

VOC RURAL DEVELOPMENT CENTRE (VOCRDC)

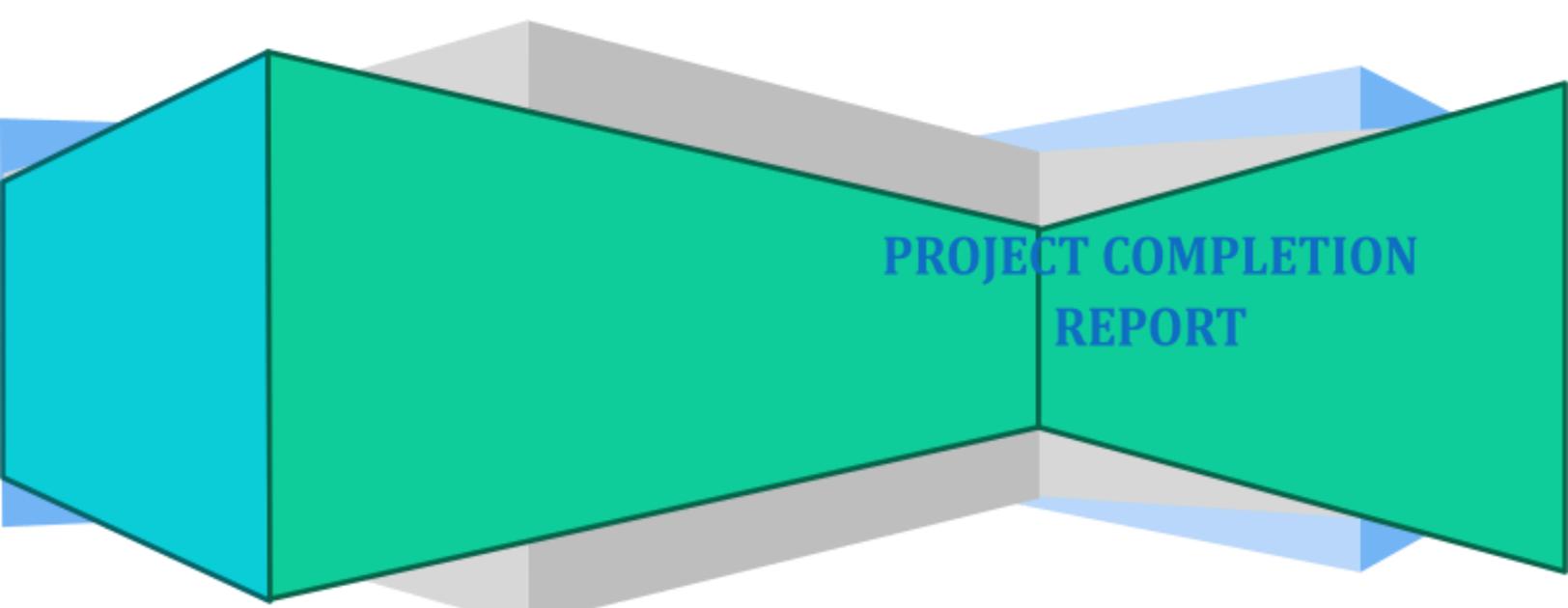
7-5-42/2, Neerathan, (Opp.) Union Office

T.Vadipatty-625 218

Madurai-District, TAMILNADU,

INDIA.

**“Conservation and restoration of Mangroves
in Pitchavaram backwaters of Tamil Nadu,
India”**



**PROJECT COMPLETION
REPORT**

PROJECT COMPLETION REPORT

PERIOD: January -1st 2020 to December 31st 2020

1. TITLE OF THE PROJECT

“Conservation and restoration of Mangroves in Pitchavaram backwaters of Tamil Nadu, India”

2. APPLICANT & IMPLEMENTING AGENCY

VOC RURAL DEVELOPMENT CENTRE (VOCRDC)

7-5-42/2, Neerathan, (Opp.) Union Office

T.Vadipatty-625 218

Madurai-District, TAMILNADU,
INDIA.

Email:vocrdc2000@yahoo.co.in

3. PROJECT OBJECTIVES:

- 1. Conserving the Pitchavaram estuarine ecosystem and regeneration of mangroves in the suitable new 10 ha and degraded places.**
- 2. Controlling the human influenced destruction through appropriate knowledge transfer to communities.**
- 3. Support initiatives to reduce resource consumption / pressure by promoting the elimination or reduction of waste at source, and its re-use, recycling, and recovery.**

4. PLANNED ACTIVITIES

- 1. Standardizing appropriate technologies of afforestation, and nursery rising.**
- 2. Conservation of restored estuarine ecosystem across Pitchavaram with natives and government partnership.**
- 3. Propagation of mangroves in selective new areas through seeds and propagates, native collection and nursery rising and management and replacement plantation in the diseased.**
- 4. Strengthening and integration of District Level Conservation & Monitoring Committee - DLCMC through capacity building and interactions.**
- 5. Strengthening partnership with communities - CBOS - NGOS - Government through the District Level Conservation & Monitoring Committee.**

5. OUTPUTS ACHIEVED:

Quantitative:

1. Affordable and government pollution department clearance on **effluent treatment plant developed and installed.**
2. **3 Village level conservation & monitoring committee formed** with 5-member representation in each committee and they have ensured conservation and monitoring on violations.
3. **6000 seeds and propagules** propagated in the new 10 ha swampy area **through native collection** and nursery rising and nearly **10000 nursery raised plants** replaced with the diseased and degraded 10 ha.
4. **DLCMC ensured more than 60% survival percentage** of the total 10000 afforested in the restoration plan.
5. Alternative livelihood opportunities in **mud crab fattening** identified for the natives and extended support to the **newly identified members from 3-villages 6 SHGS and 60 women.**

Qualitative:

1. **An improved ecologically sustainable use of fisheries resources system in estuarine and marine environments**
2. **An effective control of the loss of critical coastal, estuarine and marine fish nursery areas through measures to ensure biodiversity conservation and the productivity of fisheries.**
3. **An effective control of the loss of native estuarine vegetation,**
4. **An effective control-impact of land-based sources of pollution and scale-up of nutrients on coastal, estuarine and marine habitats.**
5. **A clear demonstration of Mangrove forestry resource regeneration to be replicated in other areas of feasibility.**

6. STRATEGY:

1. **Ensuring ecologically sustainable development in the use of coastal, estuarine and marine environments.**
2. **Conserving and safeguarding the Pichavaram estuarine ecosystem**
3. **Controlling the pollution and improving the understanding levels of the natives of the Pichavaram ecosystem**
4. **Establishing District Level Conservation & Monitoring Committee - DLCMC and interpret, advocate on education, Afforestation and research.**

7. IMPLEMENTATION METHODS AND MEASURES:

1. STANDARDIZING APPROPRIATE TECHNOLOGIES OF AFFORESTATION, AND NURSERY RISING – JANUARY 2020

This activity was done on January 7th to 14th of 2020 and referral of literature review, salinity, pH, soil composition, and nutrients determination, survey analysis, and the standardized techniques well documented for grassroots' action planning on conservation advocacy and management and prevented of human influence on the damage to the fragile coastal ecosystem.

Research and Development of appropriate technologies was organized and administered across the 3 estuarine areas for appropriate techniques of pollution prevention, control and abatement

2. CONSERVATION OF RESTORED ESTUARINE ECOSYSTEM ACROSS PITCHAVARAM WITH NATIVES AND GOVERNMENT PARTNERSHIP – FEBRUARY 2020

Conservation of estuarine ecosystem across the Cuddalore District with natives and government partnership upheld through 11-members community and participating and collaborating agencies and government such as 1.Panchayat Raj Institutions, 2.District Administration, 3.Forest department, 4.Tourism department, 5.Pollution control department, 6.Schools and colleges, 7.Researchers, 8.Nature lovers, 9.Conservationist, and 10.Environmentalist.

This way **District and Village level Conservation & Monitoring Committees** were formed in the 3 estuary villages during February 15th to 22th of 2020. With the participation of **District Conservation & Monitoring Committee (DCMC)** periodic visits in all the targeted coastal villages once in every month organized through the project period and conducted and the documentation help in lobby with the exploiters and government.

3. PROPAGATION OF MANGROVES IN SELECTIVE NEW AREAS THROUGH SEEDS AND PROPAGATES, NATIVE COLLECTION AND NURSERY RISING AND MANAGEMENT AND REPLACEMENT PLANTATION IN THE DISEASED – MARCH – SEPTEMBER 2020

Propagation of mangroves through seeds and propagules collection and nursery rising with appropriate red soil and organic fertilizer amendments with standardized techniques. The targeted 10,000 propagules were propagated at various time intervals of plantation in **M.G.R Thittu, Chinavaaikkal, and Mulukkuthurai** survival assessments and replantation in the suitable muddy swampy estuarine areas in the estuaries. District and Village level conservation & monitoring committees conducted regular review meetings to assess the progress of the project towards the conservation of estuarine ecosystem across the Kanyakumari District with natives and government partnerships.

They during the final month of APRIL2020 conducted the propagation and survival percentage study with subject experts' supervision and documented that the Mangrove forests are degraded and threatened due to anthropogenic events. Mass production of planting material and successful germination of seeds are essential processes in rehabilitating these degraded mangrove forests. The present work was carried out mainly sapling stage in nurseries and propagation is an ideal strategy to minimize this predator damage and to facilitate vigorous growth. Seedling survival rates were calculated based on the percentage of containers with seedlings 270 days after planting. For the assessment of growth, the height (cm) of the seedlings was first measured 30 days after planting, and then every month over the nine months of the study period. The survival rates recorded was appreciable 60%.

4. STRENGTHENING AND INTEGRATION OF DISTRICT LEVEL CONSERVATION & MONITORING COMMITTEE - DLCMC THROUGH CAPACITY BUILDING AND INTERACTIONS.

During the entire period of the project with the participation of 6 training workshops conducted from JANUARY TO APRIL 2020 at District level with technical resource persons, Forest Officer, District Collector, Local Panchayat Presidents and elected legislatures on biodiversity conservation, sustainable utilization practices, treatment of pollution at source, re-use – recycling – recovery methods, population growth – resource consumption and biodiversity, and good lifestyle choices IEC materials disseminated during the workshops, seminar and meeting event.

5. AWARENESS MEETING AND PUBLIC PROPAGANDA – AUGUST, SEPTEMBER 2020.

Conduct Awareness Meeting and Public Propaganda efforts on the general factors that affect the mangrove ecosystems was carried out through series of awareness meetings in SHGs through IEC materials of hand-outs and public propaganda through organized street theatres in public gathering points. The mangrove forests play a vital role in sustaining coastal ecosystems. Yet they have come under great pressure from population growth and development, in some cases being seen as little more than waste dumps and nuisances. A general lack of awareness of the importance of mangrove ecosystems means they are widely undervalued. With better environmental awareness these threats could be managed. It is possible to educate natives and thereby relieve some of the pressure on mangrove habitats. The program also influence government to formulate and implement stronger policies to protect and sustainably manage not just mangroves, but also natural resources generally.

The long-term goal of this project, therefore, was to ensure that the mangroves are maintained as healthy ecosystems through stronger, more effective public awareness and policies.

6. CLEAN UP DRIVES EVENTS - DUG OF FEEDER CANALS – SEPTEMBER 2020.

This project obviously on a main canal was dug in the middle portion of the degraded areas from which a large number of feeder canals were dug, covering the entire degraded area.

A mangrove forest harbours a group of plant species that grow well in the estuarine areas – where salinity undergoes constant changes due to freshwater flow and where the substratum is composed of accumulated deposits of river-borne sediment. A mangrove forest is intersected by a number of tidal canals, channels and creeks and large open water bodies, where the water level varies daily due to tidal inflow and outflow, as well as seasonally due to freshwater discharge.

Then the main canal was connected to the nearby natural canals. This artificial canal system facilitated free flow of tidal water, which gradually decreased the soil and groundwater salinity and increased the soil moisture, making the degraded areas suitable for mangrove growth. As a result, mangrove species planted in the demonstration site showed more than 80% survival, and growth was comparable to seedlings planted in the non-degraded areas. The large open water body found associated with the Pichavaram mangrove wetlands is the estuarine region of the Uppanar River.

7. Strengthening partnership with communities – CBOS – NGOS – Government through the District Level Conservation & Monitoring Committee.

District Level EEIC interactive seminar was organized on July 30th and September 20th, 2020 to the native beneficiaries, NGOs, researchers, students, natives, public and tourists, and the program covered nearly 200 participants. The likeminded institutions and local environmental NGOs were been invited for the interaction and learning from sharing of experience during the 6 events conducted. The program was conducted every month until SEPTEMBER 2020. As the outcome of the specialized program achieved improved marine, coastal and estuarine water quality, habitat protection and biodiversity conservation outcomes, and promote the ecologically sustainable use of marine and coastal natural resources.

8. COVID 19-complete lockdown period–Challenges and mitigation – September to December 2020

India has been put under complete lockdown since March to till November end, and suspended all public transport has been banned while any kind of non-essential movement outside the house has also been prohibited. Prime Minister Modi made the big announcement and said that this is the only way India can fight coronavirus. This biggest pursuit is to flattening the curve' and stem the COVID-19 spread to nullify socioeconomic, health negative effects.

On hard struggle with life and livelihood our fishing community were with the government fight against the pandemic and not deviating from the project intervention to achieve the overall goal.

The novel coronavirus disease outbreak (COVID-19) and resultant lockdowns have created circumstances unfamiliar to most across the world. The universality of the impact has brought in ramifications for the non-profit sector as well.

The sector is dabbling with precarious decision-making about the fate of development projects.

Many require scaling up, others have to be reviewed, some overhauled and yet others called off altogether, but VOCRDC successfully implemented the project because of community cooperation in following COVID-19 spread measures and coordination with departments.

The key principle, here though, should not be rationality but equity — presumably the bane of each organisation's existence. Of the two things to consider here, the first is that the impact of the pandemic is not similar on all



organisations, staff within organisations, communities at the margins and those affected by various forms of vulnerabilities within communities.

VOCRDC maximize the use of current technologies that could facilitate better communication and networking. Effectively use technologies assist and staying abreast of important regional, national and global concerns.

Mitigation:

- 1. To be more transparent in managing the funds. Reporting in accordance with global standards usually will help NGOs gain credibility and thus attract more investments.*
- 2. To utilize technology in recording actual data of the social work. This information is crucial for a more strategic plan and a more effective decision-making process.*
- 3. To broaden their network beyond India's territory and reach out the reputed Philanthropy platforms globally.*
- 4. To focus on attracting and retaining young talents for social work.*

Field level Research Team, Research, Assessment and Analysis and Monitoring Committee – RAMS organizes regular monthly community level meetings and assess and transfer knowledge and information to the targeted on the progress of the project with VOCRDC staff and experts. Thus ensure high level of conservation and monitoring. Periodical documentation and feedbacks are recorded.

The regular periodical Field Based Assessment Survey and Field Analysis were recorded and compiled in the final report and publications from the start of survey, assessment and analysis and presented to KNCF with the Project Completion Report.

Project photos (showing project activity)



0123456789101112131415161718192021222324252627282930313233343536373839404142434445464748495051525354555657585960616263646566676869707172737475767778798081828384858687888990919293949596979899100













