

Mangrove and Marine Biodiversity Conservation Foundation of Maharashtra (Mangrove Foundation) Annual Report Financial Year 2020–21



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PREFACE

Virendra Tiwari, IFS

Executive Director, Mangrove Foundation & Additional Principal Chief Conservator of Forests Mangrove Cell



For the Mangrove Foundation, F. Y. 2020–21 has been about continuing and upscaling the coastal and marine conservation activities in Maharashtra and overcoming the varied challenges along the way which were posed by the Covid-19 Pandemic.

Through this report, we showcase the different conservation initiatives undertaken by the Mangrove Foundation for the protection and conservation of mangroves and Marine biodiversity of the state. The 'Mangrove Conservation and Livelihood Generation' scheme is now being implemented in more than 110 villages across coastal Maharashtra and in F.Y. 2020–21, the revenue generated through these livelihood activities benefited many villagers in coastal Maharashtra during the difficult times of the Covid-19 Pandemic.

Furthermore, in F.Y. 2020–21, the Mangrove Foundation has also streamlined the Olive Ridley Turtle conservation programme which is carried out along coastal Maharashtra. Now this entire programme is being supported financially through the Mangrove Foundation.

During F.Y. 2020–21, the foundation has also partnered with different research institutes like the Wildlife Institute of India, Salim Ali Centre for Ornithology, etc. to carry out research on corals and intertidal fauna in Maharashtra.

In F. Y. 2020–21, the Mangrove Foundation and Mangrove Cell launched its website which has detailed information about all the initiatives of the Mangrove Cell and Foundation.

Furthermore, the Mangrove Foundation also started a quarterly magazine of the Foundation titled 'Sonneratia' which gives information regarding the mangrove and marine conservation activities in the State.

Finally, I would like to express my utmost gratitude to the Hon'ble Chief Minister of Maharashtra for his constant support and also thank the Governing Body of the Mangrove Foundation for their valuable guidance.

(Virendra Tiwari)

From the desk of the Joint Director

Neenu Somaraj, IFS
Joint Director, Mangrove Foundation
& Deputy Conservator of Forests,
Mangrove Cell



Since its inception the Mangrove Foundation has been dedicatedly working towards conservation and protection of mangroves and marine biodiversity. It is with great pleasure that I present you this report covering our work in F.Y. 2020–21.

Speaking of mangroves, there has been a considerable increase in the mangrove cover of the State over the last few years which can be attributed to stricter enforcement of law, increased awareness among the public about the importance of mangroves and the wider knowledge about the legal protection available to mangroves. Since 2018, the Mangrove Cell and Foundation have deployed more than 100 security personnel from the Maharashtra State Security Corporation throughout Mumbai for protection of mangroves. In addition to this, construction of a protective boundary wall next to some sensitive mangrove areas in Mumbai is also being undertaken.

Furthermore, the Mangrove Cell and Mangrove Foundation in collaboration with the Fisheries Dept. of Maharashtra, have initiated a joint compensation scheme wherein monetary compensation up to Rs. 25,000/- is given to fishermen for cutting their fishing nets in order to release a marine species protected under the Wildlife (Protection) Act, 1972. As of today, more than 200 fishermen have been compensated under this scheme and many marine species such as Olive Ridley Turtles, Green Sea Turtles, Leatherback Turtles, Whale Sharks, Guitarfishes and Dolphins have been released safely back to the sea.

Other programmes for marine life conservation include awareness workshop for local beach management staff regarding managing the turtle hatchery sites, locating and relocating turtle nests, etc. Another significant step towards protection of marine species in the State has been the establishment of a new turtle transit centre at Airoli where sea turtles stranded in and around Mumbai are now being treated and in the near future, the Mangrove Foundation plans to establish such centres in the districts of Raigad, Ratnagiri and Sindhudurg.

To conclude, I thank the Mangrove Cell and Foundation staff for working tirelessly and passionately towards conservation of mangroves and marine habitats of Maharashtra and I compliment the compilation team for preparing such a comprehensive report.

(Neenu Somaraj)

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1. Introduction

The Mangrove Foundation is a registered society under the Societies Registration Act, 1860 (set up in 2015) and it functions under the aegis of the Mangrove Cell, Maharashtra Forest Dept. and undertakes implementation of various programmes and activities for the conservation and protection of the mangroves and the coastal & marine biodiversity of Maharashtra. The Mangrove Foundation works synergistically with the Forest Dept. and provides the much-needed monetary support for various mangrove protection activities, it undertakes the implementation of sustainable livelihood activities across coastal Maharashtra involving local communities, conducts various awareness programmes and collaborates with various scientific institutions and NGOs for conservation-oriented research projects.

Important coastal habitats found in Maharashtra



Fig.1. Mangroves



Fig.2 Sandy Beaches



Fig.3. Rocky Intertidal Areas



Fig.4. Corals

This annual report presents the gist of various programmes and activities undertaken by the Mangrove Foundation and the financial details pertaining to various programmes of the Foundation.

2. Financial aspects of the Mangrove Foundation for the F.Y. 2020–21

The Mangrove Foundation was registered with a corpus of Rs. 115 crores in 2015 with a mandate to run its operations from the interest income generated by keeping its corpus funds in Fixed Deposits. Additionally, it receives project/activity specific funds from various Government Departments & Agencies and CSR funds from various corporate organizations. The corpus at the end of F.Y. 2019–20 was Rs. 316.22 crores and in F.Y. 2020–21 Rs. 209.69 crores were added to the corpus thereby increasing the total corpus to Rs. 525.91 crores. The growth in the corpus fund of the Mangrove Foundation is shown in Fig.5.



Fig.5: Growth in the corpus fund of Mangrove Foundation

The Foundation also received Rs. 2.3 crores towards project/activity specific funds (i.e., earmarked or non-corpus funds) in F.Y. 2020–21.

The details of the non-corpus funds received in F.Y. 2020–21 is given in Annexure-I.

2.1 Regarding the Financial Budget and Expenditure of Mangrove Foundation in F.Y. 2020–21

The Annual Financial Budget for F.Y. 2020–21 of the Foundation was approved by the Governing Body of the Foundation in its meeting dated 27/10/2020. The summarised details of Annual Budget and Actual (Unaudited) Expenditures are as follows:

Table 1: Details of the annual budget for F.Y. 2020–21 and related expenditure

Sr. No	Budget Head	% To Total Budget	Budget (Amount in Rs. Lakhs)	Expenditures (Amount in Rs. Lakhs)
i.	Mangrove Protection Framework	30%	630	470
ii.	Ecotourism and Livelihood Activities	22%	472	232
iii.	Research and Projects	6%	127	76
iv.	Capacity Building	1%	25	18
v.	Communication and Awareness	2%	43	30
vi.	Coastal and Marine Conservation Measures	3%	60	60
vii.	Marine Stranding and Rescue Centre	2%	50	19
viii.	Miscellaneous	1%	20	3
ix.	Human Resources	11%	234	300
X.	Administration	16%	340	292
xi.	Assets Procurement	5%	100	65
	Total	100%	2100	1566

The detailed budget and expenditure statement for F.Y. 2020–21 is given in Annexure-II.

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3. Mangrove Conservation and Protection Activities

3.1 Mangrove Afforestation

In F.Y. 2020–21, a total of 161.5 hectares of degraded mangrove land was restored under the mangrove afforestation programme spread over 28 locations throughout the coastal districts of Maharashtra and 7,15,353 mangrove saplings were planted (Annexure-III). At some places fish bone canal technique was implemented on an experimental basis in order to ensure maximum survival. The total expenditure incurred for the mangrove afforestation programme in F.Y. 2020–21 was Rs. 2.37 crores and of this said expenditure, the Mangrove Foundation contributed a fund of Rs. 24.1 lakhs.

Table 2: Mangrove plantation details in F.Y. 2020–21

Sr. No.	District	Area taken under Plantation (in Hectares)
i.	Mumbai/Mumbai Suburban/Thane	49
ii.	Palghar	88
iii.	Raigad	8
iv.	Ratnagiri	6.47
v.	Sindhudurg	10
Total		161.5

Table 3: Details of expenditure on the mangrove plantation programme in 2020–21

Sr. No.	Funding Source	Funds provided in lakhs (Rs.)
i.	CAMPA/ CA	14.2
ii.	Mangrove Conservation and Livelihood Generation Scheme (State Plan)	189.2
iii.	Mangrove Foundation (MFN)	24.1
iv.	Corporate Social Responsibility (CSR)	9.7
	Total Amount	237.2



Fig.6. Mangrove Nursery

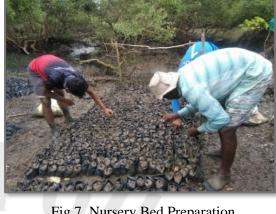


Fig.7. Nursery Bed Preparation



Fig.8. Collection of Propagules



Fig.9. Mangrove Plantation

3.2 Mangrove Protection

Considering the high vulnerability to encroachment and debris dumping in the mangrove areas of Mumbai and Mumbai Suburban region and to overcome the staff shortage, the Mangrove Cell, through Mangrove Foundation, has employed the services of the Maharashtra State Security Corporation and in F.Y. 2020-21, 117 security guards were deployed for the protection and patrolling of mangroves in Mumbai, Mumbai Suburban and Navi Mumbai areas. The total expenditure made by Foundation regarding the hiring of the said security guards in F.Y. 2020-21 was Rs. 3.47 crores.

In the F.Y. 2020–21, more than 450 illegal shanties, which had cropped up on mangrove lands in some parts of Mumbai such as Chembur and Colaba, were removed/demolished by the Mangrove Cell. The Mangrove Foundation provided a financial support of Rs. 4.39 lakhs for the said encroachment removal activities.

Furthermore, in order to prevent encroachment of the mangrove areas in some sensitive parts of Mumbai and Mumbai Suburban region, the Mangrove Cell has undertaken the construction of Mangrove Protection Wall in some areas such as Charkop, Kandivali, Kanjur, Mandale, Mahul, etc.

For the said construction of the protection walls, the Mangrove Foundation has provided a funding of Rs. 3.09 crores till the end of F.Y. 2020–21 (about 2.9 km of protection wall has been constructed till the end of F.Y. 2020–21).



Fig.10. Encroachment Removal



Fig.11. Mangrove Area Demarcation

4. Implementation of Sustainable Livelihood Activities

Implementation of sustainable livelihood activities in coastal villages of Maharashtra through the participation of the local coastal communities is a major objective of the Mangrove Foundation. The mangroves and associated habitats of creeks and estuaries have great potential for providing alternative livelihood sources to the local communities and hence the Mangrove Foundation has initiated various sustainable livelihood activities such as mud-crab farming, oyster farming, fish cage culture, ornamental fish culture and mangrove ecotourism in various coastal villages of the State.

For the identification of suitable sites and for the implementation of various aquaculture based livelihood activities, the Mangrove Foundation has collaborated with a number of Govt. research institutions which are working in the field of sustainable aquaculture [for e.g. ICAR – Central Marine Fisheries Research Institute (CMFRI), ICAR – Central Institute of Brackishwater Aquaculture (CIBA), The Marine Products Exports Development Authority (MPEDA), Rajiv Gandhi Centre for Aquaculture (RGCA), ICAR – National Bureau of Fish Genetic Resources (NBFGR)].

The livelihood activities are being implemented by the Foundation under a State Govt. scheme 'Mangrove Conservation and Livelihood Generation Scheme'. This scheme is implemented through village-based Mangrove Co-Management Committees (MCMC) formed in the selected villages which have considerable mangrove cover and by the end of F.Y. 2020–21, 115 villages from Palghar, Thane, Raigad, Ratnagiri, Sindhudurg and Mumbai Suburban districts have been covered under the scheme (Annexure-IV). The details regarding the MCMCs are as follows:

Table 4: Number of MCMC formed in the coastal districts of Maharashtra

District	Nı	umber of MO	CMCs form	ed	Total neg of MCMCs
District	2017–18	2018–19	2019–20	2020–21	Total nos. of MCMCs
Palghar	4	9	0	5	18
Thane	4	2	3	0	9
Mumbai suburban	0	1	0	0	1
Raigad	10	7	8	1	26
Ratnagiri	7	17	0	1	25
Sindhudurg	19	17	0	0	36
Total	44	53	11	7	115

^{*}Since the start of F.Y. 2019–20, the focus has been to start the livelihood programmes in the existing MCMCs. Hence, the number of MCMCs formed in F.Y. 2019–20 and 2020–21 are less compared to F.Y. 2017–18 and 2018–19.

4.1 Livelihood Development: Aquaculture/Fishery based activities

The aquaculture-based livelihood activities being implemented by the Foundation are mud-crab farming, oyster farming, fish cage culture, ornamental fish culture and the details regarding the operational aquaculture projects in various coastal districts of Maharashtra are given in Table 5.

<u>Table 5: Operational livelihood projects (no. of units) in various</u> coastal districts of Maharashtra in F.Y. 2020–21

Livelihood Activities	Palghar	Thane	Raigad	Ratnagiri	Sindhudurg	No. of units per activity
Crab farming	4	_	_	5	1	10
Ornamental Fishery	8	7	3	6	28	52
Sea bass cage culture	6	_	8	9	41	64
Oyster Culture	_	-	_	13	21	34
Mussel farming	_	-	_	_	10	10
Sea bass nursery	_	2	_	_	3	5
Total no. of units	18	9	11	33	104	175

For the implementation of the various livelihood activities the main source of funding is through the State Government Budget under the 'Mangrove Conservation and Livelihood Generation Scheme' and the funds provided under the said scheme in F.Y. 2020–21 were Rs. 62.98 lakhs. Table 6 shows the details of the funds provided to various coastal districts received from the State Govt. Budget:

Table 6: Details of the funds provided through the State Govt. Budget for the Livelihood

Generation Scheme in F.Y. 2020–21

Districts	Palghar in lakhs (Rs.)	Thane in lakhs (Rs.)	0		Sindhudurg in lakhs (Rs.)	
Funds provided	_	2.23	-	0.8	59.93	62.98

Also, for the effective and timely implementation of the livelihood programmes, the Mangrove Foundation has made an expenditure of Rs. 1.75 crores in F.Y. 2020–21.

<u>Table 7: Details of the expenditure made by Mangrove Foundation regarding implementation of livelihood programmes in F.Y. 2020–21</u>

Sr. No.	Particulars	Expenditure Amount in lakhs (Rs.)
i.	Project awarded to ICAR-CIBA regarding implementation of various aquaculture activities in coastal Maharashtra	30
ii.	Expenditure for mud crab nursery at Paratavne, Ratnagiri	1.26
iii.	Consultancy Fees to ICAR- CIBA and RGCA regarding Multispecies Hatchery, Vengurla	17.08
iv.	Project fees to NBFGR for operating the Marine Ornamental fish breeding centre at Airoli	19.65
v.	Ornamental fish farming and breeding centre related expenses	20.34
vi.	Procurements of various items for livelihood activities	0.21
vii.	Professional fees and TA – DA to Project Associates	70.30
viii.	Purchase of crablets for mud crab farming activity	2.16
ix.	Seabass cage culture related expenses	14.26
	Total	175.26

The livelihood activities being implemented by the Mangrove Foundation have started generating revenue for the local communities and in F.Y. 2020–21 the total revenue generated was Rs. 35.8 lakhs. The details of the revenue generated by various aquaculture-based livelihood activities in 2020–21 are as follows:

Table 8: Details of the revenue generated by various livelihood activities in 2020–21

District	Livelihood activity	Revenue in lakhs (Rs.)	District Revenue in lakhs (Rs.)
Palghar	Ornamental fish rearing	0.46	0.46
	Sea bass nursery	1.69	
Thane	Ornamental fish rearing (Freshwater and Marine)	0.56	2.25
Raigad	Ornamental fish rearing	0.06	0.06
Dotnogini	Ornamental fish rearing	0.34	0.73
Ratnagiri	Oyster farming	0.39	0.75
	Sea bass cage culture	18.82	
	Sea bass cage culture – CIBA	2.50	
	IMTA – CIBA	1.50	
Sindhudura	Pearl spot cage culture	3.70	32.33
Sindhudurg	Mud crab farming	0.34	32.33
	Ornamental fish rearing	1.41	
	Oyster and Mussel farming	0.532	
	Seabass/Pearl spot nursery	3.53	
	Total	35.83	35.83

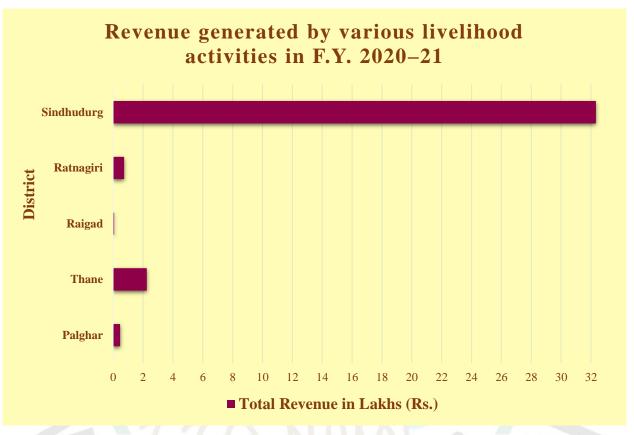


Fig.12. Revenue Generated by Various Livelihood Activities in F.Y. 2020-21



Fig.13. Harvested Asian Sea Bass



Fig.14. Harvested Mud Crab



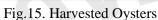




Fig.16. Ornamental Fishes

4.2 Livelihood Development: Ecotourism activities

All the sites developed for Mangrove Ecotourism under the Mangrove Conservation and Livelihood Generation Scheme were affected due to the covid related lockdowns in the State in F.Y. 2020–21. Despite such adversity, the ecotourism initiatives of Mangrove Foundation have shown slow but steady progress; many developments have happened during the said timeframe and many ecotourism sites did host tourists in the short span of relaxation from lockdown before the second wave of covid led to reimposition of covid related restrictions.

Currently, ecotourism activities are ongoing in 9 villages (spread across 3 coastal districts of Maharashtra), and a total of 123 beneficiaries (19 self-help groups) are being benefited from this initiative.

<u>Table 9: Villages developed for Mangrove Ecotourism under Mangrove Conservation and</u>
<u>Livelihood Generation Scheme and revenue generated</u>

District	Village	No. of Self-Help Group	Beneficiaries	Revenue generated in lakhs (Rs.)
Daired	Kalinje	1	7	_
Raigad	Diveagar	1	10	_
Dotmo odini	Anjarle	2	10	0.07
Ratnagiri	Songaon	4	42	0.06
	Taramumbri	1	12	0.26
	Mithmumbari	2	12	_
Sindhudurg	Achra	3	9	0.25
	Nivti	4	13	0.03
	Vengurla	1	8	1.18
r	Fotal	19	123	1.85

4.3 Details of some important works undertaken at the ecotourism sites in F.Y. 2020–21

❖ Boat for Mangrove and Crocodile Safari at Songaon, Ratnagiri

Songaon is a small village situated on the banks of river Vashishti in Ratnagiri district. Creeks and islands around Songaon are rich in biodiversity and harbour a large number of rare mangrove species *Kandelia candel*. A major attraction here is the Marsh crocodiles that inhabit the islands and riverbank of Vashishthi. One 10-seater boat (8+2) was procured for the mangrove and crocodile safari at Songaon which was received by the beneficiaries in March 2021. Thus, tourists will now be able to take a boat ride in the river Vashishti to observe the Marsh Crocodile and mangroves and this new boat will be a great addition for enhancing the ecotourism activities in Songaon.

Also, to support Mangrove Ecotourism at Songaon, catering materials for the group of beneficiaries was provided and their training for catering and hospitality was undertaken by experts (organised by the Foundation).





Fig.17. Boat for Crocodile Safari

Kayak, boat and life-saving equipment provided in Sindhudurg

One 12-seater boat (10+2) has been procured for Mangrove Ecotourism at Nivti, Sindhudurg. Thus, tourists will now be able to take a boat ride in the creek which will allow them to observe mangroves and other biodiversity from close quarters in the Nivti creek.

Two double seater Kayaks were provided at the Taramumbri ecotourism site which will now allow tourists an exciting guided kayak ride in narrow mangrove channels which will provide an opportunity to observe mangroves, their adaptation to survive in unfavourable conditions and the biodiversity which thrives in this environment.

Life-saving equipment such as ring buoy, life jackets etc. have been provided in all the ecotourism sites with water-based eco-tourism activities for the safety of the tourists.

Beneficiaries in Sindhudurg have also started food stalls at Achara and Mithmumbari which are helping in additional revenue generation as well as the promotion of the ecotourism activities.





Fig.18. Mangrove Kayaking

❖ Ecotourism initiatives in Thane Creek Flamingo Sanctuary (TCFS) and the Mumbai Metropolitan Region

The Foundation has provided funding for various ecotourism and awareness initiatives in the Mumbai Metropolitan region. The Coastal and Marine Biodiversity Centre (CMBC) in Airoli is one of the prime mangrove ecotourism destinations and the gateway to the Thane Creek Flamingo Sanctuary.

Furthermore, the Mangrove Cell and Foundation is in the process of setting up mangrove parks at Gorai and Dahisar in the near future, which will have various attractions for tourists such as mangrove trails, bird trails, watchtower, mangrove museum, glass bridge over mangroves, etc., The Foundation has supported these activities by providing funding regarding the hiring of consultancy services for the said project activities.

Mangrove Foundation along with Mangrove Cell is planning to develop the Bhandup Pumping Station (BPS) area as an ecotourism site for the benefit of nature lovers and birdwatchers. As a part of this development, entry to the BPS area has been regularised with a checkpoint at the entry of the area; the work of putting up attractive information

boards and signages along the trail at BPS has been initiated. The objective of these boards and signages is to provide additional information on the biodiversity and importance of the place along with easy navigation while on the trail. The total revenue generated from the tourist inflow at Bhandup Pumping Station and CMBC Airoli in F.Y. 2020–21 was Rs. 45.2 lakh.





Fig.19. Informative Boards at Bhandup Gate TCFS

The total expenditure for ecotourism and related activities by Mangrove Foundation in F.Y. 2020–21 was Rs. 57 lakhs.

Table 10: Details of Eco-tourism related expenditures in F.Y. 2020–21

Sr. No.	Ecotourism related expenditures in F.Y. 2020-21	Expenditure in lakhs (Rs.)
i.	Kayak registration work	0.37
ii.	Mangrove boardwalk at Airoli	12.37
iii.	Development of ecotourism activities at Bhandup area adjoining TCFS	6.50
iv.	Development at CMBC, Airoli	7.64
v.	Video documentation of flamingos in TCFS	7.78
vi.	Awareness activities	1.79
vii.	Mangrove parks at Dahisar & Gorai	20.57
	Total	57.02

5. Research on Coastal and Marine Biodiversity

In the F.Y. 2020–21, the total no. of on-going research projects commissioned/undertaken by the Mangrove Foundation were 25. The list of the on-going and completed research projects till the end of March 2021 is attached in <u>Annexure-V</u>.

The expenditure on research programmes and related activities for the F.Y. 2020–21 was Rs. 76 lakhs.

Some of the important on-going research projects in F.Y. 2020–21 are as follows:

❖ High resolution mapping of the mangrove areas in Maharashtra

The Mangrove Foundation has commissioned a project to the Indian Institute of Space Science and Technology (IIST) under the Dept. of Space, Govt. of India for the high-resolution mapping of the mangrove areas in Maharashtra using the satellite dataset for 2018–19. IIST is also developing a computer application which will allow for the near-real time monitoring of the changes in mangrove cover in Maharashtra.

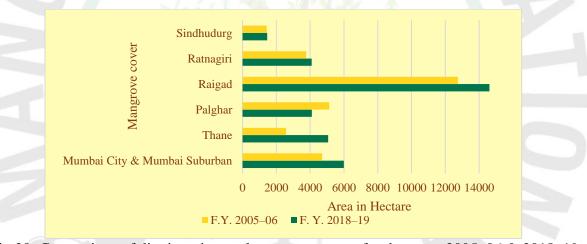
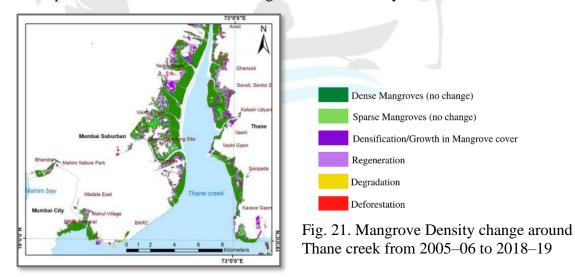


Fig 20: Comparison of district-wise total mangrove cover for the years 2005–06 & 2018–19



* Research on the nesting ecology of Olive Ridley Turtles in Maharashtra

A research project has been commissioned to a researcher from the Wildlife Institute of India (WII) to study the nesting ecology of the Olive Ridley Turtles at various nesting beaches along the coast of Maharashtra. Temperature data-loggers were placed in many Olive-Ridley nests during the said project to get valuable data regarding the incubation temperature of the nests and the project has also tried to address the issues regarding effect of high temperatures on the turtle nests which hatch in the months of April and May.

Furthermore, the Mangrove Foundation has also commissioned a project to the NGO Sahyadri Nisarg Mitra for the development of a mobile application which will allow for the regular monitoring of the Olive Ridley Turtle nesting data in the State during the nesting season of these turtles.



Fig.22. Female Olive Ridley Sea Turtle



Fig. 23. Hatchling of Olive Ridley Sea Turtle

Survey for otters and crocodiles in mangrove habitats of Ratnagiri district

A study has been commissioned to the Ela Foundation for the survey of otters and crocodiles in the rivers and estuaries of the Ratnagiri district. During the study, the presence of Smooth-coated Otter and Marsh Crocodile has been observed in various rivers/estuaries and irrigation tanks in Ratnagiri district.



Fig. 24. Marsh Crocodile



Fig. 25. Smooth-coated Otter

* Research on Gobiid fishes in coastal Maharashtra

A research project has been commissioned to the Bombay Natural History Society (BNHS) to study the diversity and distribution of Gobiid fishes (fishes like the mudskippers) in mangroves and associated freshwater and tidal creeks of Maharashtra. This group of fishes is a relatively less studied group and till now BNHS has recorded 18 species of gobioid fishes from various study sites in coastal Maharashtra.



Fig. 26. Barred Mudskipper recorded from Savitri Estuary



Fig. 27. Flathead Gudgeon recorded from Thane Creek

❖ Mapping of biological diversity in caves of Vengurla Rocks Archipelago, Sindhudurg
The Mangrove Foundation has commissioned a project to the Sálim Ali Centre for
Ornithology and Natural History (SACON) to study the biological diversity in the caves
found on the Vengurla Rocks Archipelago which comprises a group of about 20 islets off
the coast of Malvan, Sindhudurg. The research team from SACON has recorded various
species of invertebrate fauna and some bird species in these caves till now.



Fig. 28. Cave on Burnt Island, Vengurla Rocks

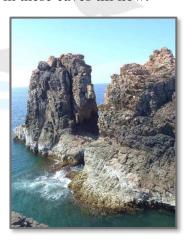


Fig. 29. Old Lighthouse Island, Vengurla rocks

6. Coastal and Marine Biodiversity Conservation Programmes

6.1 Compensation scheme for the fishermen

The Mangrove Cell and Mangrove Foundation in collaboration with the Fisheries Dept. of Maharashtra have initiated a joint compensation scheme wherein monetary compensation up to Rs. 25,000/- is given to fishermen for the damage they sustain due to cutting of their fishing nets in order to release a marine animal species protected under the Wildlife (Protection) Act, 1972, which gets accidentally entangled in their fishing nets.

Under the said scheme, in F.Y. 2020–21, 135 fishermen were compensated for releasing marine protected species back to the sea safely for which a total amount of Rs. 20,41,800/- was released by the Mangrove Foundation as compensation to the fishermen. Of the 135 cases processed for compensation in F.Y. 2020–21, 72 cases were of the release of Olive Ridley Sea Turtles, 36 cases were of Green Sea Turtle, 3 cases of Hawksbill Turtle, 2 cases of Guitarfish and 22 cases were of the release of Whale Shark.



Fig. 30. Guitarfish released by the fishermen



Fig. 31. Whale Shark released by the fishermen

Table 11: The district-wise details of the compensation cases processed in F.Y. 2020–21

Sr. No.	District	No. of cases Processed	Amount released as compensation in lakhs (Rs.)	Protected species released by Fishermen	
i.	Mumbai	1	0.13	1 Olive Ridley Turtle	
ii.	Thane	39	7.00	1 Green Sea Turtle, 1 Giant Guitar Fish, 20 Olive Ridley Turtle, 17 Whale Shark	
iii.	Palghar	10	1.13	1 Green Sea Turtle, 1 Giant Guitar Fish, 8 Olive Ridley Turtle	
iv.	Raigad	25	3.85	4 Green Sea Turtle, 1 Hawksbill Sea Turtle, 16 Olive Ridley Turtle, 4 Whale Shark	
v.	Ratnagiri	13	1.63	9 Green Sea Turtle, 1 Hawksbill Sea Turtle, 3 Olive Ridley Turtle	
vi.	Sindhudurg	47	6.69	21 Green Sea Turtle, 24 Olive Ridley Turtle, 1 Hawksbill Sea Turtle, 1 Whale Shark	
Total		135	20.43	72 Olive Ridley Turtle, 36 Green Sea Turtle, 3 Hawksbill Sea Turtle, 2 Giant Guitar Fish, 22 Whale Shark.	

6.2 Joint patrolling of the territorial seawaters of Maharashtra

The Mangrove Cell, Maharashtra Forest Dept. along with the Fisheries Dept. of Maharashtra has undertaken joint patrolling of the seawaters of Ratnagiri and Sindhudurg districts of Maharashtra to monitor and curb illegal fishing practices. The said activity was carried out in the territorial seawaters along the coasts of Ratnagiri and Sindhudurg during the month of May 2020. During the said period of joint patrolling, 79 fishing boats in Sindhudurg and 4 fishing boats in Ratnagiri were checked by the Fisheries Dept.

The Mangrove Foundation provided funds for the said activity (hiring of a suitable boat for the patrolling work) and a total funding of Rs. 6.72 lakhs was provided by the Foundation to the Fisheries Dept. of Maharashtra for the hiring of patrolling boats in Sindhudurg and Ratnagiri districts in the year 2020–21.





Fig. 32. Joint Patrolling

6.3 Sea turtle conservation

In F.Y. 2020–21, the Mangrove Foundation conducted education and awareness programmes with respect to management of Olive Ridley turtle nest hatcheries and collection of systematic data for turtle nest managers appointed by the Forest Department in Raigad, Ratnagiri and Sindhudurg districts.

The Mangrove Foundation also provided funds to the Roha (Raigad district) and Chiplun (Ratnagiri district) divisions for the procurement of all the materials required for the construction of turtle hatcheries and also for the payment of the honorarium of the turtle nest managers in both the districts. Table 12 shows the Olive Ridley Sea Turtle nesting data of Maharashtra from 2018 - 2021 and it can be seen that, the number of nests of the Olive Ridley Turtles in all the three districts of Raigad, Ratnagiri and Sindhudurg increased in 2020–21 as compared to 2018–19 and 2019–20.

Table 12: Olive Ridley Turtle nesting and hatchling release data from 2018–19 to 2020–21

	2018–19			2019–20			2020–21					
District	Number of nests	Number of eggs	Number of hatchlings	Hatchling success %	Number of nests	Number of eggs	Number of hatchlings	Hatchling success %	Number of nests	Number of eggs	Number of hatchlings	Hatchling success %
Sindhudurg	75	8107	3841	47.3	65	6409	4767	74.3	164	17226	8769	50.9
Raigad	15	1727	1127	65.4	15	1545	808	52.2	28	3211	2137	66.55
Ratnagiri	143	13297	7633	57.4	148	19300	6574	34	282	30362	12800	42.15
Total	233	23131	12601	54.47	228	27254	12149	44.57	474	50799	23706	46.66

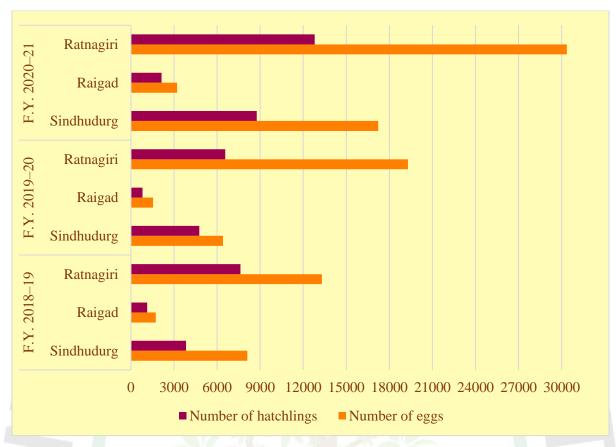


Fig. 33. Olive Ridley Turtle Nesting & Hatchling Release Data from 2018–19 to 2020–21 for Maharashtra

Thus, the total expenditure of the Mangrove Foundation for various coastal and marine conservation measures such as compensation scheme for the fishermen, joint patrolling activity and the turtle conservation activities in F.Y. 2020–21 was Rs. 60 lakhs.



Fig.34. Turtle egg relocation in hatchery



Fig.35. Release of turtle hatchlings

6.4 Management of marine animal stranding

The existing marine respondent group of Mumbai is being strengthened by the Mangrove Foundation for better coordination and management of stranded marine animals on the beaches in and around Mumbai. Furthermore, the Mangrove Foundation has also developed such networks in all the coastal districts of Maharashtra.

The Mangrove Foundation and the Mangrove Cell established a Marine Animal Transit and Treatment Centre in Airoli which has facilities such as FRP tanks, medicines, operation table, water supply and visiting veterinary doctor etc. to rehabilitate injured sea turtles stranded on beaches in and around Mumbai and in F.Y. 2020–21, three Olive Ridley Turtles were treated at the Airoli centre and released back to the sea.

The Mangrove Cell is also planning to develop such centres in Raigad, Ratnagiri and Sindhudurg districts and the tendering procedure to develop such transit centres has been completed in Raigad and Sindhudurg districts. The Mangrove Foundation has also provided funds to the Dahanu Forest Division for the repair and maintenance of the existing Turtle Transit and Treatment Centre at Dahanu. The details of marine animal strandings along the coast of Maharashtra have been given in Table 13.

Table 13: Marine animal stranding incidents along the coast of Maharashtra (F.Y. 2020–21)

Species	Live stranding	Dead stranding		
Olive Ridley Sea Turtles	80	9		
Green Sea Turtle	0	1		
Indian Ocean Humpback dolphin	0	9		
Striped Dolphin	0	1		
Indo-pacific Finless Porpoise	1	2		
Dwarf Sperm Whale	0	1		
Cuvier's Beaked Whale	1	0		
Baleen Whale	0	4		
Total	82	27		

<u>Table 14: District wise marine animal stranding incidents along the coast of Maharashtra (F. Y. 2020–21)</u>

Species	Palghar	Mumbai	Raigad	Ratnagiri	Sindhudurg	Total
Olive Ridley Sea Turtle	11	7	14	31	26	89
Green Sea Turtle	0	1	0	0	0	1
Indian Ocean Humpback Dolphin	2	2	1	2	2	9
Striped Dolphin	0	0	0	1	0	1
Indo-pacific Finless Porpoise	1	1	0	0	1	3
Dwarf Sperm Whale	1	0	0	0	0	1
Cuvier's Beaked Whale	0	0	0	1	0	1
Baleen Whale	2	0	0	0	2	4
Total	17	11	15	35	31	109

The expenditure by Mangrove Foundation regarding marine stranding and rescue related activities in F.Y. 2020–21 was Rs. 19 lakhs.



Fig. 36. Stranded sea turtle treatment at Marine Animal Transit and Treatment Centre, Airoli



Fig. 37. Rescue of stranded dolphin

7. Capacity Building Programmes and Exposure Visits

7.1 Capacity Building Programmes

In F.Y. 2020–21 due to the covid pandemic very few training programmes were conducted which were as follows:

- * Training programme on 'Rearing of marine ornamental fish' for beneficiaries from Raigad.
- Capacity Building programme on 'Hygienic handling and value addition in fisheries' for beneficiaries from Sindhudurg.
- ❖ Training programme on 'Understanding the Open-Source Geographical Information System (GIS) software' for Mangrove Cell and Foundation staff.
- Capacity building programme regarding ecotourism activities for beneficiaries from Sindhudurg.

Details regarding the above-mentioned capacity building programmes are included in <u>Annexure-</u>VI.

7.2 Exposure Visits:

In F.Y. 2020–21, exposure visits of beneficiaries could not be organised due to restriction on interstate and inter-district travels owing to covid pandemic. However, one exposure visit was conducted for the staff of JSW Foundation and few locals from Alibaug to the Coastal and Marine Biodiversity Centre, Airoli for sensitization on mangroves and coastal biodiversity of Maharashtra.



Fig. 38. Ornamental Fish Rearing Training programme at Airoli hatchery



Fig. 39. Exposure visit of JSW Foundation staff and locals from Alibaug to CMBC, Airoli

The total expenditure made by Mangrove Foundation for capacity building and related programmes in F.Y. 2020–21 was Rs. 18 lakhs.

7.3 Awareness and Outreach programmes

In F.Y. 2020–21, most of the awareness and outreach programmes were conducted online due to the covid related restrictions. The programmes included multiple webinars, quiz, puzzles, crosswords, Instagram LIVE sessions, etc. for general public on environmentally significant days viz. International Day for Mangrove Ecosystem, International Wetlands Day, Wildlife Week, World Wetland Day and so on. The sessions were open to all and free of cost.

Apart from this the Mangrove Foundation also inaugurated films, documentaries, books, field guides, brochures, pamphlets, etc. on various topics pertaining to coastal and marine biodiversity to raise awareness and engage audiences.

In addition to the above, many Government/Private institutions/organisations invited various staff members of the Mangrove Cell and Foundation for delivering expert talks on various subjects related to coastal and marine biodiversity conservation. The details of all the above-mentioned activities and programmes are mentioned in Annexure-VII to X.



— A Layman's Guide to Inter-tidal Animal Diversity

Prof. Or Pandah Pandas

Fig. 40. Bird exhibition on occasion of Bird Week

Fig. 41. Marine Matters Lecture Series

7.4 Coastwise 2021

Coastwise Festival is an initiative of the Mangrove Foundation, Mangrove Cell-Forest Department of Maharashtra in collaboration with Coastal Conservation Foundation and WWF India which shines the spotlight on the lesser-known intertidal ecosystem. Coastwise 2021 was conducted from 13th February to 21st February 2021 which included a Marine photography competition, Flight of the Flamingo programme, online marine quiz, online art workshop, Fish catch walks, Mangrove walks and Bird-watching trails. Many of the activities were organized in various coastal states of India to generate awareness about coastal and marine biodiversity (Maharashtra, Goa, Tamil Nadu, Andhra Pradesh, Telangana and West Bengal).



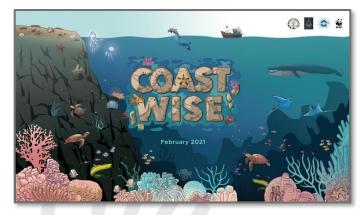


Fig.42. Flight of the Flamingo (Art workshop)

Fig.43. Logo of Coastwise Festival 2021

7.5 Sonneratia Newsletter

The Mangrove Foundation has started a quarterly newsletter, *Sonneratia* named after the State Mangrove tree of Maharashtra. This newsletter highlights the work of Mangrove Cell and Mangrove Foundation in the field of coastal and marine biodiversity conservation in the State. This newsletter was inaugurated at the hands of Shri. Nitin Kakodkar, PCCF (Wildlife) Maharashtra, on 01st January 2021.

All the editions of the newsletter are available in the publication section of the Mangrove Cell and Mangrove Foundation website.





Fig.44. Sonneratia 1(1), January 2021

7.6 Website

The official website of Mangrove Cell and Mangrove Foundation (<u>mangroves.maharashtra.gov.in</u>) was launched on 29th September 2020 by the Hon'ble Forest Minister of Maharashtra, Shri. Sanjay Rathod. This website contains information on all the activities, programmes and conservation

initiatives of the Mangrove Cell and Foundation such as the on-going sustainable livelihood scheme, mangrove plantation data, protected marine animal conservation scheme updates, publications, news releases, research project reports, etc.



Fig.45. Mangrove Cell and Mangrove Foundation Website Inauguration





Fig.46. Mangrove Cell and Mangrove Foundation Website

7.7 Clean-up drive

The Mangrove Foundation, in collaboration with many NGOs and local communities, undertakes and supports clean-up drives in mangrove areas and beaches along coastal Maharashtra. In F.Y. 2020–21, many clean-up drives were conducted in the mangrove areas of Mumbai Suburban region and the Thane Creek Flamingo Sanctuary which led to the collection of more than 18 tons of garbage from these areas. Also, clean-up drives were conducted on some beaches and mangrove areas of Sindhudurg and Ratnagiri district (this led to the collection of more than 300 kg of garbage).



Fig.47. Clean Mangrove Campaign



Fig.48. Beach clean-up drive

The total expenditure incurred by the Mangrove Foundation on awareness and outreach activities and programmes in F.Y. 2020–21 was Rs. 30 lakhs.

8. Corporate Social Responsibility (CSR) Initiatives

The Mangrove Foundation has partnered with multiple companies for raising CSR funds for various coastal conservation activities. During the F.Y. 2020–21, a MoU was signed with United Way Mumbai in September 2020 for mangrove plantation on 10-hectare land in Ghatkopar, Mumbai. Following this, mangrove plantation was successfully carried out on 5 ha land wherein *Avicennia marina*, *Ceriops tagal*, *Rhizophora mucronata* and *Aegiceras corniculatum* were planted.

Furthermore, the mangrove plantation for the second year was carried out on 100 ha land in Alibaug division (Raigad district) under the partnership with Škoda Auto Volkswagen India Private Limited and on 25 ha land in Chiplun division (Ratnagiri district) under the partnership with ICICI Bank.

The list of on-going activities under CSR initiative are detailed below:

<u>Table 15: On-going projects under CSR initiatives of the Mangrove Foundation</u>

Sr. No.	CSR Partner	Initiative	MoU signed (Year)	Amount Committed in lakhs (Rs.)	Amount Received in lakhs (Rs.)	
i.	United Way Mumbai	Mangrove plantation in Ghatkopar, Mumbai	2020–21	32.97	9.65	
ii.	Skoda Auto Volkswagen India Pvt. Ltd.	Mangrove plantation in Raigad district	2019–20	308.00	173.00	
iii.	ICICI Bank Limited	Mangrove plantation in Ratnagiri district	2019–20	50.00	33.25	
iv.	JSW	Implementing Ornamental Fish Culture activity in selected villages of Raigad district	2018–19	In kind (construction of fish rearing sheds in 4 villages)	_	
v.	Gems & Jewellery National Relief Foundation (GJNRF)	Mangrove plantation in Mumbai city	2019–20	100.00	Nil	



Fig. 49. Plantation with United Way Mumbai at Ghatkopar, Mumbai

9. NatWest Group Earth Heroes Award 2020

NatWest Group India, (formerly RBS India) the global capability centre of the NatWest Group, announced the winners of the 10th edition of the NatWest Group Earth Heroes Awards on 08th October 2020. These awards honour individuals and institutions who have done significant work in conservation of wildlife & habitats and welfare of communities therein thereby making an impact in 'Conservation of Biodiversity and Sustainable Development'.

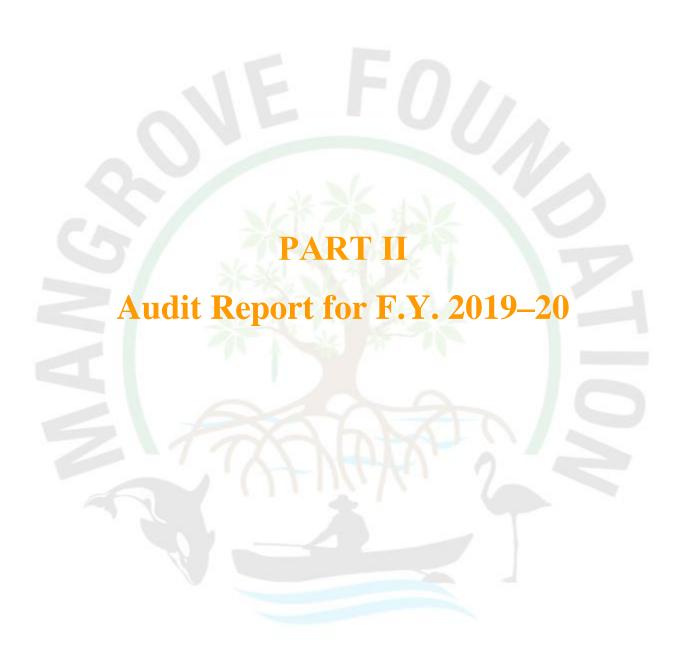
The Mangrove Cell, Maharashtra Forest Dept. was awarded the 'Earth Guardian Award' under the NatWest Group Earth Heroes Awards 2020 for its significant contribution towards conservation and protection of mangroves and the coastal & marine biodiversity in the State.

The various winners of these awards were felicitated via a virtual ceremony that was presided over by the Chief Guest, Ms. Elizabeth Maruma Mrema, Assistant Secretary General, UN and Executive Secretary of the Convention on Biological Diversity.





Fig 50. Mangrove Cell & Foundation Team with the NatWest Group Earth Heroes Award 2020



AMBEKAR SHELAR KARVE & AMBARDEKAR CHARTERED ACCOUNTANTS

501, Mirage Arcade, Off Phadke Road, Opposite Ganesh Mandir, Dombivli (East) – 421 501

<u>Auditors Report of Mangrove& Marine Biodiversity Conservation</u>
<u>FoundationOf Maharashtra</u>

for the Year ended 31st March, 2020 [Annexure to Report under Section 33(2) and Rule 19 of The Bombay Public Trust Act, 1950]

To,
The Members,
MANGROVE & MARINE BIODIVERSITY CONSERVATION FOUNDTAION OF
MAHARASHTRA,
Bandra.

Report on the Financial Statements

We have audited the accompanying financial statements of MANGROVE & MARINE BIODIVERSITY CONSERVATION FOUNDTAION OF MAHARASHTRA, which comprise the Balance Sheet as at 31st March 2020 and the statement of Income & Expenditure Account for the year then ended, and a summary of significant accounting policies and other explanatory information.

Trust Management's Responsibility for the Financial Statements

Management is responsible for the preparation of these financial statements that give a true and fair view of the financial position, financial performance of the Trust, in accordance with the BOMBAY PUBLIC TRUST ACT, 1950. This responsibility includes the design, implementation and maintenance of internal control relevant to the preparation of the financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with the Standards on Auditing issued by the Institute of Chartered Accountants of India. Those Standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement. An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgement, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error.

In making those risk assessments, the auditor considers internal control relevant to the Entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of the accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

Date: 14.12.2020

In our opinion and to the best of our information and according to the explanations given to us, the financial statements of MANGROVE & MARINE BIODIVERSITY CONSERVATION FOUNDTAION OF MAHARASHTRA for the year ended March 31, 2020 give the information required by the relevant sections and rules of the BOMBAY PUBLIC TRUST ACT, 1950 in the manner so required and give a true and fair view in conformity with the accounting principles generally accepted in India:

I) In the case of Balance Sheet, of the state of affairs of the Trust as at 31st March, 2020.

II) In case of Income & Expenditure Account, of the Surplus for the year ended 31stMarch, 2020.

Report on Other Legal and Regulatory Requirements

As required under rule 19 to the Bombay Public Trust Rules 1951, we furnish herewith statement of particulars as prescribed under the said rule.

Further, subject to our comments referred to in annexure attached herewith, we report that:

- a) We have obtained all the information and explanations, which to the best of our knowledge and belief were necessary for the purpose of our audit.
- b) In our opinion proper books of accounts as required by law have been kept by the Trust so far as appears from our examination of those books.
- c) The Balance Sheet and Income & Expenditure Account dealt with by this report are in agreement with the books of accounts.

For AmbekarShelarKarve&Ambardekar

KARV

THANE

Chartered Accountants

F.R.No.122063W

CA Mangesh Ghanekar

(PARTNER) Place: Thane

M.No. 149885

UDIN: 21149885AAAADL7586



Ambekar Shelar Karve & Ambardekar

Chartered Accountants

Report of an Auditor relating to accounts audited under Sub-section (2) of section 33&34 and rule 19 of the Bombay Public Trust Act.

Registration No: F-66824

Name of the Trust: MANGROVE & MARINE BIODIVERSITY CONSERVATION FOUNDTAION OF MAHARASHTRA

For the Year ending on: 31st March, 2020

	Observations	Remark
۵)	Whether accounts are maintained regularly and in accordance with the	YES
a)	provisions of the Act and the Rules;	
b)	Whether receipts and disbursements are properly and correctly shown	YES
	in accounts;	
c)	Whether cash balance and vouchers in the custody of manager or trustee on the date of the audit were in agreement with the books of Accounts;	YES
d)	Whether all books, deeds, accounts, vouchers, or other documents or records required by the auditor were produced before him.	YES
e)	Whether register of movable or immovable properties is properly maintained, the changes therein are communicated from time to the regional office, and the defects and inaccuracies mentioned in the previous audit report have been duly complied with;	YES
f)	Whether the manager or the trustee or any other person required by the auditor to appear before him did so and furnished the necessary information required by him;	YES
g)	Whether any property or funds of the trust were applied for any object or purpose other than object of the Trust.	NO
h)	The amounts outstanding for more than one year and the amount written off, if any;	NO
i)	Whether tenders were invited for repairs or construction involving expenditure exceeding Rs.5,000/-;	YES
j)	Whether any money of the public Trust has been invested contrary to the provisions of section 35.	NO
k)	Alienation's, if any, of the immovable property contrary to the provisions of the Section 36 which have come to notice of the Auditor.	NO
1)	All cases of irregular, illegal or improper expenditure, or failure or omission to recover monies or other property belonging to the public trust or loss or waste of money or other property thereof and whether such expenditure, failure, omission, loss or waste was caused in consequence of breach of trust or misapplication or any other misconduct on the part of the trustees or any other person while in the management of the trust;	NIL
m)	Whether the Budget has been filed in the form provided by Rule 16A;	YES
n)	Whether maximum or minimum number of trustees are maintained;	YES
0)	Whether Meetings are held regularly as provided in such instrument;	YES
p)	Whether minute books of the proceedings of the meeting is maintained;	YES

8, Giriraj Society, SBI Lane, Off Gokhale Road, Naupada, Thane (W)-400602. Tel.: 022-25365705, 2541 6737 Email: sanjay.ambardekar@ca-aska.com

Visit us at : www.ca-aska.com H.O. Dombivli: (0251) 242 6191



q)	Whether any of the Trustees has any interest in the investment of the Trust;	NO
r)	Whether any of the Trustees is a debtor or creditor of the Trust;	NO
s)	Whether the irregularities pointed out by the auditors in the accounts of the previous year have been duly complied with the trustees during the period of Audit;	YES
t)	Any special matter which the auditor may think fit or necessary to bring the notice of the Deputy or Assistant charity commissioner.	NO

For AMBEKAR SHELAR KARVE & AMBARDEKAR CHARTERED ACCOUNTANTS

F.R.No.:-122063W KARVA

CA MANGESH A. GHANEKAR

(PARTNER)

THANE

MEMBERSHIP NO.:149885

PLACE: THANE

DATE: 14.12.2020

UDIN: 21149885AAAADL7586

SCHEDULEIXC

Statement of income liable to contribution for the year ending on 31st March, 2020

Name of Public Trust MANGROVE & MARINE BIODIVERSITY CONSERVATION FOUNDTAION OF MAHARASHTRA

Registration No. F-66824

(Sched	me as shown in the Income & Expenditure Account dule IX) me not chargeable to contribution under Section 58 dle 32: Donations received from other Public Trust and Dharmadas. Grants received from Government and Local authorities Interest on Sinking & Depreciation Fund. Amount spent for the purpose of secular education Amount for the purpose of medical relief	6,80,16,657	29,47,42,147
II. Inco and Ru (i) (ii) (iii) (iii) (iv)	me not chargeable to contribution under Section 58 lle 32: Donations received from other Public Trust and Dharmadas. Grants received from Government and Local authorities Interest on Sinking & Depreciation Fund. Amount spent for the purpose of secular education	6,80,16,657	**
and Ru (i) (ii) (iii) (iii) (iv)	Donations received from other Public Trust and Dharmadas. Grants received from Government and Local authorities Interest on Sinking & Depreciation Fund. Amount spent for the purpose of secular education	6,80,16,657	
(i) (ii) (iii) (iv)	Donations received from other Public Trust and Dharmadas. Grants received from Government and Local authorities Interest on Sinking & Depreciation Fund. Amount spent for the purpose of secular education	6,80,16,657	
(ii) (iii) (iv)	Dharmadas. Grants received from Government and Local authorities Interest on Sinking & Depreciation Fund. Amount spent for the purpose of secular education	6,80,16,657	A)
(iii) (iv)	Grants received from Government and Local authorities Interest on Sinking & Depreciation Fund. Amount spent for the purpose of secular education	6,80,16,657	2
(iii) (iv)	Interest on Sinking & Depreciation Fund. Amount spent for the purpose of secular education	6,80,16,657	
(iv)	Amount spent for the purpose of secular education		
7			
IVI	Amount for the purpose of medical refler		
	Amount for the number of Veterinary treatment of		
(vi)	Amount for the purpose of Veterinary treatment of animals		
(vii)	Expenditure incurred from donations for relief of distress		
(VII)	caused by scarcity, draught, flood, fire or other natural		
	calamity		
(viii)	Deductions out of income from lands used for agricultural		
(****)	purposes:-		
	(a) Land revenue and Local Fund Cess		
	(b) Rent payable to superior landlord		
	(c) Cost of production, if land are cultivated by trust	,	
(ix)	Deduction out of income from lands used for non –		
()	agricultural purpose.	``	
	(a) Assessment, cesses and other government or		
	Municipal Taxes		
	(b) Ground rent payable to the superior landlord		
	(c) Insurance premium		
	(d) Repairs at 10 percent of gross rent of building		
	(e) Cost of collection at 4 percent of the gross rent of the	2	
	buildings let out		
(x)	Cost of collection of income or receipts from securities		
	stock, etc. at 1 percent of such income		
(xi)	Deduction on account of repairs in respect of buildings		
	not rented and yielding no income, at 10 percent of the		
	estimated gross annual rent.		
C A	and the same described to satisfaction B - C W		00 (808 100
Gross A	nnual Income chargeable to contribution Rs. (I-II)		22,67,25,490

Certified that while claiming the deduction admissible under the above schedule the Trust has not claimed any amount twice, either wholly or partly, against any of the items mentioned in the Schedule which have the effect of double - deduction.

FOR MANGROVE & MARINE BIODIVERSITY CONSERVATION FOUNDATION

EXECUTIVE DIRECTOR

DATE:14.12.2020

FOR AMBEKAR SHELAR KARVE AMBARDEKAR KARVA

THANE

CHARTERED ACCOUNTANTS

CA MANGESH A GHANKEKAR

(PARTNER) M. NO. 149885 **PLACE: THANE**

UDIN: 21149885AAAADK3844

THE BOMBAY PUBLIC TRUST ACT,1950
SCHEDULE VIII [Vide rule 17(1)]
NAME OF THE PUBLIC TRUST: MANGROVE & MARINE BIODIVERSITY CONSERVATION FOUNDTAION OF MAHARASHTRA

REGISTRATION NO. F 66824

		2019-2	NCE SHEET AS AT 31ST	2018-19			9-20 Rs.
2018-19			Rs.	Rs.	PROPERTY AND ASSETS	Rs.	RS.
Rs.	FUNDS AND LIABILITIES	Rs.	RS.	101			
101					IMMOVABLE PROPERTIES	1 1	
TRUS	ST FUNDS OR CORPUS-	4 = 2 = 2 = 2 = 2					1.51,96,223
- BPCI.	(Pineline Project)- Conserv. Wildlife in TCFS	1,23,38,000	- 1	1.40.96,268	FIXED ASSETS		1,31,90,223
MCCN	M - (Mumbai Coastal Road Project) - Corpus Fund	25,00,00,000	- 1	1,10,70,200			
	RDA (MTHL Project) Corpus Fund	25,00,00,000		20.11.11.11.11.11.11.11			
25,00,00,000 MMRI	DC (Bridge on TCFS) - Corpus Fund	15,51,16,000		May read to the American			
	i Mumbai International Airport - Corpus Fund	1,15,71,00,000					
1,15,71,00,000 Navi l	RCL (Mumbai-Ahemedabad Bullet Train) Corpus Fund	1,35,00,00,000					
- NHSR	RCL (Mumbal-Anemedabad Bullet Flam) Corpus Faire	1,75,84,000	3,19,21,38,000				
- TATA	A Power Ltd - Project - Laying 220kv Elec Cable						
				1909 1907 190			
FUNI	NDS AND RESERVES	20,39,64,120			INVESTMENTS (SCHEDULE II)		3,88,33,16,000
23,16,06,680 - BN	NHS-MTHL Proj -Moitigation & Monitoring of Birds	8,16,000		2,28,03,50,000	Fixed Deposits		0,00,00,00,00
9 16 000 - Fur	unds to Purchase smartphones for Guards	14,31,057					
14.31.057 -CSI	SR Funds From MSRDC - For Plantation (DFO MMCU)				ADVANCES	(5.00.545)	
Ain	jmera CSR Funds - Chain Link Fencing in Anik	84,16,945		(5,22,545)	- Financial Assistance to UNDP Project	(5,22,545)	
BP	PCL (Pipeline Project)- Plantation / Afforestation	3,44,000		(3,22,373)	- Deputy Conservator of Forest, Roha	30,000	
- Br	SR FUNDS From Volksvagen - 7 Year Plantation Progr	1,33,01,100			- Deputy Conservator of Forest (Wildlife), Thane	41,625	
CS	PDC Funds of DFO MMCU	17,74,836		00 00 454	- Deputy Conservator of Forest, Alibag		
DP	PDC Funds of DFO MMCO und-Construction of Office Container Base-RFO Bhiv	2,94,898		20,79,491		80	
Fu	und-Construction of Office Container base-the British	76,67,059	- 1	19,16,700	- Deputy Conservator of Forest, Thane		
Fu	fund for HDPE Fish Cage Net, GI Pipes - DFO MMCU	77,844	- 1	24,00,208	- Divisional Forest Officer, Chiplun	2,971	
M1	MMRDA - Tree Felling Cost (DFO-CAMPA) Fund	9,92,33,400	- 1	2,914	- Mangrove Foudation, Ratnagiri	2,58,846	
NF	HSRCL - Habitat Improvement of TCFS & Adjoi Forest	1,23,14,770		(1,12,822)	- Campa funds	46,16,244	
NI	NHSRCL - Plantation Fund for 07 Years	10,00,00,000	- 1	51,05,046	- DFO MMCU-Foundation Budget		
10.00.00.000 - M	MMRDA (MTHL Project) Interpretation center Airoli			(29,11,039)	- DFO MMRDA Budget	39,02,129	
40,65,59,953 - M	MMRDA (MTHL Project) Mangrove conservation plan	37,65,24,598		(27)22,007,	- Range Forest Officer, Malvan	1,45,026	
40,03,39,933	MMRDA (MTHL Project) Mangrove Plantation	-	- 1	1,394	- Range Forest Officer, Ratnagiri		
59,24,727 - M	MMRDA (MTHL Project) Marine Biodiversity Plan	10,00,00,000	- 11		- Deposit Under Leave and License Agreement	20,44,800	
10,00,00,000 - M	MMKDA (MITTLE Project) Marine Diodrecists) 1 mm	30,50,941	- 1	20,44,800		1,508	1,05,20,684
PI	Plantation/ CSR Funds from United Way NGO	78,84,000	ll ll		- Sundry Receivables		
	Fund for Pellet Feed of Sea Bass - DFO MMCU	20,64,925	93,91,60,493			1 1	
31,53,940 - U	UNDP SEED MONEY		1			1 1	
1		1 1	- 1		CURRENT ASSETS	1,02,28,532	
OT	THER LIABILITIES	5.84.651	II.	90,14,266		75,000	1,03,03,537
3,88,318 TD	DS Payable	27,14,789		75,000	- Petrol Deposit	73,000	2,00,000
	andry Payables	40,000				1 1	
	udit fees Payable	40,000	l l		CASH AND BANK BALANCE -(SCHEDULE -III)		
	ncome Tax Payable		22.74.715	10,39,29,517		42,41,48,650	40.44.03.33
	rofessional Fees Payable	35,275	33,74,715		b) Cash With trustee	44,576	42,41,93,22
13,49,119	oressional rees rayable			4,402	b) Casil With trustee		
73.7	NCOME AND EXPENDITURE A/C						
	alance as per last balance sheet	15,06,99,216			1		
			1		1	1 1	
570.0	ess: Appropriations, if any	5,81,57,242			1	1 1	
	dd:Surplus as per income & expenditure account		20,88,56,458			1 1	
Le	ess: Deficit				1	1 1	
1						1 1	
- 1					_	TOTAL RS.	4,34,35,29,66
			4,34,35,29,666	2,41,74,73,600		TOTAL RS.	1/0 1/1 1/1
2,41,74,73,600 TO	TOTAL RS.				0		
					As per our report of even date		
Th	The Above Balance Sheet to the best of My/ Our belief						
Co	Contains a true account of the Funds and Liabilities and of the						
De	Property and assets of the trust.				For Ambekar Shelar Karve & Ambardekar Chartered Acc	ountants	
					FRN: 122063W		
Pr.	FOR MANGROVE & MARINE BIODIVERSITY CONSERVATION FOUNDTAION				0000	KARI	
Tr.	ON PRINCIPAL STATE OF THE PRINCIPAL STATE OF				MUNCO	AR KARVE	
	10-6-0-					WY 4	
	on on on.				CANADACTIC CHANEVAD	2/	
1					CA MANGESH GHANEKAR	0/	
E:	Executive Director				(PARTNER)	THANE	
- 1				II	Membership no. 149885	4 12	
1	Date: 14.12.2020			II .		/~ //	

THE BOMBAY PUBLIC TRUST ACT,1950 SCHEDULE - IX [VIDE RULE 17(1)] NAME OF THE PUBLIC TRUST: MANGROVE & MARINE BIODIVERSITY CONSERVATION FOUNDTAION OF MAHARASHTRA

REGISTRATION NO. F 66824

INCOME AND EXPENDITURE A/C FOR THE YEAR ENDED 31ST MARCH 2020

2018-19	\neg	Expenditure	2019-20	2018-19		Income	2019-20
	o	Expenditure in respect of properties		•	Ву	Rent (accrued/realised)	
4,09,79,324 T	o	Establishment expenses (As per SCHEDULE -IV)	5,68,04,603	16,39,45,601	Ву	Interest(accrued/realised) - On Fixed Deposits	22,39,69,69
- Т	Го	Legal expenses			Ву	Donations in cash or kind	
40,000	Го	Audit fees	40,000		Ву	Grants/subsidies	
21,24,75,446	Го	Expenditure on the objects of the trust (As per SCHEDULE -V)	17,68,32,507	32,47,570 12,66,731	Ву	Miscellaneous Income Revenue from CMBC, Airoli Accrued Income-UNDP SEED Money	26,59,4 10,89,0
- 1	То	Miscellaneous Expenditure		10,03,18,198		Accrued/ Due Income Other Income	6,69,27,6 96,3
26,99,180	То	Depreciation (as per schedule I)	29,07,795	32,00,000	Ву	CSR Funds	
-	То	Amounts transferred to reserve & specific funds corpus fund	-				
1,57,84,150	То	Excess of income over expenses	5,81,57,242	÷			
27,19,78,100	_		29,47,42,147	27,19,78,100	1		29,47,42,1

FOR MANGROVE & MARINE BIODIVERSITY CONSERVATION FOUNDTAION

CA MANGESH GHANEKAR

CHARTERED ACCOUTNANTS FRN NO: 22063W

FOR AMBEKAR SHELAR KARVE & AMBARDEKAR

PARTNER MEM. NO. 149885

DATED AT: 14.12.2020

ANNEXURES

Schedule I

FIXED ASSETS AS ON 31.3.2020

	Original cost	Additi	ons	Deductions	Total Cost As on 31/3/20	Depreciation for the current year	Rate of depre	Total Depreciation upto 31/3/20	Closing WDV As On 31/3/20
		First Half	Second Half						
Civil Works for Redevelopment at Airoli	28,12,795.47				28,12,795.47	2,81,279.55	10.00	2,81,279.55	25,31,515.92
Camera	1,95,284.53		81,814.00		2,77,098.53	35,428.73	15.00	35,428.73	2,41,669.80
Canon Xerox Machine	2,03,007.20				2,03,007.20	30,451.08	15.00	30,451.08	1,72,556.12
Computers	4,70,772.60	63,300.00	3,48,985.00		8,83,057.60	2,83,426.04	40.00	2,83,426.04	5,99,631.56
GPS	-	-	49,200.00	The state of the s	49,200.00	3,690.00	15.00	3,690.00	45,510.00
Ipad	-		50,257.00		50,257.00	3,769.28	15.00	3,769.28	46,487.73
Vehicle - Scorpio	11,73,538.03				11,73,538.03	1,76,030.70	15.00	1,76,030.70	9,97,507.33
Scanners	48,068.16				48,068.16	19,227.26	40.00	19,227.26	28,840.90
Video Conference Unit	1,03,756.95				1,03,756.95	15,563.54	15.00	15,563.54	88,193.41
Executive chair	29,173.77				29,173.77	2,917.38	10.00	2,917.38	26,256.39
Office Tables and Chairs	2,07,806.92	3,81,053.00	2,43,500.00		8,32,359.92	71,060.99	10.00	71,060.99	7,61,298.93
Binoculars	2,73,530.00				2,73,530.00	41,029.50	15.00	41,029.50	2,32,500.50
Scuba Dive Equipment	2,32,927,20	2,59,410.00	3,62,292.00		8,54,629.20		20.00	1,34,696.64	7,19,932.56
Speed boat	26,08,000.00				26,08,000.00	5,21,600.00	20.00	5,21,600.00	20,86,400.00
Pantoon Boat	5,79,448.56				5,79,448.56		20.00	1,15,889.71	4,63,558.85
Vehicle-Honda city	7,85,648.67		12		7,85,648.67	1,17,847.30	15.00	1,17,847.30	6,67,801.37
Vehicle Tata Hexa	12,85,155.84				12,85,155.84	1,92,773.38	15.00	1,92,773.38	10,92,382.46
Vehicle-Two wheelers	4,66,373.75				4,66,373.75	69,956.06	15.00	69,956.06	3,96,417.69
Vehicle - Mahindra Bolero	-	-	6,61,639.00		6,61,639.00	49,622.93	15.00	49,622.93	6,12,016.08
Vehicle - Mahindra TUV 300		7,02,680.00			7,02,680.00	1,05,402.00	15.00	1,05,402.00	5,97,278.00
Generator(Diesel) at Airoli					15.04.142.00	2 27 (21 20	15.00	2,37,621.30	13,46,520.70
Inerpretation center	15,84,142.00			-	15,84,142.00		15.00	7,594.70	43,036.65
EPABX	50,631.36		2 (1 0 0 0 0 0	-	50,631.36		40.00	2,45,826.88	5,50,740.32
Laptops	4,00,567.20	32,000.00	3,64,000.00		7,96,567.20			23,328.04	1,32,192.21
LG Tv 55 "	1,55,520.25				1,55,520.25		15.00		2,00,426.92
LG Tv 65 "	2,35,796.38				2,35,796.38		15.00	35,369.46	
LG Tv 75 "		2,05,000.00		1	2,05,000.00		15.00	30,750.00	1,74,250.00
PA Mixer Amplifer	1,19,522.58				1,19,522.58		15.00	17,928.39	1,01,594.19
Hero Go Pro 7	-	36,580.00			36,580.00		15.00	5,487.00	
Printers	74,800.66	-	51,990.00		1,26,790.66		15.00	15,119.35	
Projector & Projector Screen	-	1,14,050.00	-	1	1,14,050.00	17,107.50	15.00	17,107.50	96,942.50
Total	1,40,96,268.07	17,94,073.00	22,13,677.00	(AB)		29,07,794.68		29,07,794.68	1,51,96,223.39

SCHEDULE II FIXED DEPOSITS AS ON 31/3/2020

Particulars	Face value
FD with Canara Bank	60,91,16,000.00
FD with Union Bank of India	40,00,000.00
FD with Punjab National Bank	3,27,02,00,000.00
TOTAL	3,88,33,16,000.00

SCHEDULE-III

CASH & BANK BALANCES AS ON 31.3.2020

PARTICULARS	TOTAL
Canara Bank-FCRA A/c	1,000.00
Canara Bank-Savings A/c	20,22,09,470.66
Punjab National Bank	22,03,87,587.60
Union Bank of India	14,00,490.98
IDBI	1,16,336.60
Indian Overseas Bank	33,764.25
Cash balance	44,576.00
TOTAL	42,41,93,226.09

SCHEDULE-IV

ESTABLISHMENT EXPENSES

PARTICULARS	TOTAL
Advertisments	22,84,828.00
Professional Fees to Staff	1,04,54,190.00
Airoli Centre - Staff, Security Staff Souvenir Shop	14,66,396.00
Airoli Interpretation Centre - Maintenance Cost	61,52,106.00
Annual Maintenance Contract AMC for Pest Control	44,014.00
Annual Maintenance Contract for AirConditioners	1,24,431.00
Bank Charges	10,833.18
Electricity Expenditure	2,21,558.00
Electricity, Telephone, Stationery Exp	4,70,213.00
Fuel & Maintenance Cost (Vehicles and Boat)	40,00,562.00
Honorarium	54,000.00
Meeting Expenses	1,35,840.00
Office Expenses	27,52,873.00
Professional Fees to Steno / Clerks / Peons	1,31,24,247.00
Renovation / Repair Works of New Office at CST	26,46,583.00
Rent for DFO MMCU Office	16,05,060.00
Rent for Office at CSTM	96,51,456.00
Rent for RFO Alibaug Office	17,024.00
Rent for RFO Ratnagiri Office	51,738.00
Rent of RFO Malvan's Office	4,47,531.00
Returns Filing Fees - TDS, IT, Annual Etc	7,670.00
Stationery	4,26,015.00
Telephone Expenditure	1,53,863.00
Travel Expenses	5,01,572.00
TOTAL	5,68,04,603.18

SCHEDULE -V

EXPENDITURE ON OBJECTS OF TRUST

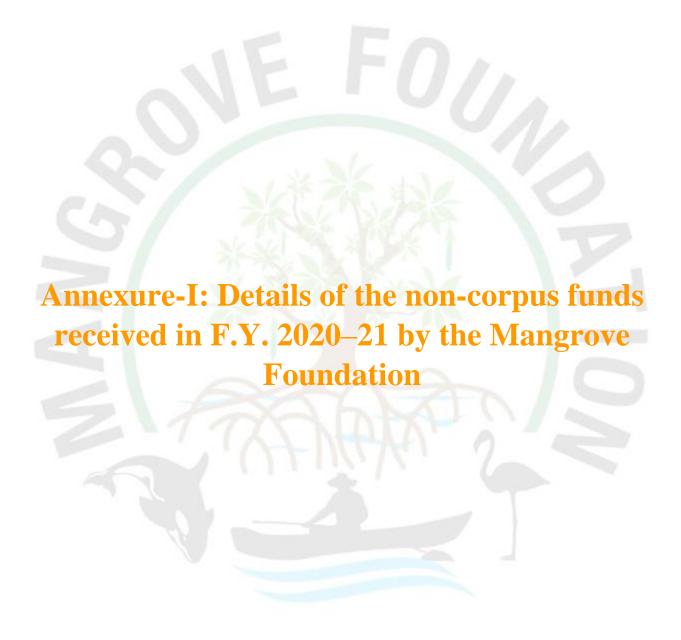
PARTICULARS	TOTAL
1. Capacity Building	
Conferences, Workshops, Trainings, Events	59,14,391.00
Exposure Visits	13,74,473.00
2. Research and Projects	
Research on Various Coastal and Marine Biodiversity	16,72,196.00
Small Grants Programme for Research Projects	10,49,224.00
BNHS - Elucidating the Migratory Routes-Water Birds	13,11,000.00
CIBA - Mapping of Coastal Resources, Brackishwater	12,50,000.00
IISST - Monitoring of Health of Mangrove Species	13,59,000.00
IWST-Development of Integrated Pest Mgmt Strategies	6,11,000.00
IWST-Development of Procedure for Forensic Identifi	8,63,000.00
R D College- Documentation of Mangrove & Associates	20,000.00



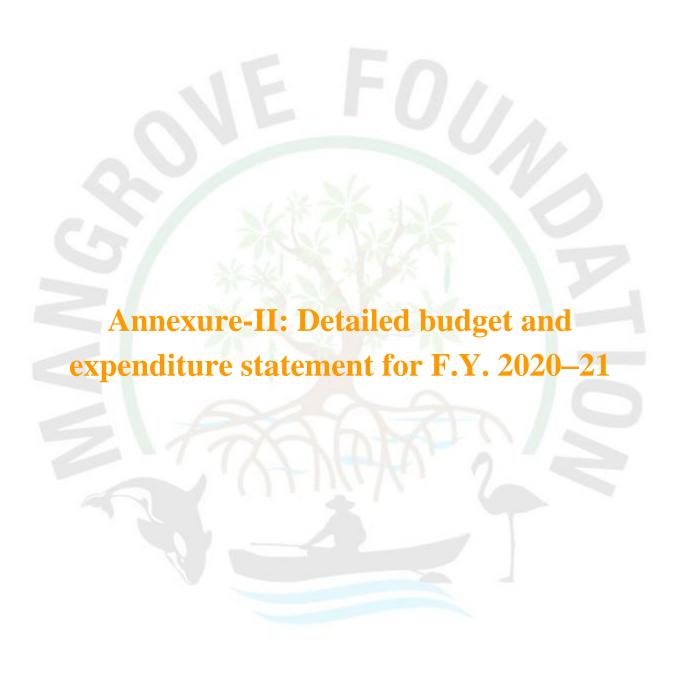
3. Livelihoods	
Livelihood Related Activities Along the Maha. Coast	56,55,495.00
Ornamental Fish Master Facility at Airoli	31,60,342.00
SCHEME - Mangrove Cons. Livelihood Gen Exp	54,79,890.00
Construction of Multi Species Hatechery at Vengurla	10,92,798.00
Professional Fees to Project Associates for SCHEME	13,54,338.00
Purchase of Crablets	40,749.00
TA DA to Project Associates	2,61,905.00
4. Ecotourism	40 24 255 00
Development of Mangrove Parks	48,34,355.00 3,22,946.00
Ecotourism Events and Communication Materials	1,61,754.00
Infrastructure at Potential Ecotourism Sites	1,01,734.00
5. Communication and Awareness	15,69,063.00
Sponsorship to Awareness Initiatives and Programme	6,57,719.00
Awareness Programme for Fishermen	24,400.00
Awareness Programme for School Children	18,09,530.00
Awarenss (Chariot Display) - Republic Day 2020	9,02,553.00
Clean Mangrove Campaign	4,56,460.00
Coastwise Event - January 2020 Communication and Distribution Material	9,33,156.00
Development of Online Boat Booking Website - TCFS	2,47,500.00
	22,658.00
Development of QR Code App Mangrove Day Celebration 2019	59,284.00
Marine Matters Lecture Series	6,450.00
Star Gazing Awareness Programme	33,000.00
Video Film on Turtle Conservation Work by Foundatin	2,77,000.00
Video Films on Multispecies Hatchery	2,61,370.00
Video on Livelihood Scheme	2,90,870.00
Wetland Day 2019	15,000.00
Wildlife Week 2019	1,20,195.00
World Environment Day Event-05-Jun-2019	5,12,987.00
World Mangrove Day 2019	8,49,635.00
World Wetland Day 2020	69,652.00
6. Magrove Protection Framework	
Other Protection Measures	65,22,145.00
Plantation and Restoration of Degraded Mangrove Are	1,53,98,488.00
Constuction of Protection Wall - Foundation Budget	12,42,304.00
Encroachment Removal	7,78,770.00
Security Personnel Cost - (Mah. State Secu. Corp.)	3,58,23,221.00
7. Coastal and Marine Conservation Measures	
Compensatation to Release Marine Animals From Nets	8,90,626.00
Honorarium to Beach Managers for Turtle Conservatin	22,822.00
Joint Patrolling -with Fishery, Police, Coast Guard	13,52,000.00
7. Marine Stranding and Rescue Centre	20.70.205.00
Establishing Stranding Management Centre - Alibaug	20,79,395.00
MArine Stranding Related Exp	17,496.00
Preservative Expenses on Marine Stranded Animals	5,73,375.00
8. Miscellaneous	5,30,490.00
Other Activities	5,30,490.00
9.Expenditure From MMRDA Funds	2,57,48,704.00
1A Construction of Protection Wall	32,41,433.00
1C Mangrove Stations	10,45,218.00
1D Mangrove Watch Towers	10,43,210.00
10.Mangrove Plantation Under MMRDA	70,16,122.00
Mangrove Plantation (MMRDA) - DFO MMCU	2,76,42,560.00
11.BNHS - Bird Monitoring and Mitigation Measures	2,70,72,300.00
momat.	17,68,32,507.00
TOTAL	





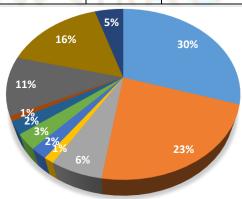


Sr.	Month	Description	Amount in lakhs (Rs.)
1.	August 2020	CSR Funds for Plantation from Skoda Auto Volkswagen India Pvt Ltd Received CSR Funds towards "Programme of Mangrove Afforestation". This is a 07-year plantation programme. Rs. 40,34,100/- Is received for 02nd year's operation. The company voluntarily desires to extend financial support of total Rs. 3,08,23,600/- over the course of 07 years' (From Nov 2019 to Nov 2026) to Foundation to implement the "Programme of Mangrove Afforestation" in 100 Ha of degraded land in Alibaug.	40.34
2.	November 2020	CSR Funds for Plantation as per Agreement with M/s Unitedway NGO Received Rs. 9,65,995/- as 1st Instalment as per Agreement entered with M/s Unitedway NGO. This fund is to be utilised for plantation purposes for 10 Ha in Vikhroli	9.66
3.	March 2021	Kharghar Vikhroli Transmission Line Pvt Ltd (Adani Group) Received deposit of Rs. 20,51,332/- towards the 3.5 ha afforestation cost towards compliance of directions of Hon'ble Bombay High Court in Writ Petition No.96276 of 2020 Dated. 04/02/2021	20.51
4.	March 2021	Maharashtra Information Technology Corporation Ltd Received funds of Rs. 1,59,55,823/- towards CSR funds contribution from Maharashtra Information Technology Corporation Ltd towards conservation breeding of Rusty Spotted Cat	159.56
		Total	230.07



Sr. No.	Budget Head	Approved % Range	% To Total Budget	Budget in Lakhs (Rs.)	Expenditures	Target Budget Achieved
i.	Mangrove Protection Framework	20%-30%	30%	630	470	75%
ii.	Ecotourism and Livelihood Activities	20%-30%	22%	472	232	49%
iii.	Research and Projects	05%-10%	6%	127	76	60%
iv.	Capacity Building	02%-05%	1%	25	18	70%
v.	Communication and Awareness	02%-05%	2%	43	30	71%
vi.	Coastal and Marine Conservation Measures	02%-05%	3%	60	60	100%
vii.	Marine Stranding and Rescue Centre	00%-2.50%	2%	50	19	38%
viii.	Miscellaneous	00%-2.50%	1%	20	3	13%
ix.	Human Resources	10%-20%	11%	234	300	128%
X.	Administration	10%-20%	16%	340	292	86%
xi.	Assets Procurement	00%-2.50%	5%	100	65	65%
E	Total			2,100	1,566	75%





- Mangrove Protection FrameworkResearch and ProjectsCommunication and Awareness

- Marine Stranding and Rescue Centre
- Human Resources
- Assets Procurement

- Ecotourism and Livelihood Activities
- Capacity Building
 Coastal and Marine Conservation Measures
- Miscellaneous
- Administration

Mangrove and Marine Biodiversity Conservation Foundation of Maharashtra Unaudited Financial Expenditure Statement for F.Y. 2020–21

Sr. No.	Particulars	Budget Amount	Expenditure
1	MANGROVE PROTECTION FRAMEWORK		
	Mangrove Plantation and Restoration of Degraded Mangrove Areas	200	71
	Maharashtra State Security Corporation (117 Security Personnel + 66 Additional Personnel)	400	322
	Other Protection Measures (including Encroachment Reomoval, Campus Development at Borivli Range Office, Legal Fees to Advocates, etc)	30	77
	TOTAL MANGROVE PROTECTION FRAMEWORK	630	470
2	ECOTOURISM AND LIVELIHOODS ACTIVITIES		
	Livelihood Activities along the Maharashtra Coast		
	SCHEME 'Mangrove Conservation and Livelihood Generation' related expenses	180	86
	Construction of Multi Species Hatchery at Vengurla (including consultancy for DPR Preparation)	50	17
	CIBA Project - Brackishwater Cage Culture with multi trophic candidate species in diverse rearing systems for alternate livelihood and societal development Project	30	30
	Livelihood Projects along the Maharashtra Coast	140	23
	Project to NBFGR - Marine Ornamental Breeding Centre	20	20
	Sub - Total of 'Livelihood Activities along the Maharashtra Coast'	420	175
		1	
	Ecotourism Activities along the Maharashtra Coast		
	Interpretation/information centre and related work	6	-
	Basic Infrastructure at Potential Ecotourism Sites (Procurements, Events, innaugurations, awareness drives, etc)	6	22
	Interpretatiion Materials, Boards, Signages, Banners, Boards, Panels, etc	5	-
	Promotion of Ecotourism Sites (Short documentaries, Print & Electronic Media, etc)	5	14
	Sub - Total of 'Ecotourism Activities along the Maharashtra Coast'	22	36

	Mangrove Parks; Support to Ecotourism by local communities		
	Mangrove Parks Development (Consultant's Fees, etc)	29	21
-	Mangrove Park at Dahisar (Remuneration to Internal Project Coordiantor)	1	-
	Sub - Total of 'Mangrove Park at Dahisar; Support to Ecotourism by local communities'	30	21
_	TOTAL ECOTOURISM & OTHER LIVELIHOODS RELATED ACTIVITIES	472	232
3	RESEARCH & PROJECTS	an ar an	
-	WII Project - Reorganization of Malvan Marine Sanctuary (Total Project Cost Rs 40.05 Lakhs)	35	25.22
	CIBA - Mapping of Coastal Resources and identifying suitable Brackish water areas for integrated multi tropic aquaculture (IMTA) in Maharashtra	6	3.00
	IIST - Monitoring Health of Mangroves of Maharashtra State using near real time satellite remote sensing data	7	
	IWST - Development of Integrated Pest Management (IPM) strategies against the major defoliating pests of mangroves in the Thane district of Maharashtra (Phase - II)	6	4
	IWST - Development of Procedures for forensic identification of illegally cut mangrove trees using molecular marker techniques	10	10
	Project - Studying the incubation temperature of nesting population of Olive Redli Turtles in Coast of Maharashtra - Ms. Sumedha Korgaonkar (Phase - II)	1	2
	Ela Foundation - Survey of Otter and crocodiles in Mangrove Habitats of Ratnagiri Districts	2	2
	BNHS - Diversity and Distribution of Gobiid Fishes	7	4
	CMFRI - Oyster Projects - Palghar	12	12
	BNHS - Elucidating Migratory Routes of Waterbirds	ed.	4
	Other New Projects	15	5
	Sub - Total of 'Research & Projects'	102	72
	Small Grants Programme		
	SACON - Documentation of Fauna from Tide Pool	3	
	SACON - Mapping Biological Diversity in Caves	3	
	CES-IISc - Conservation Genetics of Humpback Dolphins	3	
	Alissa Barnes - Characterising Diversity etc of Ray Fisheries	3	

	Anuja Vartak - Management of Red Ants	0	0
	Dakshin Foundation - Identifying Nursery Grounds	2	1
	B.N. Bandodkar College - L-Asp[araginase from Mangroves	2	
	Tuljaram Chaturchand College - Survey for Mapping and Distribution of important mangroes species	1	1
	Siddhesh Bhogte - Distribution of White Belied Sea Eagle along coast of Mahrashtra	2	
	Swapnil Tandel - Study on Whale Shark distribution in Raigad and Sindhudurg	2	
	New Small Grants Project	5	1
	Sub - Total of 'Small Grants Programme'	26	4
	TOTAL RESEARCH & PROJECTS	127	76
4	CAPACITY BUILDING		
	Conferences, Workshops, Trainings, Events and Exposure Visits	25	18
	TOTAL CAPACITY BUILDING	25	18
5			
	COMMUNICATION & AWARENESS		
	Publication of Communication and Awareness Materials, Short Documentary Films, etc	15	23
	Clean Mangrove Campaign	15	4
	Young Marine Scientist Conference for School Children	5	
	Project for Website-Cloud Maintenance	5	
	MahaOnline Ltd - Website Development for Mangrove Cell Mumbai	3	3
	TOTAL COMMUNICATION & AWARENESS	43	30
6	COASTAL AND MARINE CONSERVATION MEASURES		
	Introduction of Square Mesh Net; Joint Patrolling (Along with Fishery, Police, Coast Guard); Compensation for release of marine animals entangled in fishing nets, Turtle Conservation activities	60	60
	TOTAL COASTAL AND MARINE CONSERVATION MEASURES	60	60
7	MARINE STRANDING AND RESCUE CENTRE		
	Marine Stranding and Rescue Centre related expenses	50	19

8	<u>MISCELLANEOUS</u>		
	Miscellaneous and Other Activities	20	3
	TOTAL MISCELLANEOUS	20	3
Δ.			
9	<u>HUMAN RESOURCES</u>		
	Professional Fees to staff of Mangrove Foundation	110	99
	Professional Fees to UNDP Project Staff from UNDP SEED MONEY	11	10
	Professional Fees to contractual staff hired through Manpower Agency	113	191
	TOTAL HUMAN RESOURCES	234	300
10	A DA STATE COMP A MY CAN		0
10	ADMINISTRATION		
	Office's Rent of Mangrove Foundation's Office	97	97
	Office's Rent (DFO MMCU, RFO Malvan and RFO Alibaug)	25	25
	Interior Renovation / Repairs in Office of Mangrove Foundation	35	15
	Office Expenses (Electricity, Telephone, Internet, Stationery, Printing, Postage, Audit Fees, etc)	60	41
	Coastal and Marine Biodiversity Centre, Airoli (Recurring Expenditures, Security staff, Souvenir shop staff)	50	66
	Fuel and maintenance Cost (Vehicles and Boat)	40	47
	Advertisements	15	2
	Logistical arrangements (Accommodation, Air/Train/Bus/Local Travel, Refreshments etc)	10	0
	Group Insurance Premium	8	-
	TOTAL ADMINISTRATION	340	292
4.4			
11	ASSETS PROCUREMENTS		
	Procurement of Vehicles	80	53
	Procurement of Electronic Items (Desktops, Laptops, Printers, Projector & Screen, TV etc)	10	11
	Procurement of Furnitures & Fixtures (Chairs, Tables, Sofa, storage racks etc.)	10	1
	TOTAL ASSETS PROCUREMENTS	100	65
	GRAND TOTAL	2,100	1,566

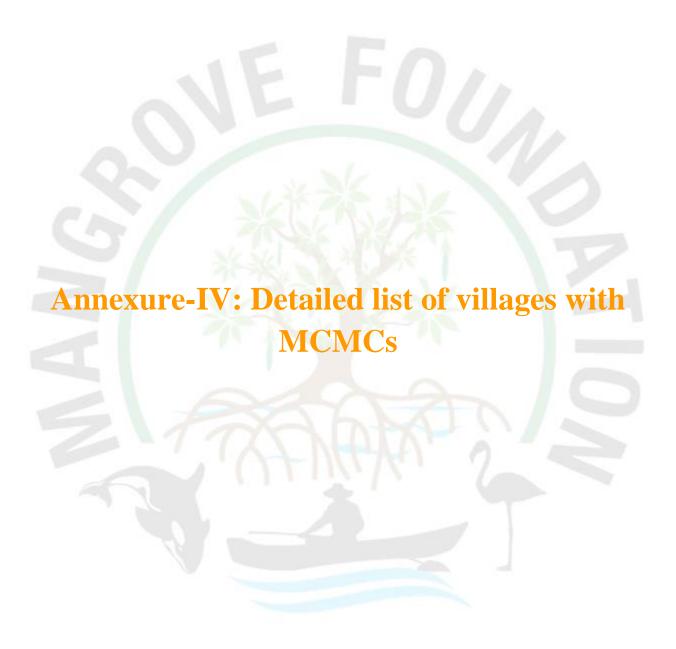


District (Division)	Location	Hectares	Planted saplings (nos.)	Actual expenditure as per estimate (₹)	Expenditure from Mangrove Foundation (₹)	Total Expenditure (₹)	Funding source	Remark
	Alimgar Bharodi	13.00	57,772	11,39,259	4,20,689	15,59,948	State Plan & MFN	Plantation done by using fish bone channel method
	Surai	5.00	22,220	3,98,909		3,98,909	State Plan	
	Eksar	16.00	71,104	18,12,250	1325	18,12,250	State Plan	
	Vikhroli	5.00	22,220	9,65,995	A MI	9,65,995	CSR	
Mumbai/	Sarsole	3.00	13,332	4,38,698		4,38,698	No.	
Mumbai Suburban/	Ghansoli Survey no.109	1.00	4,444	1,45,611	Sele	1,45,611		
Thane (Mumbai	Koparkhairane Survey no. 312	1.00	4,444	1,45,611	100	1,45,611		
Mangrove Conservati	Ghansoli Survey no.109	1.00	4,444	1,45,611		1,45,611		
on Unit)	Ghansoli Survey no.109	1.00	4,444	1,45,611	1	1,45,611	CAMPA	
	Koparkhairane Survey no. 312	1.00	4,444	1,45,611		1,45,611		
	Manori Survey no 295	1.00	4,444	1,22,759	\Z,	1,22,759		
	Gorai Survey no. 267	1.00	4,444	1,25,786		1,25,786		
Raigad (Alibag)	Palav 223(1)	8.00	35,552	9,80,427	12,88,284	22,68,711	State Plan & MFN	Plantation done by using fish bone channel method

Ratnagiri	Mauje Kasari	0.27	1,200	30,485		30,485	State Plan	
	Mauje Mirya	4.00	17,776	4,61,272	6,96,951	11,58,223	State Plan & MFN	Plantation done by using fish bone channel method
(Chiplun)	Pawas	1.00	4,444	62,023		62,023	State Plan	
	Aare	0.20	889	23,717	DE	23,717	State Plan	
	Saldure	1.00	4,444	1,29,717	667	1,29,717	State Plan	
Sindhudur	Mauje Taramumbri	4.50	19,998	6,34,219	No.	6,34,219	State Plan	
g (Malvan)	Mauje Mithbav	5.50	24,442	7,75,156	24	7,75,156	State Plan	
Palghar (Palghar)	Mahim	13.00	57,772	14,51,695		14,51,695	State Plan	
	Sarawali	15.00	1,33,320	19,45,726	M	19,45,726	State Plan	
Palghar (Dahanu)	Agwan Survey no 315	30.00	66,660	40,81,271	,	40,81,271	State Plan	
	Agwan nursery			11,40,836		11,40,836	State Plan	

	Asangaon Survey no .6 (I)	5.00	22,220	6,48,711	-	6,48,711	State Plan
	Asangaon Survey no.6 (II)	5.00	22,220	6,48,711		6,48,711	State Plan
Palghar (Boisar)	Asangaon Survey no.6 (III)	5.00	22,220	6,48,711		6,48,711	State Plan
(Doisar)	Kolwade 161	5.00	21,200	6,35,834		6,35,834	State Plan
	Kumbhawali 718 (I)	5.00	22,220	6,35,732	11	6,35,732	State Plan
	Kumbhawali 718 (II)	5.00	22,220	6,35,732	N. Park	6,35,732	State Plan
	Total	161.47	7,16,553	2,13,01,686	24,05,924	2,37,07,610	

^{*}Additional expenses incurred for fish bone channelling were provided by the Mangrove Foundation



Name of District (no. of MCMCs)	Taluka	Name of village MCMC			
	Dahanu (4)	Agwan Chichani	3. Dhakti Dahanu4. Chandigaon		
Palghar (18)	Palghar (6)	 Satpati Navapur Kelve Kharekuran 	5. Dapoli6. Donagre		
	Boisar (2)	1. Murbe	2. Tarapur		
	Saphale (4)	Karwale Datiware	3. Vedhi4. Wadhiv		
	Vasai-Virar (2)	1. Mharbalpada	2. Bhuigaon		
Thane (9)	Bhivandi (9)	 Kasheli Dive (Kevani) Kharbav Dive (Anjur) Alimghar 	6. Malodi7. Dunge8. Bharodi9. Surai-Sarang		
Mumbai Suburban (1)	Borivali (1)	1. Gorai			
	Panvel (1)	Kombadbhuje			
	Pen (4)	Shirkichal Vadhav	3. Div4. Dadar		
	Alibaug (4)	1. Sudkoli 2. Shahapur	3. Raiwadi4. Navedarbeli		
	Tala (3)	1. Uche 2. Bhalgaon	3. Mandad		
Raigad (26)	Mhasala (5)	 Pabhare Waral Kalasuri 	4. Kandalwada 5. Nigdi		
	Roha (2)	1. Dapoli	2. Thoradi		
	Shrivardhan (4)	1. Kalinje 2. Kudgaon	3. Bagmandladanda4. Diveagar		
	Murud (3)	1. Salav/Nidhi 2. Mithekhar	3. Chorde		
Ratnagiri (25)	Rajapur (8)	 Ansure Sagwe Khurd Shirse Janshi 	5. Juve (Jaitapur)6. Dhaulvali7. Keravale8. Burumbewadi		

	Ratnagiri (7)	 Gaonkhadi Pawas Rai Bhandarwada/ Warawade 	5. Gadnaral6. Mayekarwadi7. Malgund
	Chiplun (2)	1. Chiveli bandar	2. Donavali
	Khed (1)	1. Songaon	
	Guhagar (3)	 Tavsal Khurd Veldur 	3. Pewe
	Dapoli (4)	1. Murdi 2. Aade	3. Anjarle4. Murud
	Devgad (11)	 Hindale Tambaldeg Mond Mohulgav Wada Tirlot 	7. Velwadi 8. Mithmumbri 9. Mithbav 10. Taramumbri 11. Elliye
Sindhudurg (36)	Malvan (11)	 Hadi Achra Juva Pankhol Tondavali Kolamb Teraiwadi 	7. Gawthanwadi8. Nivhe9. Revandi10. Gaonkharwada11. Kothewada
	Vengurla (12)	 Mochemand Tank Vengurla-Mandvi Nivati Parule Gandhinagar 	7. Kerwadi8. Velagar9. Mhartale10. Huda11. Karli12. Mayane
	Kudal (1)	1. Chendvan	
	Sawantwadi (1)	1. Aronda	

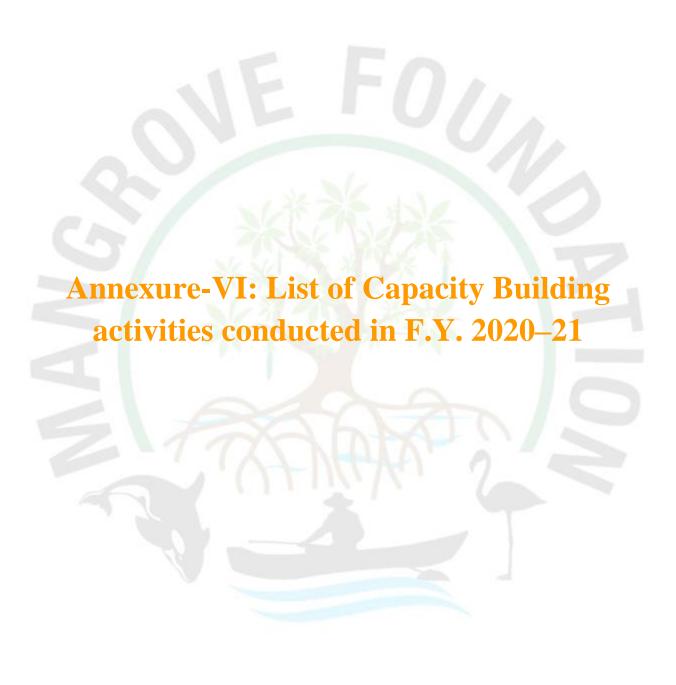


Sr. No.	Project/Activity	Institute / Organisation	Project Duration	Status	Total Budget (₹)	Amount Released (₹)
1.	Elucidating the migratory routes of water birds wintering along the Maharashtra coast	Bombay Natural History Society (BNHS)	Mar 2017– July 2020	Completed	90,15,000	90,15,000
2.	Development of Integrated Pest Management (IPM) strategies against the major defoliating pests of mangroves in the Thane district of Maharashtra (Phase-I)	Institute of Wood Science & Technology (IWST)	Mar 2017– Oct 2020	Completed	20,27,777	20,27,777
3.	Development of Procedures for forensic identification of illegally cut mangrove trees using molecular marker techniques	IWST	Mar 2017– Mar 2022	Ongoing	39,82,000	31,99,000
4.	Wood anatomical studies of important mangrove species from Maharashtra coast for the identification	IWST	Mar 2017– Sept 2020	Completed	24,32,625	24,32,625
5.	The species diversity and foraging behaviour of waders in wetlands around Jasai near Uran and Flamingo Bird sanctuary of Thane Creek	B. N. Bandodkar College	Mar 2017– Dec 2017	Completed	2,93,000	2,93,000
6.	Monitoring the health of mangroves of Maharashtra state using near real time satellite remote sensing data	Indian Institute of Space Science & Technology (IIST)	Mar 2018– Feb 2021	Ongoing	77,94,000	71,31,000
7.	Documentation of Mangrove and Mangrove Associates from Mumbai	R.D. & S.H. National College	Jan 2018– April-2019	Completed	61,000	61,000

8.	Implementation of Flamingos & Birds related mitigation measures and bird monitoring programme for the MTHL project	BNHS	Sept 2017–Aug 2027	Ongoing	31,92,73,2 40	14,24,51,6 80
9.	Studying the incubation temperature of nesting population of olive ridley turtles in coast of Maharashtra	Sumedha Korgaonkar (WII – Research Scholar)	Jan 2019– Oct 2021	On-going	Phase-I: 1,98,503 Phase-II: 2,60,000 Phase-III: 1,95,000	Phase-I: 1,98,503 Phase-II: 2,60,000 Phase-III: 97,500
10.	Survey of Otter and Crocodiles in Mangrove habitats of ratnagiri district - ELA foundation	ELA Foundation	Jan 2019– Mar 2021	On-going	6,56,000	4,38,000
11.	Does fishing pressure affect the feeding ecology of sea snakes?	Dakshin Foundation	Oct 2018– Nov 2019	Completed (Small Grants)	4,53,800	4,53,800
12.	Mapping of coastal resources and identifying suitable brackishwater areas for integrated multi trophic aquaculture (IMTA) in Maharashtra	Central Institute of Brackishwater Aquaculture (CIBA)	Sept 2017–Mar 2021	Completed	40,00,000	40,00,000
13.	Setting up of marine ornamental fish hatchery, Airoli	National Bureau of Fish Genetic Resources (NBFGR)	Mar 2018– Jun 2021	Ongoing	1,02,37,17 7	82,71,807
14.	Survey for crab fattening programme in Raigad	Norid- Fishcopfed	Dec 2017– Mar 2018	Completed	75,000	75,000
15.	Survey of marine flora and fauna in and around the Malvan Marine Sanctuary	Noah Shinde (Bharathi Vidyapeeth, Pune)	Feb 2019– Apr 2019	Completed	60,000 + 61,193	60,000 + 61,193 (Second instalment expenditur e inhouse)
16.	Survey of biodiversity and ecotourism potential in and around Songaon, Ratnagiri	Puja Singh (Bharathi Vidyapeeth, Pune)	May 2019–Feb 2020	Completed	15,440	15,440

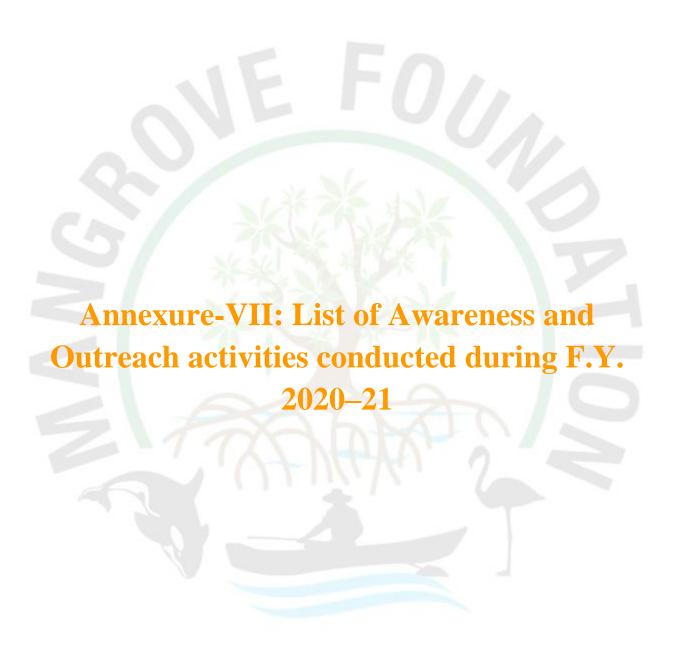
17.	Sustainable Alternative Livelihood for Coastal Fishing Communities along the Palghar district of Maharashtra: Molluscan Mariculture Approach	Mr.Santosh Bhendekar, CMFRI-MRC Mumbai	Jan 2020– Jan 2023	On-going	26,62,000	17,66,000
18.	Diversity and Distribution of Gobiid fishes in Mangroves and associated freshwater and tidal creeks of Maharashtra: assessing cryptic species diversity through integrative taxonomy study	Dr. Unmesh Katwate, BNHS	Jan 2020– July 2021	On-going	12,00,000	8,40,000
19.	Study of intertidal corals along the coast of Maharashtra	Harshal Karve, Marine Biologist, Mangrove Foundation	Jan 2019– Dec 2019	On-going (in-house project)		
20.	Study of Elasmobranchs along the coast of Maharashtra (Through surveys of major fish landing centres in Maharashtra)	Dhanashree Bagade, Marine Biologist, Mangrove Foundation	April 2019–Mar 2020	Completed (in-house project)		
21.	Isolation and Identification of Industrially important Microbial producers of L- Asparaginase from Mumbai Mangroves	Sayali Daptardar VPM's BN Bandodkar College of Science	Jan 2020– Dec 2021	On-going (Small Grants)	4,00,000	1,60,000
22.	Characterizing the diversity, life-history traits and the socio-economic drivers of ray fisheries along the Maharashtra coast.	Alissa Barnes	Jan 2020– Dec 2021	On-going (Small Grants)	4,99,110	1,99,644
23.	Management of Red Ants Predation on Eggs and Hatchlings inside the protected nests of Olive Ridley Sea Turtle along the Coast of Maharashtra	Anuja Vartak	Dec 2019– June 2020	Completed (Small Grants)	23,000	23,000
24.	Mapping biological diversity in the caves of Vengurla Rock Archipelago, Sindhudurg, Maharashtra.	Shirish Manchi SACON	Dec 2019 -Dec 2021	On-going (Small Grants)	5,00,000	3,50,000

25.	Documentation of Fauna from Tide pool ecosystems along the Ratnagiri and Sindhudurg Coast, Maharashtra	Goldin Quadros SACON	Dec 2019– Dec 2021	On-going (Small Grants)	5,00,000	3,50,000
26.	Identifying nursery grounds of Endangered Elasmobranchs around Sindhudurg, Maharashtra	Trisha Gupta Dakshin Foundation	Dec 2019– June 2020	Completed (Small Grants)	2,11,752	2,11,752
27.	Conservation genetics of Humpback Dolphins along the Maharashtra Coast with a secondary focus on all Cetacean strandings	Mihir Sule CES-IISc	Jan 2020– Jan 2021	On-going (Small Grants)	4,95,000	2,00,000
28.	Survey of the major Estuaries/Creek in the Raigad district for the mapping and distribution of some important mangrove's species.	Ganesh Pawar, Tuljaram Chaturchand College, Baramati	Dec 2020– Dec 2021	On-going (Small Grants)	2,65,000	1,20,000
29.	Assessing the effect of fishing pressure on the diet of sea snakes on Sindhudurg coast of Maharashtra	Dakshin Foundation	Jan 2018– Mar 2018	Completed (UNDP project extension grant)	60,000	60,000
30.	Tracking the nearshore and migratory movements of sea turtles occurring in the coastal waters of Maharashtra	Wildlife Institute of India (WII)	Feb 2021– Jan 2022	On-going	9,87,850	6,00,000
31.	Spatial mapping of critical marine habitats of Malvan coast for reorganisation of boundary of the Malvan Marine Sanctuary	Wildlife Institute of India (WII)	Feb 2021– Nov 2021	On-going	36,02,950	25,22,065
32.	To develop m-Turtle Android App to collect turtle conservation data in real time for Raigad, Ratnagiri and Sindhudurg districts	Sahyadri Nisarg Mitra (SNM)	Jan 2021– Dec 2022	On-going	1,90,000	1,00,000
33.	GIS study of the Shrinkage of Thane Creek from 1972 to 2020	Anjaneya GIS Specialist Mangrove Foundation	April 2021 —June 2021	On-going	-	-



Sr. no.	Activity	Date	Districts covered	Training Institute	No. of people trained
1.	Open-Source GIS training	09 December 2020	In-house	Mangrove Foundation	8
2.	Open-Source GIS training	10 December 2020	All coastal districts	Mangrove Foundation	15
3.	Ornamental fish rearing training	27- 29 January 2021	Raigad	NBFGR	20
4.	Catering Workshop for Women SHG	7 February 2021	Ratnagiri	Professor from Ratnagiri Catering College	35
5.	Fish Value Addition	24 March 2021	Sindhudurg	Mangrove Foundation	30
6.	Boat safari Training	24 March 2021	Sindhudurg	Mangrove Foundation	30





Sr.	Date	Name of Event	Speaker/Host
1.	10 April 2020	Protected Marine Species of Maharashtra	Ms. Dhanashree Bagade
2.	12 April 2020	Marine Matters Lecture Series- Chapter IX (Virtual Tour of Mangroves)	Dr. Sheetal Pachpande
3.	22 April 2020	Earth Day Online Quiz	Mangrove Foundation
4.	09 May 2020	World Migratory Bird Day Quiz	Mangrove Foundation
5.	15 May 2020	Marine Matters Lecture Series- Chapter X Endangered species Day (Satellite Telemetry- Why and How do scientist track Marine Animals?)	Dr. Nimit Kumar, INCOIS
6.	22 May 2020	International Day for Biological Diversity puzzle	Mangrove Foundation
7.	23 May 2020	World Turtle Day Marine Matters Lecture Series- Chapter XI – (Tales of Turtle Webinar)	Ms. Nupur Kale
8.	05 May 2020	World Environment Day- Fest Marina 2020 Cities, Urbanisation and environmental challenges webinar	Mr. N. Vasudevan, IFS
9.		Online LIVE Quiz	Mr. Siddhesh Surve
10.	06 May 2020	World Environment Day- Fest Marina 2020 Current environmental challenges and solutions.	Mr. Malahar Kalambe
11.	08 June 2020	World Ocean Day Storytelling- Have you heard a Whale sing?	Ms. Nishna Mehta & Ms. Isha Bopardikar
12.	03 July 2020	Marine Matters Lecture Series- Chapter XII World Seabird Day (Pelagic Birding)	Mr. Avinash Bhagat
13.	14 July 2020	Shark Awareness Day Marine Matters Lecture Series-Chapter XIII (Sharks Around us)	Mr. Sadashiv Raje
14.		Fest Mangrovian Marine Matters Lecture Series-Chapter XIV (Insight of Mangrove Conservation)	
15.	26 July 2020	Online Quiz on Mangrove Ecosystem	Mangrove Foundation
16.		Inauguration of Virtual Tour of Coastal and Marine Biodiversity Centre, Airoli	
17.		Mangrove Day Celebration at Nivati	
18.	30 August 2020	International Whale Shark Day Marine Matters Lecture Series-Chapter XV (World of Whale Shark)	Mr. Swapnil Tandel

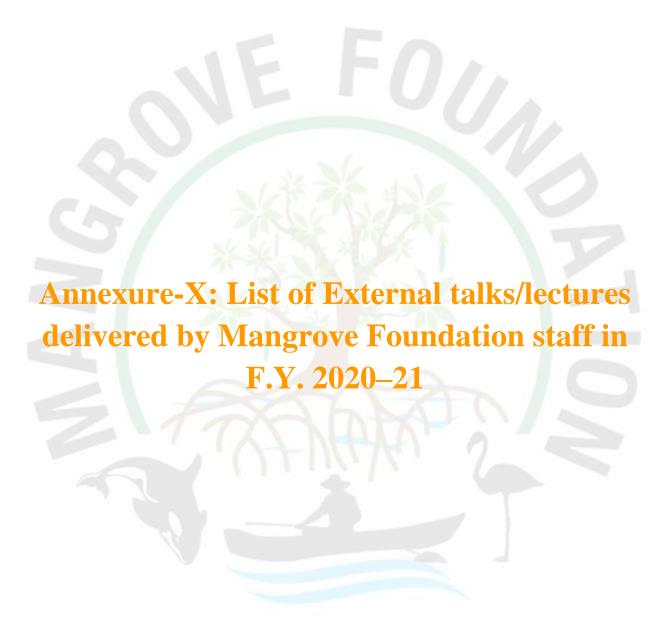
		W 11m ' D M E 1	
19.	27 September	World Tourism Day- Mangrove Ecology, Restoration and Research Aspect	Dr. Sheetal Pachpande
20.	2020	World Tourism Day- Mangrove Ecotourism in Maharashtra	Mr. Vandan Jhaveri
21.	02 October 2020	Wildlife Week- Marine Matters Lecture Series-Chapter XVI (Cetaceans of Maharashtra)	Mr. Mihir Sule
22.	07 October 2020	Wildlife Week- Marine Matters Lecture Series-Chapter XVII (Exploring the Unexplored - Angria Bank Expedition)	Mr. Vardhan Patankar
23.	08 October 2020	Wildlife Week- Make your Octopus - Paper Quilling Workshop	Ms. Pranjalee Gidh
24.	10 October 2020	Wildlife Week- Online Quiz on Migratory Birds	Mangrove Foundation
25.	06 November 2020	Bird Week 2020- Birdwatching Trail at Vehele Jetty, Thane	Mrs. Sailee Joshi-Gupte
26.	08 November 2020	Bird Week 2020- Marine Matters Lecture Series-Chapter XVIII (Journey of Flamingos)	Ms. Tuhina Katti
27.	10 November 2020	Bird Week 2020- Bird Quiz	Mangrove Foundation
28.	11 November 2020	Bird Week 2020- Mangrove & Birdwatching Trail at Vengurla	Ms. Durga Thigale
29.	05 to 12 November 2020	Coastal Bird Photo Exhibition at Coastal and Marine Biodiversity Centre, Airoli	Mangrove Foundation
30.	21 November 2020	Fisheries Day- Joint Public Awareness about Marine protected species under Wildlife Protection Act 1972	Mangrove Foundation & Department of Fisheries
31.	15 December 2021	Biodiversity Identification Training	Dr. Goldin, Dr. Shirish Manchu & Ms. Dhanusha Kavalke
32.	02 February 2021	World Wetlands Day MarineMatters Lecture Series-Chapter XIX (A Layman's Guide to Inter-tidal Animals)	Dr. Parvish Pandya
33.	02 February 2021	World Wetlands Day- Nature Walk at Sindhudurg	Dr. Goldin Quadros
34.	13 to 28 February 2021	Coastwise Festival- Flight of the flamingos, Fish catch walk, photography competition	Mangrove Foundation
35.	03 March 2021	World Wildlife Day- Online Quiz	Mangrove Foundation



Sr. no.	Publications	Author	Date of release
1.	Field Guide 'Marine Animals of the Intertidal zone'	Mr. Harshal Karve	10 April 2020
2.	Management Plan of Thane Creek Flamingo Sanctuary 2020–21 to 2029–30	Mangrove Foundation	18 June 2020
3.	Revised Management Plan for the Malvan Marine Sanctuary, Sindhudurg 2020–21 to 2029–30	Mangrove Foundation	07 October 2020
4.	Handbook of the Mangroves of Maharashtra	Ms. S. Shashikala, Dr. Sheetal Pachpande, Ms. M. Sujatha & Mr. S. R. Shukla	02 November 2020
5.	Sonneratia Newsletter Inaugural Issue	Mangrove Foundation	05 January 2021
6.	Brochure of Thane Creek Flamingo Sanctuary	Mangrove Foundation	02 February 2021
7.	Ishaan's Treasures (Children's Book)	Ms. Katie Bagli	21 February 2021
8.	Pamphlet of 'Mangrove Conservation and Livelihood Generation' Scheme (Marathi)	Mangrove Foundation	21 March 2021



Sr. no.	Documentaries	Produced by	Date of release
1.	The Fascinating world of the Flamingos	Mangrove Foundation	16 May 2020
2.	Sea Turtle Conservation in Maharashtra	Mangrove Foundation	16 June 2020
3.	Mangrove Day message from (former) Hon'ble Forest Minister, Maharashtra, Shri. Sanjay Rathod	Mangrove Foundation	26 July 2020
4.	Mangrove Day message Shri. Virendra Tiwari, APCCF, Mangrove Cell	Mangrove Foundation	26 July 2020
5.	Mangrove Day message from Smt. Neenu Somaraj, DCF, Mangrove Cell	Mangrove Foundation	26 July 2020
6.	Mangrove conservation through livelihood generation in Maharashtra	Mangrove Foundation	26 July 2020
7.	Managing waste for marine biodiversity conservation: Mangrove Cell - Mangrove Foundation Initiative (English & Marathi)	Mr. Simit Bhagat	25 February 2021
8.	Mangrove Restoration by Mangrove Cell and Foundation (English & Marathi)	Mangrove Foundation	22 March 2021



Sr. no.	Speaker	Subject	Date	Organisers
1.	Mrs. Sailee Joshi- Gupte	Mangroves and their Importance (Marathi)	29 May 2020	Pratap Shakha, RSS, Thane
2.	Mr. Virendra Tiwari, IFS, Mr. N. Kokare & Dr. Sheetal Pachpande	Mangrove Plantation with Mangrove Warriors (Marathi)	25 July 2020	MahaMTB
3.	Mr. D. R. Patil, & Dr. Sheetal Pachpande	Discussion on Mangroves and its Importance (Marathi)	26 July 2020	Maharashtra Times Online
4.	Dr. Sheetal Pachpande	Mangroves our Frontline Warriors	26 July 2020	Birds of Thane and Raigad District (BOTARD)
5.	Mrs. Sailee Joshi- Gupte	Coastal and Marine Biodiversity Centre, Airoli (Marathi)	27 July 2020	Paryavaran Dakhshata Mandal and Loksatta Newspaper, Thane
6.	Dr. Sheetal Pachpande	Mangrove Ecosystem (Marathi)	28 July 2020	Paryavaran Dakhshata Mandal and Loksatta Newspaper, Thane
7.	Mrs. Sailee Joshi- Gupte	Coastal and Marine Biodiversity Centre, Airoli (Marathi)	30 July 2020	Bhartiy Majur Sangh, Thane
8.	Mr. Harshal Karve	Marine life around Mumbai (Marathi)	02 August 2020	Shiv Shourya Trekkers
9.	Mr. Virendra Tiwari, IFS	Mangrove Forest (Marathi)	09 August 2020	Shiv Shourya Trekkers
10.	Mr. Siddhesh Surve	Migratory Birds (Marathi)	26 August 2020	Shiv Shourya Trekkers
11.	Mr. Virendra Tiwari, IFS	The Fight of the pink	10 October 2020	Ministry of Mumbai's Magic
12.	Mr. Hrishikesh Rane	Coastal Wetlands and its conservation in Maharashtra	02 February 2021	Department of Environmental Science, Institute of Science
13.	Dr. Sheetal Pachpande	Mangroves - bridging life on earth and sea	03 February 2021	Kirti College of Arts, Science, and commerce
14.	Mr. Mohan Upadhaye	Olive Ridley Turtle Conservation	08 January 2021	Paryavaran Dakshata Mandal
15.	Dr. Manas Manjrekar	Coastal & Marine Biodiversity Conservation in Maharashtra	17 March 2021	Institute of Environment Education & Research, Bharati Vidyapeeth

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