

# Hand Book

## For Management & Maintenance of Multipurpose Cyclone/ Flood Shelters



**OSDMA**  
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**Odisha State Disaster Management Authority (OSDMA)**  
(Government of Odisha)

# **Hand Book for Management and Maintenance of Multipurpose Cyclone/ Flood Shelters**

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The Hand Book for Management and Maintenance of Multipurpose cyclone/ flood shelters has been developed by Sri Avaya Kumar Nayak, General Manager and Sri Krushna Chandra Bisoi, Shelter Coordinator, OSDMA under guidance of Sri Bichitrananda Das, IAS, Managing Director, OSDMA after consultation with Shelter management committees, NGOs and other stakeholders.

## Preamble

Communities have been successfully managing disasters in the past. Yet, there are a few shortcomings that need to be addressed. The participation of the community as the first responder in disaster situation has to be more comprehensive, effective, swift and well planned based on training and capacity building.

In Odisha, the multipurpose cyclone shelters and flood shelters and the multi stakeholder Management and Maintenance Committees formed for sustainable management of the shelters on a participatory model have emerged as a vital tool for community based disaster management.

Realizing the need to compile and consolidate the guidelines for the shelter level Management and Maintenance Committees, the Odisha State Disaster Management Authority (OSDMA) has developed this Hand Book incorporating the principles and procedures the shelter level committees may follow. This Hand Book will be periodically revised and updated to incorporate the latest policy approach and support system to further incentivize the management and maintenance model.

*Bichitraranda Das*  
**Managing Director**

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## Introduction:

IMD Disastrous Weather Events Annual Reports relating to destruction of human life wrought by the past major cyclones of Odisha that took place in 1885 (False point - Hukitola), in 1971 (Jambu - Kendrapara) and 1999 (Paradeep, Ersama - Jagatsinghpur) records 5000, 10000 and 9885 deaths respectively. Some of these deaths were due to house collapse or severe injury sustained from flying debris. But majority of deaths were due to storm surge. This underscores the criticality of promoting disaster resilient shelters towards risk reduction.

“Safer Homes, Stronger Communities” is a realization, but its implementation at household level is most challenging. Factors like hazard and site specific cost effective design, technical assistance, enforcement building codes, consorted mass action of the community and the complex effect of relocation are some of the major constraints. Therefore, the current approach to disaster risk management inter alia focuses on building well engineered hazard resilient safe shelters at strategic locations while ensuring sustainable management and maintenance practices to address safety concerns of the vulnerable communities.

Odisha State Disaster Management Authority (OSDMA) with financial support from government and other sources including World Bank has taken significant initiatives for providing multipurpose cyclone /flood shelters at strategic locations for the vulnerable communities. About 180 cyclone /flood shelters have been constructed in the cyclone and flood prone areas of the State. Construction of 149 multipurpose cyclone shelters under National Cyclone Risk Mitigation Project (NCRMP) and 14 multipurpose cyclone shelters under Integrated Coastal Zone Management Project (ICZMP) is going on. Government has approved construction of 38 more flood shelters. When completed, these shelter buildings will be precious assets for the community as first responder to any disaster.

## Multipurpose Cyclone Shelters:

Tropical cyclones are meteorological events which seriously affect the coastal communities. Apart from severe whirl winds, high storm surges result in saline ingress into human habitations. The impact of cyclones is the severest within 10 kms of the coastline. Many valuable human lives were lost in the super cyclone 1999 due to want of safe shelters in the coastal Odisha. Hence in the aftermath of the super cyclone, it was decided by the Government of Odisha to construct multipurpose cyclone shelters in selected locations to provide safe shelters to our vulnerable people. Indian Institute of Technology, Kharagpur was engaged by the Government to conduct a survey within 10 km of the coastline and identify locations to construct the buildings. IIT, Kharagpur was also assigned the task of developing the drawing and design of the building with disaster resistant features. The IIT, after vulnerability analysis and need assessment of the area has identified villages for construction of shelter buildings.

The basic principle of the study was to ensure that every single individual would have access to a safe shelter either belonging to the community or a private person, without having to run for more than 2.25 KM and without crossing any natural barrier during an emergency situation. IIT, Kharagpur has taken 10 square km grid (3.15km x 3.15km) for identification of location of the shelters. In this case most of the villages will have maximum 1.57 km of traveling distance, except the villages located in the corners of the grid, which may go upto 2.25 km.

The sites for shelter buildings have been selected by the Collector of the district on the basis of following considerations:

1. The site should be inside the existing school premises or adjacent to school.
2. The site should be a piece of Government Land/ public land without any encumbrances and should be suitable for construction.
3. The site should have sufficiently wide access, which can be developed to approach road.

So far, OSDMA has constructed 135 multipurpose cyclone shelters and 49 multipurpose flood shelters. 149 more multipurpose cyclone shelters under World Bank assisted National Cyclone Risk Mitigation Project (NCRMP) and 14 under Integrated Coastal Zone Management Project (ICZMP) have been taken up. 38 more flood shelters are also coming up under Chief Minister's Relief Fund.

<b>SI No.</b>	<b>Fund scheme</b>	<b>Numbers</b>
1.	Chief Minister's Relief Fund	60
2.	World Bank Fund-Immediate phase	37
3.	Prime Minister's National Relief Fund	38
	<b>Total</b>	135
<b>Taken up</b>		
1.	World Bank assisted National Cyclone Risk Mitigation Project (NCRMP)	149
2.	World Bank assisted Integrated Coastal Zone Management Project (IZMP)	14
3.	Container Corporation of India	02
	<b>Total</b>	165

### **Multipurpose flood shelters:**

Odisha has 11 major rivers, which create floods. Mahanadi including its tributaries and distributaries, being the largest river system, causes severe threat of floods to most parts of the State. Other rivers like Budha Balanga, Suvarnarekha, Brahmani, Baitarani, Rusikulya and Vansadhara also swell for flooding. Floods are very frequent and result in severe damages to life and property in Odisha. Many valuable lives and livestock are lost due to want of safe shelters.

Hence, to address this gap, Government of Odisha has constructed 49 multipurpose flood shelters out of Chief Minister's Relief Fund (CMRF) in the aftermath of Mahanadi floods in 2008. 38 more flood shelters are also coming up this year in flood affected districts of the State.

The structural design and drawing of the flood shelter, like cyclone shelter has been developed by IIT, Kharagpur. The management and maintenance system is the same for both cyclone and flood shelters.

## What is a safe shelter?

A safe shelter building, apart from being strategically located, should have the following features:

1. Structurally safe to survive the ensuing disaster. Not to be affected by the disaster itself. Should be above high flood level (HFL) and able to withstand speedy wind and earthquakes.
2. Should have free access. The approach road to be used for evacuation and relief should not be affected by the disaster. As far as practicable, the approach road should preferably be above HFL.
3. Should have basic amenities like water, light and sanitation.
4. Should be closer to the community and without any geographical barrier like rivers, creeks etc to cross over.
5. Should be prominently placed and visible against tree cover.

## About our safe shelters

1. Locations of the cyclone shelters have been identified by IIT, Kharagpur. Locations of flood shelters have been identified by the Collectors on the basis of hazard experience.
2. Drawing and design of multipurpose cyclone/ flood shelter buildings has been developed by IIT, Kharagpur
3. "Proof checks" are carried out at all critical stages to ensure that quality is of acceptable standard as per IS codes.
4. Structurally, these can withstand high speed wind and moderate earthquakes. The buildings have been constructed above high flood level (HFL) with raised platform and stilted floors, so that the flood water will not affect the shelter building. Even in case of very high floods, the water can pass through the stilted floors without affecting the shelter in the 1<sup>st</sup> floor.



## Why the shelters are multipurpose?

1. The shelter buildings will be primarily used for shelter purposes to save human lives during disasters. The ground floor of the building can also be used as shelter for livestock's during emergencies. Relief material and medicines can be stacked for emergency situation.
2. Almost all the shelter buildings have been constructed inside school premises or adjacent to it for convenient use for school purposes during normal times.
3. Additionally, these shelter buildings can be used as community halls and can be put to various other community uses like Anganwadi centers, training centers, and marriage mandaps and for other social gatherings etc.
4. Without affecting the primary purpose, the shelters can be put to economic uses on payment of nominal user fee and the fee so collected can be deposited in the joint account of the Committee for resource augmentation.



### **Features and facilities available in the multipurpose shelter:**

1. Separate hall for men and women
2. Separate toilets for men and women.
3. One extra room to be used for sick/ labour room
4. One store room
5. Ramp of 1:12 slope for persons with disability
6. Drinking water supply through submersible pump
7. Internal electrical wiring done. 5 KVA generator set supplied for backup power supply.
8. Black board for class room purposes
9. All weather road connectivity to the shelter

## All future shelter buildings will have these changed features.

1. One unisex multiuse (accessible) toilet in the building.



2. The steps in the ground floor are redesigned as per universal design concept (tread – 300mm and riser – 150mm). A contrast colour band is used in the steps to make it visible during deemed light period.



3. Handrails at 0.75 & 0.9mt height with GI pipes of 40 to 50mm dia will be fixed at both sides of staircase and ramps (extension).
4. Pathway from gate to the building, will be paved in PCC, both side curb will be constructed and painted with black & white (Contrast) colours.
5. Tactile tiles will be fixed from entrance gate on pathway, in corridors etc by which a visually challenged person can easily access every facilities in the building.



### Principles of shelter use:

1. Multipurpose shelter building constructed by OSDMA is the property of Government of Odisha in Revenue and Disaster Management Department. It is a public infrastructure for use of the community members.
2. To provide shelter to the vulnerable and affected people at the time of need is the main objective of the multipurpose shelter.
3. This shelter can be used by all affected persons irrespective of caste, class, creed, gender and language. All should pay special attention to women, children, old and persons with disabilities.

4. The shelter buildings have been constructed within/ adjacent to the premises of the existing school. During normal times, these shelters will be used as schools. The provision of blackboard is inbuilt in the shelter hall. Wherever necessary, wooden partitions can be used to create separate halls for class room purposes.
5. It is the duty of the Headmaster of the school to keep the shelter clean at the time of its use as schools.
6. On receipt of early warning even through T.V. and radio, the shelter building should be vacated and kept ready for use as shelter by the evacuated persons.
7. Headmaster of the school is an ex-officio member of the shelter management and maintenance committee.
8. Day-to-day maintenance of the shelter is the responsibility of the local community. The Shelter Management and Maintenance Committee will cooperate in it.
9. With approval of the Committee, the shelter can be used for government programmes, social, cultural and economic purposes. But nobody will be allowed to use the shelter or its campus permanently.
10. The user fee collected will be kept in the joint account and can be spent for repair, maintenance and disaster preparedness activities. The rate of user fee will be decided by the Shelter Management Committee by adopting a resolution.
11. No illegal, illicit, criminal or divisive activities will be allowed inside the shelter.
12. Any dispute regarding the management and or use of the shelter will be brought to the notice of local BDO, Collector of the district and OSDMA.

### **Sustainability:**

The multipurpose cyclone/ flood shelters, being provided at strategic locations along the coastline of Odisha under different schemes including NCRMP, have been identified as critical disaster resilient infrastructure to reduce the destructive impact of cyclone and related disasters on human life. Thus, they are precious

assets for the community as the first responder to disasters. Besides, providing cyclone shelters in the cyclone prone areas emerges as a vital tool for taking the community based disaster response initiative forward.

The multipurpose cyclone shelters are constructed within 10 km of the coastline. By sheer location, these structures will be constantly exposed to aggressive marine climate. Similarly, the flood shelters constructed in flood prone areas are also exposed to hazardous climatic conditions. The structural safety concerns are being addressed by adopting disaster resilient design, use of construction materials and by carrying out “proof checks” at all critical stages of construction to ensure quality.

But structural safety of the buildings per se will not ensure sustainability of the buildings as shelter. Institutionalization of a suitable management and maintenance system will be key and critical to ensure long term sustainability of the shelter buildings.

OSDMA has developed a model for management and maintenance of the shelter buildings with community participation and has initiated a proposal for the consideration of Government to support repair and maintenance including drinking water supply installations.

### **Institutionalization of maintenance system:**

To ensure sustainable maintenance of these shelter buildings, community-based Shelter Management and Maintenance Committees (CSMMCs) are formed and imparted managerial training. The CSMMC members and Task Force members and the community at large are oriented, trained and involved regularly. This creates an atmosphere of Community ownership and involvement in the asset management.

To ensure sustainable maintenance of these shelter buildings, community-based Shelter Management and Maintenance Committees are formed and imparted managerial training. The shelter level management and maintenance committee for the multipurpose cyclone shelters is called as Cyclone Shelter Management and Maintenance Committee (CSMMC) and for multipurpose flood shelters; it is called as Flood Shelter Management and Maintenance Committee (FSMMC).

This creates an atmosphere of Community ownership and involvement in the asset management. The committee as a society will be governed by Bye -Law of

the society, prepared in line of the standard bye-law given by OSDMA and duly accepted by the Committee and the instructions of OSDMA and Government of Odisha issued from time to time.

### **Salient Features:**

1. Multipurpose shelters are handed over to community based Shelter management Committees.
2. CSMMCs/FSMMCs will be registered under the Societies Registration Act, 1860 for being recognized as a legal entity.
3. Buildings are used for school and other community purposes during normal time.
4. Buildings are put to economic uses and user's fee is collected by CSMMC/FSMMC.
5. All the funds are placed in Joint Accounts opened for the purpose in a Scheduled Bank.
6. A number of shelter equipments including basic equipment for search and rescue are supplied to the Cyclone/Flood shelters.
7. Task forces are constituted at shelter level for different tasks.
8. All the members of Committee and Task Forces are imparted training on disaster management techniques.

### **Constitution of Shelter Management and Maintenance Committee**

The Shelter Management and Maintenance Committee is constituted through a Palli Sabha (Community meeting) convened at the instances of OSDMA by the local BDO. The meeting is held in presence of representative of OSDMA and the local BDO and other officers. The CSMMC/FSMMC consists of both government and private members.

The Shelter Management and Maintenance Committee will be constituted through a Palli Sabha (Community meeting) convened by the Sarpanch of the Gram Panchayat at the instances of OSDMA and the local BDO. The CSMMC consists of both government and private members. The Block Development Officer of the concerned block will function as the President of the Committee. Sarpanch of the

Gram Panchayat of the Shelter village will function as the Vice President. One representative of the vulnerable community, selected by Pallisabha or in case of urgency nominated by the President, will function as the Secretary of the Committee. The CSMMC/FSMMC will have around 21-25 members as detailed bellow.

	<b>Official Members</b>	
1.	Local B.D.O.	President
2.	Local Tahasildar	Member
3.	Local Medical Officer	Member
4.	Asst. Engineer/Jr. Engineer of Local Block and/or Asst. Engineer/ Jr. Engineer of RD dept	Member(s)
5.	Local Revenue Inspector	Member
6.	Executive officer of the Gram Panchayat	Member
7.	Headmaster/Principal of the school/College closer to which the MCS/MFS has been constructed	Member
8.	Local ANM	Member
9.	Local Anganwadi worker	Member
	<b>PRI representatives</b>	
10.	Local Sarpanch	Vice President
11.	Concerned ward member of the MCS/MFS village	Members
12.	Concerned ward members of hamlets of served villages to which the MCS/MFS serves	Members (1-3)
	<b>Community representatives</b>	
13.	One community volunteer to be selected as	Secretary
14.	Representative of Local N.G.O./village club	Member
15.	Women representative	Member
16.	SC/ST representative	Member
17.	Shelter village/ hamlet representatives	Members (1-4)
18.	Representative of Persons with Disability	Member

Any other government officer related to relief, rehabilitation and reconstruction will be the Ex- officio members of the society. The private member will be selected/ nominated by the General Body i.e. two representatives each from the shelter village, served villages and hamlets, NGOs, SC & ST / Women representatives, Disaster Management Teams and SHG representatives etc. One person with disability will be selected to represent the Persons with Disability in the locality.

### **Executives of the Shelter Management and Maintenance Committee**

1. Block Development Officer of the concerned block will function as the Ex-officio President of the Shelter Management and Maintenance Committee.



2. Sarapanch of the Gram Panchayat of Shelter Village will function as the Ex-officio Vice-President of the Shelter Management and Maintenance Committee.
3. One representative of the vulnerable community, selected by General Body or in case of urgency nominated by the President, will function as the Secretary of the Shelter Management and Maintenance Committee.

The duties and responsibilities of the executives have been defined in the Bye-law of the Society.

## **Procedure for formation:**

The CSMMCs/FSMMCs will be constituted as early as possible so that the committee will be acquainted with the process, which will ultimately help in smooth handing over the completed shelters. In line with the action plan, the BDO of the Block will intimate the concerned Sarpanch to convene a Pallisabha in the Shelter Village (the Village wherein the shelter has been constructed) to select the community members of the Committee. One spirited volunteer will be selected as the Secretary of the Committee. The ex-officio and community members together will constitute the Committee.

The Constitution of Committee involves a social process in different levels and social mobilization is required for educating the community members before identifying the members of the committee and task force members. Coordination with the Block administration, concerned local officials, PRI members like Sarpanch and Ward Member and community members and local NGO/ volunteers and widespread discussion on disaster management and shelter management activities are required. For coordination, services of local nodal NGO/ volunteers will be utilized. The village community and other Government, PRI and community members will be present in the Palli Sabha.

OSDMA has identified nodal NGOs for the Blocks to coordinate shelter related activities at the block and village levels.

### **1st meeting of the CSMMC/FSMMC**

After formation, the 1st meeting of the CSMMC/FSMMC will be held at a suitable date and time under the chairmanship of the local BDO or in presence of his authorized representative. The Committee will discuss and take following decisions:

1. The standard bye-law will be read out, discussed and adopted by the Committee for its governance.
2. The name, location and permanent address of the Society (normally the Address of the shelter) will be decided. Secretary of the Committee will be authorized to sue and to be sued on behalf of the society. He will also be authorized to take all necessary steps for registration of the Society.

3. 50 volunteers within the age group of 18-35 years ( 25 for first aid and 25 for search & rescue) will be selected as task force members.
4. The proceedings of the meeting will be noted in the Resolution Book of the CSMMC/FSMMC and copy of the resolution along with copy of the proceeding of the Pallisabha will be sent to BDO, Collector of the District and OSDMA.

### **Role of Shelter Management and Maintenance Committee in management and maintenance:**

The cyclone shelters will be primarily used for providing safe shelter to the vulnerable people during disasters like cyclone/ flood etc. Most of the multipurpose shelters have been constructed in school premises, so that the buildings can be used as class rooms during normal times. The multipurpose shelters can also be used as a hub of social activities.



Besides, the CSMMCs/FSMMCs have been authorized to put the buildings to economic uses and collect user fees at nominal rates. The user fees so collected will be deposited in the joint account and will be spent for the day to day maintenance of the building. However, the building cannot be used for anti-social, anti-national,



communal or political activities. Similarly, the building cannot be given on rent permanently or for a longer period. As providing shelter to vulnerable people during disasters is of utmost priority, permission for use of the building for any other purpose including economic use will stand automatically cancelled the moment a disaster warning is received and the building will be vacated immediately.

### **Functions of the Shelter Management and Maintenance Committee**

- Day to day maintenance of the building
- Receive and decide on proposals for use as per rules
- Determine the amount of User Fees for different types of use.
- The duration for which use will be permitted
- Monitor that the shelter is used responsibly
- Take remedial or punitive action against misuse.

### **Responsibilities:**

The Committee shall be responsible for four major areas of activities:

- Normal time use of the shelter.
- Shelter management and maintenance fund

- Shelter equipment and their maintenance and use
- Disaster preparedness of the community and management during disaster

### **Registration:**

The CSMMC/ FSMMC will be registered under the Societies Registration Act, 1860. A standard Bye-Law has been prepared by OSDMA and the Committee in its first meeting will discuss and adopt the bye-law. The procedures and conditions laid down in the bye-law will be standard guidelines for functioning of the committee.

### **Task Forces or Disaster Management Team (DMT):**

#### **Objective of DMT formation**

The principal objective of DMT formation is to have a trained and equipped disaster preparedness group to minimize the loss of life and property of the target community



#### **Formation of DMT**

1. At the shelter level, 50 volunteers both male and female within the age group of 18-35 years will be identified from among the local youths as task forces or Disaster Management Teams.



2. At least 50 volunteers per shelter; 25 on search and rescue and 25 on first aid, representing all shelter and served villages will be imparted specialized training through Civil Defense Organization and St John Ambulance respectively.. This will generate volunteerism in the locality.
3. The task force members have to play an important role during and after disasters.
4. The committee will identify the members. If the any member becomes non-resident in the locality, the CSMMC/ FSMMC will select new members and propose to OSDMA for training.
5. Besides, the CSMMC/ FSMMC will maintain a training register at the shelter with details of name, address, contact number and trade of training, duration and date of training of all the trainees and send the copy of the same to OSDMA for a database at the State level.

### **Guidelines of DMT**

- DMTs will carry out duties as per the Disaster Management Plan and in cooperation with shelter management committee..
- DMT members start action as and when cyclone/flood warning signal is hoisted.
- During normal times, they assist vulnerable people for preparedness.

## Training and capacity building:

The Cyclone Shelter Management and Maintenance Committee / FSMMC members will be trained on shelter management and maintenance issues and maintenance of shelter equipment from time to time. The committee will be responsible for safe custody and maintenance of the building as well as the equipment. Task force



members will be trained on search & rescue and first aid techniques.

Besides, Cyclone Shelter Management and Maintenance Committee/ FSMMC members will be trained on disaster management & shelter management skills and record keeping procedures. Some community volunteers will be given hands-on training on use of shelter equipment.

## Training and skill updation

- DMT members will be given training from time to time to update their knowledge and skill on Disaster Management. They will also participate on Mock Drills and Disaster operations.
- Representatives from DMTs may be taken as members in the CSMMC/FSMMC
- Whenever any vacancy arises in the DMTs it should be filled up immediately from among the local youth.
- The service by the DMTs is purely voluntary in nature and no remuneration will be paid for the purpose.

## Mock Drill:

Regular mock drills are organized in the shelters with participation of government officers, Shelter Management and Maintenance Committee, task force and community members to augment the knowledge and test readiness for disasters. The 19<sup>th</sup> day of June every year, mock



drill will be organized in all shelters. Nodal NGO will coordinate the activities.

OSDMA and District Administration will supervise the mock drill. Mock drills/ Response drills can also be organized on other occasions as decided by OSDMA.

## Procedure for mock drill:



The Block administration and Shelter Management Committees at the field level will be informed about the warning by OSDMA. After receipt of warning message from OSDMA, emergency alertness by Sirens will be made at shelter and served villages. Immediately after the alertness, the local volunteers, task force

members and Committee members will assemble in the shelter. CSMMC/ FSMMC will organize an emergency meeting and finalise the plan of action on evacuation etc. The task force members will sensitize the people by handheld megaphone. Then, people will start moving to cyclone shelters with their necessary belongings. Physically challenged persons, older people and seek persons will be evacuated to cyclone shelters by stretchers and wheel chairs, wherever required, with the help of task force team members. Search & Rescue and First Aid techniques will be demonstrated by the task force members during the drill. The trained volunteers will use the equipments during the mock drills.

### **Involvement of NGOs:**

NGOs/ INGOs have very important roles to play for social mobilization and community participation. OSDMA in partnership with Indian Red Cross Society (Odisha State branch), different NGOs and INGOs, has developed community awareness in management and maintenance of shelters. Under UNDP assisted DRM programme, village level and Block level Disaster Management Plans have been prepared. In partnership with Handicap International, universal accessible features have been incorporated.

Besides, based on performance of different local NGOs in DRM activities and offer of the NGO to work in coordination with OSDMA for the cause of disaster management in the local area, OSDMA has identified one nodal NGO for every block in 23 coastal blocks. These NGOs have been engaged for coordinating shelter related disaster management activities in the concerned block. This engagement of nodal NGOs is purely on voluntary basis and accrues no claim of any financial or other support to the NGO. It can be renewed on the basis of their performance. If any NGO fails to perform satisfactorily, the same can be disengaged without any prior notice and new NGO may be nominated by OSDMA as the nodal NGO for the Block.

The main purpose of engaging nodal NGO is to promote volunteerism among the committee members and to educate them on the art of social coordination, asset management and record keeping. This involvement will continue until the private members of the committee get educated and capable to handle the issues on its own. The main activities of the nodal NGO would be:

1. To assist the Shelter Management Committee in convening regular meetings, documenting the proceedings and maintaining records at the shelter level.
2. To assist the Shelter Management Committee in identifying the task force members and coordinate training programmes for them.
3. To train the members on social coordination skills, asset management and record keeping
4. To assist the committee in organizing different programmes including mock drills
5. To liaise with OSDMA, District Administration, BDO, Shelter Management Committees and other stakeholders
6. Other activities as and when assigned by OSDMA

### **Corpus Fund for Maintenance:**

Multipurpose cyclone shelters and flood shelters are engineered buildings and issues of durability in aggressive saline climate are taken care of in the construction phase. Rectification, if required within one year of completion will be done by the contractor at his own cost under the defect liability clause. Major/ special repair required at a later stage will not be within the coping capacity of shelter level Management and Maintenance Committee. Therefore, alternative arrangement for major/ special repair is under consideration. However, minor repair/ replacement and maintenance will be the responsibility of the committee. To further incentivise the participatory model of management and maintenance, creation of a Corpus Fund has been proposed. When made available, the fund will be administered as per the following guidelines:

1. The Corpus fund will be kept in an attractive interest paying term deposit scheme with a lock-in system for 2 (two) years in the nearest scheduled bank or post office in the joint account of shelter level management and maintenance committee.
2. The committee will not withdraw the amount or the interest accrued for first two years. After two years, the capital and the interest will form the capital for the next term of deposit.

3. The interest accrued from the said deposit only can be withdrawn by the committee in the 4th year and spent for maintenance of the building.
4. The committee shall not withdraw the principal amount at any point of time and without prior permission of OSDMA.

## **Financial Guidelines**

1. The CSMMC/FSMMC will be registered under the Societies Registration Act 1860. A standardized bye Law has been developed by OSDMA for this purpose.
2. A joint Account in the name of the Secretary and President of the CSMMC/FSMMC is opened in the local Nationalized Bank.
3. Funds provided from Govt. sources for maintenance of multipurpose cyclone shelters and funds generated by the maintenance committee will be deposited in the joint account of the CSMMC/FSMMC and will be spent for the purpose as per the guideline of the funding source with approval of the President and supported by the Resolution of the Committee. Secretary of the CSMMC/FSMMC can keep up to Rs.500/- cash in hand for day to day maintenance/cleaning etc. works.
4. For minor repair works, Secretary of CSMMC/FSMMC with prior approval of the committee will propose individual repair item with an expenditure not exceeding Rs. 1000/-. The work can be taken up with approval of president of the committee.
5. The repair / maintenance works could be taken up either departmentally or by engagement of contractors with active cooperation of members of the committee and local public. Members of CSMMC/FSMMC will be required to supervise the repair works to ensure its quality.
6. All payments more than Rs. 500 will be made through Cheques. Cheques will be issued with the joint signature of secretary and president of the CSMMC/FSMMC.
7. The committee will decide the rate of hire charges of the building for different purposes as a matter of principle once in a year before the start of the financial year.

## Shelter Equipment:

A number of shelter equipments will be provided to each shelter, which will be used at shelter level during disaster. The equipment include generator sets, inflatable tower lights for night time disaster management, power saws, search and rescue equipment, First-Aid kit, free kitchen utensils, totaling more than 50 items.

- The CSMMC/ FSMMC will be duty bound to receive, keep in custody in good condition and maintain the shelter equipment supplied to the cyclone shelter by OSDMA and any other agency for search and Rescue, first Aid, free kitchen or any other purposes.
- The equipment will be put to emergency uses when such situation arises.
- The equipment received will be duly entered in the stock register maintained by the CSMMC/ FSMMC. Copies of the list of the equipment will be supplied to the concerned BDO and Collector.
- The equipment will be used for mock drill and for the purposes for which it is supplied in emergency situations.



Multipurpose Flood Shelter

<b>Sl. No</b>	<b>ITEMS</b>	<b>UNIT</b>
1	Pulley Block	3 Nos
2	Life Buoy MMD/ SOLAS Approved	5 Nos
3	Life Jacket MMD/ SOLAS Approved	5 Nos
4	Nylon Rope 12 mm dia-50 mtr	25 Kg
5	Manila rope 200 ft.6mm dia	25 Kg
6	Manila rope 60 ft.12mm dia	25 Kg
7	Sisal chord 60mm dia 20 ft	25 Kg
8	G.I. Trunk ( Big Size) 6 ft x 3ft x 2.5 ft, 22 SWG	2 Nos
9	Telescopic Aluminium Ladder(30ft)	1 No
10	First Aid Box with two manuals	1 Box
11	Florescent jackets	50 Nos
12	Mass Kitchen Utensils : Flat Handa, Kadai, Dekchi,Daba, Khanta, paniki,Hemadasta,Korana, Bucket and other items	1 Set(List enclose-22 items)
13	Notice Board with chicken net covering and locking	1 No
14	Dari	2 Nos
15	Black Board	1 No
16	Plastic Chair(5 Nos.Nil Kamal)	1 Set
17	Solar Lantern (TATA BP)	1 No
18	Inflatable Tower Light	2 Nos
19	Portable Power Saw	2 Nos
20	Siren	1 No
21	Hand Held Mega Phone	1 No
22	Flexi-water tank-100 lit. capacity	2 Nos
23	Safety shoes (Gum Boot)	2 pairs
24	Gloves	2 Pairs
25	Foldable stretcher	2 Nos
26	Water filters 27lit ( Bajaj).	4 Nos
27	Fire Extinguisher 4.5 Kg Co2	2 Nos
28	Rain Suit	5 Nos
29	Helmate	5 Nos
30	Steel Almirah 8ft x 3.5 x 1.5 ft 20 SWG	1 No

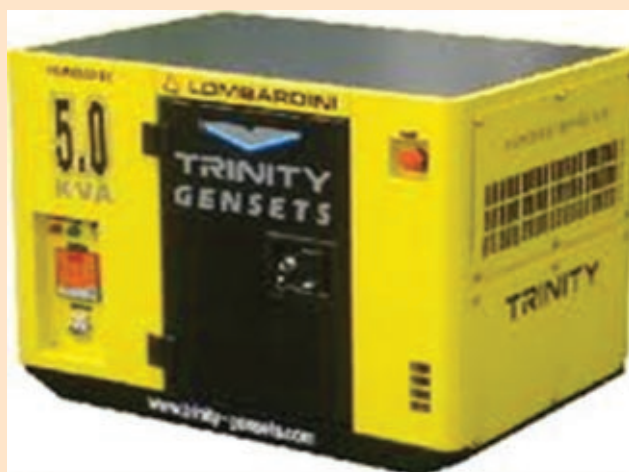
Secretary of the CSMMC/FSMMC will maintain a stock register and enter the equipments in the said register. The format is annexed herewith. The record of use of the equipment for maintenance or during mock drill and/or disasters should maintained in the log book in given format to know the history of use of the equipment.



**Aluminum ladder**  
(Building Rescue)



**Inflatable Tower Light**  
(Illumination up to 100 meters)



**5 KVA Generator**  
(Backup Power supply at the time of power failure)



**Electrical Siren**  
(Disaster warning up to 1.5 Km)



### **Life buoy**

(Throwable Flotation Device for water Rescue)



### **Life Jacket**

(Personal Flotation Device for water Rescue)



### **Portable Power Saw**

(It is very essential of cutting the fallen trees during disaster, capable cutting all types of tree girth of 1.5 mtr.)



### **Gloves/ Safety Shoes/helmet**

(Personal Protective Equipment (PPE) Gloves/Shoes/Helmet/Eye and Ears protection)



### **Fluorescent Jacket**

(For identity of task force during Search & Rescue operation)



### **Foldable Stretcher**

(Transportation of Casualty/Patient)



### **Hand held Mega phone**

(Public Address during Search & Rescue activities For use by task force during Search & Rescue activities)



### **Hand held Search Light**

(Night time Search & Rescue activities, clear vision for search of victim up to the 1Km)



**Solar Lantern**  
(Utilized at the time of Power Failure)



**Water Filter**  
(Supply of Safe water during disaster)



**Free Power Radio**  
(For knowledge radio Broad cast to the affected persons)



**First Aid box**  
(Treatment of patient/ injured persons at the time of disaster)

For safe use and maintenance of the shelter equipment, OSDMA has developed a separate manual in Odia. The instructions contained in the manual should be followed while using the equipment.

### **Record keeping and reporting:**

The Secretary of the Committee will maintain following records:

1. **Resolution Book;** Proceedings of the meetings of the CSMMC/FSMMC and General Body are recorded by the Secretary in this register.
2. **Stock Register;** All the equipment supplied to the shelter must be entered in this register. The register will be maintained in the given proforma.
3. **Cash Book:** All collection/ deposits and expenditures will be entered in this register. The Account will be audited through chartered accountant firms annually.
4. **Equipment log book:** The use/ dry running and running of all equipment will be entered in this register.
5. **Training Register:** Name, address and contact number of all trainees with date of training & duration, trade/skill of training will be entered in this register.

### **Reports:**

1. Secretary of CSMMC/FSMMC will send the copy of the resolution to OSDMA after every meeting.
2. Annual report of funds collected and expenditure made.
3. Utilization certificates as regards to Government funds placed with the CSMMC/FSMMC should be submitted to OSDMA duly countersigned by concerned BDO.
4. Situation of emergencies/ disasters if any in the locality should be brought to the notice of OSDMA.
5. Emergency repair/ maintenance will be done with prior information to OSDMA.

## Community participation:



Community involvement at different levels is ensured to own the programme and main the assets created. The asset are handed over to the community based Shelter Management and Maintenance Committees for management and maintenance of the building. Although adequate design considerations have been made to withstand the coastal weather vagaries, built along coastal villages, the shelters are likely to suffer more than the usual wear and tear due to their close proximity to the sea. Sustainable maintenance of these Shelters can be ensured through active participation of the local communities in their management. Community-based management of cyclone shelters will strengthen the people's sense of ownership, necessary for sustainable management.

## Role of community in shelter management:

Vulnerable community has a major role to play in shelter management. The shelter building is handed over to the community based CSMMC/FSMMC. The local community constitutes the general body of the CSMMC and selects through Palli Sabha the members of the CSMMC/FSMMC.



The CSMMC/FSMMC takes the responsibility of management and maintenance of the shelter building. The Committee also selects the members of task forces and in coordination with OSDMA imparts training in different skills to the task force members.

Some community members are also imparted training on use and maintenance of shelter equipment. During emergencies, the trained community members can use the equipment for disaster management purpose. A separate user manual has been published by OSDMA with details of maintenance and use of the equipment.

It is the responsibility of the community to keep the shelter and its campus clean and worth using always. During normal time, the shelter building will be used for school and other socio- cultural purposes.

One very important role of the community is the social audit of construction works as well as other activities undertaken there. The community will bring to the notice of the local BDO, Collector and OSDMA as and when any unauthorized activity is carried out in the shelter building.

## Specific maintenance activities:

The community and the CSMMC/FSMMC will inspect the cyclone shelter before and after the onset of monsoon as well as regular inspection during monsoon specially the roof top to avoid chocking of the outlet pipes, if any. Cracks, Leakage, Soakage and stagnation of water on roofs and Chajja tops will be prevented from occurrence by making a priori maintenance, since a posteriori maintenance of damages to such buildings is extremely difficult and costly. The CSMMC/FSMMC will bring it to the notice of the concerned engineers, BDO and OSDMA for further inspection.

The following areas will typically be inspected during such a visit:

1. Foundation Details:
  - a. Existence of scours / cracks.
  - b. Condition of pitching
  - c. If exposed surface precautionary measures will be taken.
2. Super Structure: Exterior
  - a. Soakage and stagnation of water on roof/Chajja tops/ porch tops etc
  - b. Patches on walls and floors.
3. Super Structure: Interior
  - a. Corrosion of steel / spalling of concrete.
  - b. Cracks in flooring / walls / plinth.
  - c. Joinery for existence of white ants.
  - d. Application of paints / colour and lime wash

The CSMMC/FSMMC will bring to the notice of the engineers of the concerned block office/RD Department/ OSDMA as the case be, in case of any need based maintenance requirements around the following areas:

- § Painting
- § Damage to floor and plaster
- § Electricity & Water Supply damages, if any
- § Maintenance of doors and windows and others

## **Role of community in Disaster Management:**

Community has important roles in all three phases of disaster management;

1. Pre-disaster phase
2. During Disaster
3. Post disaster

### **Pre-disaster phase:**

Prior preparedness and mitigation efforts are the main activities in the pre-disaster phase. The community CSMMC/FSMMC should concentrate on following activities;

1. Select and train task force members
2. Attend and practise the learnt skills in the mock drills
3. Prepare disaster management plan of your locality depending on the type of disasters faced by the area
4. Conduct pre-disaster emergency meetings, decide evacuation routes and give specific charge to different task force members.
5. Prepare a check list of activities and duty charts.
6. Identify the old, infirm and pregnant women cases in the locality and give special attention for their evacuation at the time of need.
7. Check the shelter building and fittings including water supply, electricity, sanitation and equipment supplied.

8. If required clean the shelter and its surrounding.
9. Discuss with local BDO and arrange for relief materials and its stacking in the shelter before the disaster.
10. On receipt of the message of ensuing disaster, check its correctness from the concerned authorities and disseminate the same for information of all concerned.
11. Collect the key of the shelter building and keep with a known person.
12. Inform all household to prepare emergency kit for evacuation. The kit should contain the valuables, certificates and land records in a plastic bag, dry foods, baby foods, medicines, torch light, candles, match box and minimum clothes etc.
13. Evacuate the vulnerable people with emergency kits to the shelters.
14. Take care of the domestic animals.
15. Prepare to keep a ward of the houses during absence of the family members.

### **During Disaster:**

1. Check if anybody is left behind and emphasize on search and rescue and evacuate all to the shelter.
2. Maintain law & order in the shelter.
3. Keep in touch with local authorities and listen to Radio for information updates.
4. Assist Administration in relief distribution.
5. Give priority to children, old, infirm and pregnant women cases during relief distribution.
6. Always maintain a queue and wait till your turn comes.
7. Fight against rumors.

## **Post disaster phase:**

Assist administration in

1. Disseminating de-warning of the disaster
2. Providing relief to the victims.
3. Assessing damages
4. Administering rehabilitation packages, if any
5. Vacate the shelter once the situation is normal
6. Clean the shelter building to bring to its pre-disaster stage

## **Preparation of Emergency Kit (Household level):**

The CSMMC/FSMMC and task force members should educate the vulnerable community to prepare an emergency kit at the household level before evacuation. The kit may contain the following items.

1. Dry food (Mudhi, chuda, gur etc)
2. Medicines
3. Baby food
4. Candles
5. Torch light
6. Match box
7. Valuables/ jewellery etc (in safe custody)
8. Certificates/Pass book etc wrapped in polythene)

9. Land pass book, Land Record (wrapped in polythene)
10. Minimum clothes
11. Other urgent and relevant items

Please note that during the stay in shelters, safe custody of personal belongings is the responsibility of the owner. No committee or official will be responsible for any loss/ theft or damage due to disaster.

### **Provision for reward and recognition:**

To encourage competitive spirit and volunteerism, the best managed three cyclone/ flood shelters are awarded at the State level function of the Odisha Disaster Preparedness Day on 29<sup>th</sup> October every year.



Similarly, State level competitions are held every year among the task force teams attached to multipurpose shelters on Search & Rescue and First aid. The best three teams on search & Rescue and best three teams on first aid are awarded in the State level function of Disaster Preparedness Day.

**Format for Stock Register**

<b>SI No</b>	<b>Item of stock</b>	<b>Details</b>	<b>Date of purchase/ supply</b>	<b>cost</b>	<b>Bill No./ Clallan No/date</b>	<b>Date of verification</b>	<b>signature</b>
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**Format for Log Book**

**Name of the shelter:**

**Name of Equipment:**

**Machine Number:**

	<b>Date</b>	<b>Duration of use in hours</b>	<b>Purpose of use</b>	<b>POL Opening Balance</b>	<b>POL issued</b>	<b>POL Consumed</b>	<b>Balance</b>	<b>Signature of user</b>	<b>Countersignature by Supervising officer</b>	<b>Remarks</b>
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Best search & Rescue Team being awarded in 2011



Best First Aid Team being awarded in 2010



Mock drill



Mock drill



Mock drill



Cyclone shelter at Nardia, Jagatsinghpur



**Odisha State Disaster Management Authority (OSDMA)**  
**(Government of Odisha)**  
**2nd floor, Rajiv Bhawan, Unit-V, Bhubaneswar-751 001**