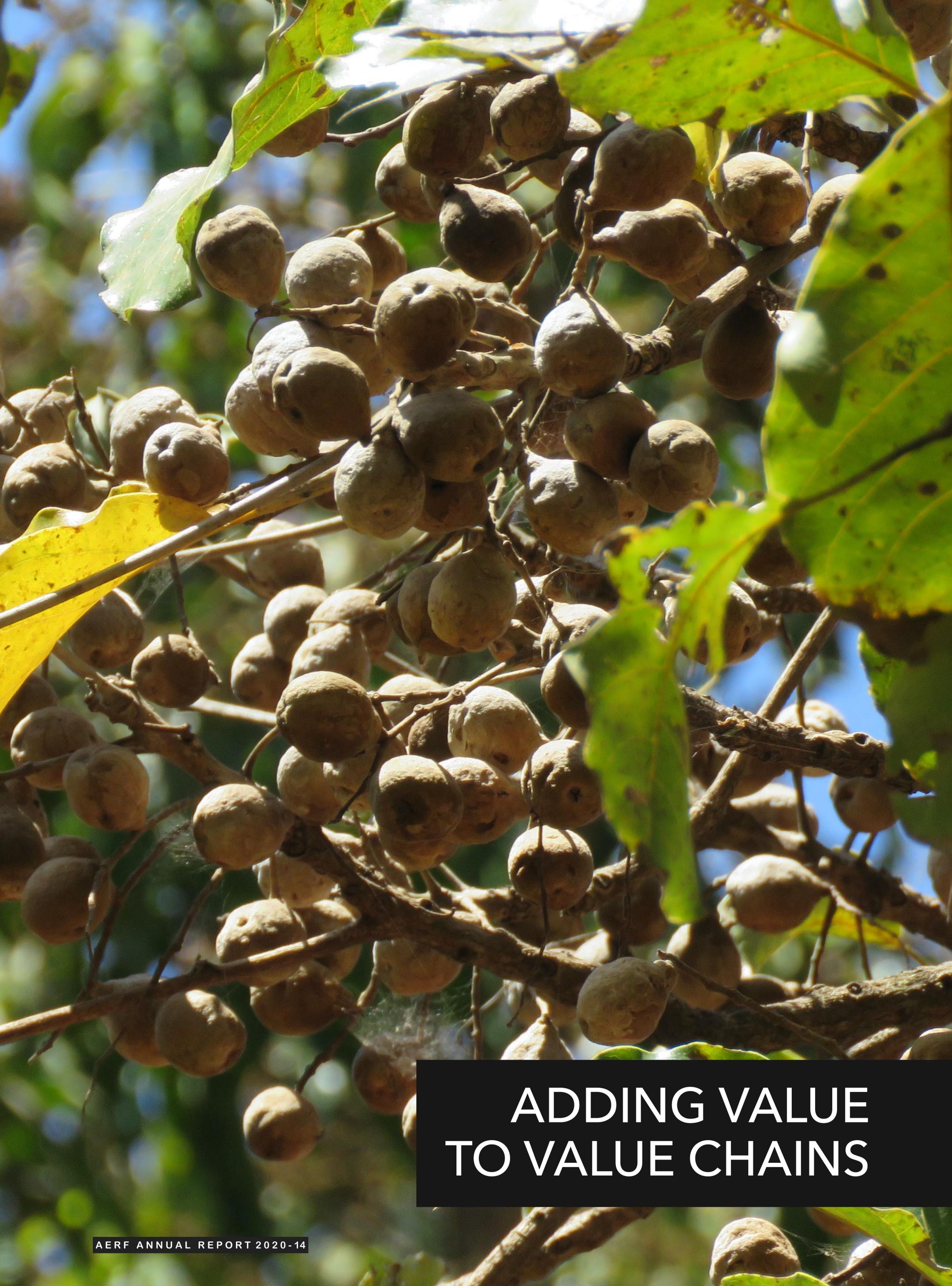


ADDRESSES THE
GLOBAL ISSUE OF
FOOD SECURITY



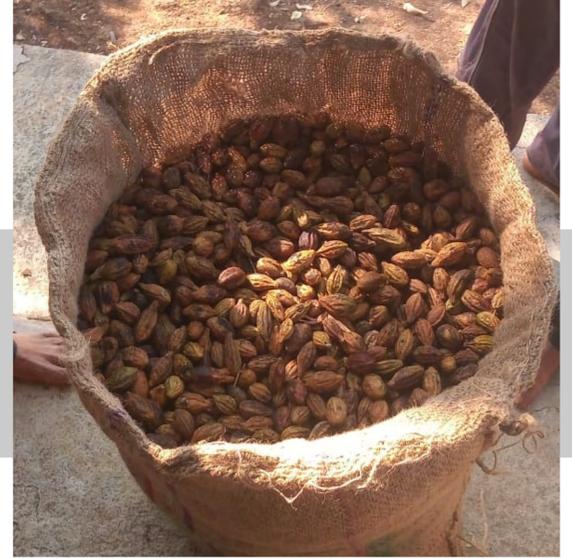
FOREST CONSERVATION
BECOMES A WIN-WIN
SITUATION FOR
FARMERS





ADDING VALUE TO VALUE CHAINS

Enhancing the partnership between business and biodiversity through international certifications



We successfully completed the FairWild certification audit at our sites in the northern Western Ghats for the 6th consecutive year - this time overcoming the additional challenges brought on by the pandemic! In all we collected 6210 kgs of Haritaki at our Bhimashankar and Talmachi sites and 9823 kgs of Bibhitaki at Sangameshwar sites. This activity provides collection and processing benefits to 100+ households. With so many years of experience behind us, our focus is now on expanding the benefits of certified value chains to more forest-dependent communities. In 2020, we successfully added 2 new Bibhitaki collection sites in Sangameshwar and worked on 13 new Haritaki collection sites in Talmachi, Junnar which will be certified next year! Importantly, the local community gained much necessary experience in collection and processing of Haritaki fruits for the first time. We made sure that the non-certified processed Haritaki husk from Talmachi gets completely sold in the market at an attractive price. This whole exercise was important to win the trust of the local community at this new site and build their confidence in their own capacity. The new processing unit at Talmachi will secure the livelihoods of at least 59 families through collection and processing activities.

Our FairWild organic certified Triphala is on its way to the UK - this time as a symbol of our field team's commitment and hard work!

Our field team's exemplary commitment, passion for conservation and hard work during the challenging times of COVID-19 paid off. Samples of our FairWild organic certified Triphala have passed stringent tests set by labs in the UK and our consignment is well on its way to Pukka Herbs. Importantly for us, this enterprise approach is resulting in conservation of nesting habitats of Great hornbill and Giant trees in the northern Western Ghats along with generating a steady stream of income for the local community



EXEMPLAR OF SUSTAINABLE ENTERPRISE



CONSISTENT GROWTH OVER THE YEARS



DEPENDABLE INCOME EVEN DURING THE PANDEMIC



SUCCESSFUL MODEL FOR THE LOCAL TO GLOBAL APPROACH



Incorporating Bamboo as a mainstream building material



Last year we started out on a bid to promote Bamboo as a mainstream building material, and this year we decided to lead by example by building our Haritaki processing centre at village Talmachi completely in Bamboo! The rationale behind this initiative to exploit the full economic potential of Bamboo and make it one of most sought-after material in circular bio-economy.

This task is made much easy since our forest conservation site in village Pali in Velhe block is full of bamboo groves maintained by local people. These groves mainly have population of high quality bamboo species *Dendrocalamus stocksii* which is preferred in construction.

Teaming up with Architect Atul Rajwade, we have begun sourcing, treating and processing Bamboo from our Velhe site with the community's support. Architect Rajwade conducted several capacity building sessions with the community members at Velhe and trained them in correct techniques of harvesting, cutting and processing the bamboo poles in boric solution for durability. Led by our local resource person Mr. Bharat Dalvi, they traversed the important learning curve of preparing 'ready-to-use' poles for transport to the construction site. Our engagement with the community at Velhe has been very fruitful and now they have realised the potential of using their forest-based resources for not only 'supportive' but 'creative' applications in the construction industry.

Our Haritaki processing centre at Talmachi will stand as a truly sustainable and strong structure - exemplary of our mission i.e. to elevate the status of this resource for application in affordable, sustainable housing.



OPPORTUNITY TO DEVELOP NEW VALUE CHAINS



LEADING BY EXAMPLE



PROMOTING SUSTAINABLE SOLUTIONS



CAPACITY BUILDING OF LOCAL COMMUNITY

Guduchi / Giloy for conservation of Giant Trees

Guduchi or Giloy (Tinospora cordifolia) has come under the spotlight during this pandemic owing to its well documented effect in boosting immunity and easing respiratory illnesses. This valuable climber grows in healthy manner on large trees. Moreover in some cases the Giant trees enhance its medicinal properties. Hence availability of this medicinal climber in sufficient quantity depends on the conservation of primary forests and giant trees. With the resource being so intrinsically linked into our core mission, we explored this value chain and procured and supplied 2 tonnes of Guduchi last year from Sangameshwar region. It helped in generation economic benefits for the local communities from 6 villages during the challenging times of COVID.



Moving from 'volume' to 'value' in the Bija value chain

Bija or *Pterocarpus marsupium* is a tree revered in Ayurveda as the effective cure for Diabetes. However, diminishing traditional knowledge among forest-based communities is resulting in these trees ending up as firewood! Our Bija Diabacheck tumblers sourced from a single Bija tree have proved the true value of this resource by bringing returns equal to that from clear-felling of more than 600 trees! This set the precedent for bringing this high conservation value tree species under sustainable management, and we could save our first 51 Bija trees in 2020 - from clusters present in forests to single trees in village homes using the conservation agreement approach !

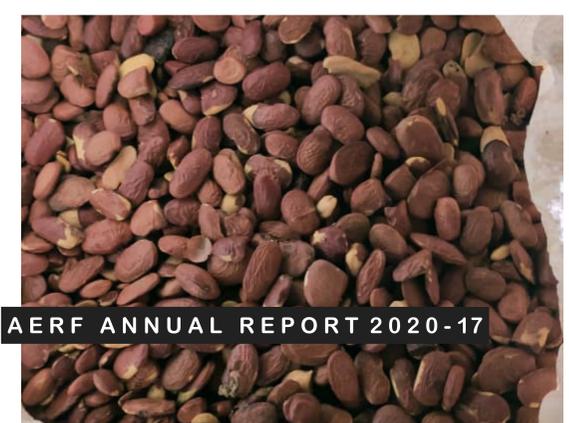
Meanwhile, our team has been working on moving from 'volume to value' in this enterprise by making tea bags from powder of Bija wood which will help us get more forest under conservation in lieu of the economic potential of a single Bija tree.



Stocking up our Amazon store

My Forest Karanja Seed Oil is cold pressed, virgin oil extracted from seeds of wild *Pongamia pinnata* trees found in the forests of Raigad, Maharashtra. These seeds are collected by the **indigenous Thakar tribe** and processed at our **carbon-neutral processing centre** at Alibaug - which has been running as a **'livelihood machine'** for the local community for more than a decade now!

Use this oil in various cosmeceutical preparations for skin and hair or use it as an effective, all-natural mosquito repellent.



देवरहाटी संरक्षण, बेहेडा संकलन व प्रमाणीकरण कार्यक्रम - उजगाव



देवरहाटी ही कोकणातील गावाची जंगल संरक्षणाची प्राचीन परंपरा आहे. मात्र आज देवरहाटीतील प्राचीन वृक्षांचे व जैव विविधतेचे रक्षण करणे हे मोठे आव्हान बनले आहे. कोकणात जंगल संरक्षणाचे काम करणारी ए.ई.आर.एफ. संस्था व नेचर कनेक्ट ह्या कंपनीमार्फत देवरहाटी मधील प्राचीन वृक्ष वाचावेत व स्थानिक लोकांना फायदा मिळावा अशा उद्देशाने आंतरराष्ट्रीय फेयर वाईल्ड प्रमाणीकरण कार्यक्रम राबविला जातो. ह्या कार्यक्रमांतर्गत देवरहाटीतील पुरातन बेहेडा वृक्षांची समग्र माहिती गोळा केली जाते व बेहेडा फळ संकलन करण्यासाठी गावातील इच्छुकांना प्रशिक्षण दिले जाते. देवरहाटीतील पुरातन वृक्षांचे जतन केल्यामुळे माड गरूड, कळणेर व पक्ष्यांना अभय मिळते. ह्याच पक्ष्यांमुळे जंगल संवर्धन होण्यास मदत होते. आंतरराष्ट्रीय प्रमाणपत्र कार्याक्रमात बेहेडा गोळा करणाऱ्या देवरहाटीचे जतन करणे, वृक्ष टिकविणे आणि फळे गोळा करताना इतर जैवविविधतेला हानी पोचणार नाही याची काळजी घेणे महत्वाचे आहे. तसेच ह्या कामातून मिळणाऱ्या मोबदल्याचे न्याय्य वाटप झाले पाहिजे व समाजातील कोणत्याही घटकावर अन्याय होणार नाही याची काळजी घेतली जाते. ह्या गोष्टीची दरवर्षी काटेकोर तपासणी केल्यानंतरच फेयर वाईल्ड हे आंतरराष्ट्रीय प्रमाणपत्र दिले जाते. ह्या सर्व गोष्टींची पूर्णता झाल्यानंतर फळांचा जास्त मोबदला गोळा करणाऱ्या प्रशिक्षित स्थानिक लोकांना मिळतो व गावालाही देवरहाटी संरक्षणासाठी खास निधी दिला जातो.

देवरहाटी ही गावाची परंपरा आहे व गेली अनेक वर्षे गावाच्या पिढ्यांपिढ्या ह्या देवराईचे संरक्षण करीत आहेत. महाराष्ट्र सरकारच्या जैवविविधता महामंडळाच्या नियमानुसार भारतीय जीव विविधता कायदा २००४ अंतर्गत गावातील देवरहाटीचे संरक्षण करणे गरजेचे आहे. या साठी **उजगाव जैविक विविधता व्यवस्थापन समिती** स्थापन झाली असून त्यामार्फत देवरहाटीचे संरक्षण व व्यवस्थापन केले जाते.

उजगाव जैविक विविधता व्यवस्थापन समिती - पर्यटकांना सूचना

१. देवरहाटीत कोणत्याही प्रकारचा काचरा, प्लास्टिक इ. टाकता कामा नये.
 २. देवरहाटीतील फळे, पुले अथवा वनस्पतींचे नमुने गोळा करता येणार नाहीत. कोणत्याही अभ्यास व संशोधनासाठी तसे करावेचे असल्यास जैविक विविधता समितीची परवानगी घ्यावी लागेल व नियमानुसार त्यासाठीचे शुल्क भरवे लागेल.
 ३. देवराई पाहण्यासाठी येणाऱ्या प्रत्येकाला रु.२५ शुल्क घावे लागेल.
 ४. देवरहाटीतील पक्षी व प्रण्यांना त्रास होईल असे कोणतेही वर्तन करता कामा नये. उदा. टेपेकोर्डरवर गाणी वाजविणे, मोबाईल फोनवर मोंट्याने बोलणे.
 ५. देवरहाटीत वाहणे पाकिय करण्यास बंदी आहे. कृपया आपली वाहने बाहेर लावावीत.
- वरील अटींचा भंग केल्यास दंड केला जाईल व गरज पडल्यास कायदेशीर कारवाई केली जाईल.

आज्ञेवरून

उजगाव जैविक विविधता व्यवस्थापन समिती



COMMUNITY ENGAGEMENT

Discussing the role of indigenous community in forest conservation

In November 2020, we organised a meeting and workshop at Barshet village in Alibaug for the indigenous community from the 'Thakar' tribe to discuss the linkage between forest conservation, value chains, species conservation and their intrinsic role in granting success to this challenging pursuit. Despite the looming shadow of the pandemic, we are glad to have hosted more than 100 participants from 12 hamlets!

It was a good start to initiate the discussion about species conservation in reserve forests, especially endangered species like pangolin in the Barshet reserve forest. Instead of approaching with a preconceived notion about reserve forests, species and their relationship with the local community, this was a good way to encourage open communication that can lead to a mutually beneficial conservation strategy.

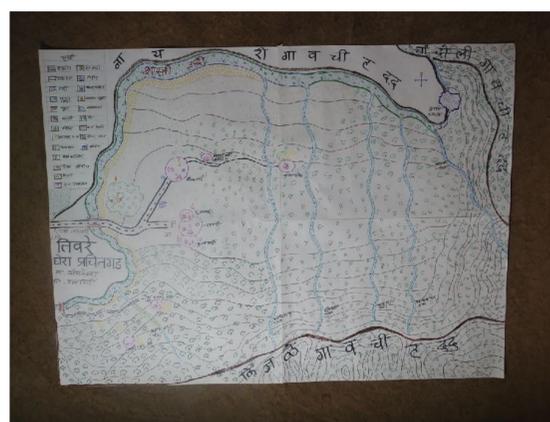
It was reassuring to see people slowly open up with their experiences, understand AERF's mission and approach and pledge to be a part of the conservation solution for both species and habitats!

Engaging with the community to document the fast vanishing traditional knowledge of biodiversity

Amid the strict directives by National Green Tribunal in November 2019, Maharashtra State Biodiversity Board initiated the process of preparing the Rapid People's Biodiversity Registers across the state. In Sangameshwar block of Ratnagiri district, AERF has been appointed as a facilitating agency for as many as 72 villages from the Ecologically Sensitive Area of Sahyadris.

It was a challenge bordering on chaos! However, banking on previous successful experience with the PBR process, we took up the challenge. With our innovative ways and rapid process at village level we completed preliminary biodiversity documentation in all villages successfully by February 2020.

We are aware that this nature of rapid exercise may not yield the ultimate/ expected results, but AERF could make best use of this opportunity with Biodiversity Management Committees to initiate the dialogue around forest conservation and document traditional knowledge of local communities about natural resources. This is a critical step in conservation of agrobiodiversity.





OUR TEAM 2020

Dr. Archana Godbole *Director*
Mr. Jayant Sarnaik *Joint Director*
Mr. Nilesh Bhujbal *Sr. Accounts Officer*
Mr. Bhalchandra Wadke *Administrative Officer*
Ms. Prajкта Damle *Jr. Accounts Officer*
Mr. Umesh Hiremath *Sr. Field Researcher*
Mr. Hasit Trivedi *Programme In-charge*
Ms. Suchitra Naidu *Communications Manager*
Mr. Kajal Barman *GIS Analyst*
Mrs. Vandana Gargate *HR and Administration*
Mr. Karn Mahadik *Jr. Research Officer*
Mr. Jyotirao Wankhede *Jr. Research Officer*
Mr. Abhishek Nangare *Jr. Field Researcher*

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Mr. Dnyaneshwar Sabale *Field Assistant*

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Ms. Shalini Khake *Field Assistant*
Ms. Asmita Khake *Field Assistant*
Mr. Nikhil Jadhav *Field Assistant*
Mr. Mahadev Sawant *Field researcher*

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Mr. Dnyaneshwar Virnak *Field Assistant*
Ms. Surekha Virnak *Field Assistant*
Mr. Vasant Kokate *Field Assistant*

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Mr. Ravindra Ghag

OUR ADVISORY BOARD



Mr. A.M. Gokhale, recipient of Padmashri for his outstanding work on traditional of Village Development Councils in Nagaland, this former chief secretary of Nagaland has coordinated a participatory resource enhancement project, the Nagaland Environmental Protection and Economic Development, through People's action (NEPED), since 1995 in Nagaland. A keen plant photographer and a taxonomist, Mr. A.M. Gokhale also served as Additional Secretary in the Ministry of Environment & Forests (MoEF) and as the Chief Secretary at the Ministry of Non Conventional Energy (MNES) . At present he is the Special Adviser to the Planning Commission for North East region.



Dr. Govindasamy Agoramoorthy, a world renowned primatologist has been guiding officials, technical and research staff members for over 25 years in the field of ecology. He currently teaches at the College of Environmental Sciences in Tajen University, Taiwan. He has served in various global environmental conservation organizations. His research and conservation activities are spread across the globe including India, Liberia, USA, Venezuela, Taiwan, Trinidad, Malaysia, Vietnam, Singapore, Indonesia, Peru, Brazil and China. He has been awarded with numerous awards and memberships including best scientist award, National Environmental Science Academy (2007)



Dr. James Danoff Burg is the Director and Founder of Big Sky Consulting and is dedicated to providing creative, science-based conservation and education solutions for NGOs, zoos, and aquariums. His twenty years in grant writing, strategic planning, evaluation, community-based conservation, biodiversity surveys, curriculum creation, and public outreach help him to be a global leader in conservation, education, and strategy. Dr. Danoff-Burg's graduate training focused on insect and marine invertebrate conservation evolution and ecology. For the past two decades, his research, teaching, and conservation implementation actions have focused on reducing the negative effects of human activities on biodiversity through conservation education



Dr. Alan Hamilton, PhD, ScD, FLS, has been in the field of professional conservation and has also worked as university lecturer in the UK and Uganda for many years. His research specialty is the history of climate, forests and land use in central Africa. He was a founder of the People and Plants Initiative, a joint programme of WWF, UNESCO and the Royal Botanic Gardens Kew, designed to raise global capacity in applied ethnobotany . In 2009, Alan was made an Honorary Professor in the Kunming Institute of Botany, Chinese Academy of Sciences in recognition of his collaboration on conservation with Chinese scientists.



Dr. Jean Phillipe Puyravaud

A well known ecologist contributed to understand vegetation patterns and peculiar species from various regions in the Southern Western Ghats. He is a rare combination of a researcher and a conservation practitioner.



Dr. Mark Lethbridge has research interests in wine quality detection using active optical instruments, wine yield estimation, chain of supply issues in agriculture, vegetation condition monitoring using field and remote sensing, optimization algorithms, decision support tools in production and natural resource management and ecological, movement and spatial modelling. Together with Dr Micheal Westphal, he developed OPRAH, a landscape restoration prioritization algorithm used in NRM.

Dr Lethbridge has 15 years of field biology experience in radio tracking, mark recapture and mark resighting and has undertaken everything from small mammal pitfall trapping to medium-sized mammal treadle trapping to perfecting camel immobilization techniques with Dr Wayne Boardman. He is currently developing new and innovative ways to capture species vital rate and population growth rate data remotely using camera traps and improved aerial survey techniques.



Mr. Sanjay Upadhyay, Advocate, Supreme Court of India, is the founder and managing partner of the India's first environmental law firm, Enviro Legal Defence Firm. He also established the charitable arm of the Law firm through the Environment Law and Development Foundation. Mr. Upadhyay has over 20 years of experience in environmental law and is an advocate at the Supreme Court of India - the Apex body for legal matter in India. He has substantial experience in rules and regulation related to forest governance and is currently member of the committee formed by the Government of India to study the regulatory regime related to felling of trees grown on private lands in India. He has served as an environmental and development law expert to most well known International, multilateral, national and state institutions. He has been part of Drafting Committees of several forest, wildlife and biodiversity related legislations both at the national and state level.



Dr. Eduard Niesten earned his Ph.D. in Applied Economics from Stanford University in 1998. His work and research concentrate on comparing the effectiveness of different conservation approaches, with a particular interest in direct incentives and sustainable finance. He currently leads financial planning, cost modeling, business planning and benefits sharing at EcoAdvisors. He previously spent 14 years at Conservation International as Senior Director of Conservation International's Conservation Stewards Program where he oversaw a portfolio of more than 50 projects around the globe that pursue compensation-based conservation with local communities in developing countries. Strategies for ensuring long-term viability of these initiatives include dedicated trust funds, targeted government programs for conservation and poverty alleviation, and sustainable nature-based enterprise.



Dr. S. Natesh is a recipient of the 'Biospectrum Lifetime Achievement Award (2012) for his contribution towards taking the Indian Biosciences sector to new heights. During his tenure at the Dept. of Biotechnology (DBT) of the Government of India, he headed several divisions and built robust international collaborations for DBT whilst also leading a campaign to bring overseas Indian bio-scientists back to India! He is currently a Sr. Consultant and Project Coordinator at the DST Centre for Policy Research at IIT-Delhi and will soon be coming out with his book on the iconic trees of India.

PARTNERS & COLLABORATORS



Each year is usually filled with immersive interactions between AERF team members and our partners and collaborators across the world. 2020 proved to be an exception, as we could not host anybody, nor could we travel to meet our partners. However, just before the global lockdown, AERF director Dr. Archana Godbole attended the partners' meet organized by World Land Trust UK at Antigua Guatemala in March 2020. All of WLT partners working for conservation on the ground met to share experiences and discuss new challenges in the mission of species and habitat conservation across the globe. Dr. Godbole presented AERF's work and specifically showcased the support of WLT for AERF's corridor conservation and scaling up green enterprises in the northern Western Ghats.

We look forward to going back to live meetings and discussions among the fraternity soon!

Please visit our website www.aerfindia.org for a complete list of our partners, collaborators, supporters, network members and institutional collaborators.



CORPORATE CONSERVATION PROGRAMME

With 20 years of pioneering the cause of on-ground biodiversity conservation in the Northern Western Ghats, AERF (Applied Environmental Research Foundation) is introducing the 'Corporate Conservation Programme' (CCP) which is specifically tailor-made to address the very issue of environmental sensitivity and disconnect amongst the young working population of our society. After spearheading the concept of 'participative conservation' for the local communities in Maharashtra, AERF is looking to engage the urban class in on-ground conservation activities through CCP.

The programme has been designed to imbibe a feeling of responsibility towards the environment and for 'nature lovers' to become actual 'doers' through such activities. It is also a channel to inculcate the refined analytical minds of the educated class to correct a global problem with global repercussions.

A global membership programme for budding conservation stewards

WHAT DOES THE MEMBERSHIP ENTAIL?

- Access to AERF's vast environmental, social and knowledge repositories in the Western Ghats through participatory events.
- Site visits to AERF's field sites where the actual conservation work takes place. Participate in various conservation activities!
- Specially curated talks on reconnecting with nature and creating positive impact on the ground.
- CCP Conservation Kit: T-shirt, Bag, Cap, Pledge Pin.
- 20% discount on My Forest Merchandise. (www.myforest.co.in)
- 80G Benefits for tax exemption.

Reconnect with your primary habitat, find that intrinsic connect between man and nature.



Reduce your carbon footprint, make our planet happy & healthy and be an example for the young generation.



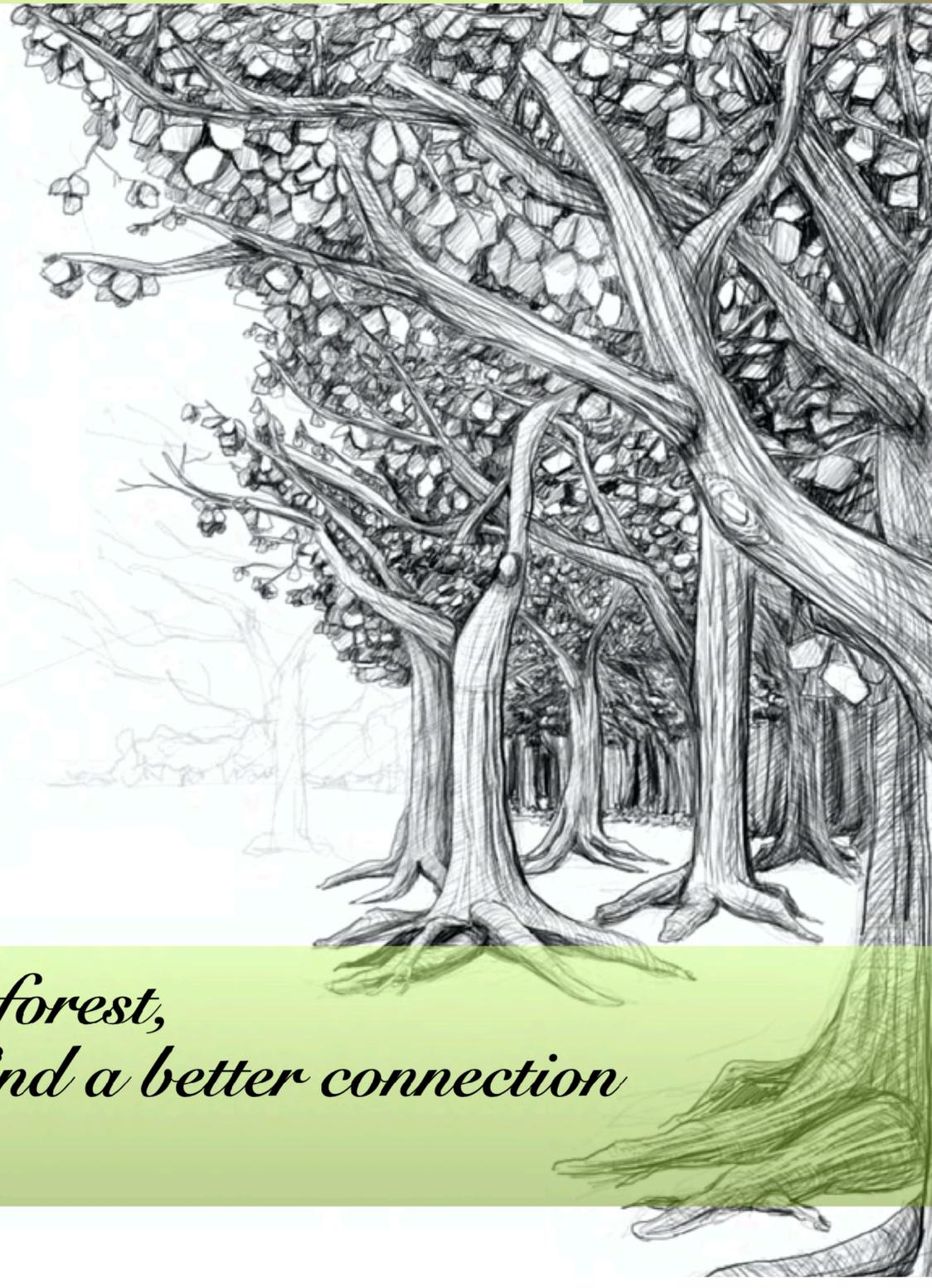
Do your bit for the environment, dare to go beyond philanthropy and donations.



Connect with like-minded eco-citizens, be part of a squad at the forefront of environmental challenges!



*There is no Wi-Fi in the forest,
but we promise you will find a better connection
- Anonymous*



CREATING VALUE FROM STANDING FORESTS



Nature Connect

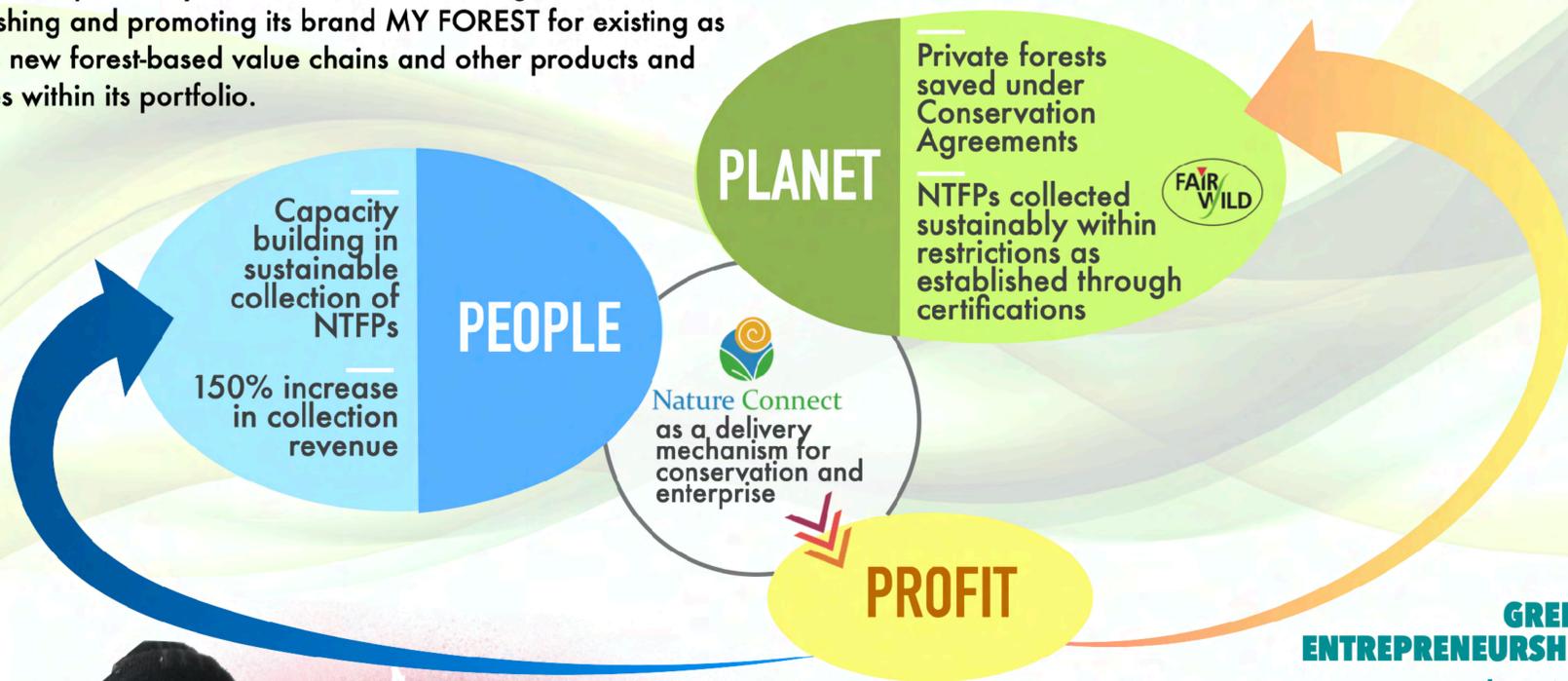
Move from Philanthropy to Impact Investment with us through Green Entrepreneurship

Nature Connect India (NCI) is a conservation enterprise established by founders of Applied Environmental Research Foundation (AERF). The Sole purpose of NCI is to build a replicable and scalable business model for sustainable use of biodiversity and forests creating a win-win situation for communities and ecosystems. This model when scaled up will address the perception gap about forests that has hindered long term private investment in forests and biodiversity conservation.

Along with NTFPs (Non-Timber Forest Produce), other scalable business models are enviro-tourism, experiential learning and strengthening nature-based solutions and innovative interventions to reduce dependency on forests. NCI is looking forward to establishing and promoting its brand MY FOREST for existing as well as new forest-based value chains and other products and services within its portfolio.

Conservation Enterprise

applying commercial strategies to create environmental and social impact; reinvesting to maximise the impact



GREEN ENTREPRENEURSHIP

Our success story with **CREDIT SUISSE** through a 3 year collaboration

1000kgs
200
12-15
25320
12000

of Karanj oil and 3 tons of oil cake extracted annually through a carbon neutral process

collectors depend on the value chain for income

local people employed annually for seasonal work

trees conserved through FairWild certified collection of Haritaki fruits

trees conserved by selling 1000 Vijaysar tumblers



Credit Suisse renewed this project for further 3 years with more ambitious targets and more beneficiaries!



ALIGNING WITH GLOBAL GOALS



CONTRIBUTION TO SUSTAINABLE DEVELOPMENT GOALS



CONTRIBUTION TO AICHI TARGETS



Convention on Biological Diversity



Spread awareness on Conservation and sustainable use of biodiversity



Positive incentives for conservation



Sustainable production and consumption by all stakeholders



ENGAGE WITH US

to save the Northern Western Ghats

BUILD YOUR CONSERVATION CAPACITY WITH US



Volunteer



Intern with us

CONTACT US

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