Impact Assessment of SDC/SHA Cyclone Shelter Programme in Orissa 2000-2002

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FINAL REPORT



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1. Context

SDC/SHA Cyclone Shelter Programme 2000-2002 in Orissa, India: On October 29th 1999 a Super Cyclone hit Orissa with wind speed exceeding 250 kmph accompanied by tidal surges of up to 10 meters and heavy rains for almost 48 hours. A total of 12 districts covering a population of 13 million were affected adversely. Far more than 10'000 people and 3 million cattle were killed due to the cyclone and as a result of an inappropriate preparedness and a weak early warning system. About 1.5 million houses have been damaged; half of them completely destroyed.

SDC responded first with a cyclone relief programme and later on with a livelihood fund and a cyclone infrastructure project including Community Based Disaster Preparedness Programmes (CBDP). Between January 2001 and October 2002 about 32 Cyclone Shelters were grounded In Orissa integrated with relevant CBDP Programmes. Some of the sites were in quite remote places. The programme was implemented by 6 Indian NGO's, supervised by a PMC on behalf of SDC CoOf in Delhi and backstopped by a technical expert from SDC/SHA. This setting proved to be very efficient and effective.

The shelters were designed according to a "Low Tec- Approach" (no electricity, no waterpipes) and prepared for a "Low Maintenance Approach" (easy to be kept clean). In case of an emergency there are provisions for an emergency toilet system, a rainwater-harvest tank and a cyclone resistant daylight system in place.

According to the different flood levels in the different sites two different structures were implemented:

- a) a school cum polyvalent Cyclone Shelter on a raised platform or
- b) a school cum polyvalent Cyclone Shelter on stilts

The 2nd Asian Ministerial Conference on Disaster Risk Reduction, New Delhi, November 2007: As a follow-up on the *Hyogo Framework of Action*, in September 2005 the Government of the People's Republic of China hosted the 1st Asian Conference on Disaster Reduction in Beijing to enhance regional understanding and cooperation in the implementation of HFA. The Conference adopted the *Beijing Action for Disaster Risk Reduction in Asia* and resolved to meet again in 2007 to review the implementation of the HFA. India offered to host this 2nd Asian Conference in November 2007 in New Delhi. The overall goal of the 2nd Asian Conference on Disaster Reduction will be to review the implementation of the Hyogo Priorities of Action in Asia in the context of various initiatives taken by the national, regional and international governments during the past two years. In line with the above mentioned objective, the 2nd Asian Conference is expected to achieve

- a) Assess the positive gains made in disaster risk reduction in Asia;
- b) Identify the gap areas requiring concerted action by various stakeholders;
- c) Develop consensus on further enhancing regional cooperation among nations;
- d) Agree on short and medium term goals for disaster risk reduction in Asia.

As a result of numerous contacts between the Governments of India and Switzerland and on the basis of a first outline of the planned 2nd Asian Ministerial Conference 2007 as received from and by prepared by the Indian National Institute of Disaster Management (NIDM) Swiss Agency for Development and Cooperation (SDC) will make the following contribution:

- 1) Participation in the high level Round Table and
- 2) Participation in the Technical Groups.

the following results:

The findings of *The Impact Assessment on the Orissa Cyclone Shelter programme* 7 years after completion will be an important input for the discussions about lessons learnt and necessary improvements in a workshop of this Conference within the Technical Segment Group B (Main-streaming DRR in Poverty Alleviation).

2. Executive Summary of the Impact Assessment

The main purpose of the assessment was to see if there was a positive impact of the SDC School cum Cyclone-Shelterproject in Orissa 5 years after completion and what lessons are to be learned. Did the shelters make any difference and what was their impact on poverty alleviation?

Due to time constraints, the assessment team decided to visit only 12 out of 32 villages to inspect the SDC School cum Multipurpose Cyclone Shelters and to review the CBDP. This corresponds to 37.5% of the whole programme, which could be seen as representative. It was decided as well that the team inspects both types of shelters – stilted and platform- from each partner, just to see how the two different type of shelters have performed.

The assignment commenced with a brief discussion with the responsible desk officer in the SDC CoOf in Delhi and meeting was held, where the former desk officers for the SDC-SCS Project Vinoj Manning and Veena Joshi were present as well. This was followed by meetings at National Disaster Management Authority (NDMA) and National Institute of Disaster Mitigation (NIDM) in Delhi together with Beat Künzi from SDC HQ. Finally the Assessment team travelled to Bhubaneswar for starting the on-ground assessment.

As a first step there, the team held a meeting with the representatives of each of the former implementing NGO's to brief them about the aim and the procedure of the planned assessment. All the NGO were enthousiastic about the fact that the donor of a programme now assesses the impact of their work after 5-7 years and they showed a keen interest to see the outcomes of this assessment thmselves. It was therefore decided to hold a debriefing with the NGO's in Bhubaneswar again the day before the team would return to Delhi.

The field visits for the first assessment day in Puri District (5 sites) were organised by the relevant NGO's. But then the field trip for the next day had to be canceled because of political unrest in Bhubaneswar. The site visits could be resumed again the next day, but due to the long distances between the different sites on road, the planned schedule of visits had to be revised several times. Therefore the responsible NGO got only at short notice by mobile the confirmation of the next visit. This helped us on the other hand to avoid deriving wrong impression at the sites by pre-organised shows. Newertheless at all visited places the team could meet villagers and the responsible persons for the shelter. In most places, members of DMT's and of women SHG's as well as teachers and students could be interwieved through semi structured discussions and interviews. But the limited time available, hampered by difficult road conditions, did not allow the team to interact with more people in other villages which hav not availed a SDC-School cum Shelter. However in the interviews held at the shelter sites we tried to adress this issue and finally got some information about the feeling of villagers deprieved off a Cyclone Shelter.

The assessmen team was surprised to find all of the visitet shelter still in use conforming to the aims of the former SDC Programme. All of these shelters are maintained, some only in a very basic way but others quite very well und a few of the shelters have even got some improvements (concrete flooring and additional rooms established at ground level, installation of electricity, etc.). Only the shelters built by CARE proved not to be adequat for the normal use and showed some technical problems. But these shelters did not follow the design proposed by SDC.

Quite more surprising was for the team was the fact that the Disaster Management Teams (DMT's) established and equipped in 20001 are still functioning in the visited sites, despite the fact that there was no external refresher training since. Most of them are doing annual trainings, some quite few and basic, but some quite often on a regular basis. All of the DMT's asked for a refresher training, since many of these youth have migrated to cities for better employment opportunities. Some girls trained had got married and left the village.

The assessmen team was very happy to learn that in all visited sites, the Multipurpose School cum Cyclon Shelter has improved the feeling of "beeing safe" among the villagers. And in most of the sites the existence of this shelters has improved as well the life in the community by creating an opportunity for a "better coming together" and having a safe place for activities like women Self Helf Groups (SHG's), village meetings, weddings, etc. This is as well a further step towards Poverty Alleviation.

3. Assessment-Team

Heinrich Gloor, SDC/SHA Berne, Switzerland:

Urban Planner and Architect; Responsible for the Technical Conceptualisation and as Advisor to the School cum Multi-purpose Cyclone Shelter programme (2000-2002) implemented in Orissa after the super cyclone of Oct, 1999

Anindya Kumar Sarkar, SDC CoOf, New Delhi, India:

Architect and Housing Planner; Responsible for streamlining and coordinating UNDP efforts in post super cyclone Reconstruction and linking the same to Development in Orissa (2001-2007)

4. Implementing Partners 2000-2002

A total of 32 School cum Cyclone Shelters were built in the most affected areas in coastal Orissa including the Community Based Disaster Preparedness (CBDP) programme with the help of 6 implementing Partner Organisations, which include:

Partner Organisation	No. of School cum Cyclone Shelters	Contact Person in field	Contact Details
CARE, India	6	Mr. Surojit Chatterji	+91-674-2544835, 2547766, 2547446, schatterji@careindia.org
CASA, India	9	Mr. Jonathan Rout	+91-674-2542150, casaorissa@sify.com
CYSD	4	Mr. Jagadananda	+91-674-2300983, 2301725, jagada@cysd.org
LWS, India	7	Mr. Bibekananda Biswal	+91-6758-252024, lwsipuri@sancharnet.in
SAES	4	Mr. S. C. Mahapatra	+91-6724-231379
VIKASH	2	Mr. Ashok Nanda	+91-674-2585306, 2588187, ashok@vikash.org

5. Visited Sites

SI. No.	Organisation	Village	GP	Block	District	Type of Shelter	Date Visited
1	CARE	Derunia	Naiguan	Astaranga	Puri	Platform	9-Sep-07
2	CARE	Apandara	Apandara	Balikuda	Jagatsinghpur	Stilted	11-Sep-07
3	CYSD	Arilo	Thailo	Balikuda	Jagatsinghpur	Platform	11-Sep-07
4	CYSD	Sunadiha	Japa	Erasama	Jagatsinghpur	Stilted	11-Sep-07
5	SAES	Pipalmadhab	Bodhei	Tirtol	Jagatsinghpur	Stilted	12-Sep-07
6	SAES	Areikana	Redhua	Raghunathpur	Jagatsinghpur	Stilted	12-Sep-07
7	LWS	Garhkarmala	Birtunga	Gop	Puri	Platform	9-Sep-07
8	LWS	Papira	Chhuriana	Astaranga	Puri	Stilted	9-Sep-07
9	CASA	Kerobelari	Marchipur	Balikuda	Jagatsinghpur	Stilted	11-Sep-07
10	CASA	Dhanahara	Majhihara	Balipatna	Khurda	Platform	12-Sep-07
11	VIKASH	Janhibalia	Surava	Gop	Puri	Platform	9-Sep-07
12	VIKASH	Balibasta	Nuakholamara	Gop	Puri	Stilted	9-Sep-07

6. Implemented CBDPP and School cum Shelters of SDC

The Super Cyclone of October 1999 was a calamity on Orissa, which called for a renewed approach towards disaster management- from rehabilitation to mitigation and preparedness. It became obvious as a result of various assessments by various actors that there is an urgent need for additional Cyclone Shelters in the affected area. UN-House identified a need of 512 additional Cyclone Shelters along the coast line of Orissa.

The Key Programme Elements of CBDPP:

As an additional outcome of this disaster the OSDMA (Orissa State Disaster Management Authority) together with the UN-House (UNDP) in Bhubaneswar developed Community Contingency Plans, which were introduced during workshops in 2000/01. And as a consequence of former negative experiences with cyclone shelters built earlier in the region, most of the actors now recommended a multipurpose use of the shelters to address additional needs of the villagers. A local village body should now be responsible for the structure and the maintenance (ownership). But it was obvious that in remote and poor rural sites erecting only a multipurpose cyclone shelter would not be sustainable. This building should be a part of a larger Community Based Disaster Preparedness Program (CBDPP). The CBDPP would includes the involvement of the community in village-mapping, risk-mapping, contingency-planning, creation of a DMT-Team as well as training and equipping of these teams for a proper preparedness for further natural disasters.

SDC's Partners:

SDC contacted its partner-NGO's in the area for the location of possible sites where schools have been destroyed during the Super Cyclone. Out of a tentative list of 60 sites, SDC, together with OSDMA, selected 32 sites due to budgetary constraints. 6 NGO's experienced in constructions at grass root level were finally selected for the implementation of the SDC program, which took place between 2000 and 2003.

The Programme Management Structure:

The Project Monitoring Consultant Agency (PMC) "DASTUR" in Calcutta made the design of the shelters in detail but SDC was responsible for the general design. A remote technical control from SDC HQ in Berne acted as a backstopper. This setting has proved to be very effective and efficient.

Structure of the SDC Multipurpose Cyclone Shelter:

According to the different flood levels in the different sites two type of structures were implemented: A polyvalent Cyclone Shelter on a raised platform where the floods only reach maximum 3 feet and a polyvalent Cyclone Shelter on stilts in areas where the stagnant waters stands for a longer period over 1,5 meters.

Because of the location of the shelters in quite remote and poor rural sites the design followed a "Low Tec" approach (no electricity, no water-pipes) and a "Low Mainte-nance Approach" (simple rectangular shape prepared for any easy cleaning).

(see below: Use of the Shelters in Emergency)







Shelter on stilts in high flood area

Use of the Shelters in Emergency:

For the case of an emergency there is an emergency toilet system in the stilted shelters where the end of the corridor can be separated by a curtain. A rainwater-harvest tank for drinking water on top of the stair house gives the stranded villagers access to potable water when the seawater is flooding their village, and a cyclone safe daylight system (Bottles incorporated in the concrete walls) gives a natural light into the shelters even during an ongoing cyclone when all shutters at the windows are closed.

Use of the Shelters in Normal times:

In a shelter there are 4 classroom of 65m2 each, organised along both sides of a corridor and linked with a stair house, which give access to the ground floor (stilted solution) and to the open platform on the roof. The cost for a CBDPP in a catchments area including the construction of the shelter was about 30-40'000 USD (depending on the type of the shelter and the accessibility of the site).





Cyclone safe daylight system

Emergency toilet system in corridor

7. Methodology of the Impact Assessment Study

Purpose:

SDC is interested to see how the Multipurpose School cum Cyclone Shelters and its CBDPP in Orissa have performed during the last 5 years and to assess the impact on the life of the communities benefitting from this Programme. A special focus should be put on the aspect of Poverty Alleviation.

On the other hand the lessons learned during this impact assessment could be used in improving SDC future activities in the field of disaster preparedness. Further, it would be an opportunity to share these lessons learned with other intersted actors in the field of Disaster Risk Reduction at he 2^{nd} Asian Ministerial Conference on Disaster Risk Reduction on November 2007 in Delhi.

Process:

- Reviewing the relevant documentation about the SDC programmes in Orissa in the period of 2000-2002 followed by briefings at SDC HQ in Berne and CoOf in Delhi.
- Briefing before and debriefings after the field mission with the relevant implementing partners in Orissa (Bhubaneswar).
- Semistructured interviews held with villagers, DMT's, heads of school, students, women-SHG's and village committees (see questionnaires in annex).
- Inspection of the condition of the shelters and their sites. Visits to other flood- and Cyclone Shelters from other actors.
- Meetings with fficials in Orissa and Delhi. (see schedule of the mission in the annex)

Design/ Questionnaire:

The questionnaire prepared for this mission was structured into the following parts:

- Physical condition of the Building (Shelter), use, maintenance and suitability.
- Emergency concept in place, integration in disaster response of Govt., preparedness and awareness.
- Impact of the Programme on daily life, poverty alleviation, school as the main purpose during normal time, use of the shelter in hazards since 2001 and information about who is deciding about additional use in the shelter.

8. Status of the visited Project Sites today

8.1 What are the Physical Conditions of the Shelters today?

Out of the 12 visited Cyclone Shelters, 10 of them are till date in a good, very good or even in an excellent condition, this despite the fact that some of these buildings are placed in very remote and not always accessible villages.

The shelters built by CARE India (2 visited) did not follow the original SDC design, and they are also those that show remarkable relevant damages like broken pipes, doors and windows and having seepage of water into the walls from the leaking rain-water tank. (see the relevant Assessment forms in Annex 3).

8.1.1 Do the Buildings still serve the original Purpose?

In all sites the school is still the predominant use of the SDC shelters. And this fact is still today seen in almost all places as the most appropriate use during normal times. No shelter has been misused or has been restricted for public access. But most of the shelters serve today not only as a school but also as a kind of village centre for the catchments area.

8.1.2 Are the Buildings well maintained and still operational?

The level of maintenance of the visited buildings is in 25% of the shelters quite low or moderate, in 50% the maintenance is good and 3 shelters are maintained very well or even excellent. All visited buildings are still operational and in use.

8.1.3 Was the Building adequate for the proposed use?

With the exception of the shelters built by CARE, all visited shelters are still used without major problems. This cannot be said for the two visited shelters designed by CARE which are difficult for use and proper maintenance because of their hexagonal shape. The dark red colour on the facades of these shelters is absorbing to much solar heat, which hampers a decent climate inside the shelter. Against the advise of SDC, CARE has installed glazed windows which will be a risk during a cyclone and furthermore the closed windows are reducing the cross ventilation inside the building. The installed water supply in the building creates maintenance-problem.



Inappropriate shape and colour (CARE)

Vulnerable and broken pipes (CARE)

In some places the villagers request today a concrete flooring between the stilts on ground floor level for enhanced use of the open space for village purposes during normal times. In other places window grills are asked for security reasons. In Jahnibalia the villagers would

like to have a community kitchen on ground floor level for the IDPs during a natural calamity. In Balibasta there is a request to raise the plinth level because the floods tend to become higher than expected in 2001. But in Areikana the relevant NGO was able to extend the rooms of the shelters even on ground floor between the stilts with its own financial resources.





CYSD: well maintained surrounding and

additional use of the open ground floor

8.2 Emergency Concept, Warning System in Place

8.2.1 Integration in the disaster response Plan of Government

All the visited shelters are integrated in a disaster response plan of then Panchayat and at Block level. These are also linked to an appropriate warning system (by radio/ sirens/ loudspeakers on cars or by alerting the villagers by the members of the DMTs.

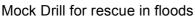
8.2.2 Disaster Preparedness and Awareness

In all the visited places there are designated Disaster Management Teams (DMT), but the size and the level of activities of these DMT's are today quite different in each sites. All the DMTs are women integrated (10-40%). In some places there are only a few DMT members (5-8), but in other villages/ catchments areas there are up to 40 DMT members, which are sometimes divided into 5-8 task forces. All of the DMT's have been trained during the "Community Based Disaster Preparedness Programme" (CBDP) in 2001-2003. But since then only a minority of DMT's have got additional trainings or mock drills. Therefore in some places the awareness of the population and the commitment of the DMT members are at risk of fading away. Most of the DMT's are therefore requesting refresher trainings.

The rescue equipment in the Cyclone shelters are very basic, hardly ever replenished, but still available in the majority of the sites (ropes, a few life west's, a first aid kit, torch lights, candles, a megaphone or a hand siren and some instruction materials). Only in two places a local NGO has donated additional material.

There is a training centre for DMT's in the region run by CASA, but due to the lack of funds nearly none of the SDC supported villages was able to avail a refresher training there. It has to be mentioned here that, after the extended implementation of the SDCshelter programme, LWS offered to all 6 implementing NGO's additional DMT trainings. But this opportunity was not used because they felt that they would be do this in the development programme that should follow the School cum Shelter programme.







Basic rescue material

8.3 Impact of the Shelter Programme until today

8.3.1 Impact on daily Life and Poverty Alleviation

A direct impact of the SDC shelter programme towards poverty alleviation is in some places not easy to prove. But if the head or other breadwinners of a family, thanks to a safe Communal Shelter, are still alive after a natural disaster, the restoration of a livelyhood is much more possible than in the case of human loss, injured or disabled people.

Impact on Community Activities:

In all villages benefiting from the SDC programme, the communal activities became more active than before and the level of education was significantly improved, simply because of the fact, that people have now a safe and adequate building for carrying out these activities. In some places the Cyclone Shelters have really boosted the village activities and a lot of Woman Self Help Groups (SHG) popped up.

Impact on Livelihood:

Most of these buildings are now used as access to better incomes, trainings or for strategising protection of the forests as a windbreaker along the coast, etc. In some places the Cyclone Shelter became even a safe place for stocking the seeds or for keeping wood for festivities. The villagers feel now more empowered to improve their livelihood (see the relevant Assessment forms in Annex 3).

Impact on local Building technologies:

Some of the local masons trained during the SDC Shelter programme have in two visited places started their own enterprise and are meanwhile giving work to local people as well. After having received on-job training during the construction of these shelters, they are building now houses much better in these highly multi-hazard prone villages.

8.3.2 Do people feel more secure than before?

Yes definitively. In all visited sites the DMTmembers, as well as the villagers, have confirmed to have today a much stronger feeling of being secure in case of a natural disaster. In two villages having an SDC Shelter, there are even immigrants from other villages because of "better security" here.

8.3.3 Is the School the right Utilization of the Shelter?

In all visited sites the school is the predominant use of the SDC shelters. And this fact is seen in most places (90%) as the most appropriate use during normal times. Only in one case the villagers wished that they could have a community centre as the main purpose of

the Cyclone Shelter with the school as the secondary use; this due to the fact that the responsible head of the school is very restrictive in giving the rooms free for other communal uses. In two other places (SAES), the supporting local NGO, is focused mainly on education. This leads to a very good maintenance of the shelter but limits on the other hand the use of the building for communal or private use.

In most other places the shelters are also used for private festivities like weddings or for meetings of Women Self Help Groups (SHG's), DMT's, village committees etc.

8.3.4 Have the Shelters ever been used in case of a Disaster?

According to the risks related to each of the sites, about 60% of the Shelters have been used during an emergency (mostly floods) in the past 5-7 years. In some places the whole village or up to 1500 people found shelter for 3-6 days. Only in a few places the emergency-toilets in the shelters as well as the rainwater tanks on top of the stair house have been used but without any problems. (see the relevant Assessment forms in Annex 3)

8.4 Decision making process

Most villagers are happy about how the decisions are made for the secondary uses of the shelters (see the relevant Assessment forms in Annex 3).

9. Findings, Lessons learned

Very good feedbacks from Communities in almost all cases were received.

- Implementation of CBDP in the daily village life is crucial. For this the involvement of an already existing group in the village with this task is most appropriate and a must.
- Today some villages are "forgotten" and have no own resources to keep up or to improve their DMT preparedness level.
- The feeling of commitment and to be responsible grows only through a slow process and needs therefore time to be established. (Maintenance as an aspect of ownership)
- Improvements and Refresher Trainings of CBDP have to be done regularly to keep the level of awareness and trainings. For this a new support program is needed, eventually through a new project program (implemented by local NGO's (supported by SDC?). A training center of CASA exists already in the area in Banamalipur.
- Technocrats (PMC) do not always respect the difficult work that has to be done by local communities. But communities need recognition of their commitment and work.
- Today there is a need and an opportunity for the creation of an exchange platform among the villages in the former SDC program. This kind of meetings would allow the villagers and DMT's from the villages of the different catchments areas to learn from each other how to improve their daily commu-nal life and their disaster preparedness.



- The SDC Cyclone shelters have boosted the communities for a better communication among the villagers and have created the possibilities for improving the self-help approach, which is a first but an important step to alleviate the poverty in this area.
- The low tech and low maintenance design of the SDC School cum Multipurpose Cyclone Shelter incorporated in a CBDPP is a success story and it is therefore today adopted by the Indian Government as a part of the National Emergency Policy. The acceptance by SDC for the establishment of an alternative design by CARE was a mistake.
- School as the main purpose during normal times can hamper a multipurpose use for the community. There is a need to prevent this in an appropriate way (SAES, CASA)

10. Recommendations

10.1 General Recommendations:

- In future SDC should not only support DPP on National Level (trickle down) but also upfront at village level (bottom up) since these are the people we (and the National Program) want to assist in being better prepared for future natural disasters.
- The already supported villages in the School cum Multipurpose Cyclone Shelter program including the CBDPP should be further supported in keeping the level of awareness and trainings for a longer lasting impact by a new programme implemented by local NGO's (CASA, CYSD). The use of the already existing and wellequipped training centre of CASA in Banamalipur should be taken into consideration.
- In a similar future project boundary fences by bushes and window grills should be incorporated already in the design. Eventually only stilted solution should be taken into consideration as this solution gives more opportunities for the development of the village life on the open but covered ground floor during normal times.

10.2 Detailed Recommendations

- Support the creation of an exchange platform for DMT's in the 32 villages of the
 former SDC programme. This will serve as a Learning Platform for experience
 sharing and exchange of lessons learnt for improving the local capacities to be better
 prepared. There should be the possibility of up-scaling this programme to a wider
 area.
- Mandate experienced local NGOs for supporting the village DMT's/ Committees to insert sustainable Disaster Preparedness activities in daily community life.
- Pave opportunities for regular Refresher Trainings and Mock-Drills along with provisions for adequate equipments for a period of 5 10 years.
- Engage in capacity building of masons who are the ones that should be ready for "building back better". [SDC in India has already developed the experience of supporting Housing initiatives for long]
- Acknowledge the challenges faced by some of the implementing NGOs, which have done an excellent job in very difficult circumstances. (e.g. CYSD).

11. Conclusions

Better Disaster Preparedness integrated with Capacity Building for Improved Daily Life are key factors for Poverty Alleviation in this region. SDC has started a pilot project in Orissa in 2000, today this type of "CBDP + School cum Multipurpose Cyclone Shelter" became a kind of "National Standard" in India. Other Indian organisations and NGO's have meanwhile adopted a similar approach.

SDC has created a baby who has so far developed well, but now we (SDC?) have to take care about this child until it is grown up and able to perform by itself.

"It is better to Prepare and Prevent rather than to Repair and Repent"

12. Key Messages towards AMCDRR-Conference in New Delhi

The conference is addressing the positive gains made in disaster risk reduction in Asia but is also looking at the remaining gap areas for a better-concerted action by various stakeholders.

A special focus will be given at the Poverty Alleviation as an expected outcome of any disaster reduction activities.

SDC has got a range of experiences in Asia in the last twenty years in the field of Disaster Preparedness and in "Building Back Better". The experiences made with the CBDPP in Orissa after the Super Cyclone of 1999 stand for similar results in the region (e.g. Bangladesh, Turkey, Georgia and Kyrgyzstan).

The following main points of the SDC Orissa project may therefore be high lightened at the Conference:

A) Community Based Disaster Preparedness Program (CBDPP)

- 1. An effective CBDPP in poor hazard prone areas is the first step towards poverty alleviation because it saves life and limits the amount of injured people during a natural calamity. Therefore people will be able to restart their livelihood soon after the disaster without being hampered by the dead of the breadwinner or by handicapped family members.
- 2. Any CBDP-program has to involve the whole community and has to start with the people from the level of skills and knowledge they already may have. For the introduction of a CBDPP at village level we need local NGO's experienced with this task at grass root level.
- 3. The implementation of the CBDP in the daily life of a community is a must. The already existing groups in the villages have to be incorporated for a better mainte-nance of the installations and for maintaining the level of ownership and awareness. The development and installation of a Disaster Management Team (DMT) at village level is therefore necessary. The linkage of the village CBDPP with the Disaster Management Structure of the Government at the relevant level is absolutely needed.
- 4. DMT's have to incorporate women and man equally in its task for having access to all people in he community. The teams have to be trained and equipped accordingly. The villagers as well have to be involved regularly in mock-drills together with the DMT's. There is a need for refresher trainings at a regular basis and for an opportunity for the villagers to share their experiences, doubts and expectations with other communities residing in other hazard prone areas as well.

B) Construction of a safe Shelter for the Community

- 1. In flood- or cyclone prone areas there is a must to link a CDPP wit the construction of a multipurpose shelter where villagers will find a safe and secure place during the disaster event. There is a need to find a communal use for this shelter, which is accepted by all levels and groups of villagers in the community (school will be in most cases the adequate use).
- 2. This shelter will act as well as a further step in the alleviation of poverty, because the involvement of the villagers in the construction of this building will enhance their skills and the building itself will allow all members of the village to meet and to come together. As we have learned from our experiences, this creates the opportunity for the villagers for finding new ways of income generating activities. Therefore it has to be secured, that the shelter will really be used in a multipurpose way for the whole community. Finally the existence of a safe shelter in the community helps to keep the people in the village and slows down the emigration to other and safer places
- 3. The design of the Multipurpose Cyclone Shelter has to follow a "low-Tec" and "low-Maintenance" design to reduce the efforts for maintenance and well keeping of the building for poor villagers with limited resources and limited experiences in keeping a public building clean and functional. Measures to protect the boundary of a communal shelter and to improve the safety of its users have to be taken into consideration.
- 4. The design of a Multipurpose Shelter should not limit its proper and convenient use and should allow also options for a future development in the communal life.

12.1. Presentation at the 2nd Ministerial Concerence on DRR in Delhi 2007

52 Countries were present at this conferece (out of them 33 with Ministers) as well as many Agencies (IO and NGO's). The conference was very well arranged by the Indian Home Ministry and gave the impression of India as a leader in the regional DRR community. SDC was invited to give two presentations. Marco Ferrari presented in the High Level Round Table 3 on "Integrating DRR int Rehabilitation and Reconstruction" and Heiner Gloor shared some experiences and Lessons Learned by SDC in India in the Technical Segment B on "Mainstreaming DRR in Poverty Alleviation" (see annex). Both presentations have been well received and according to feedbacks, they have well responded to the set questions and to the concept of the organizers. SDC was seen as a actor on DRR in India and other Asian countries. The need for improving the sharing of knowledge and lessons learned was clearly felt in these sessions. This could also be seen as a moral support for the idea to do in future more refresher trainings in DM and to assist the exchange of experiences in the villages which have been supported by SDC in the CBDPP cum Multipurpose Cyclone Shelters in Orissa 2000-2002.

13. Acknowledgment

We extend our profound thanks to:

- The SDC Coof New Delhi for excellent preparation and support.
- The Implementing NGOs in Orissa for outstanding commitment, team work, logistical support and interesting feedbacks.
- The Village Communities, Women SHG's and DMT's for active participation, commitment and interesting feedbacks for our lessons we have to learn

ANNEX 1
Assessment-Itinerary

Date	Day	Work Done	Start Time	End Time	Remarks
5-Sep- 07	Wednesday	Travel of HGL from Switzerland to New Delhi via Munich	14:00*	7:30	* Swiss Time
		Arrival of HGL in New Delhi, hotel accommodation, visit to SDC CooF, contact with Adrian, Avni and Veena	7:30	14:00	
6-Sep-	Thursday	For ANS, Cancellation of tkts to NDLS due to flight cancellation, Purchased fresh tkts for NDLS	9:00	10:30	
07	marsday	For ANS, contacted All Partners, OSDMA, UNDP (tel + mails). Discussed with Mr. Gloor on Tel. Fixed All Partners' meet at LWS, I on the 8th aft.	10:30	19:00	
		Travel from BBS to NDLS	20:00	23:55	
		Meeting of the 2 Missions at SDC	8:00	9:00	
		Meeting with VJO, Vinoj and others at SDC	9:00	10:00	
7-Sep-	Friday	Meeting at NDMA	11:00	14:00	
07	Tilday	Meeting at NIDM	15:00	16:30	
		Meeting awith Mr. N. M. Prusty	16:30	18:00	
		Dinner at Mr. Binder's Residence	20:00	23:00	
8-Sep-	Saturday	Travel from NDLS to BBS	11:30	14:00	
07	Saturday	All Partners' Meeting at LWS, I office	15:30	20:00	
		Visit to Puri District	5:45	23:00	
		Field Visit to Derunia, CARE			
9-Sep- 07	Cundou	Field Visit to Papira, LWS-I			
	Sunday	Field Visit to Janhibalia, VIKASH			
		Field Visit to Garhkarmala, LWS-I			
		Field Visit to Balibasta, VIKASH			
		Field Data Compilations, Data Entry, Report-writing	9:30	16:00	
10-Sep-	Monday	Meeting at UN House, Bhubaneswar	17:00	17:30	
07		Meeting at Red Cross, Bhubaneswar	18:00	19:00	
		Visit to Jagatsinghpur District	6:00	22:00	
		Field Visit to Arilo, CYSD			
11-Sep-		Field Visit to Apandara, CARE			
07	Tuesday	Field Visit to Kerobelari, CASA			
		Field Visit to Sunadiha, CYSD			
		Night Stay at Paradeep			
		Visit to Jagatsinghpur and Khurda Districts	6:45	20:00	
		Field Visit to Jadupur, IRC			
		Field Visit to Pipalmadhab, SAES			
12-Sep-	Wednes-day	Field Visit to Areikana, SAES			
07	,	Field Visit to Dhanahara, CASA			
		Field Visit to Banamalipur, CASA Trng Centre			
		Working Time - field data compilations, data entry	20:00	23:00	
13-Sep- 07	Thursday	Working Time - preparation of presentation for Debriefing to Partners	8:00	11:00	
		All Partners' Debriefing Meeting at CYSD office	11:00	15:00	
		Working Time - Preparation of Presentaion for SDC CooF, New Delhi	15:00	17:30	
		Travel from BBS to NDLS	21:00	23:00	
14-Sep- 07	Friday	Working Time - Preparation of Presentaion for SDC CooF, New Delhi	9:00	13:00	
		Debriefing at SDC CooF, New Delhi	14:00	16:30	
		Permening at ODO OOOI , New Dellii	17.00	10.50	

Date	Day	Work Done	Start Time	End Time	Remarks
15-Sep- 07	Saturday	Working Time - Preparation of Draft Report in Hotel	9:00	15:00	
16-Sep- 07	Sunday	Travel of HGL from New Delhi to Switzerland via Munich	7:30	19:00*	* Swiss Time
		Working Time for ANS in Hotel	8:30	17:00	
17-Sep- 07	Monday	Travel for ANS from New Delhi to BBS	8:00	13:30	

Annex 2: List of Persons met during the Assessment

Organ-	Name	Designation	Place	Phone	е	Mail-address
isation				Off	Mob	
NDMA	Mr. K. M. Singh	Member	New Delhi	+91-11- 23385175		kmsingh100@gmail.co m
NDMA	Mr. N. Vinod Chandra Menon	Member	New Delhi	+91-11- 25655007	98101 11328	vinodmenon@ndma.go v.in
NDMA	Mr. R. K. Sinha	Comdt./ Training Officer	New Delhi	+91-11- 25655410		rakeshsinha2@hotmail. com
NDMA	Mr. J. B. Sinha	Joint Secretary	New Delhi	+91-11- 25655410		
NDMA	Mr. H.S. Brahma	Addl. Secretary	New Delhi	+91-11- 25655012	98103 65585	harisankar@nic.in
NIDM	Mr. P. G. Dhar Chakravarty	Exec Dir	New Delhi	+91-11- 23702445		ed.nidm@nidm.net, dharc@nic.in
OSDMA	Mr. Gyana Ranjan Das	DGM	Bhuban- eswar		94373 48573	gyanaranjan.das@gmail .com
UNDP	Mr. Pradeep Jena, IAS	Team Leader, BBSR office	Bhuban- eswar	+91-674- 2595850/ 851		pradeep.jena@undp.org
Sphere India	Mr. N. M. Prusty	Chairperson	New Delhi	+91-11- 42705166	98993 92306	nmprusty@yahoo.co.in
LWS, I	Mr. Neville Pradhan	Director	Kolkata	+91-33- 22849730/31		nevillepradhan@vsnl.ne t, lwsi@vsnl.com
LWS, I	Mr. K. G. Mathakutty		Kolkata	+91-33- 22849730/ 31		mathewlwsi@vsnl.net
LWS, I	Mr. Sisir Tarafdar		Kolkata	+91-33- 22849730/ 31		sisir_lwsi@vsnl.net
LWS, I	Ms. Anjana		Kolkata	+91-33- 22849730/ 31		ablwsi@vsnl.net
LWS, I	Mr. Bibekananda Biswal	Project Coordinator	Puri	+91-6758- 252024	99378 74599	lwsipuri@sancharnet.in
LWS, I	Ms. Monalisa Bhanja	Project-In- Charge, UDP - BBSR	Bhuban- eswar	+91-674- 2553395	94373 03608	lwsiudpbbsr@sancharn et.in
CARE	Mr. Surojit Chatterji	State Programme Representative	Bhuban- eswar	+91-674- 2544835, 2547766, 2547446	94370 24653	schatterji@careindia.org
CARE	Mr. S. S. Singh	Commodity T.A. Ofiicer, INHP	Bhuban- eswar	+91-674- 2544835, 2547766, 2547446	94379 66195	sssingh@careindia.org
IRC	Mr. Rabi Ratna Das	Hony. Secretary	Bhuban- eswar	+91-674- 2393261		odmp@sancharnet.in
IRC	Mr. Abani Ku. Nayak	Ex- Enggr –CARE (presently, German RC)	Bhuban- eswar	+91-674- 2393261	99371 26369	

Organ-	Name	Designation	Place	Phor	пе	Mail-address	
isation				Off	Mob		
CASA	Mr. Jonathan Rout	Project Officer	Bhuban- eswar	+91-674- 2542150, +91-33- 22498187	94370 16685	abishkar@sify.com, casaorissa@sify.com, jonathan.rout@yahoo.c o.in	
SAES	Mr. Pranjal Johar		Bhuban- eswar		98100 76614	aurobindo@vsnl.com, pranjaljauhar@gmail.co m	
SAES	Mr. S. C. Mahapatra	Coordinator	Areikan a	+91-6724- 231379	94372 91262	III	
CYSD	Mr. Jagadananda	Secretary	Bhuban- eswar	+91-674- 2300983, 2301725	94370 61226	jagada@cysd.org	
CYSD	Mr. Jitendra Ku. Sundaray	Programme Manager	Bhuban- eswar	+91-6622- 275458	94370 16685	jitendra@cysd.org	
VIKASH	Mr. Ashok Nanda	President	Bhuban- eswar	+91-674- 2585306, 2588187	99370 05133	vikashbbsr@hotmail.co m, ashok@vikash.org	
VIKASH	Mr. Bibekananda Mishra	Secretary	Bhuban- eswar	2000107	99378 21358		
SDC	Mr. Francois Binder	Country Dir	New Delhi	+91-11- 26877819		francois.binder@sdc.net	
SDC	Mr. Adrian Marti	Asst. Country Dir	New Delhi	+91-11- 26877819 (Ext. 413)		adrain.marti@sdc.net	
SDC	Dr. Veena Joshi	Team Leader	New Delhi	+91-11- 26877819 (Ext. 420)		veena.joshi@sdc.net	
SDC	Ms. Avni Malhotra	Prog. Off	New Delhi	+91-11- 26877819		avni.malhotra@sdc.net	
IPAS	Mr. Vinoj Manning	National Prog. Manager, Ex-Prog. Off, SDC	New Delhi	+91-11- 41662006		manningv@ipas.org	
CONSUL- TANTS	Mr. Heinrich Gloor	Senior Technical Advisor SDC	Bern	+41-52- 7412953		glowi@smile.ch	
	Mr. Anindya Sarkar	Development Architect-Planner	Bhuban- eswar		98610 85234	aniksarkar@gmail.com	

Way	Village	Gram	Block	District	Partner	Type of	Village	Catchment
Point		Panchayat			NGO	Shelter	inhabitants	area
No.								(people)
17	Apandara	Apandara	Balikuda	Jagatsinghpur	CARE	Stilted	2000	5000

This is the only place for Shelter in the Panchayat. There are 2 small Shelters provided by Paradeep Port Trust and 1 from the Block office in the same campus.

Contact person in the village/place:

- Mr. Baikunta Nath Sahoo, Head Master, High School
- Mr. Ananta Kumar Muduli, Asst. Teacher, High School

Only 3 people from the surrounding villages were present during the meeting.

Questions

1. Physical Conditions

- What is the physical condition of the building?
 - Ok, no classroom doors. The emergency water tank is leaking, and very difficult to clean.
- Do the building still serve the original purpose?
 - Yes, with classrooms for classes 8 to 10, (120 students, co-education).
- Is the building well maintained and still operational?
 - Yes, operational, But not very well maintained, broken windows and terrace door, brackish water and seepage from the tank.
- Was the building adequate for the proposed use? What should be different? Yes, but crazy design which creates difficulties in terms of space utilization, maintenance and echoes. Glass windows not desired, dangerous in case of cyclones. The dark red colour of the building absorbs heat creating uncomfortable conditions inside.

2. Emergency concept

- Is the building integrated in the disaster response plan of the government? It seems so, because no information from the DMT.
- Is there a warning/ alert system in place? Which type? Maintenance? No information, as DMT was not available.
- Is the population aware and trained to react? How? Commitment?
 The DMTs received trainings in 2001 from UNDP and Block Office. CARE helped in preparing the CCP. They are functionless now.

- What was the effect of the project on the daily life of the community? Poverty? Safe building for shelter and school
- Do they feel more secure than before or like others without these shelters? Yes.
- Is the school the right utilization of the infrastructure? Yes, the building is part of the school centre.
- Has the building ever been used in case of a cyclone? What are the results?
- Has the presence of the building affected the behaviour in the community? Access to better schooling.
- has infrastructure and population increased since the construction of the shelter?

Yes, Govt. provided a Tubewell.

- Was the shelter a reason for these changes?
 May be yes.
- are there now additional risks? Which?
 More floods

4. Use of Building, decision-making process

- Is there any secondary use of the building?
 Women SHG meetings, Health Camps, not used for social gatherings
- Possibility or proposals for further secondary use Wedding ceremonies
- Who is deciding how and when to use the Cyclone Shelter-Building? School Management Committee (8 members including 1 woman)

Additional Information concerning the Questions above

1. Physical Conditions

The not appropriate design creates many problems. The hexagonal edges are traps for dust and rubbish and are difficult to be kept clean.

Ventilation not proper due to glass windows, poor quality wood work.

2. Emergency concept

Toilet on first floor inside the building, has replaced the emergency toilet. But no access to water supply except by buckets from the tube-well on the ground floor.

The DMT level is very weak and needs urgently a refresher training.

The village commitment levels are weak.

3. Impact and Poverty Alleviation

Not a user-friendly design with negative effects on the use as class-rooms.

4. Use of Building, decision-making process





Way	Village	Gram	Block	District	Partner	Type of	Village	Catchment
Point		Panchayat			NGO	Shelter	inhabitants	area
No.								(people)
22	Areikana	Redhua	Raghunathpur	Jagatsinghpur	SAES	Stilted	200	2000

This is the head-quarter of SAES in Orissa. The teachers and DMT staffs were attending the meeting.

Contact person in the village/place:

Mr. Saroj Chandra Mahapatra (155 students, of which 20 students stay in hostel, 2 teachers, 4 care takers) [Class KG 1 to Class 9.]

Questions

1. Physical Conditions

- What is the physical condition of the building?

Very Good (water supply pipe connection to the emergency Water Tank leading to daily-use of this, extended garden, electric supply and built-in rooms on the ground floor, the emergency toilets on the first floor have been converted into permanent ones, widow grills have been fixed for one room, which serves as the hostel).

- Do the building still serve the original purpose?
 Yes.
- Is the building well maintained and still operational?

 Excellent
- Was the building adequate for the proposed use? What should be different? Yes. A better ventilation in the classrooms is requested.

2. Emergency concept

- Is the building integrated in the disaster response plan of the government? Yes. CBDP for catchment area was conducted through SDC support.
- Is there a warning/ alert system in place? Which type? Maintenance?

 People get the information from the Block office vehicle by loud speakers / micro phones. DMT members collect information through the Sarpanch (Panchayat Leader).
- Is the population aware and trained to react? How? Commitment?

 People were trained in 2001. One teacher trains his students in DMT, which is carried forward to the families.

- What was the effect of the project on the daily life of the community? Poverty? The quality of the schooling became better.
- Do they feel more secure than before or like others without these shelters? Yes.
- Is the school the right utilization of the infrastructure?
 Yes
- Has the building ever been used in case of a cyclone? What are the results? No big cyclone/ flood occurred after this.
- Has the presence of the building affected the behaviour in the community?

 The people are attracted by the big building, it is a model area for educating their children.
- has infrastructure and population increased since the construction of the shelter?

People are constructing their houses better and stronger. 21 masons were trained here.

- Was the shelter a reason for these changes?
- are there now additional risks? Which?
 Only possibility of flash floods if a breach occurs in the Devi river embankment.

4. Use of Building, decision-making process

- Is there any secondary use of the building?

 Polytechnics trained 200-500 women SHGs in tailoring and production of soft toys.
- Possibility or proposals for further secondary use

 Computer training to people in the village is being offered by RKM trust. Wedding was held once.
- Who is deciding how and when to use the Cyclone Shelter-Building? The School Principal.

Additional Information concerning the Questions above

1. Physical Conditions

2. Emergency concept

3. Impact and Poverty Alleviation

4. Use of Building, decision-making process





Way	Village	Gram	Block	District	Partner	Type of	Village	Catchment
Point		Panchayat			NGO	Shelter	inhabitants	area
No.								(people)
15	Arilo	Thailo	Balikuda	Jagatsinghpur	CYSD	Platform	350	2000

Contact person in the village/place:

- Mr. Niranjan Lenka, President School Management Committee, Member Community Management Group, CYSD
- Mr. Alok Kumar Parida, DMT Member

Teacher + DMT people (12) from the village were in the meeting, no women.

Questions

1. Physical Conditions

- What is the physical condition of the building?
 Good, but small defects at the plinth level. Low maintenance for floor skirting adopted.
- Do the building still serve the original purpose?

 Yes, High School with classrooms for classes 8, 9 and 10, office, common staff room, school for 140 students.
- Is the building well maintained and still operational?

 Yes, door on the terrace damaged. Toilets not finished and never used, some rubble in rooms.
- Was the building adequate for the proposed use? What should be different? Yes, for school, but no need for toilets; people use the open fields.

2. Emergency concept

- Is the building integrated in the disaster response plan of the government? Yes, local DMT includes 8 members, including 2 women.
- Is there a warning/ alert system in place? Which type? Maintenance? Yes, DMT get information from Tahsil Office and warns people by sirens.
- Is the population aware and trained to react? How? Commitment?

 The DMTs were formed and trained in 2001. A ToT was organised for them in 2003. Since then, 3

 Mock Drills have taken place, which included participation from the villagers. No Refresher Training was however offered.

- What was the effect of the project on the daily life of the community? Poverty?

 Access to safer place for education in the village; otherwise no school would have been running.
- Do they feel more secure than before or like others without these shelters? Yes, of course (as a life-line building).
- Is the school the right utilization of the infrastructure?

 Yes, it is the main need for a wider area and not only for this village.
- Has the building ever been used in case of a cyclone? What are the results? Yes, in 2006 in case of a flood. Location of the shelter was confirmed to be ok.
- Has the presence of the building affected the behaviour in the community? Securing the continuity of education, especially for the girl children.
- has infrastructure and population increased since the construction of the shelter? Yes, CYSD installed a Tube-well.
- Was the shelter a reason for these changes?

Partly. But if people migrate, they do so more for economic reasons.

- are there now additional risks? Which? Yes, recurring floods, a minor earthquake.

4. Use of Building, decision-making process

- Is there any secondary use of the building?

 Health Camps, Panchayat Meetings. There are other possibilities for communal activities in the village.
- Possibility or proposals for further secondary use Wedding ceremonies, but only after improvement of surrounding land.
- Who is deciding how and when to use the Cyclone Shelter-Building? School Management Committee

Additional Information concerning the Questions above

1. Physical Conditions

Toilet incomplete and not used.

The corridors are noisy when the classrooms doors are open; some echoes heard.

Ventilation below the roof is needed.

Improvement in Plinth Level is required.

Sun cum RainOshade in front of entry is required.

2. Emergency concept

.More DMT Trainings were requested.

In case of breach in river, flood waters may rise upto plinth level.

3. Impact and Poverty Alleviation

4. Use of Building, decision-making process





Way	Village	Gram	Block	District	Partner	Type of	Village	Catchment
Point		Panchayat			NGO	Shelter	inhabitants	area
No.								(people)
11	Balibasta	Nuakholamora	Gop	Puri	VIKASH	Stilted	1500	3300

Contact person in the village/place:

- Mr. Padma Charna Khandual, President School Management Committee
- · Mr. Subash Ch. Pradhan, Bimal High School

Teacher + 7 people from the village were in the meeting

Questions

1. Physical Conditions

- What is the physical condition of the building?

Good, but leaking over stair room from the emergency water tank (lack of maintenance). The plinth level on the ground floor is quite low.

- Do the building still serve the original purpose?

Yes, 5 classrooms for classes 8, 9 and 10, office, common staff room, school for 140 students.

- Is the building well maintained and still operational?
- Was the building adequate for the proposed use? What should be different? Yes, but the Ground Floor level should be raised.

2. Emergency concept

- Is the building integrated in the disaster response plan of the government?
 Yes
- Is there a warning/ alert system in place? Which type? Maintenance?

 Through radio/ TV first and then from the Block Office or GP office by megaphone/ local volunteers.
- Is the population aware and trained to react? How? Commitment?

 Once the DMTs were trained in 2002. The rescue team consists of 12 to 15 members. The people are used to deal with floods.

3. Impact

- What was the effect of the project on the daily life of the community? Poverty?
 Cultural and social life improved.
- Do they feel more secure than before or like others without these shelters? Yes, highly.
- Is the school the right utilization of the infrastructure?

Yes, it is the right idea, said the school teacher. This is so because as a school this gets regularly cleaned and maintained, otherwise in this highly illiterate community, maintenance would not have been possible.

- Has the building ever been used in case of a cyclone? What are the results? Yes, almost every year there has been floods, 3 to 4 heavy floods since 2002. This building has provided shelter to about 400-500 people. Further more sq. ft area is required.
- Has the presence of the building affected the behaviour in the community?

 The building helped to improve the cultural and social unity in the village.
- has infrastructure and population increased since the construction of the shelter?
 No, people migrate more for economic reasons.

- Was the shelter a reason for these changes?
- are there now additional risks? Which? Yes, recurring floods.

4. Use of Building, decision-making process

- Is there any secondary use of the building? women SHGs meetings, cultural programmes.
- Possibility or proposals for further secondary use Possible Health related trainings.
- Who is deciding how and when to use the Cyclone Shelter-Building? School Management Committee

Additional Information concerning the Questions above

- 1. Physical Conditions
- 2. Emergency concept
- 3. Impact and Poverty Alleviation
- 4. Use of Building, decision-making process



Way	Village	Gram	Block	District	Partner	Type of	Village	Catchment
Point		Panchayat			NGO	Shelter	inhabitants	area
No.								(people)
7	Derunia	Naiguan	Astarang	Puri	CARE	Platform	1500	10000

Contact person in the village/place:

- Mr. Manas Ku. Sahoo, Ward Member (09938398098)
- Mr. Pramod Ku. Swain, Member School Committee
- Mr. Manguli Malik, Rescue Team Member

Questions

1. Physical Conditions

- What is the physical condition of the building?
 Water seepage on facades, no plinth plastering, broken pipes from toilets
- Do the building still serve the original purpose?

Yes, but first floor not in use

- Is the building well maintained and still operational?

 Regular cleaning is done, but the building needs some repair
- Was the building adequate for the proposed use? What should be different?

 Not in every respect, the octagonal shape of rooms creates echos, glass windows will be a risk in case of cyclones, maintenance not taken up by OPEPA or any other agency.

2. Emergency concept

- Is the building integrated in the disaster response plan of the government?

 Yes, but integrated with the Village Community Contingency Plan done in 2002, which has not been updated.
- Is there a warning/alert system in place? Which type? Maintenance? Yes, from Block Office by megaphone/ cars/ local volunteers
- Is the population aware and trained to react? How? Commitment?

 There is a 4-5 member Rescue team in village with no equipment and no training since 2002.

 People asked for Refresher Trainings.

- What was the effect of the project on the daily life of the community? Poverty? People are not sure about. For better incomes, they seek other places.
- Do they feel more secure than before or like others without these shelters? Yes, but trainings are forgotten
- Is the school the right utilization of the infrastructure?

 School is the best solution, since there is no theft and cleaning is regular.
- Has the building ever been used in case of a cyclone? What are the results?
 No significant cyclone/ floods since 2002
- Has the presence of the building affected the behaviour in the community?

 There is less fear in case of disaster; no other change in behaviour reported. Village Development Committee is no more active.
- has infrastructure and population increased since the construction of the shelter?
 A Tube-well from Red Cross and a toilet through the Govt. sponsored RWSS (Rural Water Supply and Sanitation)

- Was the shelter a reason for these changes?

are there now additional risks? Which?
 Moderate Earthquakes

4. Use of Building, decision-making process

- Is there any secondary use of the building?

 Social gatherings, health promotion campaigns, weddings (but without revenue generation)
- Possibility or proposals for further secondary use Pre-school, possibility for storing relief materials
- Who is deciding how and when to use the Cyclone Shelter-Building?
 Village Committee (12 people including 3 women and 3 Ward Members)

Additional Information concerning the Questions above

1. Physical Conditions

Plumbing and water protection is not optimum, design of the building (octagonal shape) is not facilitating easy maintenance.

2. Emergency concept

The continuity in the training programmes with respect to the CBDP exercises were missing. Awareness is fading away.

3. Impact and Poverty Alleviation

A better safety feeling and safe school area for the growing population.

No clear impact towards poverty alleviation.

4. Use of Building, decision-making process

This building is used for classes 6 and 7.

There is need for a permanent Committee for maintenance of this school.

People expressed the need for a mud wall of adequate width for plinth protection around the building and for better use for external space.





Way	Village	Gram	Block	District	Partner	Type of	Village	Catchment
Point		Panchayat			NGO	Shelter	inhabitants	area
No.								(people)
23	Dhanahara	Majhihara	Balipatna	Khurda	CASA	Raised	1508	4447
						Platform		

Contact person in the village/place:

- Mr. Krushna Chandra Nayak.
- Ms. Banalata Parida, CBDP site leader (of 5 villages)

The school head-master, DMT members and village committee members, women SHG members. Altogether 22 people including 10 women and 2 kids.

Questions

1. Physical Conditions

- What is the physical condition of the building?
 Good. Small repairs are needed, waste deposits around the building.
- Do the building still serve the original purpose?

Yes, as part of Govt. School for classes 1 to 7 with 297 students.

- Is the building well maintained and still operational?

 Yes, but better cleaning of the surrounding premises is required (environment).
- Was the building adequate for the proposed use? What should be different?

 Yes. But a stilted solution would be better, including bigger windows, built-in shelves as cupboards.

 Better ventilation is required.

2. Emergency concept

- Is the building integrated in the disaster response plan of the government? Yes. The CCP was done in 2003
- Is there a warning/ alert system in place? Which type? Maintenance?

 They receive news from the media like radio. Locally the information is transmitted through sirens, conchs, and the warning teams.
- Is the population aware and trained to react? How? Commitment?
 Yes. The DMT consists of 25 members of which 10 are women. The DMT task forces collect Rs.
 100 from within themselves individually per month. They organise their trainings twice in a year.
 The resource persons are from Block offices/ CASA. 2 mock drills have been organized.

- What was the effect of the project on the daily life of the community? Poverty? The building has helped women to come together, now they have frequent interactions.
- Do they feel more secure than before or like others without these shelters? Yes.
- Is the school the right utilization of the infrastructure?

 No, a Community centre would have been better with school as a secondary use.
- Has the building ever been used in case of a cyclone? What are the results? No. In a false warning in 2004, about 50 people arrived.
- Has the presence of the building affected the behaviour in the community?
 Better education and secured feeling

- has infrastructure and population increased since the construction of the shelter?
 No.
- Was the shelter a reason for these changes?
- are there now additional risks? Which?

 No.

4. Use of Building, decision-making process

- Is there any secondary use of the building?

 Disbursement of pensions, weddings, women SHG meetings, Mothers' meetings, health camps (once in a month).
- Possibility or proposals for further secondary use More health related programmes.
- Who is deciding how and when to use the Cyclone Shelter-Building?

 The procedure is that a letter has to be given from the person concerned to the Village Education Committee (VEC comprising of 9 members, of which 2 are women.)

Additional Information concerning the Questions above

1. Physical Conditions

Ventilation is poor and should be improved.

A stilted solution would be better because space for live stock is needed and the space between the stilts could be used for village functions/ weddings, etc.

2. Emergency concept

Additional and better training programmes and training material is needed.

3. Impact and Poverty Alleviation

4. Use of Building, decision-making process

Need for sharing of experience between the different communities who have participated in the SDC programme would be very useful.





Way	Village	Gram	Block	District	Partner	Type of	Village	Catchment
Point		Panchayat			NGO	Shelter	inhabitants	area
No.								(people)
10	Garkarmala	Birtunga	Gop	Puri	LWS-I	Platform	1600	5000

Nearest cyclone shelter is 15 kms from here; Distance from Sea is 6 to 8 kms. Located in between two settlements/ hamlets.

Contact person in the village/place:

• Mr. Rasmi Rekha Mondal, DMT member

Questions

1. Physical Conditions

- What is the physical condition of the building? Ok
- Do the building still serve the original purpose?

Yes, 3 classrooms, 1 teacher room, 1 DMT training room, school for 120 students from class 8 to 10.

- Is the building well maintained and still operational? \bigcirc^k
- Was the building adequate for the proposed use? What should be different? Yes, window grills required.

2. Emergency concept

- Is the building integrated in the disaster response plan of the government?
 Yes
- Is there a warning/ alert system in place? Which type? Maintenance?

 Through radio/ TV first and then from the Block Office or GP office by megaphone/ local volunteers.

 DMT consist of 30 members (including 5 women)
- Is the population aware and trained to react? How? Commitment?

 Training was offered only 2 times in 6 years. People asked for refresher trainings at least two times a year.

- What was the effect of the project on the daily life of the community? Poverty?
 Shelter helped to improve community life, especially for women.
 Children used to study in an asbestos sheet roofed school before cyclone, but now in the newly constructed school cum cyclone shelter.
- Do they feel more secure than before or like others without these shelters? Yes, other villages want such a structure in their village.
- Is the school the right utilization of the infrastructure? Yes, very much.
- Has the building ever been used in case of a cyclone? What are the results?

 There has been 3 floods after 2002. About 30 families poorest of the poor took shelter here.
- Has the presence of the building affected the behaviour in the community? Women are now coming together. Community activity was strongly supported.
- has infrastructure and population increased since the construction of the shelter? Yes, but not further checked.

- Was the shelter a reason for these changes?

Maybe, but difficult to say. Economic reasons are stronger than feeling for security.

- are there now additional risks? Which?

Floods have been recurrent in 2001, 2003 and 2006. Water was stagnant upto plinth level (+1 ft. above Ground Level).

4. Use of Building, decision-making process

- Is there any secondary use of the building?
 - Building used for the purpose of village cultural programmes, Sankirtan programme (religious songs and dances), Women SHGs meetings, tailoring unit run by women SHGs, etc.
- Possibility or proposals for further secondary use Proposal for holding marriage functions.
- Who is deciding how and when to use the Cyclone Shelter-Building?

 School committee (11 members) + DMT member (30 members). But decision lies on a day-today basis with the Executive committee comprising of the president, secretary and treasurer.

Additional Information concerning the Questions above

1. Physical Conditions

People find the emergency light system (bottles inside walls) very effective.

2. Emergency concept

3. Impact and Poverty Alleviation

Those who have been trained are getting gainful employment and left the village.

4. Use of Building, decision-making process

The school committee is maintaining the building through funds mobilised from the community.





Way	Village	Gram	Block	District	Partner	Type of	Village	Catchment
Point		Panchayat			NGO	Shelter	inhabitants	area
No.								(people)
9	Jahnibalia	Surava	Gop	Puri	Vikash	Platform	1000	10000

Contact person in the village/place:

- Mr. Babulal Swain, Secretary BDA Girls high school
- 6 people attended the meeting

Questions

1. Physical Conditions

- What is the physical condition of the building?

Ok, low level of maintenance

- Do the building still serve the original purpose?

Yes, school for 100 girls, but class rooms without furniture. Building is also used for DMT trainings, community meetings, SHGs meetings etc.

- Is the building well maintained and still operational?

Not very well maintained but operational

- Was the building adequate for the proposed use? What should be different? Yes, but community kitchen cooking space is missing

2. Emergency concept

- Is the building integrated in the disaster response plan of the government?
- Is there a warning/alert system in place? Which type? Maintenance? Yes from Block Office to Sarpanch (Head of Panchayat) and then by word of mouth
- Is the population aware and trained to react? How? Commitment?

 The DMTs received trainings twice in year 2001, but no refresher trainings since then.

3. Impact

- What was the effect of the project on the daily life of the community? Poverty?
 Possibility for community meetings
- Do they feel more secure than before or like others without these shelters? Yes, definitely.
- Is the school the right utilization of the infrastructure? Yes.
- Has the building ever been used in case of a cyclone? What are the results? Yes, in the floods of 2006, sheltering 300 people for 6 days.
- Has the presence of the building affected the behaviour in the community?

 The school has become the centre of community activities.
- has infrastructure and population increased since the construction of the shelter?
- Was the shelter a reason for these changes?

Limited influence, Difficult to say

- are there now additional risks? Which?

Floods and Tsunamis

4. Use of Building, decision-making process

- Is there any secondary use of the building?
 For DMT trainings, community meetings, SHGs meetings etc.
- Possibility or proposals for further secondary use

 Would like to raise an additional floor on top for school and emergency shelter. They would like to have an emergency kitchen space and furniture for the class rooms.
- Who is deciding how and when to use the Cyclone Shelter-Building? School Committee (10 members including 2 women)

Additional Information concerning the Questions above

1. Physical Conditions

There is a plan to collect money from students and from the villagers.

2. Emergency concept

10000 people came and took shelter inside and around this building. Hence the dire need for construction of an additional floor.

3. Impact and Poverty Alleviation

4. Use of Building, decision-making process





Way	Village	Gram	Block	District	Partner	Type of	Village	Catchment
Point		Panchayat			NGO	Shelter	inhabitants	area
No.								(people)
16	Kerobelari	Marchipur	Balikuda	Jagatsinghpur	CASA	Stilted	315	3000

2.2 Km from sea

Contact person in the village/place:

- Mr. Purna Chandra Nayak, DMT Member
- Mr. Madhab Nayak.

About 50 people from the village came for the meeting.

Questions

1. Physical Conditions

- What is the physical condition of the building?

Quite Good, additional window grills and windows above shelves. But defects in grading at roof level, needing urgent repair.

- Do the building still serve the original purpose?

Yes, with classrooms for classes 1, 2 and 3.

- Is the building well maintained and still operational?

- Was the building adequate for the proposed use? What should be different? Yes, for school and as village centre.

2. Emergency concept

- Is the building integrated in the disaster response plan of the government?

Yes, local village DMT is linked to Panchayat DMT. The village DMT is of 15 members, including 2 women.

- Is there a warning/ alert system in place? Which type? Maintenance? Yes, DMT get information from Radio/ local Collector and warns people by sirens.

- Is the population aware and trained to react? How? Commitment? Yes, very aware.

The DMTs received trainings in 2001 and 2002 and then 2 Mock – drills.

- What was the effect of the project on the daily life of the community? Poverty? Safe building, centre for village activity, especially for women whose lives have improved by meeting each other.
- Do they feel more secure than before or like others without these shelters? Yes, definitely.
- Is the school the right utilization of the infrastructure? Yes.
- Has the building ever been used in case of a cyclone? What are the results? Yes, in 2001 in case of a flood, the entire village found place in the Shelter. Both the Tank and Emergency Toilets have been used.
- \- Has the presence of the building affected the behaviour in the community? Yes, this Shelter boosted the community life.
- has infrastructure and population increased since the construction of the shelter? Yes, people did not leave their villages during an emergency.

- Was the shelter a reason for these changes?
 - Partly. Now people even immigrate into this village.
- are there now additional risks? Which?
 Yes, recurring floods, moderate cyclones.

4. Use of Building, decision-making process

- Is there any secondary use of the building?
 - Education for the Pre-school children, Observing festivals, village/ Panchayat meetings.
- Possibility or proposals for further secondary use
 Wedding ceremonies, but only after improvement of surrounding land.
- Who is deciding how and when to use the Cyclone Shelter-Building?
 Village Development Committee + DMT member.

Additional Information concerning the Questions above

1. Physical Conditions

There is a need for hard flooring on the Ground Floor below stilts.

There is a need for water-proofing colour on the roof platform.

People wish to have a boundary wall.

2. Emergency concept

Needs to be more refreshed with minor Trainings.

3. Impact and Poverty Alleviation

Positive, people do not leave the village and work here itself.

4. Use of Building, decision-making process

Even Govt. programmes are organized here.

People want a Govt. recognition for the school and an appointment for a teacher.





Way	Village	Gram	Block	District	Partner	Type of	Village	Catchment
Point		Panchayat			NGO	Shelter	inhabitants	area
No.								(people)
8	Papira		Astarang	Puri	LWS-I	Stilted	287	2000

Contact person in the village/place:

• Mr. Ramakanta Behera, Warning Task Force Member, DMT

Questions

1. Physical Conditions

- What is the physical condition of the building?
 Very Good
- Do the building still serve the original purpose?
 Yes
- Is the building well maintained and still operational?

 Yes, Village fund has been used for minor repairs. But the emergency water tank has never been used and not maintained.
- Was the building adequate for the proposed use? What should be different?

 Yes, but people asked for metal window grills for safety of kids and a concrete flooring on the ground floor to use for community purposes. Separation for male and female emergency toilets.

2. Emergency concept

- Is the building integrated in the disaster response plan of the government? Yes, integrated with the Village Community Contingency Plan by the Panchayat
- Is there a warning/alert system in place? Which type? Maintenance?

 Yes, DMT team of 20 people from this village supported by LWS-I warns the people through sirens and direct contact.
- Is the population aware and trained to react? How? Commitment?

 Yes, trainings are regular. They have also participated in several mock- drill trainings.

- What was the effect of the project on the daily life of the community? Poverty?
 Children receive education in a better manner. Women have found the opportunity for coming together (Self- Help Group meetings), income-generation like incense-stick making, HIV/ AIDS trainings, vocational trainings, etc. The 60 women membered Jangal Suraksha Committee (Forest protection Committee) meet here.
- Do they feel more secure than before or like others without these shelters? Yes, absolutely the village community said.
- Is the school the right utilization of the infrastructure? Yes, absolutely.
- Has the building ever been used in case of a cyclone? What are the results? Floods 2003 3 days.
 - Even the emergency toilets have been used, but not the emergency water system.
- Has the presence of the building affected the behaviour in the community? Yes, the position of women for availing the opportunity to meet each other.
- has infrastructure and population increased since the construction of the shelter?
 Yes

- Was the shelter a reason for these changes?

Yes, to some degree

are there now additional risks? Which?
 Moderate Earthquakes

4. Use of Building, decision-making process

- Is there any secondary use of the building?
 - Women SHG meets, social gatherings, health promotion campaigns, agricultural trainings to farmers, Village Committee meetings, weddings (but without revenue generation)
- Possibility or proposals for further secondary use Eve campaigns
- Who is deciding how and when to use the Cyclone Shelter-Building? Village Development Committee (57 people)

Additional Information concerning the Questions above

1. Physical Conditions

Government should mobilise money for maintenance:

The reinforcements in the ceilings have become exposed in few areas and are corroding due to salt in the air. These need some protection and plastering.

2. Emergency concept

This village is a good example wherein the CBDP is very well embedded in the community. The shelter serves 8 villages in times of emergencies and hence more shelters are required in this area.

3. Impact and Poverty Alleviation

A better safety feeling and safe school area for the growing population.

The shelter gave the opportunity to create an environment protection group which is involved in major afforestation along the coast-line, which serves as wind-breaks in times of cyclones. This also helps them to secure their incomes.

4. Use of Building, decision-making process

Women SHG meets, social gatherings, health promotion campaigns, agricultural trainings to farmers, Village Committee meetings, weddings (but without revenue generation)

The decision-making process is quite transparent for the villagers.





Way	Village	Gram	Block	District	Partner	Type of	Village	Catchment
Point	t	Panchayat			NGO	Shelter	inhabitants	area
No.								(people)
21	Pipalmadhav	Bodhei	Tirtol	Jagatsinghpur	SAES	Stilted	1000	2100

Contact person in the village/place:

- Mr. Sarat Kumar Sasmal (06722-250823, 099374 30189), Principal of the school (committed his life to this school)
- Mr. Subodh Chandra Das

Questions

1. Physical Conditions

- What is the physical condition of the building?
 Very Good.
- Do the building still serve the original purpose?

Yes, school for 150 students.

- Is the building well maintained and still operational? Yes, very well

163, very wen

- Was the building adequate for the proposed use? What should be different? Yes, very much adequate.

Platform construction on ground floor between stilts is required.

2. Emergency concept

- Is the building integrated in the disaster response plan of the government?

 CBDP for catchment area was conducted through SDC support.
- Is there a warning/ alert system in place? Which type? Maintenance?

 People get the information from the Block office vehicle through loud speakers / micro phones...
- Is the population aware and trained to react? How? Commitment?

 DMT consists of 40 people divided into 8 Task Forces and including 5 women headed by a teacher.

Training received only in 2001, no mock drill since 2001.

- What was the effect of the project on the daily life of the community? Poverty?
 More safety
- Do they feel more secure than before or like others without these shelters? Yes, definitely.
- Is the school the right utilization of the infrastructure? Yes.
- Has the building ever been used in case of a cyclone? What are the results? No significant cyclone has occurred yet, but the building is prepared by the DMT.
- Has the presence of the building affected the behaviour in the community? Not much.
- has infrastructure and population increased since the construction of the shelter?
 Yes.
- Was the shelter a reason for these changes?
 No.

are there now additional risks? Which?
 No.

4. Use of Building, decision-making process

- Is there any secondary use of the building?
 Women SHG meetings, DMT and community meetings
- Possibility or proposals for further secondary use
 Wedding ceremonies, if the ground floor between stilts is made a hard concrete surface.
- Who is deciding how and when to use the Cyclone Shelter-Building? The School Principal, Sarat Ku. Sasmal.

Additional Information concerning the Questions above

1. Physical Conditions

Very well maintained.

Boundary wall made of bushes keeping cattle away, plantation and flowers inside the campus. A serene mood inside the premises.

2. Emergency concept

Well implemented in the teams, but received no trainings since 2001.

Urgent need for Refresher Trainings.

OSDMA – UNDP should arrange for the trainings.

3. Impact and Poverty Alleviation

Local masons were trained under supervision of M. N. Dastur, who are now building stronger homes for the poor in the villages.

Mr. Pravakar Sutar was the Lead mason. He is from the village Sahansa and leads a team of about 15 masons.

4. Use of Building, decision-making process

The Sri Aurobindo Education Society is running the school with a strong commitment from the Principal.





Way	Village	Gram	Block	District	Partner	Type of	Village	Catchment
Point		Panchayat			NGO	Shelter	inhabitants	area
No.								(people)
18	Sunadiha	Japa	Erasama	Jagatsinghpur	CYSD	Stilted	660	2000

This Shelter is located in a very remote place where transportation of building materials was only able on foot for quite long distances.

Contact person in the village/place:

- Mr. Gautam Ch. Patra President Disaster Mitigation Sena
- Ms. Mandakini Manna, Member Secretary, Ma Manasa Women SHG
- Mr. Tapan Pramanik
- Ms. Ranjita Pramanik

41 persons including 11 women participated in the meeting.

DMT includes 25 members including 4 women. There are 4 women SHGs involved in microcredit/ dairy/ poultry.

Questions

1. Physical Conditions

- What is the physical condition of the building?

Very Good, except Ground Floor on which a platform is under construction through support from World Vision.

- Do the building still serve the original purpose?

Yes

- Is the building well maintained and still operational?

Yes, very good maintenance. The terrace door has been kept inside.

- Was the building adequate for the proposed use? What should be different? Yes, very well. In future, the ground floor between stilts should be a concrete platform.

2. Emergency concept

- Is the building integrated in the disaster response plan of the government? Yes, but only up to Panchayat level.
- Is there a warning/ alert system in place? Which type? Maintenance?

 Yes, by Radio by Block, then sirens from Shelter including provisions for new rescue materials.
- Is the population aware and trained to react? How? Commitment?
 Yes, the DMTs received 2 trainings in 2001 and 2003. They have a mock drill every year. But they look urgently out for advanced training.

- What was the effect of the project on the daily life of the community? Poverty? Community gathering, better social contact. Community activities started with the shelter.
- Do they feel more secure than before or like others without these shelters? Yes, definitely
- Is the school the right utilization of the infrastructure?
- Has the building ever been used in case of a cyclone? What are the results?

Yes, 3 times after floods and cyclone warning. It is a life-line for the catchment area. In 2005, 1500 people stayed here for 3 days inside the shelter; they also drank water from the emergency water system. They used roads for defecation, not the emergency toilet systems.

- Has the presence of the building affected the behaviour in the community? Yes, the community came closer together.
- has infrastructure and population increased since the construction of the shelter?
 Yes, 5 immigrant families from neighbouring villages. Case-study: Mr. Pradip Patra, an agricultural labour with 4 family members from Jhatibari village has settled in this village in 2006 since it has access to this cyclone shelter. Trained masons started their own business and employs local workers.
- Was the shelter a reason for these changes?
- are there now additional risks? Which?
 More frequent floods and rains.

4. Use of Building, decision-making process

- Is there any secondary use of the building?
 Village Meetings, Women SHG meetings, pre-school, Training of Women SHGs on book-keeping and accounts, HIV/AIDS awareness programmes. cultural and marriage functions.
- Possibility or proposals for further secondary use
- Who is deciding how and when to use the Cyclone Shelter-Building? Village Development Committee

Additional Information concerning the Questions above

1. Physical Conditions

The shelter is in very good condition. But there is a need for a boundary wall and gate. Flooring on ground floor was felt necessary; World Vision is accomplishing this now.

2. Emergency concept

The emergency water tank was cleaned by DMT and used by the villagers during emergencies. There is an urgent need for advanced refresher training

3. Impact and Poverty Alleviation

Additional jobs for the trained masons

Immigration because of safer place and better community life.

4. Use of Building, decision-making process





				RAT	ING OF	THE SCH	OOL CUM	CYCLON	E SHELT	ER SIT	ES				
Partner Organization		Full		CAF	RE	C.A	ASA CYSD		SD	LWSI		SAES		VIKASH	
Type of Struct	Type of Structure		-	Stilted	Platform	Stilted	Platform	Stilted	Platform	Stilted	Platform	Stilted	Stilted	Stilted	Platform
Name of Village		Points		Apandara	Derunia	Kerobelari	Dhanahara	Sunadiha	Arilo	Papira	Garhkarmala	Pipalmadhab	Areikana	Balibasta	Janhibalia
	Physical Condition?		10	6	5	9	8	10	8	10	8	10	10	6	6
Physical	Serving Original Purpose?	40	10	6	5	9	8	10	9	10	9	10	10	9	8
Condition	Maintenance/ Operational	40	10	4	6	9	7	10	7	8	8	10	10	8	6
	Adequate for Proposed Use		10	3	3	8	8	10	7	8	8	8	8	7	8
F	Integrated with DRP?	30	10	6	8	8	7	8	8	10	9	7	7	8	8
Emergency	Warning Systems		10	8	9	8	9	9	8	10	9	8	8	9	9
Concept	Is community aware and Trained?		10	5	5	7	10	8	7	10	6	9	7	6	5
	Effect on Daily Life		3	2	1	3	3	3	2	3	3	2	2	2	2
	More Secure than before?		3	3	3	3	3	3	3	3	3	3	3	3	3
lana na na	Building used in calamities	4.5	3	1	1	3	2	3	3	2	3	1	1	3	3
Impact	Effect on Behaviour	15	3	1	1	3	2	2	2	2	3	1	1	3	2
	Infrastructure/ Population increased?		3	2	2	3	1	3	2	2	2	2	3	1	2
Use of	Secondary Use?	45	10	7	6	9	6	10	7	10	10	9	6	8	8
Building	Decision-makers for Use	15	5	3	3	5	3	4	4	4	5	3	3	3	4
	TOTAL	100	100	57	58	87	77	93	77	92	86	83	79	76	74