

Development of protocols for stranding/beaching and post-mortem analysis of cetaceans for the capacity building of officials and local people of Sindhudurg district of Maharashtra



PROJECT FINAL REPORT

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BACKGROUND

INTRODUCTION

Marine mammals – such as whales, dolphins, porpoises and sea cows have long been considered to be some of the most spectacular and majestic mega fauna on earth. For generations, they have captured the attention and imagination of people and cultures all over the world. Despite their beauty and the awe they inspire, virtually every species of marine mammal is listed as threatened or endangered, largely due to the direct and indirect impacts of human activities. Hundreds of years of aggressive hunting, combined with habitat destruction, marine noise, chemical pollution and increased shipping traffic have reduced populations to just a fraction of their original numbers. Several species are facing imminent extinction. In recent years, there is increasing awareness of the integral importance of marine mammals to healthy aquatic ecosystems, and of the growing threats that a variety of human activities pose to these animals and their environments.

All marine mammals have undergone major adaptations, which permit them to live in the water. The cetaceans (whales, dolphins and porpoises) and sirenians (dugongs – sea cow) spend their entire lives in the water, while other marine mammals come ashore for various reasons, at particular times in their life cycle. Every year, thousands of cetaceans and sirenians are found stranded, either alive or dead, on beaches all over the world. They may be alone or in groups, and while some animals are old or sick, many of them are young and appear to be perfectly healthy. This is a natural phenomenon and has been happening since time immemorial, but all such stranded cetaceans and sirenians face the grave danger of an inability to breathe. Whales and dolphins are often very social mammals, some exhibiting high levels of cognition. Many live in complex and little-known communities, are capable of experiencing a range of emotions and have been demonstrated to be sentient and sapient beings. They will

suffer physically as a result of being out of the water for prolonged periods of time, an experience which is undoubtedly psychologically stressful for these marine mammals.

Certain stranding of cetaceans is easy to explain: the animals simply die at sea and are washed ashore ('cast ashore') with the tides and currents. But live stranding is more mysterious, and many theories have been put forward to explain their possible cause. One theory is that changes in the earth's magnetic field cause an animal to lose its sense of direction. Cetaceans may have an extra sense called bio-magnetism, which enables them to detect variations in the earth's magnetic field. They may use the magnetic field, like a map, to navigate. The field is always changing, so, occasionally, they could become confused and swim towards the shore. Alternatively, an earthquake or storm could cause it to panic; a brain infection may cause disorientation; its sonar system may fail; or it may simply get lost or feel sick and need to rest. In mass stranding, the whole group may be in trouble in some way, or they may be following one individual that is ill or disoriented.

In most cases, the animals are still alive when they first become stranded, usually on gently shelving beaches. Post mortem operations often reveal an injury, infection or debility which must have caused discomfort and made it difficult for the whale to behave normally in deep water. Under these circumstances, faced with the risk of drowning, it would be natural for the cetacean to seek a place where it could continue to breathe while marshalling its strength to deal with other problems. Swimming about above a level, shallow bottom may lead to disorientation and to an inability to find the way back out to deeper waters. Large societies require elaborate systems of social cohesion and communication, and it is these which lead to mass stranding. The initial cause of a single stranding may be illness (perhaps caused by parasites), injury, the birth of a calf too close to shore, evasive action under the threat of

predation or a simple accident. Some whales are more susceptible to stranding than others, for example, pilot whales seem to strand more often than most.

Importance of marine mammals in environmental sustainability

Our growing understanding of whales is important for improving the safety measures of all marine mammals as well as improving the oceans ecosystem. When it comes to the environment and the oceans ecosystem whales help regulate the flow of food by helping to maintain a stable food chain and ensuring that certain animal species do not overpopulate the ocean. A blue whale for example can consume as much as 40 million krill per day, so you can imagine the impact this would have on stabilizing the aquatic ecosystem if the blue whale species were to become extinct. When one species of animal that is important to the food chain dies it allows other species to thrive. The following are the reasons why marine mammals are important in our environment:

1. Marine mammals play an important role in stabilizing the aquatic food chain and reproduction of other species. If more marine mammals are lost, the food distribution in the ocean becomes destabilized and causes changes in the food supply of many other kinds of marine life.
2. Scientific studies of the cetacean species (whales, dolphins and porpoises) has led to a lot of discoveries and advancements regarding echolocation, aquatic environments, marine life/biology and marine mammal intelligence and other important oceanic topics.
3. The excreta of marine mammals plays a large role in stabilizing the offset of carbon in the atmosphere providing a healthier environment for both land and aquatic life forms.

4. Whale watching and various other spectating activities have brought in billions of dollars helping stimulate economic growth in various cities, states and countries.

As these species play an extremely important role in our ecosystem by maintaining a stable food chain and feeding other marine animals that help provide a cleaner atmosphere as well as helping growing economies increase their awareness and profitability through tourism.

In India most of the marine mammal records come from stranding and accidental catch in trawls and purse seine. There are two main habitats of marine mammals in India, *viz.*, Arabian Sea on the western coast with a wide continental shelf and constant salinity and Bay of Bengal with narrow continental shelf and fluctuating salinity. Both the habitats provide optimum living condition for tropical marine mammals as there are few Islands which offer less hindrance in their movement. Arabian Sea is rich in bio-resource and offers enormous food (most important are squid and shrimp) to hungry whales and dolphins. The Gulf of Mannar, the Gulf of Kutch and the Andaman and Nicobar group of Islands have lush growth of sea-grass where the sea cows show their dominance.

Stranding and sighting records show that the Indian seas are the habitat of 30 species of cetaceans. All the cetaceans are protected under the Indian Wildlife (Protection) Act, 1972. The marine cetaceans are under threat from incidental entangling in fishing gears, pollution, human activities and habitat destruction. One of the major sources of information on marine cetaceans is from the stranding data. It is noted that much of the stranding data reported is not accurate and only meagre biological data have been recovered from dead animals washed ashore. Updating stranding response criteria and protocols are of prime importance in this regard. Hence, the current project funded by GOI-UNDP-GEF to develop protocols for

stranding/beaching and post-mortem analysis of cetaceans was sanctioned in the development of strategies for conservation of cetaceans in Indian waters and to develop capacity building for locals/officials of Sindhudurg district of Maharashtra.

OBJECTIVES OF THE PROJECT

1. To develop protocols for reporting the stranded/beached cetaceans
2. Capacity building of local people from three coastal taluks of Sindhudurg district on identification of cetaceans and reporting a stranding
3. Development of comprehensive protocols for dealing with the stranded/beached cetaceans to local authorities
4. Capacity building of local authorities/officials on dealing with stranding/beaching and post-mortem analysis of cetaceans

DURATION OF THE PROJECT

The project was initially awarded for period of six months. Later, it was extended for a total period of nine months due to operational reasons.

PROJECT PERSONNEL:

S.No.	Name	Designation	Role in the project
1.	Dr. M. Sakthivel	Scientist	Principal Investigator
2.	Dr. G. Gopakumar	Principal Scientist	Co-Principal Investigator
3.	Mr. S. Ramkumar	Scientist	Co-Principal Investigator
4.	Mr. Vaibhav D Mhatre	Technical Assistant	Technical Assistant
5.	Mr. Sachin T Jose	Project Assistant	Project Assistant

PLAN OF ACTION

TECHNICAL PROGRAMME

The following were the sequence of technical programme followed in the project:

1. Assessment of awareness of local people or officials regarding species identification and dealing with stranded/beached cetaceans
2. Development of protocols for reporting and dealing with stranded/beached cetaceans
3. Development of protocols for species identification of cetaceans
4. Preparation of training manuals, pamphlets, audio-visuals aids, *etc.* for the capacity building training programmes
5. Capacity building of local authorities/officials (45 officials) on species identification, dealing with stranded/beached cetaceans (includes officials from the departments of forest, revenue, fisheries and animal husbandry, coast guard, and marine police and others stakeholders)
6. Capacity building of local people (90 people covering 3 taluks) on species identification, reporting, assisting local officials in post-mortem analysis and dealing with stranded/beached cetaceans.
7. Evaluation of post-training awareness of locals and authorities
8. Compilation of data and report preparation

DETAILED WORK PLAN

Month 1

1. Brainstorming on the preparation of questionnaires to assess the awareness of local people and officials regarding species identification and dealing with stranded/beached cetaceans
2. Preparation of questionnaire to assess the awareness of local people on species identification of cetaceans
3. Preparation of questionnaire to assess the awareness of local authorities on handling of stranded cetaceans, release of rescued cetaceans and post-mortem analysis of beached cetaceans. The authorities may include officials from the departments of forest, revenue, fisheries and animal husbandry, coast guard and marine police and others stakeholders

Month 2

4. Recruitment of project assistant
5. To train the project assistant on the activities to be carried out in the project
6. Conducting the survey to assess the awareness of local people and officials regarding species identification and dealing with stranded/beached cetaceans

Month 3

7. Development of species identification key for the common cetaceans to be dealt with in the region
8. Development of protocols for handling of stranded cetaceans and release of rescued

cetaceans

9. Development of protocols for conducting post-mortem analysis of beached cetaceans
10. Workshop to validate the protocols developed on species identification, reporting, handling and release of stranded cetaceans and post-mortem analysis of beached cetaceans. Experts from different parts of the country who work on marine mammals were invited to discuss and validate the protocols developed.

Month 4

11. Preparation of training manuals on species identification, reporting, handling and release of stranded cetaceans and post-mortem analysis of beached cetaceans
12. Preparation of audio-visual aids to deal with the stranded and beached cetaceans
13. Initiation of the process to establish the hotline facility for reporting the stranded and beached cetaceans

Month 5

14. Organizing the training programmes to train the local authorities (30 officials) on protocols to deal with the stranded and beached cetaceans. The duration of the training programme was decided based on the guidelines developed from the validation workshop.

Month 6

15. Organizing the training programmes to train the local people (90 persons) on species identification and reporting the stranded and beached cetaceans. The duration of the training programme was decided based on the guidelines developed from the validation workshop.
16. Evaluating the awareness of the trained people on species identification, reporting, handling and release of stranded cetaceans and post-mortem analysis of beached cetaceans
17. Compilation of data and preparation of the project report

ACTIVITY SCHEDULE:

Activity	Month1	Month2	Month3	Month4	Month5	Month6
1. Assessment of awareness of local people and officials						
2. Development of protocols for reporting and dealing with stranded/beached cetaceans						
3. Development of protocols of identification of species using molecular markers						
4. Validation workshop with the experts on the protocols developed						
5. Preparation of training manuals, pamphlets, audio-visuals aids, <i>etc.</i>						
6. Establishment of hotline facility for reporting						
7. Training of local authorities on protocols for dealing with stranded/beached cetaceans						
8. Capacity building of locals on species identification and reporting						
9. Evaluation of post-training awareness of locals and authorities						
10. Compilation of data and report preparation						

LOCATION OF THE PROJECT

The location of the project includes three coastal taluks of Sindhudurg district *viz.,*

1. Vengurla
2. Malvan
3. Devgad

TARGET GROUP

The capacity building training programmes were targeted towards two major groups of people *viz.,*

1. Authorities or local officials involved in dealing with cetaceans and
2. Local people of coastal villages who can play a primary role in dealing with the stranding/beaching of cetaceans.

The officials included covers various departments of the government *viz.,*

- Dept. of Forests
- Dept. of Fisheries
- Dept. of Animal Husbandry and Livestock Development
- Dept. of Customs
- Maritime Board
- Marine Police
- Indian Coast Guard

The local people covered under the target group include the following:

- Fishermen Societies
- Local leaders
- Responsible/interested candidates from coastal villages
- Other stakeholders involved in cetacean activities

TARGET NUMBERS

The total numbers of officials targeted to be trained from various departments of govt. were as follows:

S.No	Department	Number of persons
1.	Dept. of Forests	20
2.	Dept. of Fisheries	06
3.	Dept. of Animal Husbandry	06
4.	Maharashtra Maritime Board	05
5.	Dept. of Customs	04
6.	Marine Police/Coast Guard	04
Total		45

The total numbers of individuals targeted to be trained from the coastal villages of three taluks of the district were as follow:

S.No	Taluk	Number of persons
1.	Vengurla	30
2.	Malvan	30
3.	Devgad	30
Total		90

RESULTS

BRAINSTORMING

A brainstorming was organized at Mandapam Regional Centre of CMFRI, Mandapam Camp, Tamil Nadu. Scientific experts from CMFRI Mandapam Regional Centre participated in the brainstorming session. The brainstorming was carried out on the following aspects of the project:

1. Reporting a stranding of cetaceans
2. Preparation of questionnaires to assess the following:
 - a. Awareness of common people about cetaceans, their stranding and conservation
 - b. Awareness and expertise of authorities on identification of cetaceans, handling of stranded cetaceans, release of rescued cetaceans, post-mortem analysis and disposal of the carcasses of beached cetaceans. The brainstorming session resulted in the following:
3. Pre-training survey
4. Development of species identification key for the commonly available cetaceans of Arabian Sea
5. Development of protocols on the following:
 - a. Handling of stranded cetaceans and release of rescued cetaceans
 - b. Conducting post-mortem analysis and disposal of beached cetaceans

The brainstorming yielded many ideas to carry out the project successfully and the results are summarized as follows:

- *Questionnaire 1:*
 - A questionnaire has been brought out to carry out the pre-training survey for assessing the awareness of the common people of coastal villages about the cetaceans.

- *Questionnaire 2:*
 - A questionnaire has been brought out to assess the awareness and expertise available with the authorities involved in coastal activities. It has been designed to assess the knowledge of the officials on identification of cetacean species, handling of stranded and release of rescued cetaceans, post-mortem analysis and disposal of beached cetaceans.

RECRUITMENT OF THE PROJECT ASSISTANT

The recruitment for selection of a Project Assistant was carried out based on advertisements given through local newspapers and website of the institute. A total of 12 candidates appeared for the Walk-in-Interview conducted on 20th March 2014. One candidate (Mr. Sachin T Jose) was selected based on the performances of Written Test and Interview. The Project Assistant joined the project on 01.04.2014 and was trained on the activities to be carried out in the project.

PRE-TRAINING SURVEY

A preliminary visit was made by the project team to select the villages from the coastal taluks (Devgad, Malvan and Vengurla) of Sindhudurg district. About 14 villages have been identified to represent the coastal taluks based on the following criteria:

- Earlier history of occurrence of Cetacean beaching
- Presence of major landing centre
- Presence of active fishing villagers

The villages identified were as follows:

- *Devagad Taluk* - Anandwadi, Vijaydurg and Kunkeshwar
- *Malvan Taluk* - Achara, Navabaug Dabojwada, Muth, Nivati and Shiroda
- *Vengurla Taluk* - Devbaugh, Makrebagh, Achara, Sarjikot and Tarkarlit

Pre-training survey was carried out in the selected villages as well as in various officials/authorities from all the three taluks of the district. Detailed discussions were also made with the officials about the capacity building programmes of the project and their ideas on stranding/beaching of marine mammals.

The details of officials from various departments surveyed were given below:

Dept. of Fisheries		
1.	Sh. Pathan	Assistant Commissioner of Fisheries, Sindhudurg district
2.	Mrs. Sugandha Chavan	Deputy Fisheries Devt. Officer, Sindhudurg district
3.	Sh. R.R. Mahadik	Licensing Officer, Malval Taluk
4.	Sh. S.G. Gawade	Licensing Officer, Vengurla Taluk

5. Sh. Sawant Licensing Officer, Devgad
6. Sh. Sanjay Bandekar Chairman, Devgad Fishermen Cooperative Society Ltd.

Maharashtra Maritime Board

1. Capt. V.H. Ingale Port Officer, Regional Port Office, Vengurla
2. Sh. S.Y. Shikalikar Port Inspector, Devgad
3. Sh. P. V. Agashe Port Inspector, Malvan

Customs

1. Sh. Abhishek Srivastava Customs Inspector, Malvan
2. Sh. Roshan Kumar Customs Inspector, Office of the Superintendant of Customs (Shore Guard), Vengurla
3. SP, Customs Office of the Superintendant of Customs (Shore Guard), Devgad

Marine Police

1. Smt. Vinita Sahu, IPS Additional Superintendant of Police, Sindhudurg
2. S. R Sable Inspector of Police, Malvan

Dept. of Forests

1. Sh. Sanjay Kadam Range Forest Officer, Malvan and Vengurla (In-charge)
2. Sh. Masurkar Round Forester, Vengurla
3. Sh. R. S. Patil Range Forest Officer, Devgad

Dept. of Animal Husbandry and Livestock Development

1. Dr. Vasant B. Kulkarni Deputy Director of Animal Husbandry, Sindhudurg
 2. Dr. S.K. Chandel District Veterinary Officer, Sindhudurg
 3. Dr. R.B. Dalvi Veterinary Officer
 4. Dr. V.M. Patil Veterinary Officer
-

STAKEHOLDERS' MEET WORKSHOP

A one day workshop on “Sensitization of authorities and stakeholders of Sindhudurg district of Maharashtra for the capacity building programmes on stranding, beaching and post-mortem analysis of Cetaceans” was organized at Malvan, Sindhudurg district during 05th June 2014. The workshop was organized for the purpose of sensitizing the local people from the coastal taluks of Sindhudurg district regarding the capacity building training programmes to be organized under the GOI-UNDP-GEF Project on Cetaceans. A total of 40 participants from various departments and fishermen societies participated in the workshop. The workshop was convened by Sh. S. Rameshkumar, IFS, Deputy Conservator of Forest, Sawanthwadi Forest Division, Sawanthwadi, Maharashtra. The stakeholders participated were the authorities and local officials from Dept. of Forests, Dept. of Fisheries, Dept. of Animal Husbandry, Dept. of Customs, Marine Police, Maharashtra Maritime Board and Fishermen Societies of Sindhudurg district. The interactions and discussions of the workshop helped in identifying the skill, interest and resource persons for the proposed capacity building training programmes in each taluk of the district. The participants for the proposed training programmes were nominated by the officials of the departments and the tentative schedule of the capacity building programmes were also finalized in the workshop.



Sensitization workshop under GOI-UNDP-GEF Project on Cetaceans



Participants of the Stakeholders' Meet

**SCHEDULE OF CAPACITY BUILDING TRAINING PROGRAMMES FINALIZED AT
STAKEHOLDERS' MEET ON 05.06.2014**

The schedule and venues of the programme were decided and finalized in the Stakeholders' meeting/ Sensitization workshop held at Malvan on 05.06.2014.

S.No	Training No.	Target Group	Dates & Days
1.	Training 1	Officials/Authorities	20-21 June 2014 (Friday & Saturday)
2.	Training 2	Local people/villagers (Vengurla)	10 th July 2014 (Thursday)
3.	Training 3	Local people/villagers (Malvan)	11 th July 2014 (Friday)
4.	Training 4	Local people/villagers (Devgad)	12 th July 2014 (Saturday)
5.	Training 5	Officials/Authorities	24-25 July 2014 (Thursday & Friday)
6.	Training 6	Officials/Authorities	07-08 August 2014 (Thursday & Friday)

DEVELOPMENT OF PROTOCOLS AND TEACHING AIDS FOR THE CAPACITY BUILDING PROGRAMMES

The following were the aids developed for the capacity building programmes.

S.No	Kind of teaching aids developed/being developed	Details of the teaching aids developed/being developed
1.	Training Manual (English)	Species Identification of Marine Mammals of India
2.	Training Manual (English)	Dealing with Marine Mammals Stranding in India
3.	Field Manual (Marathi)	Marine Mammals Stranding – How to deal with?
4.	Field Guide (Marathi)	Identification of common Cetaceans of India

MODE OF TRAINING SESSIONS

The topics covered under the training programme include stranding of marine mammals, dealing with the situations of stranding and beaching of cetaceans, necropsy protocols for the cetaceans cast ashore and species identification of common marine mammals of India. The learning process was enhanced with various kinds of teaching aids like power-point presentations, videos, display banners and reading materials (manuals). A pre-training evaluation was carried out to assess the knowledge of the participants about the cetaceans and their conservation. The sessions of the training programme were conducted bilingually (English and Marathi). The participants were awarded with certificates on completion of the capacity building training programme.

DETAILS OF THE TRAINED MANPOWER

S.No	Training No.	Target Group	Dates & Days	Target number achieved
1.	Training 1	Officials/Authorities	20-21 June 2014	16
2.	Training 2	Local people/villagers (Vengurla)	10 th July 2014	21
3.	Training 3	Local people/villagers (Malvan)	11 th July 2014	38
4.	Training 4	Local people/villagers (Devgad)	12 th July 2014	29
5.	Training 5	Officials/Authorities	24-25 July 2014	11
6.	Training 6	Officials/Authorities	07-08 August 2014	27

TARGET ACHIEVED AGAINST TARGET PROPOSED

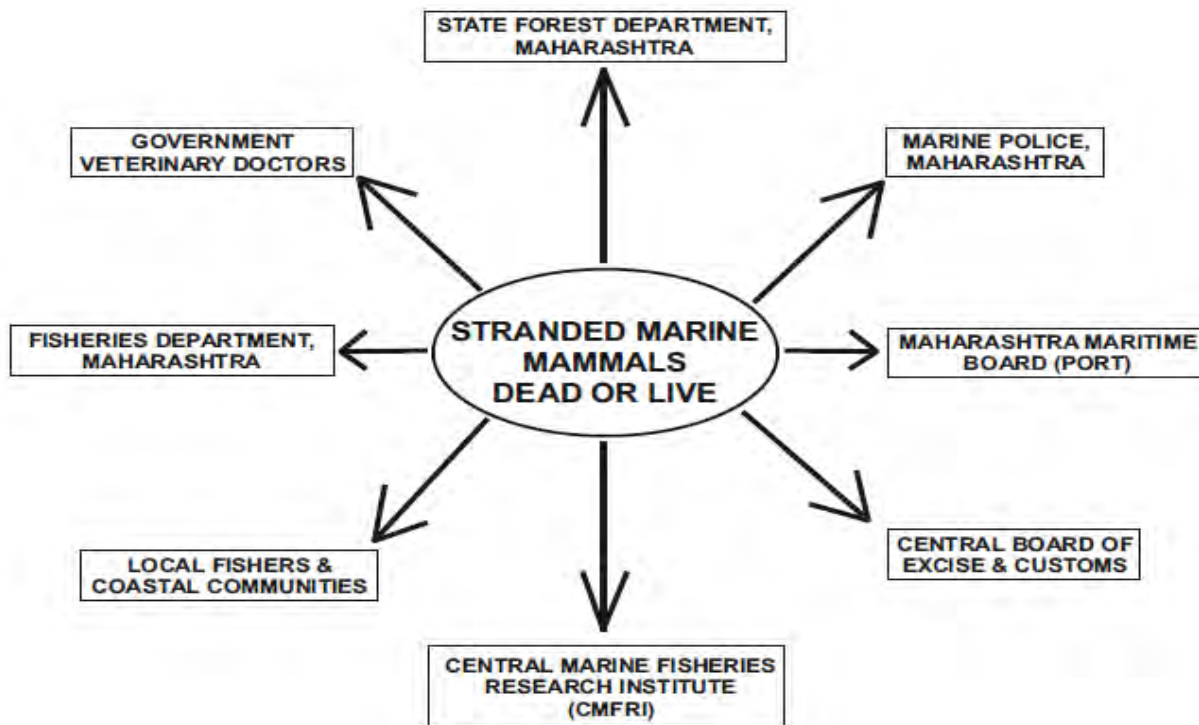
S.No	Target Group	Target proposed	Target achieved*
1.	Officials/ Authorities	45	54
2.	Local people/ villagers	90	88
TOTAL MANPOWER		135	142

*The details of the individual manpower trained are given as annexures (Annexure 1-6).

DEVELOPMENT OF NETWORK ON REPORTING OF STRANDED / BEACHED CETACEANS

The network developed for reporting of stranding/ beaching of cetaceans is given below:

STRANDED CETACEANS NETWORK LINKAGES



OUTPUT OF THE PROJECT (Deliverables achieved)

- Comprehensive **Protocols (both English and Marathi)** on:
 - Dealing with stranding/ beaching of marine mammals
 - Species identification of marine mammals of Indian sub-continent
- Trained manpower of **54 officials/authorities** on
 - Species Identification
 - Handling and rescuing the stranded (live) cetaceans
 - Post-mortem analysis and disposal of carcass
- Capacity building of **88 key individuals from local villages** of Sindhudurg district on
 - Reporting of a stranding
 - Identification of marine mammals
 - First aid measures in case of a live stranding

OUTCOME OF THE PROJECT (Impact of the project)

- Increased awareness about conservation of marine mammals
- Expertise in species identification of marine mammals
- Knowledge in rescue and release of stranded marine mammals
- Efficiency in disposal of the carcasses of beached marine mammals

A SUCCESS STORY

A spinner dolphin stranded alive was successfully rescued and released back into sea at Kalbadevi Beach, Ratnagiri, Maharashtra during September 2014. The success story was reported by Mr. A.A. Lad, Range Forest Officer, Ratnagiri who was also trained in this capacity building programme.

BUDGET

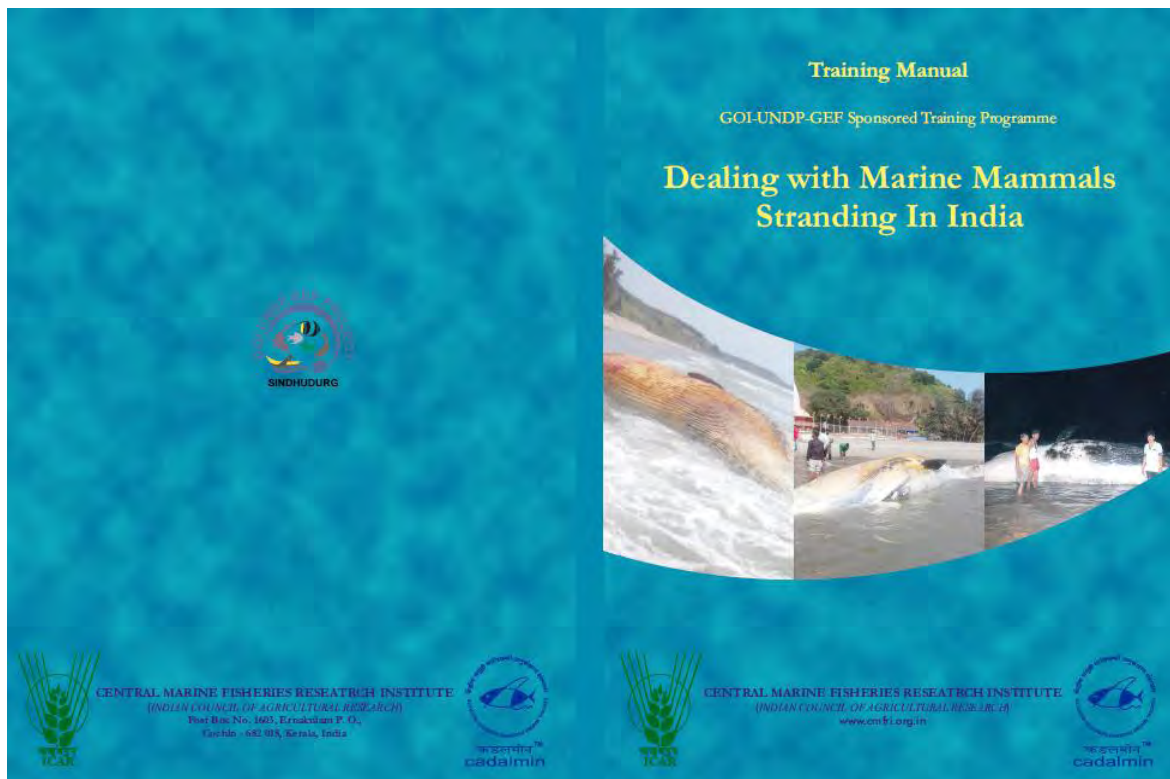
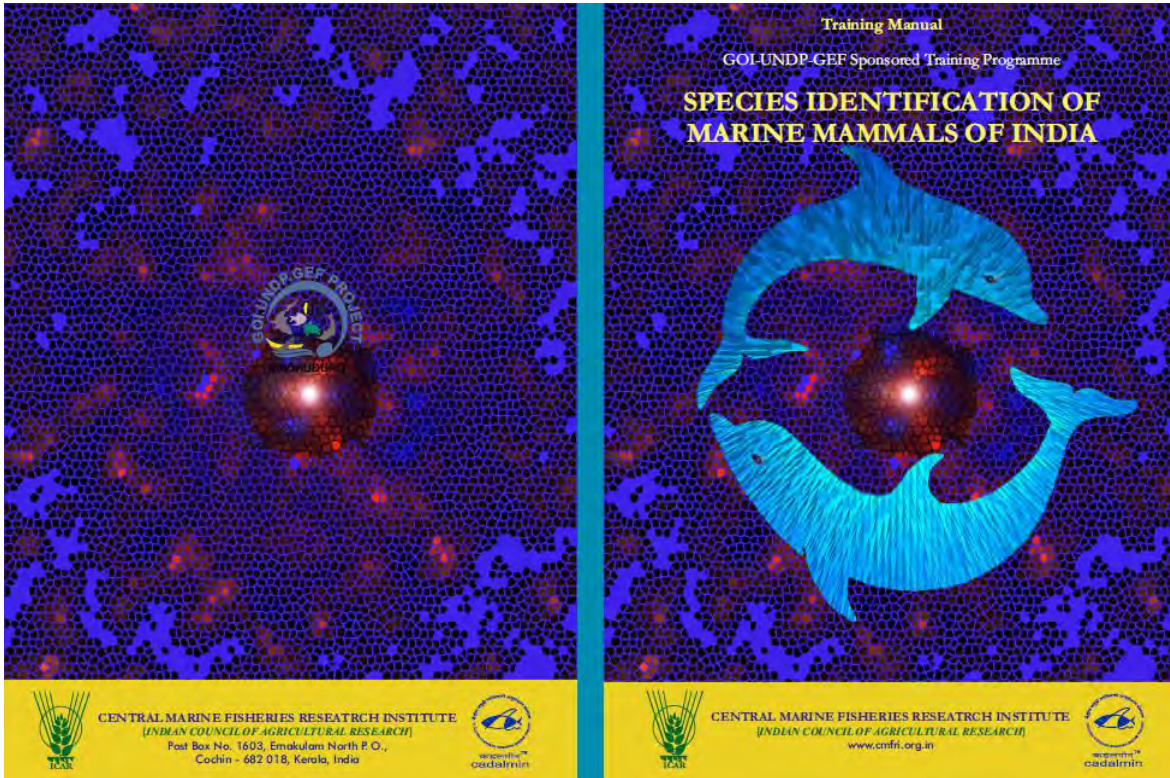
BUDGET UTILIZATION (as on 07.07.2015)

Total outlay sanctioned: Rs. 25.40 lakhs

Instalments	Earmarked (in rupees)	Released (in rupees)	Utilized (in rupees)	Balance/ Remarks
FIRST	12.50	12.50	12.50	Nil
SECOND	12.50	12.50	12.50	Nil
THIRD	0.40	Nil	Nil	Yet to be released

APPENDIX

TRAINING MANUALS (ENGLISH)



TRAINING MANUALS (MARATHI)



के.स.ना.अनु.सं. CMFRI

GOLURDF GEF PROJECT
SINCHUURG

सिंधुदुर्ग किनाऱ्यातील सागरी किनाऱ्यावरील उन्हादल क्षेत्रातील सागरी जैवविविधता संवर्धन प्रकल्प
मार्गदर्शक पुस्तिका

**किनाऱ्यावर येणारे सागरी सस्तन प्राणी : कारणे,
प्रथमोपचार, बचावकार्य आणि विल्हेवाट**

भारत सरकार - युएनडीपी - जीईएफ प्रायोजित
"सिंधुदुर्ग जिल्हा सागरी किनाऱ्यावरील उन्हादल क्षेत्रातील सागरी जैवविविधता संवर्धन प्रकल्प"



के.स.ना.अनु.सं. CMFRI

GOLURDF GEF PROJECT
SINCHUURG

सिंधुदुर्ग किनाऱ्यातील स्थानिक अधिकारी आणि सागरी किनाऱ्यावरील उन्हादल क्षेत्रातील सागरी जैवविविधता संवर्धन प्रकल्प
मार्गदर्शक पुस्तिका

**भारतीय समुद्रात आढळणाऱ्या सागरी सस्तन
प्राण्यांच्या प्रजाती आणि त्यांची ओळख**

मार्गदर्शक पुस्तिका

भारत सरकार - युएनडीपी - जीईएफ प्रायोजित
"सिंधुदुर्ग सागरी जैवविविधता संवर्धन प्रकल्प"

PHOTOGRAPHS OF THE SESSIONS UNDER THE CAPACITY BUILDING PROGRAMME



Introductory session by Dr. M. Sakthivel



Bilingual presentations (English and Marathi) of the training programme



Various department officials as participants of the training programme



Training session in progress



Interactions and discussions of the trainees



Participants of the first batch of officials along with the project team

PHOTOGRAPHS OF THE SESSIONS UNDER THE CAPACITY BUILDING PROGRAMME



Officials trained (Batch 1)



Presentations and interactions in progress



Officials trained (Batch 2)



Officials trained (Batch 3)



One of the training sessions



Participants of the third batch of officials along with the project team

PHOTOGRAPHS OF THE SESSIONS UNDER THE CAPACITY BUILDING PROGRAMME



Training in progress at Vengurla



Trainees of Vengurla Taluk



Training in progress at Malvan



Trainees of Malvan Taluk



Training in progress at Devgad



Trainees of Devgad Taluk

UNDP Sindhudurg Project
Capacity Building for local authorities and people of Sindhudurg district on
Stranded and Beached Cetaceans

QUESTIONNAIRE

Objective: To study the awareness of people about stranding and beaching of Marine Mammals

Taluk		Village	
Name		Age	
Sex		Occupation	
Email		Mobile	

Details of Response

1	Do you know marine mammals?	<input type="radio"/> Yes	<input type="radio"/> No
2	What are the animals/species we call marine mammals?	<input type="radio"/> Whale	<input type="radio"/> Dolphin <input type="radio"/> Others
3	Have you ever seen a sea animal on-shore?	<input type="radio"/> Yes	<input type="radio"/> No
4	Which were the animals?	<input type="radio"/> Fish	<input type="radio"/> Dolphin/Whale <input type="radio"/> Others
5	Have you ever seen a stranded or beached sea animal?	<input type="radio"/> Yes	<input type="radio"/> No
6	Do you know stranding or beaching of marine mammal?	<input type="radio"/> Yes	<input type="radio"/> No
7	Stranding/beaching: groups or single?	<input type="radio"/> Groups	<input type="radio"/> Single
8	Could you able to identify them?	<input type="radio"/> Yes	<input type="radio"/> No
9	What were they?	<input type="radio"/> Whale	<input type="radio"/> Dolphin <input type="radio"/> Others
10	What did you do when you saw stranded or beached marine mammals?	<input type="radio"/> Reported	<input type="radio"/> No action
11	To whom you reported?	<input type="radio"/> Dept. staff	<input type="radio"/> Village people
12	Is the stranding or beaching season specific?	<input type="radio"/> Yes	<input type="radio"/> No <input type="radio"/> Don't know
13	If yes, which season of the year?	<input type="radio"/> Rainy	<input type="radio"/> Summer <input type="radio"/> Winter
14	Why the particular season, if any?		<input type="radio"/> Don't know
15	Will the stranding or beaching affect the environment?	<input type="radio"/> Yes	<input type="radio"/> No <input type="radio"/> Don't know

16	What is the impact?		<input type="radio"/> Water/Air <input type="radio"/> Don't know
17	Will they cause any disease to people?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Don't know	
18	Will the people eat the meat of marine mammals?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Don't know	
19	If yes, which species?	<input type="radio"/> Whale <input type="radio"/> Dolphins <input type="radio"/> Porpoise	
20	Are they intellectual like human beings?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Don't know	
21	How many years do they live?	<input type="radio"/> <20 years <input type="radio"/> >20 <input type="radio"/> Don't know	
22	Have you ever seen a marine mammal stranded alive?	<input type="radio"/> Yes <input type="radio"/> No	
23	How did you know it was alive?	<input type="radio"/> Respiration <input type="radio"/> Don't know	
24	What did you do to save its life?		<input type="radio"/> Don't know
25	How did you handle the live ones?		<input type="radio"/> Not handled
26	What was the result?	<input type="radio"/> Survived <input type="radio"/> Died	
27	How did you dispose the dead ones?	<input type="radio"/> Buried <input type="radio"/> Left as such <input type="radio"/> Don't know	
28	Have you seen or performed post-mortem?	<input type="radio"/> Yes <input type="radio"/> No	
29	Why the post-mortem is important?	<input type="radio"/> To know the cause of death <input type="radio"/> Don't know	
30	Have you made any conclusion about the death of the animal?	<input type="radio"/> Yes <input type="radio"/> No	
31	Whether any conservation is needed for marine mammals?	<input type="radio"/> Yes <input type="radio"/> No	
32	If yes, why?		
33	What steps can be taken for their conservation?		
34	What fishermen can do for saving their lives?		
35	What is your immediate need to deal with these beached cetaceans?		

Name of the important persons from your village/Taluk who knows about marine mammals

S.No	Name	Address or Mobile Number
1		
2		
3		
4		
5		

Signature

DETAILS OF INDIVIDUAL MANPOWER TRAINED

(OFFICIALS BATCH 1 IN TRAINING NUMBER 1)

Sl. No	Name of the official/authority
1.	Abhay K Sawant
2.	Surendra Ganpat Gawade
3.	Anil H. Rathod
4.	G. I. Dsouza
5.	Sarik C. Fakir
6.	Anil R. Chavan
7.	Gurunath M. Devali
8.	Kishor G. Parulekar
9.	S. S. Pimpale
10.	Amol A. Tamhankar
11.	Rajnikant J. Patil
12.	S. Y. Shikalikar
13.	Shreya S. Kambli
14.	Dr. V. S. Dhekane
15.	Dr. M. N. Ghogare
16.	Dr. V. M. Patil

DETAILS OF INDIVIDUAL MANPOWER TRAINED

(OFFICIALS BATCH 2 IN TRAINING NUMBER 5)

Sl. No	Name of the official/authority	Contact No.
17.	Mr. Upadhye	9420970115
18.	B. K. Kolekarü	7387248747
19.	P. N. Koli	9403234752
20.	D. B. Shinde	9049533083
21.	G. R. Parulekar	9403364737
22.	V. G. Panchal	8275831255
23.	S. M. Patil	9421144608
24.	P. S. Sawant	9421267308
25.	Mr. Dabholkar	9403638486
26.	R. M. Patil	9404117868
27.	S. D. Satam	9423300722

DETAILS OF INDIVIDUAL MANPOWER TRAINED

(OFFICIALS BATCH 3 IN TRAINING NUMBER 6)

Sl. No	Name of the official/authority	Contact No.
28.	Sanjay N. Mali	7738155612
29.	Tanaji N. Patil	9869801819
30.	NileshTatyasaheb Kumbhar	9763679188
31.	Sachin gajanan Thakur	9420651734
32.	Sanjay B. Kamble	9850139419
33.	Sanjay N. Waghmode	7507522750
34.	Vilas R. Mule	9422853637
35.	Aananda G. Hirdekar	9099069949
36.	Govind H. Langute	7588383290
37.	Nandkumar J. Nalawade	9270047388
38.	R. T. Roopanvar	9423358374
39.	Vishal D. Pakale	9860843345
40.	Ashok A. Lad	9423297146
41.	N. S. Upadhye	9420970115
42.	Sanjeevan S. Shilvant	8007790152
43.	Shivaji S. Padiyar	8554056017
44.	Ravindra S. Hadal	9272691297
45.	Pandurang R. Gaikwad	9220460939

46.	Yogesh R. Salve	8450963033
47.	M. S. Shelke	8698633161
48.	V. A. Masurkar	9420358135
49.	Suresh R. Metar	9404261178
50.	S. S. Kank	9822420037
51.	Nitin R. Gade	9870236350
52.	Sharan M. Deshpande	7208651226
53.	C. S. Dongare	9921812802
54.	Merwyn Fernandez	9820347492

DETAILS OF INDIVIDUAL MANPOWER TRAINED

(LOCAL VILLAGERS OF VENGURLA TALUK IN TRAINING NUMBER 2)

Sl. No	Name of the villager	Contact Number
1.	Vasant Tandel	9422436636
2.	Nagesh D. Keluskar	8275386602
3.	Stanley F. Ludrik	9545006295
4.	Siston M. Rodriks	9765383855
5.	Arjun K. Girap	9823513216
6.	Mahendra N. Tandel	9049845721
7.	Mahadev K. Mote	9429301431
8.	Suhas V. Toraskar	9403072991
9.	Hitendra M. Redkar	9404748985
10.	Vishal V. Bhosale	9420309507
11.	Mangesh A. Keluskar	9404169646
12.	Mohan R. Keluskar	9420267239
13.	Rajan B. Kule	9764045527
14.	Digamber M. Kasalkar	9527929938
15.	Manohar R. Tandel	9860700101
16.	Govind Ramchandra	9420306025
17.	Govind R. Keluskar	9923590148
18.	Ghanshyam V. Toraskar	8279980782
19.	Rohidas N. Keluskar	9545353053
20.	Pratap V. Gavaskar	9422596382
21.	Abhishek Ullas Nayak	9860700101

DETAILS OF INDIVIDUAL MANPOWER TRAINED

(LOCAL VILLAGERS OF MALVAN TALUK IN TRAINING NUMBER 3)

Sl. No	Name of the villager	Contact Number
22.	Anand Rajeman Khavnekar	9420307188
23.	Dilip Krushna Paradaker	8411863844
24.	Vitthal Mohan Sarang	9423211698
25.	Dwarkanath Manohar Pardnekar	9404933340
26.	Nivritti Puntlik Joshi	9403563223
27.	Rajam Krishna Joshi	9422392583
28.	Narayanan Vishnu Kubal	9405257678
29.	Rupesh Ghadigawnkar	8975222880
30.	M.S. Upadhya	9420970115
31.	Charasekar Laxman Sarang	9403560779
32.	Devanand N. Ghare	8275315438
33.	Bhushan G. Kubal	9403182241
34.	Videsh N. Kumathekar	8275316256
35.	Maresh D. Paracker	8275315663
36.	Vasudav Shridhar Kamale	9420741242
37.	Gaygopal B. Frap	9420822713
38.	Laxman Dhaku Kumathekar	02365246317
39.	Anand Padurang Tari	9969625390
40.	Pramod H. Kubul	9423214587
41.	Hanumant P. Tari	8352037077
42.	Deepak S. Sarang	9404932287
43.	Kishor V. Tavadaker	9421364113
44.	Dmalchandra M. Kubal	7588898576
45.	Umalaker Krishna Paredekar	9422243565
46.	Arun Sarang	9421262492

47.	Ghunaji R. Kabal	9403182241
48.	Shilash L. Sarang	9869996177
49.	Santosh M. Kabal	9420210721
50.	Vanebarohidas	9405099345
51.	Bhagavani K. Kolambekar	9404472671
52.	Mohan Govind Parab	9923214902
53.	Arun Ganesh Kabal	9403638952
54.	Rasik Rajan Joshi	9404742239
55.	Suhas D. Ghare	8275315963
56.	Aagya Gokupardas	--
57.	Gopaji Gopal Dhudeker	--
58.	Parmod B. Vodekar	8275366136
59.	Suryakanth V. Chupadekar	7588906255

DETAILS OF INDIVIDUAL MANPOWER TRAINED**(LOCAL VILLAGERS OF DEVGAD TALUK IN TRAINING NUMBER 4)**

Sl. No	Name of the villager	Contact Number
60.	Arun Gurunath Toraskar	9860370228
61.	Pradeep Tukaram Koyande	9421190779
62.	Dhananjay K. Koyande	--
63.	Udhyanath T. Koyande	9421190779
64.	Ajit Bhau Rasam	--
65.	Devidas A. Borkar	8375903640
66.	Shivdas V. Rasam	--
67.	Sainath S. Rasam	2364217626
68.	Sudhir M. Devgadkar	8806305395
69.	Prakash Sadashiv Mondkar	9404499609
70.	Dhananjay Mahadev Sarang	7588449193
71.	Krishna Ganapat Parab	9423304056
72.	Pandharinath S. Manachekar	9421146120
73.	Jagannath D. Koyande	9423304056
74.	Pundalik S. Aacharekar	9421146326
75.	Vivek G. Joshi	9096959980
76.	Omkar A. Sarang	9130969289
77.	Dnyaneshwar S. Khavale	9764109491
78.	Sanjay P. Bandekar	9970373571
79.	Ravindra Vidyadhar Koyande	9423818962
80.	Tukaram Hari Dhuri	9421642434
81.	Chandrakant S. Palekar	9422584751
82.	Ramchandra Maruti Fanasekar	8275366138
83.	Shivram M. Bapardekar	9545815758
84.	Prashant Ankush Vaarik	7588448825

85.	Dharmaraj Shankar Joshi	9421903372
86.	Pradeep Vasant Jagatap	9422584907
87.	Bapu Shantaram Juvatkar	9421263903
88.	Pandurang Tukaram Hirnali	9421189366
