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Disaster Preparedness and Rehabilitation

15.1 Rebuilding Trust

Rebuilding Trust (RT), the rehabilitation programme of CEE began in Baramulla and Kupwara, the earthquake affected districts of Jammu and Kashmir (J&K), since October 2005. More than 13,000 people were helped to cope with the harsh winter months that followed immediately after the earthquake through an interim shelter support. People were helped to resume their livelihoods thus improving the quality of life of over 300 families in seven villages. Education was restored through open air schools popularly known as ‘Umang’. This year-long programme benefited approximately 35,000 students and 500 teachers from 440 schools. People were organized into self help groups and a community based disaster management (CBDM) approach was followed. The skills of local technicians were enhanced through training for earthquake resistant construction. CEE continued with its ongoing activities and initiated some new ventures during the year:

### 15.1.1 Anandshala Schools

CEE Himalaya entered into an MoU with the J&K Directorate of School Education for the reconstruction of 10 damaged schools. Education Department allotted five primary schools, three middle schools and two high schools in nine villages for reconstruction. These schools are being developed into Anandshala model schools and ‘Resource Centres’ for Disaster Risk Reduction (DRR) education. ‘Anandshala’ literally means ‘school of joy’ where students come willingly. These model rural schools are designed to teach sustainable ways of life. Parents and students are involved in the planning, implementation and upkeep of infrastructure; school hardware facilities help to impart life skills to the students through innovative and interactive pedagogy.

CEE began the construction process for four schools in Phase I. To continue with the reconstruction of damaged schools, work was resumed in all the four schools at Choolan, Rampur and Salamabad villages in April after the winter. Village Construction Committees (VCCs) were formed in the villages to monitor and suggest local requirements. Meetings were held regularly in all the schools with the teachers, villagers and VCC members to give their preferences about the interiors, ambience and fixtures like water points, electricity points, etc. The construction was a participatory process with villagers keeping a constant vigil over both the construction process and the material. CEE made several alterations, even re-did some of the work as per their suggestions, like the direction of windows and doors, leaving more open space at one end for meetings and play ground and entrance for toilet.

The cost of construction had shot up tremendously after the earthquake, mainly due to the shortage of workforce necessary for construction. The rubble that was taken into account while calculating the construction cost, was auctioned by the Department. Plan India, who supports this activity, was informed of the escalation, and after the necessary approvals, CEE decided to reconstruct six schools instead of 10, as an additional grant was not feasible. CEE raised additional funds from Give2Asia thus making it possible to complete a total of seven schools within the available grant.

Two High Schools at Sultan Dakki and Dhani Syedan were selected for reconstruction in
Phase II. On demand from the Education Department, one room each was added to Boys’ Primary School and Girls’ Primary School at Salamabad. These schools were selected based on the number of students who enrolled and easy and condition-free availability of land. All seven schools were completed this year and handed over to the J&K Directorate of School Education. Three schools – Government Primary School, Rampur; Government Girls’ Primary School, Salamabad and Government Boys’ Primary School, Salamabad were inaugurated by Ms. Bhagyashri Dengle, the Executive Director of Plan India. Ms. Minti Prabha Pandey, Country Director, Plan Thailand and Ms. Arti Kirloskar, a distinguished Board Member of Plan India also graced the occasion. Members of the village level education committee (VLEC) and panchayats, villagers, head masters, teachers and the students of the three Anandshala schools were also present on this occasion.

15.2 Rebuilding Lives: Tsunami Rehabilitation Programme

Contingency plans preparation
CEE has initiated a programme Rebuilding Lives – a tsunami response that seeks to implement an integrated multisectoral rehabilitation programme leading to sustainable livelihoods and disaster-preparedness for the affected people of Tamil Nadu and Puducherry. The programme is supported by Intermón Oxfam and was started in the year 2005. It covers 20 fishing and agriculture villages in Karaikal (Puducherry U.T) and Nagapattinam district (Tamil Nadu State).

Rebuilding Lives, a programme initiated by the centre following the devastation by the Asian Tsunami of December 26, 2004 in the east coast of India, addresses the issues of rehabilitation and Disaster Risk Reduction (DRR). The main goal is to facilitate an integrated, sustainable rehabilitation programme leading to sustainable development in the tsunami affected regions of Nagapattinam (Tamil Nadu) and Karaikal (Pondicherry) districts. For the effective implementation of this programme, the Centre has adopted meaningful interventions wherein both structural and non-structural measures have been implemented. Contingency plans for the selected 20 villages is one of the non-structural measures under this programme aiming to build disaster resilient communities. The key partner for this programme is Intermon Oxfam.

Outcomes
- Baseline information has been prepared for 20 selected villages through extensive surveys on demography, geography, infrastructure resources and other factors. This enabled the assessment of the vulnerability level and resilience capacity of the communities
- These plans are expected to help 4600 families i.e. around 18000 people from 20 communities, to implement DRR measures in their village.
- Safe/ escape routes were developed for all the villages.
- Through this study, key DRR actions have been identified to help the communities deal with the disasters effectively.
- Communities and the respective panchayat and block level officials are being guided in the implementation of DRR actions in the villages
Major Sustainable Development Interventions

- **Restoration of livelihoods** in the agrarian community through cropland reclamation, ploughing, reclamation of fallow and wasteland, soil testing, yield assessments, bunding, demonstrations, seed bank, training and capacity building. In the fishing community restoration of livelihoods is achieved through construction and deployment of Artificial Fish Habitats (AFHs) and construction of net shelters.

- **Establishing alternate livelihood options** for fishing and labour community – this includes the establishment of incense manufacturing units and crab culture cum fattening unit.

- **Meeting shelter, water and sanitation needs** - Construction of permanent shelters and conducting educational activities to promote proper sanitation and hygienic conditions in the fishing habitat.

- **Developing disaster preparedness and risk reduction plans and initiating Ecorestoration activities** – These include vulnerability assessments, mapping and contingency plan preparation, training and educational interventions and nursery raising and plantation activities along the coastal area.

- **Programme on HIV/AIDS** – Awareness on HIV/AIDS in 20 fishing villages.

### 15.2.1 Update on Activities Undertaken

**Livelihood Restoration**

As a continuation of the livelihood restoration activities the following were implemented:

**Programme on cropland restoration**

CEE continued supporting the cultivable and wasteland reclamation by ploughing and seed inputs. As part of this programme, about 236 acres in Karaikal and 502 acres in Perunthottam village were ploughed benefiting around 535 farmers. CEE also undertook *Prosopis* removal from 300 acres of fallow land in Perunthottam and 70 acres of wasteland in Karaikal which will be cultivated in the following season.

Soil testing was carried out in over 1500 acres of tsunami affected land. Electrical conductivity (EC) and pH values were calculated. Results show that 80% of the tsunami affected land where CEE had worked has shown complete reclamation. Yield assessments also reveal that farmers are able to harvest about 1.9 tons paddy/acre, which was the status pre-tsunami. In some villages, the yield has increased more than the pre-tsunami period with a harvest of about 2.1 tons/acre.

**Planning the implementation of watershed approach**

A 1.8 km earthen bund has been raised in Perunthottam village. It has nine cemented outlet points in order to regulate seawater intrusion and flood control. Grass patching has been carried out on either side of the bund to prevent soil erosion. Further, *casuarina* poles have been inserted in certain portions to strengthen the bund. Following the bunding, about 200 acres of wasteland has come under cultivation, benefiting more than 90 farmers. The local panchayat administration is advocating the construction of a motorable road over the bund with the block development authorities. The bund also serves
as an escape route during times of emergencies for the nearby fishing villages.

**Seed Bank**
Continuing with the Seed Bank concept, CEE facilitated the farmers to learn about seed production techniques including seed treatment, seed selection, field sanitation, cultivation techniques, post harvest management, market linkages and official certification procedures. Farmers used the above cultivation practices in the current seasons and also formed a seed production group establishing linkages with a private seed company. Under this intervention, 29 farmers in Karaikal undertook black gram seed production; 20 farmers in gingelly production and traditional paddy varieties; 38 farmers in vegetable seed and daincha seed production. Overall about 150 acres of agricultural land were covered under seed production cultivation. The activity has also helped in the production of quality seed material for the subsequent season leading to seed, fodder and food security.

**Trial and Demonstration Plots**
Demonstrations of improved cultivation practices leading to sustainable livelihoods have been one of the major initiatives during this year. As part of this, 20 demonstrations were completed including those on System of Rice Intensification (SRI) techniques, pesticide free farming, organic farming, use of wet seeder, summer crops, nutrition garden, traditional paddy varieties, salt tolerant paddy varieties, utilization of rice fallow period and land, water conservation, rat control and pest management. The demonstrations have helped a wide coverage of SRI techniques and use of wet seeder in and around Nagapattinam and Karaikal. The Departments of Agriculture in Karaikal and Nagapattinam too have initiated similar demonstration schemes based on the response from the farmers.

**Training and Capacity building**
About 50 farmers have been trained in various aspects of certified seed production and other cultivation aspects. Field visits and an exposure tour to the Tamil Nadu Agriculture University (TNAU) at Coimbatore were also undertaken in order to facilitate extension and education services for the farmers. A farmers’ field school has been initiated in one of the agricultural villages. Around 10 training programmes have been conducted to cover aspects related to agriculture, watershed planning, organic farming, improved technologies, post harvest management and markets. A consultative workshop on sustainable agriculture for coastal areas was also conducted, which saw the participation of more than 100 farmers from eight coastal agricultural villages, besides officials from the Department of Agriculture, professors and scientists from the Agriculture University and corporates dealing in agribusiness.

**Designing and deployment of Artificial Fish Habitats (AFHs)**
CEE deployed 50 igloo shaped AFHs about 5 km near the shore seawater in Karaikal. These were deployed for the local fishermen and widely accepted by the local fisheries department and the fishing villages. Following the deployment, the fishermen have reported an increase in the fish catch, especially of those varieties of fish which are caught by the hook-and-line fishing technique. This has also helped in improving the marine ecosystem of the Karaikal beach area.

**Designing and construction of net shelter**
CEE has designed and constructed two net
shelters in the Madathakuppam and Kodiyampalayam fishing villages in Nagapattinam district. The net shelters serve to store the nets and other livelihood tools of the fishermen. It saves them time, energy and also increases the life of the nets thus benefiting them economically. About 50 fishing families in Madathakuppam and 30 fishing families in Kodiyamplayam are being benefited under this programme.

15.2.2 Programme on Alternative Livelihoods

This programme seeks to facilitate and promote alternative livelihood options leading to economic stability and improved quality of life. Activities include crab fattening and manufacturing of incense sticks.

Crab culture cum fattening unit
The alternate livelihood demonstration activity on crab fattening was completed with 10 fishing families in Tarangambadi village of Nagapattinam district. The proceeds from the sales were distributed amongst the beneficiaries. Women members of 20 Self Help Groups (SHGs) from two fishing villages in Karaikal and Nagapattinam were also oriented in the crab culture aspects. As a follow up of this activity, crab cage culture will be carried out in the following season.

Incense stick production
CEE has established an incense stick (agarbatti) production unit where about 40 tsunami affected women beneficiaries are engaged on a daily basis for more than 400 days. They are engaged in the rolling, perfuming and packaging aspects of the production line. Through this activity, the women are able to earn a continuous income and support their families. At the marketing end, CEE is facilitating a direct sales as well as dealership mode business. The initial market response has been encouraging and the business is being stabilized. The plan is to support the incense stick production unit in a way that it becomes a self sustaining enterprise.

15.2.3 Shelter related Activities

Construction of Permanent Shelters
CEE completed the construction of 140 multi-hazard proof permanent shelters for the tsunami affected fishing families in Kodiyamplayam island village near Chidambaram in Tamil Nadu. The shelter program has been widely appreciated both by the Government Collectorate as well as the NGO coordination centre - it involved the transportation of materials and machines across backwaters into the village, involving the community in the safe keeping and maintenance of the foundation structures, roping in labour from nearby villages and skill training them in the manufacture of fly ash bricks and also considering the community’s preferences in the design and layout of the houses during construction.

The people have occupied the houses and adapted them as per their lifestyle and traditional customs. An intensive toilet education programme was also implemented to make people aware and ensure their use of toilets. Following the educational intervention, more than 90 % of the pour-flush twin pit toilets are being used. The people who were earlier housed in temporary shelters have now been settled in a separate area comprising of 16 permanent shelters arranged in colony formation.

In this programme, about 1275 tonnes of fly ash (waste) has been used saving about 546
tonnes of wood fuel and generating 600 employment days with an average of about 90 humans per day. The average earning was about Rs.110/- per day per person.

15.2.4 Disaster Preparedness and Eco-restoration Programmes

Awareness and training
An awareness programme on disaster risk reduction, concepts of disaster management, resource mapping, vulnerability assessments, emergency preparedness, life saving skills and community response, has been undertaken through street plays, discussions and exhibits in 20 fishing villages in Karaikal and Nagapattinam. This involved school students, teachers, adolescent groups, family heads, panchayat members, SHG women members, youth, the handicapped and elderly community members.

A mobile exhibit bus on disaster management – “Waves on Wheels” - has also been designed and launched. The bus has illustrative panels, working models and visuals on various aspects related to disaster management. It also houses an audio-visual system which can be utilized to screen films. The bus will cover the tsunami affected regions in Puducherry and Tamil Nadu during the year. Besides this, a training manual on disaster risk reduction for teacher training has also been prepared. Schools and colleges are being covered under the awareness and training programme.

This programme also involved the preparation of contingency plans for 20 fishing villages which included the compilation of socio-economic database, vulnerability assessment, mapping of resources and escape route maps. The contingency plans will be shared with the local panchayat members, district administration and other decision makers for integrating it with their development plans.

Life saving skill training including rescue, first aid and emergency handling, has also been imparted to 100 youths covering 10 villages and National Cadet Corps (NCC) students from colleges. The training programme has been appreciated by the Fire and Health Department as well as the district Disaster Management Authority. An awareness programme on disaster risk reduction (DRR) was carried out in 20 villages through street plays, talks, demonstrations and mock drills.

An orientation workshop on HAM radio was also conducted which had the participation of 80 fishing youth, 30 NCC students and 8 officers from the Block Development Office. A demonstration of this was conducted in the fishing villages of Palayar, Kodyamalayam, Thirumulaivasal and Karaikal. Following the orientation, the district authorities have tried to incorporate HAM radio communication and training in their disaster preparedness plans.

Eco-restoration
CEE raised over 5 lakh casuarina and other saplings in two nurseries in Karaikal and Nagapattinam. A mangrove nursery has also been raised in Melamoovarakarai fishing village. Nursery-raising saw the involvement of 40 human days of labour for 200 days (of which 60% were women). More than 50 hectares of coastal land have been planted with more than 5 lakh saplings. The eco-restoration programme has sequestered about 3,20,000 tonnes of carbon dioxide, helped in preventing coastal sand erosion and will also serve as a bio-shield in vulnerable areas.
15.2.5 Programme on HIV/AIDS

Mass awareness on HIV/AIDS through street plays, folk songs, focus group discussions and mimicry were initiated in 20 fishing villages in Karaikal and Tamil Nadu. The information disseminated included that on the science of HIV, the modes of infection, hygienic practices, safe sex, alcohol abuse, treatment measures and psychological counseling. Blood test camps were also conducted which saw the involvement of more than 50 families from each village. About 100 families from each village were directly benefited through this programme. CEE also created 10 master families per village to serve as the future information and knowledge resource on HIV/AIDS for the community members. They have been given a kit comprising of HIV/AIDS educational materials, communication material and expert contacts for further follow up and support. A workshop was also organized to involve the local health department officials, doctors and counseling experts in the community level awareness programmes. Following this, the health department has also started blood testing and awareness camps in the fishing villages.

Plan India Auditors' field visit