**PROJECT TITLE: CYCLONE VARDAH RECOVERY FOR TAMILNADU FISHER FOLK**

The Govt. of India, Metrological department reported cyclonic storm vardah, caused destruction on an Unprecedented scale on Monday (12/12/2016) afternoon – making land fall about 15km from Chennai, and brought down 50,000 trees and maximum power lines. Govt. Authorities take continuous action cleared at Northern Coastal districts uprooted trees & electrical posts. Coastal district Panchayats, the worst hit sites, a scene of devastation with uprooted trees, broken bill boards and sapped telephone and Power Cables adjacent low lying areas announced over water logged Cyclone Vardah – means Red Rose, it was informed by Govt. and this was the many intense storm made hit in Chennai in past two decades. For many days, Govt Offices, Schools, Colleges and even airport were closed. Govt. of India, provided relief and medicinal materials for the victims from INS Shivalik and INS Kadmalt (Container Ships) through Chennai Harbour. These ships were equipped with additional medical teams, divers, inflatable rubber boats, integral helicopter, and also relief material.

The Cyclone Vardah moved towards south Interior Karnataka, in western south west direction. It is expected, the heavy rain pours will continue on coming days. At least 43 have lost their lives in North TamilNadu due to Vardah, over 10,000 were (mainly Coastal community and slum dwellers) were evaluated and sent to shelter places. In addition to this, loss of lives were avoided thro fold others alertness, Army, Navy, Air force and coast guard were also mobilized up to lend a helping hand when needed. The Metrological department announced that the sea would remain rough along Northern Coastal districts of Tamil Nadu for the next few days, have been asked not to go out to fishing.

 Any how, it is true that the Cyclone Vardah has heavily affected the Coastal Community livelihood. It will take many months, to remove the scarce of the massive destruction.

**COASTAL PROJECT SITES:** Following areas have been selected because of their worst hit condition of the vardah and also as the fisher folks, and slum dwellers are pre-dominant in the targeted sites.

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| **KANCHIPURAM DISTRICT** | **CHENNAI DISTRICT** | **THIRUVALLUR DISTRICT** |
| **Palaverkadu** | **Kasimedu** | **Ennore** |
| **Gummudipoondi** | **Thiruvottiyur** | **Pulicot** |
| **Mamalapuram** | **Rayapuram** | **Kattupalli** |
| **Mahabalipuram(Old)** | **Tondayarpet** |  |
| **OMR-Rajiv Gandhi Road Villages** |  |  |
| **Panayur** |  |  |
| **Periyakuppam** |  |  |
| **Inchampakkam** |  |  |
| **Uthandi** |  |  |
| **Navaloor** |  |  |
| **Muttukadu** |  |  |
| **Kovalam** |  |  |
| **Thiruporur** |  |  |

**PROJECT ACTIVITIES:**

**PREPARATION OF TOOL KIT FOR INDIGENOUS TECHNICAL KNOWLEDGE (ITK), DISSEMINATION TO YOUTH & PRINTING AND ISSUING OF IEC MATERIALS:**

Indigenous technical knowledge has been key rescuer of the fishers, of Northern Coastal district thro frequent floods in the region every year. Fishers utilized the orders existing knowledge with a sustainable eco – friendly approach for the Community Based Disaster Risk Management (CBDRM) and exploration of fisheries resources and they have changed the life style according to their climate changes. Thro PRA, Visualization and also semi – structured interviews the Project Team would collect the ITK, associated early warning of flood, and construction of flood-safe fish ponds, at post flooded condition. These materials are compiled, and it will be documented as “ITK Tool Kit” for the younger generation.

Ethology (Animal behavior) (cattle Screaming, Insects randomness, Ants shifting, fox fowling, Doves Crying, Birds Crying, Toads and frogs sounds) and also easily prediction of cyclone (Inclines of moon cloud gathers, Extension of rainbow, massive bamboo flowering, trees bears more flowers, Elder fishers have enough knowledge about wind flow: we will train the same to youth. Fishers have indigenous Knowledge about Early warning system, we will document these and train the youth to be equipped well.The project team will print the IEC materials and distribute the same to the community.

In the outskirts of Tamil Nadu Coastal districts, mostly and generally have been heavily affected Cyclone Vardah havoc. Even though everybody meets panic and fatal defects mainly the two predominant communities’ fishermen and slum Dhalith (scheduled caste) are affected in major level. There are some major reasons for these affect ants.

1. Both fishermen and slum dwellers are living in low lying areas.
2. Both during any disaster, and after the disaster their livelihood has been affected entirely in a long duration
3. Of the Cyclone Vardah death recorded up to 43, mostly loss of human lives from these two communities.
4. 10 teams of the NDRF (National Disaster Recovery Force) along with the Local Corporation / municipal authorities they worked in clearing obstruction to restore a road traffic and electricity in Chennai & other Coastal Districts. Our two communities above mentioned will serve as the daily wages work labours (or) as volunteers.

**ITK MODE OF FISH PRESERVATION:**

During the times of flood, fishing is completely avoided, but fishes are obtained abundantly, people are not in the mind to eat the same. Hence our project team track them modern preservation / drying / Salting / Smoking technologies to preserve the fishes for thro out the year.

**FISHING BY FISH AGGREGATING DEVICES (FAD) & MODERN INSTRUMENTS:**

After the Cyclone hit/ flood occurrence school of fishes migrated in to the Coastal areas. Our project team will teach the new Aggregative methodologies. (Coconut leaves tilting, water hyacinth and also natural /artificial reef and also modern technology instruments (Echo Sounder / GIS etc).

**SHELTER BELT / WIND BREAKERS / BIO SHIELD / PLANTATION:**

Shelter belts are barriers of trees of shrubs that are planted to reduce wind velocities and as a result, reduce transpirations and prevent wind erosion. Major purpose of the shelter belt is to save the Coastal community domestic sites from disasters due to high valuating of wind along the coastal areas.

 The following are the benefits of making shelter belts.

* Will help to replace the fallen trees during vardah hit.
* Through stabilizing sand dunes, can avoid see erosion.
* Increase the area under tree cover
* Create better environmental conduction along coastal sites.
* Ensure fuel, fodder and local construct as material to traditional community.
* Present deposition of sand, and salt.

**HOW SHELTER BELT CAN REDUCE VULNERABILITY:**

Shelter belt are barriers of trees or shrubs that are planted to reduce wind velocities and as a result reduce transpiration and prevent wind erosions.

 Being followed our project team plot survey we plan to make shelter belt in some coastal localities.

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| --- | --- | --- |
| **TARGET SITE** | **PLANTS** | **JUSTIFICATION** |
| Kanchipuram, Chennai & Thiruvallur Districts Coastal Panchayats | Palm Casurina | Native PlantsIndigenous Plants |
| Muttukadu,Kovalam Kanchipuram District | Mangrove Plants  | Replantation / can improve ownership of restoration process or improve positive ongoing relationship with Government.  |
| North / South Panaiyur Periyakuppam , Buckkinhanchannel areaKanchipuram Coastal District  | Sand dunes eco system  | Panayur sand dunes estuaries will be extensively studied * Will act as buffer to reduce impacting coastal storms,
* Prevent movement of salt Laden winds.
 |
| Buckkinhanchannel area& Parangipettai  | Salt water Plants  |  |

Post – Cyclone vardah recovery for fisher folk

**RE-VEGETATION OF SAND DUNE ECOSYSTEM:**

 To reduce wind erosion, beach grasses will be planted. Although these are so serious attempts to prevent coastal sand dune erosions by “Re vegetation” of beach grass in India, we need to do community based survey for sand dunes and its eco system. During the survey itself the coastal youth / women will acquire the basic knowledge and conservatory / Regenerative measures of the sand dunes.

**RE-GENERATION OF SALT WATER PLANTS:**

The plants are living on salt water, coping with any climate variability (even drought / cyclone) and possibly offering viable farming alternative in our coastal project sites. This salty Green leaves are locally called “Umari Keerai” and catch by local fisher folk.

1. Our project team will create enough technical knowledge about this salt water plants and its benefits.
2. Will regenerate this salt water plants us nearby areas.
3. Will make document also leading new avenues.

**SHORT TERM CERTIFICATE COURSE ON DISASTER MANAGEMENT FIRST AID / EVACUATION / EARLY WARNING TRAINING**

 Tamilnadu has been surrounded by Bay of Bengal, Arabian Sea and Indian Ocean. Tamilnadu has the vast coastal length of 1076 km. Of the total 32 districts, 13 are coastal districts. Of these 13, the Northern Coastal districts have been seriously affected by Cyclone Vardah. Generally during any disaster, coastal districts are heavily affected. Hence it is deadly necessary, to provide the community based Disaster risks management (CBDRM) and first aid training to the vulnerable community mainly to our present vulnerable target fisher folk.

**SHORT TERM TRAINING FOR CLIMATE MANAGERS:**

 We are going to form 5 different types of Disaster Communities (Early Warning Team, Search and Rescue Team, Evacuation Team, First aid Team and shelter centre maintenance team. Separate training will be offered individually for every team leader comprehensive training also provided. They will be called as “Climate Managers” in every village 5 climate managers will be there.

**PREPARATION OF DISASTER MANAGEMENT PLANS THROUGH PRA:**

With the co-operation of Climate Managers, and our Global Giving aided project staff team will draw thro Sociological tools (for Participatory Rural Appraisal (PRA). They will use Social mapping, seasonal diagram, ven diagram, Resource mapping, and vulnerable community sites, Evacuation Shelters, for the plan preparation. The climate managers will be offered training to develop that skills so as to have the Lobby with Govt. officials.

**FORMATION / STRENGTHENING OF DISASTER MANAGEMENT TEAMS:**

The team will be constituted as follows

|  |  |
| --- | --- |
| Early Warning Team  | These team will declare 1. Officially delivered announcement by the Govt.
2. Will block the spreading of rumors.
3. Will evacuate the crafts & gears form vulnerable sites.
4. Making announcements for fishermen not to go in to the sea
 |
| Evacuation Team  | They will keep ready the information received thro PRA leading the vulnerable high risk group (HRG) from the low lying areas to the rescue shelters.They will keep ready with their first aid box and Health box and also necessary items (Torchlight, whistle, rope, Helmet, Socks)Must have important contact Phone No.  |
| Rescue / Centre / Shelter Home maintenance Team  | * Utensils must be ready to have pure drinking water
* Generator, electricity, Hand Pump, motor, fan must be checked at shelter home
* Bed sheets, kerosene, stove, food pockets etc must be ready.
* Special care must provide vulnerable community (pregnant women, differently abled, HIV community)
* Collection of fodder / feed for cattle / poultry
 |
| Search and Rescue Team  | During search we must give priority to lives of human / also animals Must provide special care to vulnerable community (Pregnant women, Patients, Differently abled) Necessary materials for the recovery work must be in ready condition * Must have good relationship with State Govt. Fire and Rescue Service officials.
 |
| First Aid Team  | * Always must have First Aid box with teams.
* Mainly have all types of Bandage clothes, scissors, medicines OI medicines, Dettol, ID Card, Gloves, Mask, Torch light)
 |

**SHORT TERM TRAINING FOR LIVELIHOOD INITIATIVE:**

Generally, fisher folk are seriously affected by pre-mid & post Disaster situation. Almost 15 days – 1 month fisher folk livelihood condition is affected. Hence it is necessary, to provide them alternative / additional Livelihood training programme mainly for fisher women as follows.

**LIVELIHOOD INITIATIVE: ORNAMENTAL SHELL CRAFT:**

 In intertidal area shell are abundantly found. Being collected the same, and make some crafts work upon there. It can be easily sold.

**LIVELIHOOD INITIATIVE: ORNAMENTAL FISH CULTURE:**

Fisher folk severally do their regular fishing in 3 eco systems 1. Sea water 2. Back / estuarine water and also 3. River-fresh water. Sometimes they collected vibrant color full ornamental fishes also. In addition to this our project staff team will train them various culture techniques.

**LIVELIHOOD INITIATIVE:AQUA CULTURE / CAGE CULTURE:**

 Surrounding this project site, so many aqua culture farms are available. Those who know the culture work to some extent, can easily get the jobs in this aqua farms. In the mangrove, and back water areas fisher folk can easily catch crabs. We will provide the crab fattening thro cage culture.

**TRAINING / ANALYSIS ON WASH: WATER AND SANITATION HYGIENE:**

 During any period of disaster very bad condition is the spreading of communicable diseases. In order to prevent this condition water and sanitation must be in good condition. Hence it is necessary, to offer them training on pure drinking water and sanitation. The project team will provide the fisher folk to analyze the water thro field water tool kit (FWTK) as recommended by TWAD Board, Govt. of Tamil Nadu.

**CYCLONE VARDAH RECOVERY FOR TAMILNADU FISHER FOLK**

**ACTIVITIES & DETAILED BUDGET**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S.NO** | **ACTIVITY** | **DESCRIPTION** | **REQUIRED BUDGET IN****$** | **REQUIRED BUDGET IN INDIAN MONEY** | **PROJECT SITES** |
|
| 1. | Preparation of tool kit for Indigenous technical knowledge(ITK)Printing of Pamphlets,IEC materials,posters,stickers & etc | Fishers may utilized the elder knowledge with a Sustainable community based eco friendly approach for Disaster risk management(CBDRM) | **$405.91****$774.91** | **Each tool kit=****Rs.27,500****Rs.52,500** | **Chennai,****Kanchipuram & Thiruvallur Coastal****Districts** |
| 2. | Dissemination Training ITK to youth (mainly for Early warning) | Early prediction of cyclone (Fauna/Flora) will be documented/disseminated/trained for fisher youth/women | **$1771.23** | **Each training****Rs.10,000x12 months=Rs.1,20,000** | **Chennai,****Kanchipuram & Thiruvallur Coastal****Districts** |
| 3. | Training for Fish preservation/processing/curing/salt drying/smoking | Teach them modern preservation Drying/Salting/Smoking/Dry salting and also adding to preservation/value add the fishes for thro out the year  | **$1771.23** | **Each training Rs.10,000x12 batches= Rs.1,20,000** | **Chennai,****Kanchipuram & Thiruvallur Coastal****Districts** |
| 4. | Training for Fish Aggregating devices (FAD)/modern instruments | Will train the new fish Aggregative technologies(FAD) and modern technologies instruments | **$1771.23** | **Each training Rs.10,000x12batches= Rs.****1,20,000** | **Chennai,****Kanchipuram & Thiruvallur Coastal****Districts** |
| 5. | Training on conservation of shelter belt/wind breakers /Bio shield | Trees/Shrubs are platted to reduce wind velocities-reduce transpiration and prevent wind erosion | **$1771.23** | **Each training Rs.10,000x12 months= Rs.1,20,000** | **Chennai,****Kanchipuram & Thiruvallur Coastal****Districts** |
| 6. | Plantation of palm/ casurina/ Native trees(6 feet tree +red soil + soil + manure + water +labour & etc)Plantation of native trees,saplings(1 feet tree,+ red soil + soil + manure + water +labour & etc) | Will help to replace the fallen trees/up rooted during cyclone vardah hit | **$7380.13****$1476.03** | **Rs.2500x200 plants= Rs.5,00,000****Rs.100x1000 plants= Rs.1,00,000** | **Chennai,****Kanchipuram & Thiruvallur Coastal****Districts** |
| 7. | Regeneration of mangrove plants in muttukadu & kovalam area Raising of 10,000 Seedlings(soil,watering & manure=Rs.2,00,000Plantation of 10,000 plants=Rs.2,00,000Miscellaneous=Rs.1,00,000 | Regeneration can improve ownership of restoration process or positive ongoing relationship with Government | **$7380.13** | **Rs.50x10,000 plants= Rs.5,00,000** | **Chennai,****Kanchipuram & Thiruvallur Coastal****Districts** |
| 8. | Capacity building training/Documentation on sand dune ecosystem at Periyakuppam, Panayur,Kanchipuram District. | Sand dunes-will act as buffer to reduce imparting coastal storms,-Sand dune ecosystem will be extensively community based documented | **$1771.23** | **Rs.10,000x12 months= Rs.1,20,000** | **Chennai,****Kanchipuram & Thiruvallur Coastal****Districts** |
| 9. | Re vegetation of sand dune flora(Grass +red soil + soil + manure + water +labour & etc) | -community base survey for sand dunes-Regenerative measures for sand dune flora | **$1476.03** | **Rs.100x10000 plants= Rs.1,00,000** | **Chennai,****Kanchipuram & Thiruvallur Coastal****Districts** |
| 10. | Regeneration of salt water plants(Sappling+red soil + soil + manure + water +labour & etc) | -possibly offering viable farming alternative in the project site-Also edible/Nutrition rich green leaves  | **$1476.03** | **Rs.50x20000 plants= Rs.1,00,000** | **Chennai,****Kanchipuram & Thiruvallur Coastal****Districts** |
| 11. | Short term certificate course on disaster management & First aid/Evacuation/Early warning training | For every vulnerable village 5 types of team must be formed they will provide all types of trainings individuallyDuration-4 Days x 4 Batches | **$1476.03** | **Rs.25,000x4 batches= Rs.1,00,000** | **Chennai,****Kanchipuram & Thiruvallur Coastal****Districts** |
| 12. | Short term training for Climate managers/Sustainable fishing & conservation of ecosystem | For every Disaster management team, leader will be selected, In that manner 5 Leader will be these.They will be called as climate ManagersDuration-2 Days x 12 months | **$1771.23** | **Rs.10,000x12 months= Rs.1,20,000** | **Chennai,****Kanchipuram & Thiruvallur Coastal****Districts** |
| 13. | Preparation of Disaster management(DM) plans thro PRA(Participatory Rural Appraisal Survey) | The climate Manager will be helpful to making management plansEach 1 plan x 20 villages | **$1476.03** | **Rs.5,000 x 20 villages= Rs.1,00,000** | **Chennai,****Kanchipuram & Thiruvallur Coastal****Districts** |
| 14. | Formation/strengthening of DM committees/Team | During any disaster,their regular livelihood is affected much. Hence if it’s necessary provide them alternative additional livelihood training Each 1 team x 20 villages | **$1476.03** | **Rs.5,000x 20 villages= Rs.1,00,000** | **Chennai,****Kanchipuram & Thiruvallur Coastal****Districts** |
| 15. | Short term training for Livelihood initiative ornamental Shell craft | -shells are abundantly valuable in their inter tidal areaDuration-4 Days x 4 Batches | **$1476.03** | **Rs.25,000x4 batches= Rs.1,00,000** | **Chennai,****Kanchipuram & Thiruvallur Coastal****Districts** |
| 16. | Short term training for Livelihood initiative ornamental fish culture | vibrant fishes are availableDuration-4 Days x 4 Batches | **$1476.03** | **Rs.25,000x4 batches= Rs.1,00,000** | **Chennai,****Kanchipuram & Thiruvallur Coastal****Districts** |
| 17. | Short term training for Livelihood initiative cage culture/aqua culture | Raw materials crabs/lobster available inswamps/creeks/Back waterDuration-4 Days x 4 Batches | **$1476.03** | **Rs.25,000x4 batches= Rs.1,00,000** | **Chennai,****Kanchipuram & Thiruvallur Coastal****Districts** |
| 18. | Short term training for Drinking water analysis thro Field water tool kit(FWTK) & water and sanitation conservation | To prevent spreading communicable diseases “WASH” training must be providedDuration-1 Day x 10 Batches | **$1476.03** | **Rs.10,000x10 batches= Rs.1,00,000** | **Chennai,****Kanchipuram & Thiruvallur Coastal****Districts** |
| 19. | Short term training on First aid techniques | Duration-1 Day x 10 Batches | **$1476.03** | **Rs.10,000x10 batches=Rs.1,00,000** | **Chennai,****Kanchipuram & Thiruvallur Coastal****Districts** |
| 20. | Training on Evacuation route, early warning & mock drill | Duration-1 Day x 10 Batches | **$1476.03** | **Rs.10,000x10 batches=Rs.1,00,000** | **Chennai,****Kanchipuram & Thiruvallur Coastal****Districts** |
| **GRAND TOTAL =** | **$44,280** | **Total =Rs.30,00,000** |  |