THE ADMINISTRATOR
UNION TERRITORY OF LAKSHADWEEP

LAKSAHDWEEP

DISASTER MANAGEMENT PLAN

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INTRODUCTION

The Union Territory of Lakshadweep comprise of a group of islands in the Arabian Sea between latitude 8 ^{0}and 12 ^{0} 30′ N and between longitude 71^0 and 74^0 E. There are in all 27 islands 3 reefs and 6 submerged sandbanks. Only 10 islands are inhabited (Agatti, Amini, Andrott, Bitra, Chetlat, Kadmat, Kalpeni, Kavaratti, Kiltan and Minicoy) and one island Bangaram has a tourist resort only. Each island is fringed by coral sands and is marked by huge, shallow, calm lagoon on the western side, which separates it from incoming swells of the outer sea by the wall of a reef made up of massive coral boulders and live corals. The total geographical area of the territory is 32 sq.km. All land is classified as agricultural land and the land use area is 28.5-sq.km.The lagoons cover 4200 sq.km with 20,000 sq.km of territorial waters and about 4,00,000 sq.km of Exclusive Economic Zone (EEZ). Length of coastline of UT of Lakshadweep is 132 km. Lakshadweep islands are located at a distance ranging from 200 km to 400 km from the mainland and 60 to 400 km from each other. The palm covered tiny islands sustain and support a population of 64429 (Male – 311106 and Female 31323) as per the provisional population data of 2011 census.)

Since these islands are located within the tropics and extend to the equatorial belt, they have a tropical humid, warm and generally pleasant climate becoming more equatorial in the southern islands of the territory. The temperature varies from 28^0 to 32^0 C and relative humidity of 70-75%. From the point of view of temperature, the climate is equable and no well-marked distinct seasons are experienced. Southwest monsoon is the rainy season, which extends from June to October with 80-90 rainy days a year. The average rainfall is 1640 mm. Annual rainfall decreases from South to North. Winds are light moderate during October to March.

VISION

"To minimize the vulnerability to disaster and the consequent loss of lives, livelihood systems, property and damage to infrastructure and public utilities"

THEME

"Lakshadweep a safer and better place to live in spite of its geographical isolation and proneness to cyclonic storm"

OBJECTIVES

1. Shifting the focus to preparedness by implementation , in a time bound manner an optimal combination of techno economical viable socially acceptable and eco-friendly structural measures of Disaster Management.
2. Continuous modernization of forecasting, early warning and decision support systems.
3. Importing the awareness and preparedness of all stakeholders in Lakshadweep.
4. Strengthening the emergency response capabilities.

CHAPTER-II
Natural Hazards

Surrounded by the vast ocean islands of Lakshadweep are open to storm cyclones and heavy rains. In these islands average elevation from mean sea level is from 2-5m and there is absolutely absence of Hillocks which make them vulnerable for flooding.

a) Cyclonic Storms and Wind Speeds

Some of the areas in islands are low lying and due to heavy rain the people residing in such part of the island have flee or safety and stay in places where water does not reach. The storms and cyclones hit some of the islands in the year 1847, 1891, 1922, 1963, 1977 and during May 2004. The main problem is due to the hitting of waves during such occasions and thereby sea erosion takes place and the coconut trees get uprooted and other vegetation and properties are also damaged. Wind speed in the islands during the month of May to September is normally up to 12.54knots.

b) Storm Surges

Thunderstorms mostly occur in the months of April to June and October and November squalls though occasional are more frequent in the northern islands than in the south. They occur in association with thunderstorms in May and rung the southwest monsoon season. A few of the cyclonic depression and storms which form in the south Arabian Sea during April and May, affect the weather over territory. During the post monsoon months of October to December also a few such systems originating in the Bay of Bengal and traveling westwards emerge into the south Arabian Sea and occasionally affect these islands. In association with these strong winds are caused and heavy rains occur. Table showing number of storms and depression in Lakshadweep islands during last 115 years ending 2004.

Month	Number of storms/Depression	
	Arabian Sea	Bay of Bengal
April	4	-
May	2	-
October	8	-
November	10	7
December	3	3
Total	27	10

c) Tsunamis

West cost is generally less prone as compared to east coast since the tsunamigenic earthquakes generally in the Java trench in the Andaman coast. Historically west coast has recorded tsunami due to earthquake in Makran coast. There is no record on the tsunami affecting the Lakshadweep coast. Though effect of the recent Tsunami of 26th December'2005 was not adversely felt in and around Lakshadweep except for some minor effects in Minicoy and Andrott, yet the smallness of the size of these islands, absence of high points and their geographical segregation makes them very vulnerable to any kind of Tsunami threat.

Man Made Disasters

(a) Fire

Most houses in the Lakshadweep islands have thatched roofs. The islands are full of coconut trees and many other shrub trees. Probability of fire cannot be ruled out due to lightening and contact with electricity wires (especially HT lines) going along with the trees. The wind velocity in the islands is also very high especially in the monsoon period because of the open sea around the islands.

Every island has got a Harbour Department and many other government offices, minor industrial activities are carried out in every island. In addition, every island has got a powerhouse with 3-4 generators of capacity of 320 KVA for lightening islands and operates the electrical machines in factories, offices, harbour etc. These generations operate on diesel oil, which is brought from mainland in drums and stores in tanks of 1500 liter capacity which are installed in the ground near the power house building. In total there are 46 such tanks in islands for the electricity department alone. Due to helicopter services in all the islands. ATF meant for the helicopter use is also transported from mainland and stored in drums. LPG has also been introduced in the islands for domestic consumption. As a whole total quality of inflammable liquids used by islands have been estimated to be around 70 lakhs litres per annum. Even the explosives required for Harbour Department are also stored in the island.

There are chances of fire to this storage since almost all tanks are installed very near to the powerhouses. Besides, Electricity, Port, Fisheries and Harbour Departments are also importing HSD oil and store in tanks and drums for months together for their departmental purposes and also to issue to local islanders to meet their demands.

Oil slicks

Lakshadweep islands are on the trade route. There has been a dramatic increase in passenger and cargo traffic along with passengers and cargo transported by sailing vessels. This increases the mobility of islanders and increase cargo demands. Since these vessels could not enter the shallow lagoons and hence

passengers had to be transported to the jetty via small mechanized boats, catamarans were introduced which could enter small lagoon and berths eliminating the boat journey but studies found that the use of catamarans epitomized the degradation of coral due to technological advances in mode of transportation**. (******)**

Passenger and cargo ships also dump untreated waste into the sea around the islands and discharge waste oil also which causes severe pollution.

Regular monitoring of the oil slicks should be undertaken using remote sensing data. Microwave data can be used to detect any significant oil spill.

To check any oil slicks, we have presence of Navy and Cost Guard, these agencies are involved in any such eventuality.

Marine Pollution

Studies carried out by CESS under the project of Coastal Ocean Monitoring and Prediction System (COMAPS) indicate that the coral reef ecosystem is subjected to stress mainly due to anthropogenic pressures. The high microbial activity along with other marine pollution parameters in the seas around Lakshadweep particularly, off Kavaratti, Andrott and Minicoy is likely to affect the coral reef ecosystem (Ouseph, 1977).Periodic monitoring of ocean pollution has to be undertaken and satellite data can be used especially high resolution multi-temporal data sets.

Tourism

Tourism is an important source of income for the islands population, and Lakshadweep is becoming increasing popular with both domestic and foreign tourist, their numbers and activities need to be carefully monitored and controlled as they cause a threat to the ecology of the island. Carelessness by tourists can disturb the habitat of corals due to walking on the reefs, anchoring of boats as well as release of untreated sewage and disposal of garbage as well as non-biodegradable solid wastes.

Similarly, coral mining, dredging of navigational channels, unsustainable fishing practices, coastal development and souvenir collection are some of the major causes of environmental degradation on Lakshadweep islands.

There is a guided tourism in Lakshadweep. Without help of tourist guide, tourists are not allowed to walk on coral, scuba diving etc. are also done most of using a guide.

All do’s and don’t are explained to tourists

Heritage fee of `. 200/- is charged per adult tourists

Natural Disasters

a). Cyclonic Storms and Wind Speeds

Some of the areas in islands are low lying and due to heavy rain the people residing in such part of the island have flee safety and stay in places where water does not reach.

Control rooms for early warning dissemination system are there in all the islands and all the Government school buildings in islands are identified for shelter of the people for their protection.

b).Rainfall Inundation

The annual rainfall generally decreases from south to north but southwest monsoon rainfall (during June to September) from south to north. The rainfall in the southern islands is more evenly distributed than over the northern islands. Thus while the rainfall in the north during June to September is 70% of the annual it is only 56% in the south. During the post monsoon months of October and November south gets 20% of the annual while north receives 15%. June is the rainiest month everywhere contributing 25% of annual rain in the north and less than 20% in the south. While in north rainfall progressively decreases after June in the south it shows a secondary maximum in October as a result of the influence of the northeast monsoon. The variation in the rainfall from year to year increases from south to north. As in the case of rainfall the number of rainy days during the southwest monsoon season is also greater in the north than in the south.

Control rooms for early warning dissemination system are there in all the islands and all the Government school buildings in islands are identified for shelter of the people for their protection.

(c) Coastal erosion

Coastal erosion is one of the serious problems being faced by the Lakshadweep group of islands. Erosion takes place on account of natural causes like wave action as well as due to destruction of coral reefs. Similarly, the high-speed wind and huge waves hitting the seashore lead to sea erosion resulting into reduction of the size of the islands. Even otherwise, during southwest monsoon season, sea erosion takes place and many low-lying foreshore regions of the islands are washed out.

Seashore protection measures has been done by the Public Works Department by placing big size of granites, holoblocks and tetrapodes into seashore in all the islands to break the heavy waves.

Sea Level Rise

The low level of the Lakshadweep islands makes them very sensitive to sea level rise and therefore the foremost future threat to these island chains is potential global climate change. 1998 was the warmest year on record and the 1990s were the warmest decades since temperature recording began about 150 years ago. Additionally, 1998 also saw the strongest EI Nino ever recorded. The consequences of these were felt strongly in the tropical Indian Ocean, often with temperatures of 3-5^0 C above normal. Severe coral bleaching occurred

during 1998, with mortality rates as high as 90% in some parts of the Maldives and Lakshadweep Islands.

Tsunamis

West cost is generally less prone as compared to east coast since the tsunamigenic earthquakes generally occur in the Java trench in the Andaman coast. Historically west coast has recorded tsunami due to earthquake in Makran coast. There is no record on the tsunami affecting the Lakshadweep coast. Though effect of the recent Tsunami was not adversely felt in and around Lakshadweep except for some minor effects in Minicoy and Andrott, yet the smallness of the size of these islands and their geographical segregation makes them very vulnerable to any kind of Tsunami threat.

Early warning and dissemination Systems

Cyclone warning in Lakshadweep is provided from the Area Cyclone Warning Centres at Chennai and Trivandrum. The Meteorological Department has got two Centres in Lakshadweep, one in Minicoy and the other at Amini. These centres give weather-warning signals.

The warning signals received at the Control Room functioning at the Collectorate is immediately disseminated to all the islands through Fax Phone, and Police Wireless.

The existing infrastructure for warning dissemination comprises basically of the Communication facilities available between the headquarters and the islands. Telegraph Offices are functioning in all islands except Bitra. The island of Bitra is connected to Chetlat through VHF. Apart from the Lakshadweep Police Wireless established in all the islands except Bitra has direct contact with Kavaratti and the Police Wireless at Kavaratti has direct contact with Lakshadweep Office at Cochin. Inter State Police Wireless (ISPW) station at Trivandrum and New Delhi. Similarly, the Wireless System of I.R. Battalion is also available. The NIC network has contact with New Delhi. All the wireless networks except ISPW can also be used for inter-island communication. Telephones with group dialing facility, fax and STD are available in all islands.

All the ten exchanges in Lakshadweep are electronic switches of CDOT, varying in capacity from 186 lines in Bitra to 2000 lines in Kavaratti and are steady. The Media to mainland as well as between islands are also steady as shown below:

Agatti	Have a satellite link with mainland and a UHF link to Kavaratti as an alternative route.
Amini	Have a UHF link to Kavaratti and another UHF to Kadmat which in turn is linked to Kiltan Satellite via another UHF.
Andrott	Linked to mainland by Satellite
Bitra	Connected to Chetlat by UHF which in turn is connected to Kiltan Satellite by another UHF.
Chetlat	Connected to Kiltan satellite by UHF

Kadmat	Connected to Kiltan Satellite by UHF and also have a UHF link to Kavaratti via Amini UHF
Kalpeni	Have a Satellite link to mainland
Kavaratti	Have a satellite link to mainland and UHF links to Agatti and Amini so that this can serve as alternative route for Agatti, Amini and Kadmat.
Kiltan	Have a satellite to mainland and is the main link to mainland for all the northern group of islands.
Minicoy	Have a satellite link to mainland.

In case of power failure, in all the exchanges standby power is from two sets of batteries, which can take the load of the exchange up to 20-24 hours and the back up to this is by one engine alternator of required capacity each in all the exchanges. Proposal is being sent for the provision of one INMARSAT in Kavaratti for use in an extreme emergency, but this is yet to be finalized. Indian Navy has Naval Detachments headed by a Commissioned Officer each stationed at Kavaratti and Minicoy consisting of about 70 personnel. Wireless network of Indian Navy can be used for communication.

Prevention and Mitigation Plans

The disaster mitigations works mainly address the following:

(i) minimize the potential risks by developing disaster early warning strategies,
(ii) prepare and implement developmental plans to provide resilience to such disasters,
(iii) mobilize resources including communication and tele-medicinal services and
(iv) To help in rehabilitation and post-disaster reduction.

Disaster management on the other hand involves:

(i) Pre-disaster planning, preparedness, monitoring including relief management capacity.
(ii) Prediction and early warning.
(iii) Damage assessment and relief management. Disaster reduction is a systematic work which involves with different regions, different professions and different scientific fields, and has become an important measure for human, society and nature sustainable development.

Disaster management is an exercise in logistics and information processing and distribution. Disasters will often overwhelm mechanisms for coordination and communication. In addition, the mechanisms to bring data and information to decision makers are uncoordinated. Information is often produced from disparate sources and transmitted in whatever format the provider prefers, requiring significant effort to compile it into a form that provides a coherent picture or even thwarting integration altogether. Data standards are often inconsistent and, even more dangerous; users are sometimes unaware of the limitations and uncertainties in the data or are presented with conflicting interpretations of data without the means to assess the reliability of the sources. All of these issues reduce

the efficacy of the decision-making process. The problem is compounded because information delivery system in many cases becomes overloaded.

In order to develop the Information Technology architecture Technology architecture for case scenarios application it is essential to understand the disaster event from the perspective of those responsible for assimilating the data. The effective use of this information for producing operational plans to deal with the disaster event and its aftermath is critical. Disaster management is not a linear process that can be documented easily in a flow chart with a readily apparent beginning and absolute end point. Rather, it is a cyclical process of approximation, response and re-calibration that involves many different actors whose roles in relation to one another are likely to change based on circumstances and the stage in the process. The one constant evident in the process is the chaos that drives the system. Another absolute is that the effective, efficient application of information technologies and products has the capacity to improve the system in a number of ways that will suffer. To develop effective architectures and technologies that meet the needs of the disaster management community there must be a precise understanding of the disaster management life-cycle (Mitigation, Preparedness, Response and Recovery), the information Communities that combine to define the disaster management community and the information processing requirements associated with the cycle of data development, dissemination, analysis and review. In addition, and perhaps more importantly, there must be a precise understanding of the dynamics between these comp9onents and the "interfaces" that these dynamics imply. Only with such and understanding can we effectively model the process and derive technology solution.

The island geographical area are limited and spread out with associated lagoon environment covering a larger area. The island has high population density with thick cover of coconut plantations. Satellite remote sensing forms an important tool for monitoring the island and its lagoon area. As the area is small a high resolution data with a better than one meter resolution would be ideal to generate spatial database for the area. Most of the islands are flat with a gentle topography. The highest elevation is around 6 to 7 meters in some of the islands. Most of the existing spatial database has been generated by Centre for Earth Studies, Thiruvananthapuram in collaboration with the Science and Technology Department of Lakshadweep. They have developed elevation data with the Science and Technology Department of Lakshadweep. They have developed elevation data with one meter contour interval for all the islands and land use/ land cover map on 1:4000 scales under the Integrated Coastal Zone Management Programme.

Improving Infrastructure

(1) Upgrading the IT infrastructure to be created in the Disaster Management Cell. Since the UT is very small, it is proposed to conduct GIS study for the entire UT.

(2) Enhancing the communication infrastructure capabilities, which would include a mix of VSAT communication, video conferencing and other satellite based communication systems.

(3) Carrying out engineering research towards creation of hazard resistant structures and shelters.

(4) Enhancing the scope of Shelter Belt plantation through Community Participation using suitable species of plants which can bind and stabilize the sand at identified locations.

(5) Establishment of an Emergency Operation Centre (EOC) at Kavaratti.

(6) Enhancing the existing Fire Fighting mechanism on all the islands with suitable trained manpower.

(7) Enhancing the existing medical facilities along with provision of a mobile hospital and suitable mechanism for storage and distribution of medicines during an emergency.

(8) Augmenting the existing transport facilities from mainland to the selected islands through increase in number of flights, extension of the existing landing facilities and expansion of airport at Agatti, provision of additional landing facilities at Kavaratti and Kadmat and provision of helipads with helicopters having accommodation of at lease 25 persons each.

(9) The existing connectivity through the sea should be improved by providing more number of vessels with additional frequency and carrying capacity both for the passengers and cargo. Additional facilities for provision of Ramps as well as Ro-Ro facility with the cranes and other equipments may be provided at least on 4 islands to help transport the boats from sea to the mainland during the time of calamity.

(10) The existing communication system should be enhanced on priority by providing the Internet connectivity with broadband facility and Audio-Video communication and conferencing so as to establish communication with the mainland and various islands during the time of disaster.

Improving Disaster Management

(1) Preparation of the Risk Vulnerability Maps, creation of Disaster Management Library, creation of informative and dynamic Disaster Management Website.

(2) Provision of V-SATS as well as mobile communication devices along with KIOSKS and facilities such as improvement of existing Tele-medicine be considered along with improvement of the existing communication network.

(3) The existing scheme of Ex-gratia payment/compensation for losses/ damage to the coconut trees due to natural hazard need to be reviewed in the light of the existing conditions on the islands. This is in view of the uniqueness of these islands, which grow coconut plantation as major source of livelihood, and there are no other options as on the mainland. Similarly, the compensation to be paid to the damaged boats during the natural calamities needs

to be reviewed. A suitable mechanism to compensate such losses through the scheme of insurance may also be considered. Payment of subscription for the premium for a suitable insurance policy may be made by each of the subscriber and can be subsidized by the Lakshadweep Administration by partial payment of the same.

(4) As per the existing system there is no financial mechanism or facility disaster relief fund for disbursement of Ex-gratia payment to the affected people. There is an urgent need to review this policy and make such funds available with the Lakshadweep Administration along with allocation of powers for their disbursement to the appropriate authorities.

(5) These recommendations may be considered on priority so as to augment the existing facility and enhance preparedness and response of Lakshadweep Administration so as to reduce the vulnerability of various islands and improve the existing infrastructure and manpower leading to effective implementation and management of disasters on these islands.

Human Resource Development: Training & Capacity Building

The need for a well-trained pool of man-power and organization including voluntary organizations in dealing with disaster is recommended. The following priority area of capacity building can be identified for immediate implementation in Lakshadweep.

(1) Establishment of a Disaster Management Cell with adequate manpower and infrastructure. This cell would act as the nodal agency for Disaster Mitigation and Response activities. The proposed cell would act as the nodal agency for Disaster Mitigation and Response activities. The proposed cell would act as a multi disciplinary, multi approach organization and would carry out the entire gamut of activities related to Disaster Management.

(2) Training of officers, staff from stakeholder department resource personals, people's representatives and identified NGOs. The programme should focus on the concept of training of trainers (TOT). All the abbreviation needs to be explained as an appendix or in the text.

(3) Conducting seminars, workshops and community based programmes for sensitization of the stakeholder including PRIs and woman representatives.

(4) Carrying out specific research/studies by the identified departments either by themselves or with the help of national level organizations. The objective is to create database and a documented body of research, which would cater to the specific disaster management needs of Lakshadweep.

(5) Formulation of awareness campaigns and strategies for implementation for Risk Mitigation activities.

CHAPTER – IV

MAINSTREAMING DISASTER MANAGEMENT CONCERNS INTO DEVELOPMENTAL PLANS, PROGRAMMES AND PROJECTS

In the event that a cyclone strikes Lakshadweep, an ideal level of cyclone preparedness would require that the actual mitigation process is set into motion immediately. Since time is of essence in such a situation no time can be spared for planning and organizing the response. In the eventuality of a cyclone the preparedness has to be such that the planning and organizing aspects of mitigation process are already taken care of and a functional, spontaneous mechanism (operated by a 'trigger') is already in place to respond to the cyclone situation. The 'trigger' in this scenario is the Ist warning 'cyclone Alert' issued by the Indian Meteorological Departmental (IMD) to the Lakshadweep Administration.

The IMD issues warnings to the State Government officials in two stages. The first stage warning known as 'Cyclone Alert' is issued at least 48 hours in advance of the commencement of adverse weather. The second stage warning known as the 'Cyclone warning' commences at least 24 hours in advance. These warnings are issued at 3 hourly intervals giving the latest position of the cyclone, its intensity (maximum sustained wind speed) and likely time and point of land fall together with storm surge height and the type of damage expected. For an ideal level of cyclone preparedness even before the 'Cyclone Alert', the mechanisms on the following fronts will have to be in place:

1. ORGANISATION

The Central Cyclone Committee at Kavaratti and the island cyclone committees should be in place. Government machinery at all levels should be fully geared up to meet any eventuality. Officers of all departments should be fully involved and trained in cyclone preparedness. The committee on the mainland will have to play a major role since the islands are very much dependent on the mainland. All the members of the above committees should be apprised of the responsibilities and duties of committees, viz.

1) Pre-cyclone review
2) To educate the public on cyclone hazards and the protective steps to be taken before, during and after a cyclone
3) To make arrangements for emergency action

4) Rescue and rehabilitation

5) Post cyclone Review

The committees should meet in April and August every year as these months fall just before the cyclone season. In these meetings, a comprehensive review of the actions already taken and yet to be taken will be made. The committees would need to realize that there is a need for increased visibility of the concern for disaster management since this concern tends to get relegated to the background in the day to day administrative duties and responsibilities. Every year in April and August the cyclone committees will send communications to the various departments to be cyclone ready.

A comprehensive list of activities related to cyclone preparedness should be prepared. Some of these activities are communication, transport, evacuation, search and rescue, temporary shelter, food and drinking water, clothing, medicines, health and sanitation, accessibility and public information etc. Every department can be identified with those activities and the plans should be prepared for the execution of those activities in consultation with those departments. Instructions and checklists relating to the activities should be sent to all the departments. Copies of these instructions and checklists should be kept with the cyclone committees as well.

Each department should set up teams for the execution of the activities assigned to them. The names of the members of the team as also the work assigned to them should be informed to the cyclone committees on all Islands. These teams could be trained to respond to an emergency situation especially to realize that time is of absolute essence. The Central Cyclone Committee should be in knowledge of all such departmental teams, their members and works assigned to them. In the event of a cyclone, Control Rooms are to be set up on each island, under the supervision and control of the Convener/Chairperson of the island cyclone committee. The island control room would be directly under supervision and control of the CDC at the Control Room Kavaratti. The members of the cyclone committees would work in the control rooms. Being the departmental heads, they will also supervise the activities to be done by their respective departments.

All the departments should also keep ready a list of persons to be deputed for work at the Control Room as and when requisitioned. From these lists, the cyclone committees would select persons (along with reserve list) to work at the Control Rooms as and when they are

set up. Also, the departments should be in a position to assist the Control Room with material and equipment as well. The cyclone committee would make known, the location of the control room and keep a checklist of equipment and material required and the sources/departments identified for the procurement.

2. DEPARTMENTS

The heads of the cyclone committees must ensure that all the departments are 'cyclone ready' at all times, especially in the months of April and August each year. Cyclone readiness, here, would mean that the departments, in consultation with the cyclone committees identify the activities, the departments will have to make plans, sub-plans for sub-activities, and put in place a dedicated and efficient team to carry these plans and sub-plans. The teams, also known as 'Quick Response Team' (QRTs) would have specific 'mandates' with freedom and resources to fulfill it. Relevant training should be given to these QRTs with specific realization that time and efficiency are the most critical of factors. Any change in the composition of the QRTs should be immediately brought to the notice of the cyclone committees especially in the months of April and May. Some of the activities, which need to be taken care of by the departments before 'Cyclone Alert', are:

Communication

Adequate advance warning of the cyclone and its quick and effective dissemination to all concerned is imperative for disaster preparedness. There is a need for synergisation of various departments/components of response. Accordingly all the communication resources viz. telephones, NIC, Telex, Telegram, wireless etc. will have to be brought into play and attuned to the requirements of a cyclone preparedness. The concerned departments viz. Post & Telegraph, Satellite Earth Stations, AIR, Door Darshan, ISPW, Police, NIC etc. must ensure that they have teams to do this. They must also ensure that all the modes of communication are functioning smoothly and efficiently.

Effective communication at all levels is imperative for sufficient cyclone preparedness and adequate response. Therefore, establishment of V-Sat systems is recommended since terrestrial communication systems are prone to be the earliest causalities in cyclones. A V-Sat communication system typically takes only thirty minutes to be installed. Therefore it can be kept in a stand-by position to be set-up immediately after the

cyclone. This way the deficiency in communication and loss of communication during cyclones can be prevented.

Transport

In the event of a cyclone, adequate preparations must be made for search, rescue and evacuation operations. Transport being a major problem in Lakshadweep, this aspect has to be assessed and dealt with very carefully. None of the present facilities of transport are capable of a quick response desired in a cyclone situation, especially in regard to Inter-Island and Island-Mainland emergency transport operations. Even though, the services of the all-weather ships vice **M V Bharathseema, M.V.Kavaratti, M.V. Lakshadweep Sea & M.V.Arabian Sea** would be of immense use in the cyclone situation. The four all-weather cargo barges(Mv. Thinnakara, M.V Ubaidulla, MV Laccadives and MV. Cheriyam) too can be put to use for transport of people, relief teams, food, water, medicines, essential supplies etc. Therefore, they need to be well serviced and ready for such a situation. Besides this, the service of mechanized Tuggs and boats are also used for search and rescue during disaster situation.

Port and Fisheries Department, which have mechanized boats and sufficient persons, should keep them well-serviced and ready for use. The mechanized boats would be of immense value for the quick response search and rescue operations within the waters of any particular island. The preparedness on the above would be of critical importance in April and August each year.

For an effective and quick, search, rescue and evacuation, operation, the services of the Indian Navy, Indian Air Force, Indian Coast Guard, Pawan Hans and Shipping Corporation of India, **Lakshadweep Marine Force,** would be imperative. Therefore in April and August every year, it is required that the Administration (Port Department under the control of CDC) should be in touch with them to requisition their services should the occasion arise. The Port and Harbor departments should ensure that embarkation/disembarkation jetties on all the islands, and all the infrastructure relating to transport is in good shape, and ready for any emergency use.

Health& Medicine.

During cyclones, health hazards are mainly due to cyclonic wind, heavy rain, and unusual tidal waves resulting in floods and pollution, water logging due to heavy rain and tidal waves. Some of the above factors lead to the pollution of most of the water sources and result in shortage of drinking water. Out-break of water borne diseases and respiratory infections are to be expected. The Medical establishments should be equipped to prevent and control water-borne diseases and manage respiratory infections and injuries etc. Adequate quantities of medicines, bleaching powder, chlorine tablets and trained manpower have to be ensured.

Teams of Doctors and Para-medical staff should be identified and given special training in disaster management and kept ready to swing into action at the shortest notice during the hour of crisis. The Hospitals and medical stores should be equipped to face the special situation. The hospitals and dispensaries should have the readiness to set up emergency and trauma centres. There should be a mechanism to elicit the response of entire Medical framework. In case of dire emergencies the Department should be in a position to requisition emergency medical aids from the nearby states.

Food and Civil Supplies

It should be ascertained in April and August each year that the stock of essential commodities like rice, sugar, oil etc. is adequate. Here, some allowances need to be made for wastage and for extra requirements during a cyclone situation. Construction of 2500 MT of FCI Godown constructed at Androtт island is completed. In case there is any shortfall, the department/Supply & Marketing Society should be in a position to bridge the gap.. It should be made sure that the godowns are properly maintained and ready to avoid/ minimize the damage expected to the stored goods from the cyclonic elements of high winds and seawater.

Public Works Department

Every year in April and August the PWD will communicate to the Central Cyclone Committee, the buildings identified for use as shelters during a cyclone event. The cyclone committees will select a suitable person form the list of names forwarded to it by the various departments and put him/her in charge of the designated shelters.

The PWD will inspect the roads and tanks and take suitable action for strengthening the buildings or demolishing the condemned buildings and removing the dead and dying trees from the roads. The PWD will also ensure that there is an adequate stock of wooden boards and metal

sheets to be used for protection from wind and rain. Also, it will make proper arrangements to cover the wells with metal sheets, securely, so that sea-water does not pollute drinking water resources.

Electricity

The Electricity Department will ensure that there are enough stand-by equipment and an adequate supply of diesel for the continued production of electricity in a cyclone situation. Repair and maintenance works for the transformers, electrical cables and the power-house should be carried out to ensure that nothing untoward happens at the time of cyclone. The department will also inform the public the precautions that they need to take in respect of electricity in a cyclone situation.

Information and Publicity

No efforts on cyclone preparedness can be complete without the information about cyclones being disseminated to the public. This is imperative to ensure the active involvement and assistance of the public.

The information and Publicity Department will arrange suitable programmes on the All India Radio Station at Calicut for educating the Public about the possible hazards of cyclones and the steps to mitigate the distress due to cyclone in local language. This is to be done frequently in April and May and from September to December, particularly in the programme called “Dweepukarkuvendi”, and in the local news programme. At times this may be done in the form of interview, short lectures and small interesting features etc. The school children should be encouraged to hear these broadcast and the teachers should periodically quiz them on the information. Arrangements should also be made to exhibit suitable films in local language on hazards and precautions on cyclone. Posters clearly depicting the hazards and precautions to be taken by the affected persons are to the exhibited at prominent places. Popular articles in the Lakshadweep Times which is the only mass media in Lakshadweep would be of considerable use.

Pamphlets containing detailed precautions to be taken by the public at the commencement of the cyclone season, and steps to be taken just before the cyclones may be

published for dissemination to the public. These may also be pasted at prominent places. Draft pamphlets may be seen at Annexure A.

Voluntary Groups

The Department of Social Welfare, along with Directorate of Panchayat and District Panchayat will prepare a list of persons – government servant/voluntary groups/general public – who are willing to extend their services to the cyclone committees. Such lists will be forwarded to the cyclone committees. No level of cyclone preparedness is completed unless the public initiative, knowledge and public support are made use of. The trigger mechanism needs to take into account, the trigger systems of the community to respond to the disasters. It is imperative that the traditional techniques and local knowledge of cyclone management be dove-tailed into the efforts of the administration.

Education

The services of Anganwadi workers and Gram Sevikas can be utilized to disseminate information about the cyclones and various aspects of cyclone preparedness among the public. They can encourage people and voluntary groups to extend help to the administration in preparing for a cyclone situation and tiding over it as and when it comes. Their services, as also those of the voluntary groups would be crucial in the post disaster management stage.

Fisheries

The department of Fisheries will prepare a list of Fishermen/Boat drivers etc. who may be put at the disposal of the cyclone committees at the time of cyclone. Their services would be crucial in the search and rescue operations at the island level.

Police

A team of Police personnel should be identified for patrolling, search and rescue of stranded persons during the cyclone event.

CHAPTER – V

PREPAREDNESS MEASURES

The goal of Disaster Preparedness programs is to achieve a satisfactory level of readiness to respond to any emergency situation through programs that strengthen the technical and managerial capacity of governments, organizations, and communities. During the preparedness phase, governments, organizations and individuals develop plans to save lives, minimize disaster damage, and enhance disaster response operations. Preparedness measures include preparedness plans; emergency exercise/training; warning systems; emergency communications systems; evacuation plans and training; resource inventories; emergency personnel/ contact lists; mutual aid agreements; and public information/education.

ORGANIZATION

There is no international organization / society / agency engaged in the filed of natural disaster prevention and reduction in the Union Territory of Lakshadweep. There is a Lakshadweep Disaster Management Authority at Kavaratti. Administrator, Union Territory of Lakshadweep is the Chairperson of the Lakshadweep Disaster Management Authority. Other members of this Authority are:-

1. Administrator	**:**	**Chairman**
2. Secretary (General Administration & Services)	**:**	**Chief Exe. Officer**
3. Member of Parliament UT of Lakshadweep	**:**	**Member**
4. President – Cum Chief Counselor, District Panchayat	**:**	**Member**
5. Superintendent of Police, Lakshadweep	**:**	**Member**
6. Commandant, I.R. Battalion	**:**	**Member**
7. Managing Director, LDCL	**:**	**Member**
8. Director of Medical & Health Services	**:**	**Member**
9. Executive Engineer (Electrical)	**:**	**Member**

The Administration also constituted a District Disaster Management Authority as per Disaster Management Act 2005.

1. Collector-cum-Development Commissioner	**:**	**Chairperson**
2. President-cum-Chairperson (DP)	**:**	**Co-Chairperson**
3. Additional District Magistrate	**:**	**Chief Executive**
4. Superintendent of Police, Lakshadweep	**:**	**Member**
5. Commandant, I.R. Battalion	**:**	**Member**
6. Port Officer	**:**	**Member**
7. Director of Medical & Health Services	**:**	**Member**

In order to have disaster resistant buildings, a Hazards Safety Cell is constituted. The activity undertaken by this cell is to create awareness on various kind of hazards. All future construction by LPWD should be based on National Building to ensure safety of the building and structures from various hazards like flooding,. Earth quake, cyclone which has potential to become disaster. Hazards Safety Cell established as per the direction f MHA. Safety Hazards Cell constituted as per Notification F.No.41/1/2005-LR dated 31.08.2010.

The Composition of the safety Hazard cell:-

Chairman:-

1) **Collector-cum-Development Commissioner**

Members:-

- **Superintendent of Police**
- **Additional District Magistrate**
- **Superintending Engineer (LPWD)**
- **Director, Port Shipping & Aviation**
- **Director of Panchayats**
- **Executive Engineer, Electrical**

The Composition of the Island level Authorities is as follows:-

1. **Deputy Collector, Minicoy/SDO/ASDO/Authorised Officer : Convener**
2. **Asst.Engineer,/Junior Engineer, PWD**
3. **Asst.Engineer,/Junior Engineer, Electricity**
4. **Medical Officer,**
5. **Circle Inspector/Sub Inspector of Police**
6. **Information Assistants**
7. **Agricultural Officer/Agricultural Demonstrator**
8. **Assistant Director of Fisheries/Fisheries Inspectors**
9. **Headmaster**
10. **Veterinary Assistant Surgeons/Farm Managers**
11. **Telecom Officer BSNL.**

The Chairperson and members of the Village (Dweep) Panchayat are also associated with the concerned island level Lakshadweep Disaster Management Authority.

COMMUNICATION

Cyclone warning to Lakshadweep is provided from the Area Cyclone Warning Centres at Chennai and Trivandrum. The Meteorological Department has got two Centres in Lakshadweep, one in Minicoy and the other at Amini. These Centres give weather warning signals. Indian Navy has Naval Detachment headed by a Commissioned Officer each stationed at Kavaratti and Minicoy consisting of about 70 personnel. Wireless network of Indian Navy can be used for communication. Telegraph offices are functioned in all islands except Bitra. The island of Bitra is connected to Chetlat through VHF. Apart from this, Lakshadweep Police Wireless established in all the islands except Bitra has direct contact with Kavaratti and the Police Wireless at Kavaratti has direct with Lakshadweep Office at Cochin. Inter State Police Wireless (ISPW) station at Kavaratti has direct contact with ISPW station at Trivandrum and New Delhi. Similarly, the wireless systems of I.R.Battalion are also available. The NIC network has contact with New Delhi. All the wireless networks except ISPW can also be used for inter-island communication. Telephone with group dialing facility, fax and STD are available in all islands.

All the TEN exchanges in Lakshadweep are Electronic switches of CDOT, varying in capacity from 186 lines in Bitra to 2000 lines in Kavaratti and are steady. The MEDIA to mainland as well as between islands are also steady as shown below.

Agatti	:	Have a satellite link with mainland and UHF line to Kavaratti as an alternate route.
Amin	:	Have a UHF link to Kavaratti and UHF to Kadmat which in turn is Lined to Kiltan satellite via UHF.
Androtт	:	Linked to mainland by satellite.
Bitra	:	Connected to Chetlat by UHF which in turn is connected to Kiltan Satellite by another UHF.
Chetlat	:	Connected to Kiltan satellite by UHF.
Kadmat	:	Connected to Kiltan satellite by UHF and also have a UHF line to Kavaratti via Amini UHF
Kalpeni	:	Have a satellite link to mainland.
Kavaratti	:	Have a satellite link to mainland and UHF links to Agatti and Amini so that this can serve as alternate route for Agatti Amini and Kadmat.
Kiltan	:	Have a satellite to mainland and is the main link to mainland for all the northern group of islands.
Minicoy	:	Have a satellite link to mainland.

In case of power failure, in all the exchange standby power is from two sets of batteries, which can take the load of the exchange up to 20-24 hours and the back up to this, is by one engine alternator of required capacity each in all the exchange. Proposal is being sent for the provision of one INMARSAT in Kavaratti for use in an extreme emergency, but this is yet to be finalized.

TRANSPORT

Lakshadweep has two all weather ships viz **M V Bharathseema, M.V.Kavaratti, M.V. Lakshadweep Sea & M.V.Arabian Sea** with a capacity of about 1586 passengers together. Apart from these, there is a fair weather Ship, M.V.Dweepsetu and two inter-island ferry vessels and 25 mechanized boats. There are also four all weather cargo ships with capacity of 300 tons each. Port and Fisheries Department have mechanized boats and sufficient trained persons are also available to man these boats. The island – wise details of these crafts/boats are provided at Annexes D,E & F.

In addition to above, Lakshadweep Harbour Works with Deputy Chief Engineer stationed at Kavaratti has expertise and equipment for use in a natural calamity. As detailed island – wise list of crafts along with their officers – in – charge is placed at Annexure E.

STOCKOF ESSENTIAL COMMODITIES

In each island there is a store for essential commodities like rice, sugar, Kerosene Oil, etc. The godowns are spacious to accommodate the monsoon requirements. Essential commodities are transported from the mainland by the cargo barges mentioned above. Construction of 2500 MT capacity of FCI Godown is nearing completion in one of the Island. In case of emergency, the cargo barges can be utilized for transporting essential items from one island to the affected island. There are government and private vehicles in each island. In time of emergency, these can also be used.

MEDICAL FACILITIES

There is a 50 bedded hospital viz., Indira Gandhi Hospital at Kavaratti. It is headed by a Medical Superintendent and is the referral hospital for the Union Territory. In Minicoy Island there is a 20 bedded hospital headed by a Chief Medical Officer. There are three 30 bedded Community Health Centers the islands of Andrott, Amini and Agatti. In the remaining islands except Bitra there are Primary Health Centre each having 10 bed capacity. There is a First Aid Centre at Bitra. In addition a 75 bedded Speciality Hospital with all facilities commissioned at Agatti. All the Hospitals, Community Health Centres and Primary Health Centers have ambulance facility.

COMMUNITY BASED DISASTER MANAGEMENT (CBDM)

In Lakshadweep Disaster Management is implemented incorporating all stock holders of Administration including Elected representatives, Voluntary Organizations and General Public. Thus Management of Disaster is a collective mechanism.

CIVIL DEFENCE AND HOME GUARD

Administration has already established a Civil Defence set up under Disaster & Relief Managent Directorate. 200 volunteers has already been engaged in all 10 islands, utilizing Civil Defence Force for Lakshadweep incorporating existing home guards. The distribution of the Volunteers island vise is as detailed.

Sl.No	Name of the island	No. of Volunteers		Total
		Male	Female	
1	Bitra	5	3	8
2	Chetlat	15	5	20
3	Kiltan	15	5	20
4	Kadmat	15	5	20
5	Amini	16	6	22
6	Agatti	16	6	22
7	Andrott	16	6	22
8	Kalpeni	15	5	20
9	Minicoy	16	6	22
10	Kavaratti(SDO)	15	5	20
11	Kavarati(Collectorate)	02	02	04
	Total			200

NCC, NSS & NEHRU YUVA KENDRA (NYK)

Full fledged NCC & Scout wing are available in all schools of Administration and National Service Scheme volunteers are available in University Centres of Calicut University and all Plus two schools in islands (Details regarding this given in Annexure C).

FIRE BRIGADE AND CIVIL POLICE

Civil Police and Fire Force in Lakshadweep are equipped and trained to combat any natural calamities.

MEDIA

Awareness about natural calamities and weather warning has been regularly carried out through available electronic and print media like Lakshadweep Times, LDCL TV and AIR, Kavaratti. Regular workshop involving Educational Institutions, Voluntary Organizations are regular feature in Lakshadweep to carry out awareness about natural calamities.

TECHNO LEGAL REGIME

Immediate:

So as to implement various activities related to management of hazards on the Lakshadweep islands, the existing provisions of CRZ Notifications, 1991 need to be reviewed and suitable amendments be made to these provisions.

Necessary funds may be made available to Lakshadweep Administration for disbursement of assistance during the hazards.

Long - term :

The existing scheme for payment/compensation for losses/damage to the coconut trees due to natural hazard need to be reviewed in the light of the existing conditions on the islands. This is in view of the uniqueness of these islands, which grow coconut plantation as major source of livelihood, and there are no other options as on the mainland's. Similarly, the compensation to be paid to the damaged boats during the natural calamities needs to be reviewed. A suitable mechanism to compensate such losses through the scheme of insurance may also be considered. Payment of subscription for the premier for a suitable insurance policy may be made by each of the subscriber and can be subsidized by the Lakshadweep Administration by partial payment of the same.

MEDICAL PREPARDNESS

PREVENTIVE MEASURES

Water-borne diseases are one of the most common phenomena during cyclone. Diarrhea diseases are one of the earliest manifestations but diseases like typhoid, infective hepatitis and poliomyelitis are usually seen after about fortnight. Therefore, emphasis, as far as preventive measures are concerned, is given to consumption of safe drinking water, public education, including dos and don'ts and sanitary arrangements.

SAFE DRINKING WATER: Safety of drinking water can be ensured either at he point of storage or distribution. Various methods practiced are:

a).Boiling water: Water could be boiled for 10 to 15 minutes and then stored in clear and covered containers. This could be used after it has cooled. Use of chlorine tablets: Nascent chlorine makes water safe for drinking. Bleaching powder: Bleaching powder is used as a disinfectant usually for bigger sources of water monitoring: Chlorine content of water is estimated by chlorinometer. At least 0.245ppm of chlorine should be available in water for safe drinking. Microscopically and bacteriological examination including stool culture should also be done at frequent intervals.

DISPOSAL OF WATER AND EXCRETA: Existing infrastructure is likely to become ineffective. Therefore, adequate arrangements for disposal of wastes should be planned in advance, so that it can be executed immediately.

FLY PROOFING: Areas including houses/shelters should be disinfected regularly by spray of bleaching power.

HEALTH EDUCATION : Use of mass media like radio, newspaper, pamphlets, leaflets containing small repeated messages on following points should be transmitted to eh population:

- personal hygiene
- water consumption
- use of boiled water and chlorine tablets
- food consumption - Avoid use of cheap ice creams, candles, food prepared and stored in the open.
- Non- consumption of stale and overnight food, etc.

SURVEILLANCE : A close watch is required to be kept so that any rise in disease can be detected at very early stage. This can be done only with a careful watch at the sub-centre level.

Early detection of rising pattern of diseases

The rising pattern of any disease can be detected easily by keeping a watch at sub-centre and PHC levels by noticing more number of cases with similar symptoms coming from a particular village or locality (Say more than 5 persons/locality).

In order to operational the above arrangements, the following actions may be necessary:

a) Meeting of doctors and staff with district health officials for making them aware about the intentions;
b) Specific instructions with do's and don'ts to health officials up to the sub-centre level;
c) Weekly collection, compilation and analysis of information at PHC and District levels to identify rising trends. Information sought from sub-centre and PHC should be small in order to save time in filling forms;
d) Periodical inspection up to the sub-centre levels by the district officials.

Immediate investigation and action on noticing rising patterns:

In case of rising trend of diseases, arrangements for immediate investigation should be made. Investigation should include the following points:

a) Actual assessment of the situation by the district health official;
b) Detection of the source of spread of infection by the identification of mohalla, house, person;
c) Investigation of diseases like in case of diarrhea diseases by stool examination, stool culture, etc.,
d) Immediate isolation of the source of its treatment;
e) Requisition of special medical team for investigation from the District or medical colleges.

Preventive Measures Against Diseases:

Details have already been emphasized earlier specific points are:

a) Disinfection of water sources by chlorination at intervals;
b) Distribution of chlorine tablets to local population with necessary instructions for its uses;
c) Immunization against diseases for high-risk group population;
d) In case of municipalities and notified areas, arrangements for proper disposal of water and human excreta;
e) Publicity and health education with pamphlets, cinema projectors and newspapers about do's and don'ts;
f) Health check up for high-risk group like children below years, pregnant and lactating mothers and old persons in Anganwadis, Balwadis, Chaupals, schools etc.,
g) Close surveillance.

(4) Immediate action in case of rising disease patterns:

a) Arrangement for extra manpower/doctors, paramedics and other staff;
b) Arrangement for quick mobility;
c) Sufficient drugs, vaccines and other medical stores;
d) Arrangements for establishment of evacuation/isolation camps;
e) Arrangement for close supervision and periodical evaluation and reporting.

Feedback information at various levels:

Sub-Centres, PHC's, CHS's, District Hospitals, etc. Establishment of control rooms at the affected PHC, District and State Headquarters.

II ADMINISTRATIVE ARRANGEMENTS

I. Identification of Target Groups

In flood prone areas, villages and PHCs should be identified which are commonly affected by flood. Have done SO, attention may be paid to target groups like children, pregnant and nursing mothers, old and infants, as they pose special health challenges.

2. Procurement of Medical Stores

There is no need to stock a large quantity of a number of medicines. It is expected that only about 10& of the affected population may require medical treatment. Most common diseases are diarrhea diseases including gastroenteritis; dysentery and cholera, typhoid, infective hepatitis and later poliomyelitis, other common diseases are respiratory poliomyelitis. Other common diseases are respiratory infections, skin diseases, malaria and snake bites. Medical stores should include disposable syringes also.

3. Disinfection of Drinking water Sources and frequent monitoring at Distribution Point like House etc. Necessary administrative measures may be taken to distribute chlorine tablets, spray of bleaching powder and estimate chlorine content of water at distribution points.

4. Establishment of Medical and Health Camps.

5. Setting up of Epidemiological Surveillance. Epidemiological surveillance should be set up through PHC and incidence of epidemic prone disease should be notified to the health authorities regularly.

6. Publicity and Health Education Adequate publicity should be given to inform the people about the location of various medical and health camps and other medical units. People should be informed from time to time about the public health measures to be practiced by them.

7. Monitoring and Review.

a) A cell should be established under the charge of senior officer in the Directorate of Health Services to exclusively monitor and review the public health measures in the affected areas in the State.

b) The epidemiological cell of the Directorate of Health Services should be alerted and asked to keep itself ready for any eventuality if any epidemic disease breaks out. The unit should also be asked to take anticipatory preventive measures in the form of obtaining information in respect of epidemic prone disease, immunization of preventable diseases etc. The emergency drugs, vaccines etc. should be procured and kept ready.

c) Similarly, one officer should be identified at the district level to coordinate and monitor all public health measures for flood affected areas in the district.

d) The Directorate of Health Services should send regular information to the Directorate General of Health Services where an officer has been earmarked to receive all the information and process the same for onward transmission to the Department of Health.

III CHECK LIST OF POINTS FOR MONISTORING ARRANGEMENTS FOR PUBLIC HEALTH & MEDICAL PROBLEMS IN FLOOD PRONE AREAS.

I. GENERAL

1. Have all the villages, which are affected or are likely to be affected by flood and cyclone, been identified?
2. Have the requirements of medical and paramedical staff or attending to the health needs of cyclone-prone villages during the period been assessed?
3. Have the medical and paramedical personnel who may be required to be deployed been identified?
4. Have such personnel been given special training to attend to medical and public health problems, which may arise in flood areas?
5. Have surveillance teams consisting of bacteriologists to conduct on the spot random stool examination been constituted?
6. Has the requirement of drugs, disinfectants like bleaching powder/chlorine tablet and vaccines etc been worked out?
7. Has the availability of existing stocks been estimated?
8. Have arrangements been made for the procurement of additional stocks required?

2. ACTION

1) Has adequate publicity been given in the flood prone areas on how to use the disinfectants and take other precautionary measures?
2) Have the anti-fly and anti-mesquite measures been taken?
3) Have the treatment centres been identified?
4) Do the villagers of each village know which treatment centre to go to in case of need?
5) Has the adequacy of the existing treatment centres been assessed?
6) If the additional treatment centres are required to be temporarily set up, have their locations been identified?
7) In case additional treatment centres are required, have the sources from which additional staff would be obtained been identified?
8) Has the availability of various drugs, vaccines etc. at such treatment centres been assessed?
9) Have arrangements been made of supply additional drugs and vaccines etc. in treatment centres where existing stocks are not adequate?

3. MONITORING

1) Has a senior officer in the Directorate of Health Services been identified to look after exclusively the problems of cyclone prone areas during the cyclone season?
2) Have such officers been earmarked at the District and the Block levels?
3) Have such arrangements been made for feedback information from Health Centres to the Block, District and State Headquarters for periodical assessment of the situation and the availability of staff and stock position?
4) Do arrangements exist to report from the treatment centres to higher levels about any rise in the incidence of gastroenteritis, dysentery, cholera, jaundice and polio

CHAPTER – VI

RESPONSE

CYCLONE SITUATION –THE TRIGGER MECHANISM RESPONSE

The "Trigger Mechanism" response in a cyclone situation gets activated upon the receipt of the 1st warning "Cyclone Alert" issued by the Indian Meteorological Department. As stated earlier 'Cyclone Alert' is issued at least 48 hours in advance of the expected commencement of adverse weather. The second stage 'Cyclone Warning' commences at least 24 hours in advance. Ideal cyclone preparedness would require that all the quick Response Teams (which have been assigned specific activities) and the Control Rooms are set up and functioning in all the islands before the 'Cyclone Warning' is received. The response to the cyclone situation would be in two stages:

1. Preparatory response on receiving 'Cyclone Alert'
2. Final response on receiving 'Cyclone Warning'

The basic criteria and pre-requisite for the initiation of trigger mechanism is that the ideal level of cyclone preparedness has been achieved even before the 'Cyclone Alert'.

PREPARATORY STAGE RESPONSE OF 'TRIGGER MECHANISM'

In the preparatory stage of response to a cyclone situation, the response will be initiated at the following levels:

Control Room

- Control Rooms are set up at the Head Quarter and at all the islands. The Control Rooms will requisition the services of any person (either on the lists forwarded by the departments, or otherwise) and such equipment from any department as it may require for its efficient and effective functioning. All sources of communication (Radio/TV/Wireless/NIC network/VHF sets) are to be provided in the Control Rooms. All the field level control rooms are to be linked with the Central Control Room.
- Information is made available activity – wise and department- wise. The composition and the various departmental Quick Response Team (QRTs) are made available.
- At the departmental levels, the QRTs are put in place, ready to respond. The departments are to ensure that all their properties are secure. The instructions/precautions at Annexure A are to be followed.

- The identified shelters are handed over to the designated officers who should ensure that they are in order and that there are adequate supplies of food, water, medicines etc.
- Contact are to be established with Area Cyclone warning Centres at Chennai and Trivandrum, the Indian Navy, the Indian Air Force, Shipping Corporation of India, Indian Coast guard, Pawan Hans, ISPW (Trivandrum), AIR Calicut.

Communication and Transport

- The QRT is to be ready to ensure efficient and uninterrupted communication. It should be ready to move out into the area at short notice for restoring communication. The transports QRT is to check all mechanized boats, ensure that they are ready in all respects for emergency use.
- The Pawan Hans Helicopter, All four wether ships, , the Inter – Island Ferries, and the four cargo barges to be kept stand – by. Contact to be maintained with Supply & Marketing Society, Hospital, Control Room to be ready to transport men and materials and equipment.
- Embarkation/disembarkation jetties to be readied for emergency use.

Health & Medicine

- All trained doctors and nurses to be put on alert.
- Trained staff with medicines, first aid etc. to be deputed to the identified shelters.
- Trauma Centres to be set up.

Food and Civil Supplies

- Food and essential commodities supplied to the identified shelters.
- Godowns and warehouses to be secured from cyclonic elements**.**

Public Works Department

- Identified shelters to be kept ready.
- Wooden boards and metal sheets to be kept ready.
- Arrangements to be made to cover the drinking water sources.
- Roads and buildings to be inspected, remove anything that is loose.

Electricity

- All cables to be checked for proper connectivity, there should be no danger of them coming loose during the cyclone.
- Final repair and maintenance to be done for the power House and the transformers.

Information & Publicity

- Announce through the Public Address Systems, the general cyclone alert. All safety measures and precautions to be taken before and during cyclone to be announced.
- Distribute pamphlets containing safety measures and precautions.
- The Fishermen to be alerted and advised not to go out to sea. They will be advised to tie their boats and storage the nets etc. at a safe place.

Panchayat, Social Welfare & Education

- Anganawadi workers, Gram Sevikas, Panchayat members, teachers, other voluntary groups to provide information on safety measures, precautions, arrangement of shelters etc. to the public.

Police

- Petrol parties to be formed. Voluntary groups and general public be involved in forming search and rescue operations.

Agriculture

- All the tools and implements required for cutting and removal of trees, after the cyclone, to be kept ready at one designated location. Pumps may be kept stand-by to flush out water from the low-lying areas.

FINAL STAGE RESPONSE OF THE 'TRIGGER MECHANISM'

- This response is initiated upon the receipt of the 'Cyclone Warning' from the IMD, and from the Area Cyclone warning Centres at Trivandrum and Chennai.
- Final emergency actions are to be taken at least twelve hours ahead of the anticipated time of cyclone/storm striking the area.
- All the operations hereafter, are round the clock till the emergency is over.
- A final warning along with information on safety measures and precautions to be given to the public.

- Schools, Colleges, Offices etc. are immediately closed and people advised to take shelter at the identified safe places. The Anganawadi workers, Grama Sevika, Panchayat members, teachers etc. Should take the people from unsafe and low-lying areas to the identified shelters.
- Drinking water sources to be securely covered.
- Hospitals and doctors alerted again.
- Police and patrol parties along with QRT (mechanized boats) to be on the move for search and rescue operations. People from unsafe and low-lying areas to be moved to safe shelters.
- Control Room to alert Navy, Air Force, Coastguard, Pawan Hans etc. to be ready to move into the area for search, rescue and evacuation operations.

POST CYCLONE RESPONSE

- Control Rooms to arrange for search, rescue and evacuation operations for persons out at sea or marooned on the islands in low-lying areas.
- Roads are to be cleared of fallen trees for rescue and restoration operation.
- Communication QRTs to restore communications.
- Hospitals to set up emergency operations and arrangements for inoculation. Teams set up to move from shelter to shelter to provide medical aid and to bring patients to the hospitals if required.
- Health authorities to warm people about contamination of drinking water sources and inform them about preventive measures.
- Electricity QRT to check for fallen on loose electric wires and take action to rectify the problem. Electricity department to ensure continued and adequate supply of electricity.
- The stock of food and civil supplies should be ascertained and steps taken immediately if there is any loss and damage. Steps to be taken to prevent/minimize the damage and to procure more civil supplies, if required.
- Transport arrangements made for movement of civil supplies, food, water, medicines, etc. And for movement of people from one island to another.

- Information assistants to announce to the public precautions to be taken after the cyclone. Public should be advised to take the following safety measures:
    1. They should remain in shelters until informed by those in charge that they may return home.
    2. They should get inoculated against diseases, and see medical aid and advice immediately.
    3. People should keep away from disaster areas unless they are required to assist.
    4. Any loose and dangling or fallen electric wires should be strictly avoided. A person should be kept on watch while the electrical authorities are informed immediately.
    5. Jeeps, tractors, power tillers, motorbikes etc. should be driven carefully.
    6. The houses and dwellings should be cleared of debris.
    7. The losses should be reported to the appropriating authorities. It should be remembered the exaggeration of losses is anti-social.
    8. Relatives should be promptly informed about safety of person in the disaster area.
- Suitable camps should be set up for housing people whose homes have been Destroyed by cyclone.
- An immediate up date report on affected areas and extend of damage is to be sought from the control rooms of all the islands. All these control rooms will also report to the central control room about all the efforts being made to restore normalcy and of the requirements needed for this.
- A quick assessment of the economic losses is to be made.
- Areas are to be identified for different levels of relief (Emergency, urgent, short term, long-term).

CHAPTER - VII

PARTNERSHIP WITH THE OTHER STAKEHOLDERS

(1) The Disaster Management in Lakshadweep is under the control of District Magistrate and Additional District Magistrate is the Nodal Officer for Disaster Management Activities. He is been assisted by staff from Collectorate. The activities of Disaster Management have been carried out with the help of direction from Ministry of Home Affairs, National Disaster Management Authority and NIDM. Since there is no special rules for Lakshadweep, directions from above mentioned organizations is implemented.

(2) For weather warning and other cyclone information, this Union Territory is helped by met centre, Chennai and Trivandrum. For rainfall details, sub centres of meteorological department at Amini and Minicoy are helped to get information.

(3) Revenue Department arrange training in association with NDMA specialists and from time to time, every year Mock cum Awareness Drill are arranged alongith NDMA and NDRF Battalion. Last year, we have conducted cyclone related Mock cum Awareness Drill were conducted in Seven Islands.

(4) At regular interval, Officers from Lakshadweep have been trained by NIDM, New Delhi on various aspects of Disaster Management like preparedness, mitigation etc.

CHAPTER - VIII

FINANCIAL ARRANGEMENTS

There is no separate financing system for disaster management for this Union Territory and all the financial help is to be made by the Government of India. This Administration has already requested to the Ministry of Home Affairs to provide funds under NCCF or NCF so that immediate relief can be provided to those affected by natural calamities.

Besides this, a proposal is submitted to Ministry of Home Affairs for creation of Disaster Relief Fund and Mitigation Fund.

PART - III

CROSS CUTTING ISSUES

CHAPTER – IX – REVIEW AND UPDATION OF PLANS

A meeting of the cyclone committee will be called as soon as conditions return to normalcy after cyclone. In this meeting relief operations on short-term and long team will be finalized. An assessment of economic losses will also be made. In the meeting, emergency actions taken during the cyclone will be reviewed particularly to find out the adequacy on otherwise of the arrangements that were made to meet the cyclone situation. Assessment of the deficiencies in the facilities and organization will be made to be reported to the appropriate authorities with request to make up the deficiencies and review the over-all effort urgently before the commencement of the next cyclone season.

For efficient and effective management of a disaster situation, it is imperative that the personnel of the administration realize the value of an early and timely preparation. They should also be adequately trained in useful latest techniques/management strategies of disaster precaution, management and mitigation. The district libraries too should be well stocked in this regard. Some of the books on the subject are presented in Annexure B.

LIST OF ANNEXURES

ANNEXURE -I

1. STATE DISASTER MANAGEMENT AUTHORITY

As per the direction of Ministry of Home Affairs and in accordance with the provisions contained in the Disaster Management Act 2005, Lakshadweep Disaster Management Authority was constituted with following composition (Section 14 of Disaster Management Act 2005).

1. Administrator	**Chairman**
2. Secretary (GA & S)	**Chief Executive Officer**
3. Member of Parliament UT of Lakshadweep	**Member**
4. President-cum-Chief Counselor District Panchayath	**Member**
5. Superintendent of police	**Member**
6. Commandant India Reserve Battalion	**Member**
7. Managing Director LDCL	**Member**
8. Director of Medical & Health Services	**Member**
9. Executive Engineer (ELE)	**Member**
10. Port Officer	

2. STATE EXECUTIVE COMMITTEE

To assist state authority on Disaster Management a State Executive Committee is formed as per section 20 of the Disaster Management Act 2005 with the following composition.

1. Secretary (GA & S)	**Chairman**
2. Superintendent of police	**Member**
3. Director of Medical & Health Services	**Member**
4. Superintending Engineer PWD	**Member**
5. Executive Engineer (ELE)	**Member**

3.DISTRICT DISASTER MANAGEMENT AUTHORITY

As per provisions of section 25 of the Disaster Management Act 2005 a district Disaster Management Authority also constituted for the Uni-District of Lakshadweep. The composition of the committee is as follows.

1. Collector cum Development Commissioner	**Chairman**
2. President cum Chief Counselor District Panchayath	**Co – Chairperson**
3. Additional District Magistrate	**Chief Executive**
4. Superintendent of police	**Member**
5. Commandant India Reserve Battalion	**Member**
6. Director of Medical & Health Services	**Member**
7. Port Officer	**Member**

Name Designation telephone number of the following officers to be contacted during Emergencies

	Name	Tel(O)	Tel(R)	Mobile	Fax No.	Email
Administrator	Shri. Amar Nath, IAS	262255	262344	9446565601	262184	Lk-admin@nic.in
Relief commissioner	Dr. N.Vasanthakumar, IAS	262256	262348	9447608400	263180	Lk-coll@nic.in
Secretary (DM)	Dr. N. Vasanthkumar, IAS	262256	262348	9447608400	263180	Lk-coll@nin.in
Secretary (Revenue)	Dr. N. Vasanthakumar, IAS	262256	262348	9447608400	263180	Lk-coll@nic.in
Nodal Officer	Shri.D. Manikandan, IAS ,ADM	262384	262275	9446034446	262904	Lak-so@lnic.in

4. HAZARD SAFETY CELLS

In order to establish proper implementation of the building codes in all future constructions and ensure the safety of building and structure from various hazards Hazard safety Cells established. As per the ministries direction HSC constituted vide order F.No.41/1/2005-LR dated 31.01.2010 for planning and designing of hazard resistant building in Lakshadweep with following composition.

1. Collector cum Development Commissioner	**Chairman**
2. Superintendent of Police	**Member**
3. Superintending Engineer LPWD	**Member**
4. Executive Engineer (ELE)	**Member**
5. Director, Port, Shipping and Aviation	**Member**
6. Director of Panchayat	**Member**
7. Additional District Magistrate	**Member Secretary**

5. TELEPHONE NUMBERS OF THE CYCLONE COMMITTEE IN LAKSHADWEEP

Name of the Officer	Contact Telephone No. Office	Residence

CENTRAL CYCLONE COMMITTEE (at Kavaratti)

STD Code: 04896
Group Dialing Code: 954896

1.	Collector-cum-Development Commissioner& DM	262256	262348
2.	Superintendent of Police	262258	262239
3.	Superintending Engineer, PWD	262262	262379

4.	Director, Port Shiping & Aviation	262018	262074
5.	Director of Medical &Health Services	262316	262317
6.	Director of Information, Publicity & Tourism	262250	262110
7.	Director of Agriculture	262483	262952
8.	Executive Engineer Electrical	262363	262291
9.	Deputy Chief Engineer,LHW	262351	262094
10.	Headmaster,Govt .Sr.Sec.School,Kavaratti	262218	262835
11.	Additional District Magistrate & Member Secretary	262384	262275

- **ISLAND LEVEL CYCLONE COMMITTEES**

Minicoy

STD, Code: 04892
Group Dialing Code: 954892

1.	Deputy Collector	222333	222244
2.	Asst.Engineer,PWD	222223	222233
3.	Asst.Engineer,(Ele)	222205	222305
4.	Medical Officer	222227	222248
5.	Circle Inspector of Police	222232	222272
6.	Information Assistant	222275	222882
7.	Agricultural Demonstrator	222205	-
8.	Fisheries Inspector	222221	222236
9.	Headmaster,GHS	222251	222261
10.	Veterinary Assistant Surgeon	222274	222254
11.	Sub Divisional Engineer, Telecom	222240	222599

Agatti

STD, Code: 04894
Group Dialing Code: 954894

1.	Deputy Collector	242263	242231
2.	Asst.Engineer, PWD	242249	242264
3.	Junior Engineer, Ele	242243	242246
4.	Medical Officer	242258	242257
5.	Sub Inspector of Police	242260	242259
6.	Information Assistant	242244	-
7.	Agricultural Demonstrator	242242	
8.	Fisheries Inspector	242235	
9.	Headmaster, GHS	242253	242251
10.	Veterinary Assistant Surgeon	242221	242297
11.	Sub Divisional Engineer, Telecom	242899	242300

Amini

STD, Code: 04891
Group Dialing Code: 954891

1.	Sub Divisional Officer		
2.	Asst.Engineer,PWD	273280	273221
3.	Asst. Engineer,Ele	273225	273226
4.	Medical Officer	273205	273262
5.	Sub Inspector of Police	273244	273243
6.	Information Assistant	273270	
7.	Agricultural Officer	273238	
8.	Fisheries Inspector	273239	
9.	Headmaster,GHS	273254	273256
10.	Veterinary Assistant Surgeon	273263	
11.	Executive Engineer,PWD	273203	273204
12.	Sub Divisional Engineer, Telecom	273300	273200

Andrott

STD, Code: 04893
Group Dialing Code: 954893

1.	Sub Divisional Officer	232345	232346
2.	Asst.Engineer,PWD	232339	232338
3.	Asst.Engineer,Ele	232132	232272
4.	Chief Medical Officer	232213	232750
5.	Circle Inspector of Police	232222	232232
6.	Information Assistant	232715	-
7.	Agricultural Officer	232343	232268
8.	Fisheries Officer	232324	
9.	Headmaster,GHS	232323	232337
10.	Veterinary Assistant Surgeon	232354	232254
11.	Sub Divisional Engineer, Telecom	232799	232299

Bitra
STD, Code: 04890
Group Dialing Code: 954890

1.	Authorized Officer	
2.	Junior Engineer,PWD	275237
3.	Asst. Engineer,Ele	275224
4.	Pharmacist	275225
5.	Field Assistant Fisheries	275240
6.	Headmaster,JBS	275222
7.	Officer-in-charge, Telecom	275220

Chetlat
STD, Code: 04899
Group Dialing Code: 954899

1.	Sub Divisional Officer	276232	276233
2.	Asst.Engineer,PWD	276254	276255
3.	Junior Engineer,Ele	276211	276212
4.	Medical Officer	276221	276222
5.	Sub Inspector of Police	276244	276245
6.	Information Assistant	276335	-
7.	Agricultural Officer	276243	
8.	Fisheries Officer	276270	
9.	Headmaster,GHS	276256	276257
10.	Junior Telecom Officer	276299	

Kadmat

STD, Code: 04897
Group Dialing Code: 954897

1.	Sub Divisional Officer	274630	274247
2.	Asst.Engineer,PWD	274253	274567
3.	Asst. Engineer,Ele	274232	274332
4.	Medical Officer	274228	274225
5.	Sub Inspector of Police	274227	274222
6.	Information Assistant	274890	
7.	Agricultural Officer	274239	
8.	Fisheries Inspector	274529	
9.	Headmaster,GHS	274223	274221
10.	Veterinary Assistant Surgeon	274237	274537
11.	Sub Divisional Engineer, Telecom	274390	274220

Kalpeni

STD, Code: 04895
Group Dialing Code: 954895

1.	Sub Divisional Officer	252221	252263
2.	Asst. Engineer, PWD	252251	252261
3.	Junior Engineer,Ele	252241	252262
4.	Medical Officer	252264	252254
5.	Sub Inspector of Police	252292	252239
6.	Information Assistant	252233	
7.	Agricultural Officer	252229	
8.	Fisheries Inspector	252237	
9.	Headmaster, GHS	252725	252227
10.	Veterinary Assistant Surgeon	252313	252312
11.	Executive Engineer, PWD	252453	252463
12.	Sub Divisional Engineer, Telecom	252800	252299

Kiltan

1.	Sub Divisional Officer	272222	272233
2.	Asst. Engineer, PWD	272227	272256
3.	Junior Engineer, Ele	272231	272241

4. Medical Officer	272223	272224
5. Sub Inspector of Police	272245	272244
6. Information Assistant	272337	
7. Agricultural Officer	272253	
8. Fisheries Inspector	272214	
9. Headmaster,GHS	272239	
10. Veterinary Assistant Surgeon	272211	272208
11. Junior Telecom Officer	272500	272200

ANNEXURE-II

MEDICAL MAN-POWER AVAILABLE FOR MANAGEMENT OF STORMS AND CYCLONES

Sl.No	Address	Telephone Number		
		STD Code	Office	Residence
1.	**Director Medical& health Services, Kavaratti.**	**04896**	**262316 262089**	**262317**
2.	**Medical Superintendent, Indira Gandhi Hospital, Kavaratti**	**04896**	**262109 262327**	**263311**
3.	**Medical officer Incharge, Government Hospital, Minicoy**	**04892**	**222227 222427**	**222248**
4.	**Medical Officer Incharge, Community Health Centre, Andrott**	**04893**	**232213**	**232750**
5.	**Medical Officer Incharge, Community Health Centre, Amini**	**04891**	**273434 273223**	**273234**
6.	**Medical Officer Incharge, Community Health Centre, Agatti**	**04894**	**242858 242258**	**242257**
7.	**Medical Officer Incharge, Community Health Centre, Kalpeni**	**04895**	**252264**	**252254**
8.	**Medical Officer Incharge, Community Health Centre, Kadmat**	**04897**	**274228**	**274225**
9.	**Medical Officer Incharge, Community Health Centre,**	**04898**	**272223**	**272224**

	Kiltan			
10.	**Medical Officer Incharge, Community Health Centre, Chetlat**	**04899**	**276221**	**276222**
11.	**First Aid Centre, Bitra**	**04890**	**275225**	**----**

ANNEXURE-III

LIST OF COMMON AILMENT/DISEASES FOUND AFTER CYCLONES

	Types of ailments		Due to
1.	Respiratory diseases		Adverse condition of living
2.	Injuries (not very common)		Collapse of houses/standing structures
3.	Water-borne diseases& Diarrhoeal diseases (Cholera, Gastroenteritis Dysentery etc.)		Non-availability of water due to :
		:	Flooding of wells with polluted drinking water.
		:	Breakdown of piped water Supply
	Infective Hepatitis, Poliomyelitis	:	Inaccessibility to the available water resources, unsanitary conditions in the villages/evacuation camps due to – accumulation of water, lack of excreta disposal, blockage/disruption of normal drains, slush with increase in breeding space for flies, over-crowding, dumping of compound dry refuse, dumping of animal excreta and carcasses.
4.	Malaria/ Filaria	:	Increase in mosquito breeding space
5.	Skin diseases /Eye over Diseases/Respiratory Diseases	:	Lack of personal hygiene and Crowding

ANNEXURE- IV

DETAILS OF NCC/SCOUT/GUIDE/NSS IN VARIOUS ISLANDS

NCC UNITS

SI.NO	Name of Unit	Officer in charge	Number of Cadets
1	GSS Kavaratti 262218	P.K.SYED ALI	100
2	GJNSSS Kadmat 274379	C.RAJENDRAN	50
3	GHS Agatti 242253	U. BASHEER	65
4	GHS-Amini 272354	P.NAJMUDEEN SAYEED	100
5	GHS Andrott 232323	KK.HUSAIN	100
6	GHS Kalpeni 252225	M.P.KHALEEL	100
7	GHS Minicoy 222251	S.HASSAN KOYA	100
8	Navodaya Vidyalaya	CHANDRAKANT	50

SCOUTS/GUIDES

1)	GSSS Kavaratti 262218	Transferred	32
2)	SBS Kavaratti 262310	Transferred	32
3)	SBS Kavaratti (Guides) 262310	Transferred	32
4)	GHS Agatti 242253	A.K.ATTAKOYA	32
5)	GHS Agatti (Guides) 242253	Bhiya	32

N.S.S.

Govt J.N.S.S.S.Kadmath	**K.NIYAS**	**100**
1) 274379		
2) Govt M.G.S.S.S Androtт	**SALAHUDEEN**	**100**
3) GHS Kalpeni	**A.K ABDL GAFOOR**	**100**
252225		
4) GSSS Kavaratti	**M.P NOUSHAD**	**100**
262218		
5) GHS AGATTI	**JAISON SABASTIAN**	**100**
242253		
6) GHS AMINI	**MOHD. YASIN K**	**100**
272354		
7) GHS CHETLAT	**M.P ASIF HUSSAIN**	**100**
8) GHS KILTAN	**K.K. MALIK**	**100**
9) GHS MINICOY	**C. KHALEEL**	**100**
222251		

ANNEXURE– V

BUILDING IDENTIFIED FOR SHELTER IN CASE OF A CYCLONE

Amini

1) **Junior Basic School (North)**
2) **Junior Basic School(North -West) under SSA**
3) **J.B.School (South)**
4) **Senior Basic School**
5) **Nursery School (2)**
6) **Govt. High School**
7) **Govt. Sr. Secondary School**

Kadmat

1) **Junior Basic School (North)**
2) **J.B.School (South)**
3) **Govt High School**
4) **J.B. School (Centre)**
5) **S.B. School**
6) **JNSSS**
7) **Calicut University Centre**
8) **Nursery School (2)**

Kiltan

1) **Govt. Sr. Secondary School**
2) **Junior Basic School (South)**
3) **S.B. School (UP Grade) : SSA**
4) **Noorul Islam Madrassa**
5) **Hidayathul Islam Madrassa**
6) **Tharkiyathul Islam Madrassa**
7) **Nursery School (2)**

Chetlat

1) **Govt. Sr. Secondary School**
2) **J.B. School**
3) **Nursery School**

Bitra

1) **Govt. High School**
2) **Nursery School**

Minicoy

1) **Govt. Sr. Secondary School**

2) **Nursery School (2)**
3) **Rangamanch Auditorium**
4) **Govt Senior Basic School**
5) **Govt Junior Basic School(2)**
6) **Govt. J.B School(North) : SSA**
7) **Navodaya Vidyalaya**
8) **Funhilul Madrassa**

Kalpeni

1) **Govt Senior Basic School**
2) **Govt Junior Basic School**
3) **Nursery School (2)**
4) **Dr.K.K. Mohd.Koya SR. Secondary School**

Andrott

1) **PM Sayeed Calicut University Centre**
2) **Govt. Sr. Secondary School**
3) **Govt. Nursery School (2)**
4) **Senior Basic School (2)**
5) **Junior Basic School(5)**

Agatti

1) **Govt Sr. Secondary School**
2) **Government Nursery School(2)**
3) **Govt High School**
4) **J.B.School (South)**
5) **J.B.School (North)**
6) **J.B. School (Centre)**
7) **S.B.School(New Building)**
8) **Agriculture Office**

Kavaratti

1) **J.B.School (North)**
2) **J.B.School (East)**
3) **Government Nursery School(2)(*****)**
4) **Govt. Girls Sr. Secondary School**
5) **Govt Senior Secondary School**
6) **Tharkiyathul Islam (South Branch)**

ANNEXUR-VI

REVISED LIST OF ITEMS AND NORMS ASSISTANCE FROM CALAMITY RELIEF FUND (CRF) AND NATIONAL CALAMITY CONTINGENCY FUND (NCCF) FOR THE PERIOD FROM 2005 TO 2010 (MHA LETTER NO. 32-34/2007-NDM-I DATED 27.06.2007)

Sl.No.	ITEM	NORMS OF ASSISTANCE
1	Gratuitous Relief	
	(a) Ex-Gratia payment to the families of deceased persons	**Rs. 1.00 lakh per deceased** ➢ It would be necessary to obtain a Certificate of cause of death issued by an appropriate authority designated by the State Government certifying that the death has occurred due to a natural calamity notified by the Ministry of Finance in the Scheme of CRF/NCCF. ➢ In the case of a Government employee/relief worker who loses his/her life, while engaged in rescue and relief operations, in the aftermath of activities like mock drills etc., his/her family would be paid ex-gratia @ Rs.1.00 lakh per deceased. ➢ In the case of an Indian citizen who loses his life due to a notified natural calamity in a foreign country, his family would not be paid this relief. ➢ Similarly, in the case of a Foreign citizen who loses his life due to a notified natural calamity within the territory of India, his family would also not be paid this relief.
	(b) Ex-Gratia payment for loss of a limb or eyes.	(i)**Rs. 35,000/- per person** (when the disability is between 40% and 75% duly certified by a Government doctor or from a panel approved by the Government. (ii)**Rs. 50,000/- per person** (when the disability is more than 75% duly certified by a Government doctor or doctor from a panel approved by the Government).
	(c) Grievous injury requiring	➢ **Rs. 7,500 per person** (grievous injury

	hospitalization	requiring hospitalization for more than a week). ➢ **Rs. 2,500/- per person** (grievous injury requiring hospitalization for less than a week).
	(d) Relief for the old, infirm and destitute children.	➢ **Rs. 20/- per adult, and Rs. 15/- per child** per day.
	(e) Clothing and utensils/house hold goods for families whose houses have been washed away/ fully damaged/ severely inundated for more than a week due to a natural calamity.	➢ **Rs. 1000/-** for loss of clothing per family and **Rs.1000/-** for loss of utensils/household goods per family.
	(f) Gratuitous relief for families in dire need of immediate sustenance after a calamity. GR should only be given to those who have no food reserve, or whose food reserves have been wiped out in a calamity, and who have no other immediate means of support.	➢ **Rs. 20/- per adult, and Rs. 15/- per child per day.**
		Period for providing gratuitous relief **(i) Natural Calamities other than drought and pest attack (locust and rodent menace only).** ➢ Upto a maximum period of 15 days. ➢ In the case of above mentioned notified natural calamities of a severe nature, relief can be provided upto 30 days with the approval of State Level Committee for assistance to be provided under CRF and as per the assessment of the Central Team for assistance to be provided under NCCF. **(ii)Drought/pest attaches (locust and rodent menace only**. ➢ The maximum periods for which the relief can be provided is upto 60 days and in case of severe drought/pest attack upto 90 days. ➢ In case the drought/pest attack

		situation persists beyond 90 days, the State Level Committee shall, after a detailed review, decide the further period for which relief can be provided from CRF, on a month to month basis, co-terminus with the actual period of prevailing situation.
2	Supplementary Nutrition	**Rs. 2.00 per head per day, as per ICDS norms.** **<u>Period for providing relief</u>** **(i) Natural Calamities other than drought and pest attack (locust and rodent menace only).** ➢ Upto a maximum period of 30 days with the approval of State Level Committee for assistance from CRF and as per the assessment of the Central Team for assistance from NCCF. **(ii)Drought/ pest attack (locust and rodent menace only).** ➢ The maximum period for which the relief can be provided is upto 60 days. ➢ In case of drought pest attack (locust and rodent menace only) of a severe nature, the period for provision of relief may be extended upto a maximum period of 90 days with the approval of State Level Committee for assistance to be provided under CRF and as per the assessment of the Central Team for assistance to be provided under NCCF.
3	**Assistance to small and marginal farmers for:-**	
	(a) Desalting of agricultural land	➢ **Rs. 6000/- per hectare :-** (where thickness of sand/silt deposit is more than 3", to be certified by the competent authority of the State Government.)
	(b)Removal of debts on agricultural land in hilly areas	➢ **Rs. 6,000/- per hectare**
	(c)Desalting/ Restoration/ Repair of fish farms	➢ **Rs. 6,000/- per hectare** (Subject to the condition that no other assistance/subsidy has been availed of by/ is eligible to the beneficiary under any other Government Scheme).

	(d) Loss of substantial portion of land caused by landslide, avalanche, change of course of rivers.	**Rs. 15,000/- per hectare** (Assistance will be given to only those small and marginal farmers whose ownership of the land lost is legitimate as per the revenue records).
	(e) Agriculture input subsidy where crop loss was 50% and above.	
	(i)For agriculture corps, horticulture crops and annual plantation crops	➢ **Rs. 2000/- per hectare in rain fed areas** ➢ **Rs. 4,000/- per hectare** for areas under assured irrigation. (a) No input subsidy will be payable for agricultural land remaining unknown or fallow. (b) Assistance payable to any small farmer with tiny holding may not be less than Rs.250.
	(ii) Perennial crops	**Rs. 6,000 per hectare** for all types of perennial crops. (a) No input subsidy will be payable for agricultural land remaining unsown or fallow. (b) Assistance payable to any small farmer with tiny holding may not be less than Rs.500/-
4	**Input subsidy to farmers other than small & marginal farmers**	Assistance may be provided where crop loss is 50% and above, subject to a ceiling of 1 ha. Per farmer and upto 2 ha per farmer in case of successive calamities irrespective of the size of his holding being large, at the following rates :-
		➢ **Rs. 2,000/- per hectare** in rain fed areas ➢ **Rs. 4,000/- per hectare** for areas under assured irrigation ➢ **Rs. 6,000 per hectare** for all types of perennial crops. o No input subsidy will be payable for agricultural land remaining unsown or fallow.
5	**Assistance to small & Marginal sericulture farmers**	➢ **Rs. 2000/- per ha.** For Eri, Mulberry and Tussar ➢ **Rs. 2500 per ha.** for Muga

	(ii) Provision of fodder / feed concentrate in the cattle camps	➢ Large animals **– Rs.20 per day** ➢ Small animals **– Rs.10/- per day** **<u>Period for providing assistance</u>** **(i) Notified Calamities other than drought** ➢ Upto a maximum period of 15 days **<u>(ii) Drought</u>** ➢ Upto 60 days and in case of severe drought upto 90 days. ➢ In case the drought situation persists beyond 90 days, the State Level Committee shall, after a detailed review, decide the further period for which relief can be provided from NCCF, on a month to month basis, co-terminus with the actual period of scarcity/onset of rains.
	(iii) Water supply in cattle camps	➢ To be assessed by the State Level Committee for assistance to be provided from CRF and by the Central Team for assistance to be provided from NCCF **<u>Period for providing assistance</u>** **(i) Notified Calamities other than drought** ➢ Upto a maximum period of 15 days. **<u>(ii) Drought</u>** ➢ Upto 60 days and in case of severe drought upto 90 days. ➢ In case the drought persists beyond 90 days, the State Level Committee shall, after a detailed review, decide the further period for which relief can be provided from CRF, on a month to month basis, co-terminus with the actual period of scarcity/onset of rains.
	(iv) Additional cost of medicines and vaccine (calamity related requirements)	➢ To be assessed by the State Level Committee for assistance to be provided from CRF and by the Central Team for assistance to be provided from NCCF.
	(v) Supply of fodder outside cattle camps	➢ Additional expenditure on transport of fodder from the approved fodder depot to neutralize calamity related price rise to be determined on a case-to-case basis by the State Level Committee for assistance to be provided under CRF and as per the assessment of Central

		Team for assistance to be provided under NCCF.
	(vi) Movement of useful cattle to other areas	➢ To be assessed by the State Level Committee for assistance to be provided from CRF and by the Central Team for assistance to be provided from NCCF.
8	**Assistance to Fisherman** (a) for repair/replacement of boats, nets – damaged or lost --Boat --Dugout-Canoe --Catamaran --Nets (This assistance will not be provided if the beneficiary is eligible or has availed by any subsidy/assistance, for the instant calamity, under any other Government Scheme.)	➢ **Rs.2,500/-** (for repair of partially damaged traditional crafts (all types) plus net) ➢ **Rs. 7500/-** (for replacement of fully damaged traditional crafts (all types plus net) • Such traditional crafts are to be registered with the State Government. • Extent of damage (partial or full) to be determined/certified by a competent authority designated by the State Government.
	(b) Input subsidy for fish seed farm	**Rs. 4,000/- per Hectare** (This assistance will not be provided if the beneficiary is eligible for or has availed of any subsidy/assistance, for the instant calamity, under bay other Government Scheme except the one time subsidy provided under the Scheme of Department of Animal Husbandry, Dairying and Fisheries, Ministry of Agriculture).
9	**Assistance to artisans in handicrafts/handloom sectors by way of subsidy for repair/ replacement of damaged equipments.**	
	(a) For Traditional Crafts (Handicrafts)	
	(i) For replacement of damaged tools/equipment	➢ **Rs. 2,000/- per artisan** ➢ Damage/ replacement to be duly certified by Competent Authority designated by the State Government
	(ii) For loss of raw material/ goods in process/finished goods	➢ **Rs. 2,000 per artisan** • Damage/ Loss to be certified by Competent Authority designated by the State Government.
	(b) For Handloom Weavers	
	(i) Repair/replacement of loom equipments and accessories	**<u>For repair of loom</u>**

		➢ **Rs. 1000/- per loom** **<u>For replacement of looms</u>** ➢ **Rs. 2000/- per loom** ➢ Damage/ replacement to be certified by the competent authority designated by the Government.
	(ii) Purchase of yarn and other materials like dyes & chemicals and finished stocks.	➢ **Rs. 2000/- per month** ➢ Damage/ replacement to be certified by the competent authority designated by the Government.
10	**Assistance for repair /restoration of damaged houses**	➢ The damaged house should be an authorized construction duly certified by the competent authority of the State Government ➢ The extent of damaged to the house is to be certified by a technical authority authorized by the State Government.
	(a) Fully damaged/destroyed houses	
	(i) Pucca house	**Rs. 25,000/- per house**
	(ii)Katcha house	**Rs. 10,000/- per house**
	(b) Severely damaged houses	
	(i) Pucca house	**Rs. 5000/- per house**
	(ii) Katcha house	**Rs. 2500/- per house**
	(c)Partially damaged houses – both pucca/katcha (other than hut) (where the damage is minimum of 15%	**Rs. 1500/- per house**
	(d)Huts : Damaged/destroyed	**Rs. 2000/- per hut** (Hut means – Temporary, make shift unit, inferior to katcha house, made of thatch, mud, plastic sheets etc. Traditionally seen and recognized and known as hut by the State/ District Authorities).
11	Provision of emergency supply of drinking water in rural area and urban areas.	As assessed by the State Level Committee for assistance to be provided under CRF and as per the assessment of the Central team for assistance to be provided under NCCF.
12	Provision of medicine, disinfectants, insecticides for prevention of out break of epidemics	As above
13	Medical care for cattle and poultry against epidemics as a	As above

	sequel to a notified natural calamity.	
14	Evacuation of people affected/ likely to be affected.	As above
15	Hiring of boats for carrying immediate relief and saving life.	As above The quantum of assistance will be limited to the actual expenditure incurred on hiring boats an essential equipment required for rescuing stranded people and thereby saving human lives during a notified natural calamity
16	Provision of temporary accommodation, food, clothing, medical care etc. of people affected /evacuated (operation of relief camps)	As assessed by the State Level Committee, for assistance to be provided under CRF and as per the assessment of Central team for assistance to be provided under NCCF. Quantum of assistance will be limited to the actual expenditure incurred, during the specified period. **Period** In case of natural calamities other than drought for a maximum period upto 15 days. In case of natural calamities other than drought of a severe nature for a maximum period upto 30 days. **Drought** In case of drought the maximum period for which the relief can be provided is upto 60 days and in case of severe drought upto 90 days. In case of drought situation persists beyond 90 days, the State Level Committee shall, after a detailed review, decide the further period for which relief can be provided, on a month to month basis, co-terminus with the actual period of scarcity/onset of rains.
17	Air dropping of essential supplies	As assessed by the State Level Committee, for assistance to be provided under CRF and as per the assessment of Central team for assistance to be provided under NCCF. Quantum of assistance will be limited to actual amount raised in the bills by the air force/other aircraft providers for airdropping of essential supplies and rescue operations only.
18	**Repair/restoration of immediate nature of the damaged infrastructure in eligible sectors**	**Activities of immediate nature** Illustrative lists of activities which may be considered as works of an immediate nature are

	(1) Roads and Bridges (2) Drinking water supply works (3) Irrigation (4) Power (only limited to immediate restoration of electricity supply in the affected areas) (5) Primary education (6) Primary Health Centres (7) Community assets owned by Panchayats Sectors such as telecommunication and power (except immediate restoration of power supply) which generate their own revenues and also undertake immediate repair /restoration works from their own funds / resources are excluded.	given in the enclosed appendix. **Time period** The following time limits are indicated for undertaking works of immediate nature. **For plain areas** 30 days in case of calamity of normal magnitude 40 days in case of calamity of severe magnitude **For hilly areas and north eastern states** 45 days in case of calamity of normal magnitude 60 days in case of calamity of severe magnitude **Assessment of requirements** On the basis of assessment made by the State Level Committee for assistance to be provided under CRF and on the basis of the assessment of the Central team for assistance to be provided under NCCF.
19	**Replacement of damaged medical equipment and loss medicines of Government Hospitals / Health Centres**	As assessed by the State Level Committee, for assistance to be provided under CRF and as per the assessment of Central team for assistance to be provided under NCCF. The quantum of relief will be limited to the actual expenditure incurred.
20	Operational cost (of POL only) for ambulance service, mobile medical teams and temporary dispensaries.	As above The list of items which fall under operational cost, will generally include : Cost of putting up temporary medical camps/ temporary dispensaries Hiring of ambulance vehicles Hiring of transport vehicles for mobile medical teams only. Actual POL expenditure for ambulance and transport vehicles for mobile medical teams.
21	Cost of clearance of debris	As assessed by the State Level Committee, for assistance to be provided under CRF and as per the assessment of Central team for assistance to be provided under NCCF. The quantum of relief will be limited to the actual expenditure incurred.

		Cost of clearance of debris includes removal debris of stones, bricks, steel/ iron which restricted to inhabited areas only.
22	Draining off flood water in affected areas.	As assessed by the State Level Committee, for assistance to be provided under CRF and as per the assessment of Central team for assistance to be provided under NCCF. The quantum of relief will be limited to the actual expenditure incurred.
23	Cost of search and rescue measures	As assessed by the State Level Committee, for assistance to be provided under CRF and as per the assessment of Central team for assistance to be provided under NCCF. The quantum of relief will be limited to the actual expenditure incurred on search and rescue operations within a period of two of the notified natural calamities.
24	Disposal of dead bodies/ carcasses	On actual basis as reported by the State Government or as recommended by the Central Team.
25	Training to specialist multi disciplinary groups/teams of the state personnel drawn from different cadres/services/personnel involved in management of disaster in the state	Expenditure is to be incurred from CRF only (and not from NCCF) as assessed by the sate level committee The total expenditure on items 25 and 26 collectively should not exceed 10% of the annual allocation of the CRF
26	Procurement of essential search rescue and evacuation equipments including communication equipments	As above
27	Landslides, Cloudburst and avalanches	The norms of various items will be the same as applicable to other notified natural calamities as listed above
28	Pest attack (locust and rodent menace only)	With regard to the norms of assistance for crop damaged due to pest attack it will be on the lines of assistance provided to the affected farmers in the wake of damage to crops by other notified natural calamities **However** expenditure on aerial spray of pesticides for pest control will be met under the ongoing scheme of the Department of Agriculture & Cooperation, Ministry of Agriculture as spraying is required to be done on larger areas and not on field to field basis owned by the individual farmers
29		**NORMS FOR EXISTING NATURAL CALAMITY OF FIRE**

	(i) Fire	Assistance in the wake of accidental fire may be provided for loss/damage to lives, limbs, crops, property etc. In inhabited areas as per the items and norms applicable in the wake of other notified natural calamities. The eligibility of assistance as per above criteria is to be certified by the Competent Authority of the state. The incident relating to forest fire may be covered to some extent under the scheme of the Ministry of Environment & Forests i.e Integrated Forest Protection Scheme. Relief assistance will be provided to the people affected due to forest fire for loss/damage to lives, limbs, crops, property etc. as per the items and norms applicable in the wake of other notified natural calamities, to the extent, such losses are not covered under the integrated Forest Protection Scheme. With regard to Fire incidents relating to industrial, commercial installations, these are required to be covered under insurance.

ANNEXURE – VII

STATUS OF TELEPHONE SYSTEMS IN LAKSHADWEEP

1. **Agatti:** This Exchange was expanded during March 2000. The capacity of the Exchange is 1000 lines with 818 telephones. The exchange is connected to TAX Ernakulam by a satellite system of 30 circuits Digital (IDR) and to Kavaratti by a 60 Channel UHF system. The exchange is the latest version of C-DOT with all modern facilities. A Sub Divisional Engineer is in-charge of this system.
2. **Amini:** The Capacity of the exchange is 1000 lines with 831 telephone connections. This station is connected to Kavaratti by a 60 Channel UHF system and to Kadmat by another 60 channel UHF system. A Sub Divisional Engineer in-charge of the system.
3. **Androtт:** This exchange is of 1400 line capacity with 1364 telephone connections. This exchange has all the modern facilities. This station has a Satellite system with 60 circuits and this system is Digital (IDR) which is very reliable. A Sub Divisional Engineer is in-charge of the system.
4. **Bitra:** This is a small C-DOT exchange with a capacity of 184 lines and 38 working connections. This station is connected to Kiltan by a 30 Channel UHF proposed to be expanded to 1000 lines during 2003-04.
5. **Chetlat:** This exchange has a capacity of 368 lines with 352 working connections. This station is connected to Kiltan by a 30 Channel UHF station. A Sub Divisional Engineer is in-charge of this system. This is proposed to be expanded to 1000 lines during 2003-04.
6. **Kadmat:** This exchange has a capacity of 1000 lines and there are 780 telephone connections. This station is connected to Amini by a 60 Channel UHF and Kiltan by a 30 Channel UHF. This station is under the control of a Sub Divisional Engineer.
7. **Kalpeni:** This exchange has a capacity of 1000 lines with 788 working connections. This station is connected to TAX Ernakulam by a satellite system of 30 circuits. A Sub Divisional Engineer is in-charge of this system.
8. **Kavaratti:** The exchange is latest version of C-DOTMBM with all modern facilities. The capacity of the exchange is 2000 lines with 1674 telephones. The station is parented to Ernakulam TAX by IDR & DCME system having 210 circuits including internet. This system is very reliable A C-III node for internet working is installed. A Sub Divisional Engineer in-charge of this system. GSM Mobile communication is also commissioned during March 2003.

9. **Kiltan:** This exchange has a capacity of 1000 lines with 606 telephones. This station is parented to Ernakulam TAX by a satellite system having 60 circuits. A Sub Divisional Engineer is in-charge of this system.
10. **Minicoy:** The exchange is of 1400 lines capacity with all modern facilities. There are 1368 telephones working. This station is connected to Ernakulam TAX by a satellite FDM-FM and IDR system having 60 circuits. This system is very reliable. A Sub Divisional Engineer is in-charge of this system.

ANNEXURE- VIII

DETAILS OF THE CRAFTS/BOATS UNDER VARIOUS DEPARTMENTS

PORT DEPARTMENT

SI NO.	Name of the Vessel		Size	Station	Status
I	**KAVARATTI**				
1.	Adithya	Pax boat	30 footer	Kavaratti	in service
2.	Hassan	-do-	30 footer	Kavaratti	(under repair)
3.	Muthu	-do-	30 footer	Kavaratti	in service
4.	Narmada	Mooring boat	30 footer	Kavaratti	in service
5.	Pookunhi	-do-	20 Mtr	Kavaratti	in service
6.	Beekuhni	-do-	20 Mtr	Kavaratti	(under repair)
7.	MT.Bitra	Pax launch/mobile Workshop	20 mtrs	Kavaratti	in service
8.	ML.Pitty	-do-	20 mtrs	Kavaratti	(under repair)
9.	M.T.Shaik	Twin screw Wooden	14Mtr	Kavaratti	(repair in progress)
10.	M.T.Viringili	Twin screw S/barges	14Mtr	Kavaratti	unserviceable
11.	MT.Perumalpar	Twin screw S/barges	14 Mtrs	Kavaratti	**-do-**
12.	M.L.Seaking	Pax/launch	38 footer	Kavaratti	(under repair)
13.	Mt.Sagar Samrat	Twin screw Wooden	16 Mtrs	Kavarati	in service

High Speed Vessels

1.	M.V. Viringili	15 Pax	Kavaratti	in service
2.	M.V. Bangaram(Tourism)	20 Pax	Kavaratti	in service
3.	M.V. Parali	150 Pax	Minicoy	in service
4.	M.V. Cheriyapani	150 Pax	Kavaratti	in service
5.	M.V. Valiyapani	150 Pax	Kavaratti	in service
6.	M.V. Skip Jack	50 Pax	Androth	in service
7.	M.V. Black Marlin	50 Pax	Kavaratti	in service
8.	M.V. Blue Marlin	50 Pax	Kavaratti	in service

Note : High Speed Vessels are operated during fair season and land up at Kochi during monsoon period for repairs/maintenance & surveys.

Bullard Pull Tug

1.	M.V. Kiltan	10 T Bullard Tug	Androth
2.	M.V. Kalpitti	10 T Bullard Tug	Minicoy

Passenger cum Cargo Ship

1.	M.V. Kavaratti	700 Paax cum 160 MT Cargo	Mainland-Island service

Inter island Ferries

14. M.V.Hameedathbi-Passenger boat	Kattamaram Aluminium hull Capacity 100	Kavaratti	Now repair at Kochi.
15. M.V. Kadeejabivi-Passenger boat	-do-	Kavaratti	in service

Oil Barge

16. M.B. Suhali -S/Barge	16MT 60 capacity	Kavaratti	in service

Dump Barge

17. Dump Barge	50T	Kavaratti	in operation
18. Dump Barge	75T	Kavaratti	in operation

II. AGATTI

19. Kamini –P/Boat	30 footer	Agatti	in service
20. Karim – P/Boat	30 footer	Agatti	in service
21. Naqvi- Mooring Boat	30 footer	Agatti	(under repair)
22. M. T. Althaf-W/Tug	14 Mtr	Agatti	(repair in progress)
23. M.B. Yogesh-S/Mech. Barge	75MT	Agatti	in service

Dump Barge

24. Dump Barge 50 T 2 Nos	50 T	Agatti	in operation

III. MINICOY

25.Karan - Pax Boat	30 footer	Minicoy	in service
26. Pookuty- Pax Boat	20 mtrs	Minicoy	Now on repair
27.M.T.Azad-Twin screw Wooden	14 Mtr	Minicoy	-do-
28. M.B.Meera-M/Barge	75 Mtr	Minicoy	repair at Kavaratti

Dump Barge

29. Dump Barge-Steel barge	75MT	Minicoy	in operation

IV. AMINI

30. Chandralaka-P/Boat	30 footer	Amini	in service
31. Raman - P/Boat	30 footer	Amini	in service
32. Akber -do-	30 footer	Amini	in service
33. Belabeeram Mooring boat	30 footer	Amini	in service
34. M.B Sulthana	40 Mtr	Amini	in service

V. KADMATH

34. Omenapoo pax boat	30 footer	Kadmath	in service
35 Uma – Pax boat	30 footer	Kadmath	in service

36. M.T. Barkath Twin screw wooden	14 Mtr.	Kadmath	(under repair)

Dump Barge

37. Dump Barge-steel barge	50 T	Kadmath	in operation
38. Dump Barge-steel barge	75 T	Kadmath	in operation

VI. KALPENI

39. Capten Bos -Pax/Boat	30 footer	Kalpeni	in service
40 Bumban Pax Boat	30 footer	Kalpeni	in service
41. M.T.Petal -Pax/Boat	30 footer	Kalpeni	in service

Dump Barge

42. Dump Barge-steel barge	50 T	Kalpeni	in operation

VII. ANDROTH

43. Seethi Atta Pax Boat	30 footer	Androtт	in service
44. Amina -P/Boat	30 footer	Androtт	in service
45 Jayandra Mooring boat	30 footer	Androtт	in service
46. M.T. Sushant -Twin screw W/Tug	14 Mtr.	Androtт	in service

VIII. KILTAN

47. Rahim P/boat	30 footer	Kiltan	in service
48. Laqueen P/boat	30 footer	Kiltan	in service
49. M.T Umarul Farook TSW. Tug	14 Mtrs	Kiltan	in service

Dump Barge

50. Dump Barge	25 MT	Kiltan	in operation
51. Dump Barge	50 MT	Kiltan	in operation

IX. CHETLAT

51. Amar -P/Boat	30 footer	Chetlat	in service
52. M.T.Ammu –TSW/Tug	14MTR	Chetlat	in service

Dump Barge

53. Dump Barge	50 T (1No.)	Chetlat	in operation

X.. Bitra

54. Dump Barge	25Mt	Bitra	in operation

XI PAX SHIPS (Cochin based

54. M V Kavaratti1.	P/ Ship- 700 P/160 MT Cargo	Kochi	in service
55.M.V. Bharathseema	-P/Ship -388 P/Capacity	Kochi	in service
56. M.V. Tipu Sultan	-P/Ship -658 P/Capacity	Kochi	Not in service
57. M.V. Dweepsetu	-P/Ship-150 P/Capacity	Kochi	in service
58. M.V. Minicoy	-P/Ship-150 P/Capacity	Kochi	in service
59. M.V. Aminidivi	-P/Ship-150 P/Capacity	Kochi	in service
60. M.V. L/Sea	-Pax cum cargo (250 pax/100mt cargo)	Kochi	in service
61. M.V. A/Sea	-Pax cum cargo (250 pax/100mt cargo)	Kochi	in service

XII. CARGO BARGES (Cochin based)

60. M.V. Ubaidulla	Cargo Capacity 670	Cochin	in service
61. M.V.Thinnakara	-do-	Cochin	in service
62. M.V.Laccadives	-do-	Cochin	in service
63. M.V.Cheriyam	-do-	Cochin	in service

TOURISM DEPARTMENT

SI NO.	Name of Craft/Boat	Type	Make	Status
1.	Gouri	30 footer	Greaves 3 YD	
2.	Tripathi	30 footer	Greaves 3 YD	
3.	Mrinalini	30 footer	Greaves 3 YD	
4.	Rakesh	30 footer	Greaves 3 YD	
5.		30 footer	Greaves 3 YD	Defective
6.		30 footer	Greaves 3 YD	Leased to SPORTS Kadmat
7.		30 footer	Greaves 3 YD	Leased to SPORTS Kadmat
8.		30 footer	Greaves 3 YD	Leased to SPORTS Minicoy

AGRICULTURE DEPARTMENT

Sl.No.	Name of Craft/Boat	Type	Make	Status
1.	Chengha	30 footer	Kirloskar 3 cyl.	Under repair
2.	Karingha	30 footer	Kirloskar 3 cyl.	Under repair

DEPARTMENT OF S&T

Sl. No.	Type	Number	Status

1.	30 footer	1	Working
2.	25 footer	2	Workin-do-
3.	Outboard Fibre glass boat	2	-do-
4..	Glass Boat	1	-do-

DEPARTMENT OF ENVIRONMENT & FORESTS

Sl. No.	Type	Number	Status
1.	30 footer	2	under repair
2.	25 footer	1	undr repair
3.	Outboard fibre glass	1	Working (under maintenance)

DEPARTMENT OF POLICE (Bullet proof Interceptor boats)

Sl. No.	Type	Number	island	Status
1..	12T	1	Kavaratti	in operation
2..	5 T	1	Androtт	in operation
3..	5 T	1	Minicoy	in operation
4..	12 T	1	Agatti	in operation

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Availability Fire Tender island wise

Sl. No.	Island	Status
1..	Kavaratti	in service
2.	Minicoy	in service
3..	Androtт	under repair
4	Agatti	under repair
5.	Amini	no service
6.	Kadmat	-do-
7.	Kiltan	-do-
8.	Chetlat	-do-
9.	Kalpeni	-do-
10.	Bitra	-do-
11.	Bangaram	-do-

ANNEXURE-IX

LIST OF FLOATING CRAFTS/TOOLS AND PLANTS/VEHICLES AVAILABLE WITH LHW AT VARIOUS ISLANDS

Sl.No	Island	Name of Craft/T&P/Vehicle	Nos	Address of OIC	Phone No.
1.	ANDROTH	Dump Barge 50T.capacity	2		
		Hooper Barge	1		
		Coles Crane 12 T Capacity	2		
		TATA Crane TFC 280	1		
		TATA Crane 320	1	Asst. Engineer	04893-
		Ashok Leyland Truck	2	L.H.W.Andrott	2333178
		Mahindra Jeep	1		
		Maruthu Gypsy	1		
		Fork Lift 3 T. Capacity	1		
		Power Tiller	1		
2.	AGATHI	Maruthi Omini Van	1		
		Boat M.L Ragu	1	Asst.Engineer	4894-
		Mahindra Jeep	1	L.H.W.Agathi	242225
		Power Tiller	1		
		Fork Lift 3 T. Cap.	1		
		Fork lift 4T cap	1		
		Jetty Crane Electrical	1		
		Coles Crane 16T cap	1		
3.	AMINI	Power Tiller	2	Exec. Engineer	4891-
		Mahindra Jeep	1	L.H.W. Amini	273340
		Maruthi Omini	1		
		Closes Crane	1		
		Fork Lift 3T.Cap.	1		
		Fork Lift 4T Cap.	1		
		Jetty Crane (3T cap)	1		
		Tractor/Trailer	1		
		Pull man winch	1		
		12T cap. Tyre mounted crane	1		
4.	CHETLATH	Fork Lift 3 Ton Cap.	1		
		Power Tiller with tailor	1	Asst.Engineer	04899-
		Air comoressor	1	L.H.W.Chetlat	276274
5.	KADMAT	Wooden Boat M.L. Kadmat	1		
		Steel Boat M.L. Pradeep	1		
		Steel Boat M.L. Dileep	1		
		Tug. MT Ravi	1		
		Dump Barge 80T.Cap	1		
		40 HP Yamaha OBE with dinky	1		
		12T. Cap. Escort	1		
		Grab Dredger GD Bangaram	1	Asst. Engineer	04897-
		Hopper Barge HB-I	1	LHW, Kadmat	274248(O)

		Hopper Barge HB-II	1		274284(R)
		Fork Lift 3. T.Cap.	1		
		Power Tiller	1		
6.	KALPENI	Dump Barge 50 T Cap.DB Surender	1		
		Dump Barge 50 T Cap.DB Bijoy	1		
		Hopper Barge	1		
		Boat M.L. Shama	1		
		Steel Tug	1		
		12T cap. Tyre mounded crane	1	Asst. Engineer	04895-
		Hind Crane 12T Cap.	1	LHW, Kalpeni	252383
		Mahindra jeep	1		252384(R)
		Fork Lift 3T.Cap	1		
		Power Tiller	1		
		Ashok Leyland Truck	1		
		TIL Mobile Crane	1		
		Tractor with Trailer	1		
7.	KAVARATTI	Grab Dredger GD pushker	1		
		Hopper Barge HB-1	1		
		Hopper Barge HB-Agatti	1		
		Dump Barge 50T Cap.DB Aman	1		
		Boat M.L. Sadhana	1		
		Survey Launch M.L. Parli	1		
		Motor Tug M. T. Nagendra	1		
		Coles Crane TIL 16T Cap.	1		
		Coles Crane TIL 3T Cap.	1		
		Floating TIL 16T Cap.	1	Asst.Engineer(M)	262092(O)
		Floating KEL crane 12T cap.	1	LHW, Kavaratti	262257(O)
		Fork Lift 3T .Cap	2		263609(R)
		Fork Lift 4T .Cap	1		
		Power Tiller	2		
		Jetty Crane 3T (Electrical)	1		
		Maruthi Omini van	1		
		Mahindra Jeep	1		
		Armada Jeep	1		
		Tractor with trailer	1		
8.	KILTAN	Wooden Boat M.L Mahalakshmi	1		
		Boat M.L. Mahalakshmi	1		
		Power Tiller	1		
		Fork Lift 3T.Cap.	1	OIC, LHW	03898-
		Grab Dredge GD-11	1	Kiltan	272107
		Dump Barge 50 T Cap.	1		
		Jetty Crane 2T Cap.	1		
		12T cap. Tyre monument crane	1		
9.	MINICOY	Motor tug M.T. Indira	1		
		Boat M.L. Geetha	1		
		Dumb Barge-Pramod 50 T	1		
		Dumb Barge-Jay Anand 50 T	1		
		TIL Mobile crane 10 T cap	1		

Til Cols crane 3 T Cap	1	Asst.Engineer	2892-
Power Tiller	2	LHW,Minicoy	222222(O)
Jetty Crane 3T. cap.	1		222224(R)
Mahindra jeep	1		
Dumb Barge 50 T fitted with a frame 4 Winch	1		
Tractor with tiller	1		
Fork Lift 3 T Cap.	1		
Fork Lift 4 T Cap.	1		
Trailer	1		

Lakshadweep Port Control Towers

Sl.No.	Island	Telphone Numbers
1.	Agatti	04894 242581
2.	Amini	04891 273202
3.	Andrott	04893 232756
4.	Bitra	04890 275290
5.	Chetlat	04899 276305
6.	Kadmat	04897 274645
7.	Kalpeni	04895 252695
8.	Kavaratti	04896 262741
9.	Kiltan	04898 272060
10.	Minicoy	04892 222986

ANNEXURE-X

ISLAND WISE AVAILABILITY OF MECHANISED FISHING BOATS AS ON 2011

Sl.No.	Island	No. of boats
1.	Agatti	124
2.	Amini	37
3.	Andrott	58
4.	Bitra	11
5.	Chetlat	38
6.	Kadmat	53
7.	Kalpeni	43
8.	Kavaratti	110
9.	Kiltan	58
10.	Minicoy	54
	Total	586

- The size of the boat varies from 25 to 38 feet

(end)