Building Disaster Resilient Communities – DipECHO Consortium
(Dan Church Aid/ActionAid/People in Need)

Documentation of CBDRR Models for the DipECHO VIII Action in Cambodia

PCDM provincial trainers conducting training on DRR for CSOs in Kompong Channang

October 2013
Mrs. Bernie O’Neill
### Abbreviations Used

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAC</td>
<td>Action Aid Cambodia</td>
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<tr>
<td>ADIFE</td>
<td>Association for the increase in Development of Family Economy (local partner of AAC)</td>
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<tr>
<td>BBC</td>
<td>British Broadcasting Corporation</td>
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<tr>
<td>BDRC</td>
<td>Building Disaster Resilient Communities (title of consortium proposal to DipECHO)</td>
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<tr>
<td>BMC</td>
<td>Banteay Meanchey (province)</td>
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<td>BTB</td>
<td>Battambang (province)</td>
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<tr>
<td>CBDRR</td>
<td>Community Based Disaster Risk Reduction</td>
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<td>CCDM</td>
<td>Commune Committee for Disaster Management</td>
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<tr>
<td>CEDAC</td>
<td>Centre d’Etude et de Development Agricole Cambodgien</td>
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<tr>
<td>CHRD</td>
<td>Cambodian Human Resource Development (local partner of AAC)</td>
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<td>CIP</td>
<td>Commune Investment Plan</td>
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<tr>
<td>CRC</td>
<td>Cambodian Red Cross</td>
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<td>CSO</td>
<td>Civil Society Organization</td>
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<tr>
<td>DCA</td>
<td>Dan Church Aid</td>
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<tr>
<td>DCDM</td>
<td>District Committee for Disaster Management</td>
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<td>DM</td>
<td>Disaster Management</td>
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<td>DRAT</td>
<td>Drought Resistant Agriculture Technology</td>
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<tr>
<td>DRM</td>
<td>Disaster Risk Management</td>
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<tr>
<td>DRR</td>
<td>Disaster Risk Reduction</td>
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<tr>
<td>ECHO</td>
<td>European Commission Humanitarian (office) Aid</td>
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<td>EWS</td>
<td>Early Warning System</td>
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<td>GPG</td>
<td>Good Practice Guide</td>
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<td>HVCA</td>
<td>Hazard, Vulnerability, Capacity Assessment</td>
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<td>IEC</td>
<td>Information, Education &amp; Communication (materials)</td>
</tr>
<tr>
<td>KAFDOC</td>
<td>Khmer Association for the Development of the Countryside</td>
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<td>LWD</td>
<td>Life With Dignity (implementing partner of DCA)</td>
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<td>MOEYS</td>
<td>Ministry of Education, Youth &amp; Sport</td>
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<td>Mol</td>
<td>Ministry of Information</td>
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<td>NCDM</td>
<td>National Committee for Disaster Management</td>
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<td>NDEWS</td>
<td>Natural Disaster Early Warning System</td>
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<td>NSDP</td>
<td>National Strategic Development Plan</td>
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<tr>
<td>OBC</td>
<td>O’Bei Chuan (commune)</td>
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<tr>
<td>PCDM</td>
<td>Provincial Committee for Disaster Management</td>
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<tr>
<td>PDWRAM</td>
<td>Provincial Department of Water Resources &amp; Meteorology</td>
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<tr>
<td>PIN</td>
<td>People In Need</td>
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<tr>
<td>PK</td>
<td>Ponleu Komar (local partner of Concern/PIN)</td>
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<tr>
<td>PVC</td>
<td>Poly Vinyl Chloride</td>
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<td>SNAP</td>
<td>Strategic National Action Plan</td>
</tr>
<tr>
<td>SORF</td>
<td>Support Organization for Rural Farmers (local partner of Concern/PIN)</td>
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<tr>
<td>TOR</td>
<td>Terms of Reference</td>
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<tr>
<td>TOT</td>
<td>Training of Trainers</td>
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<td>UXO</td>
<td>Unexploded Ordinance</td>
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<td>VA</td>
<td>Village Association</td>
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<td>VDMG</td>
<td>Village Disaster Management Group</td>
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<td>WUC</td>
<td>Water User Committee</td>
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I Introduction & Background

DanChurchAid/Christian Aid Cambodia, ActionAid Cambodia and People in Need have come together to form a consortium for the 8th DipECHO Action in Cambodia. The Building Disaster Resilient Communities (BDRC) project, launched in June 2012 and being implemented over 18 months, aims to increase the resilience of local communities living in hazard prone areas in Cambodia and reduce vulnerability to natural hazards through strengthened governance and increased local capacity. The Action is working across three levels: National, Sub-National (Province, District and Commune) and the village/community level and is being implemented in seven provinces (Banteay Meanchey, Pursat, Kampong Chhnanng, Kampong Speu, Prey Veng, Svey Riang and Kratie) by 11 implementing partner NGOs.

A principle component of this Action is to strengthen and consolidate Community Based Disaster Risk Reduction (CBDRR) models that demonstrate increased resilience to disasters at both ID Poor household and community levels and to document models that can be replicated elsewhere in Cambodia. The documentation and dissemination of lessons learned and good practices from CBDRR models (from current and previous DIPECHO projects) is aimed at improving DRR strategies at sub-national / national level in both government and civil society actions. In addition to the documentation of the identified models the BDRC Consortium also seeks the consultant to undertake a technical assessment of each model focusing on the relevance, effectiveness, sustainability strengths and weaknesses as well as opportunities to strengthen the models to improve impact and replicability.

The BDRC Consortium has identified eight models and best practices across the Action at least seven of which need to be documented for the purpose of future replication. The identified models and best practices are:

<table>
<thead>
<tr>
<th>Identified Models</th>
<th>Province</th>
<th>Lead Agency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community Centered Safe Areas</td>
<td>Banteay Meanchey</td>
<td>ActionAid</td>
</tr>
<tr>
<td>Promotion of DRR through Schools</td>
<td>Svuy Rieng</td>
<td>ActionAid</td>
</tr>
<tr>
<td>Improving Community Resilience through Village Associations</td>
<td>Pursat</td>
<td>Concern/PIN</td>
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<tr>
<td>Water Supply Systems and User Committees</td>
<td>Kampong Speu</td>
<td>DCA</td>
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<tr>
<td>Capacity Building Sub-national CDM structures</td>
<td>Prey Veng</td>
<td>DCA</td>
</tr>
<tr>
<td>Drought Resistant Agricultural Techniques – Bamboo irrigation</td>
<td>Kampong Chhnanng</td>
<td>DCA</td>
</tr>
<tr>
<td>Provincial EW through mobile phone</td>
<td>Pursat</td>
<td>PIN</td>
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<tr>
<td>Strengthening house construction against storm and strong wind</td>
<td>Pursat</td>
<td>PIN</td>
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</tbody>
</table>
Model 1 – Water Supply System & User Committees

1.1 Technique Description

The model of this technique was implemented in Prey Khae village of Dombok Roung commune in Phnom Srouch district of Kompong Speu province. The system was constructed in early 2010, at a total cost of $5,456, $1,970 of which was contributed by the community. There are 67 families in this village, all of whom have access to water from this system.

The water supply comes from a very small stream sourced from a hill about three kilometers from the housing area of Prey Khey village. A concrete reservoir which holds about six cubic meters of water was constructed at a point along the stream on the slope of the hill which is about 80 meters higher than the housing area of the village. The selection of the location at this elevation enabled gravity flow of the water to the village without the need for additional pumping mechanisms.

A main pipeline, using PVC pipes, was laid from the concrete reservoir to the first houses in the village, where a junction box was installed to divide the water into separate distribution pipelines. There are three separate pipelines serving the village. A elevated PVC tank (one cubic meter) was installed close to the junction on pipeline number three to allow additional storage of water in cases where this pipeline needs to be closed off (e.g. if insufficient water in the dry season to service all pipelines at the same time). A water meter is installed at each household along the pipeline to measure the amount of water used. Water is charged at a rate of 300 Riels per cubic meter.

A Water User Committee (WUC) was established and trained with five members, two of whom are women. The WUC is responsible for the monthly collection of user fees and for the overall operation and maintenance of the system.

Associated activities were the dissemination of drought resistant agriculture techniques to maximize the use of water in the dry season and the promotion of improved hygiene behavior among users.

1.2 Benefits of the technique

- Villagers now have access to water all year round, whereas before they had grave shortage of water, especially in the dry season
- Reduced time lost in water collection as the water is piped directly to their houses – this has especially reduced the burden on women and children who were the main water collectors
- Children can attend school more regularly as they don’t have to spend time collecting water
- Most of the villagers now have home gardens where they use the water supply to grow vegetables – although most families grow for own consumption, a few families can sell excess production
- The intervention contributed in improving health and hygiene – as proximity and sufficiency of water enables households to practice better hygiene and the quality of water is better than what they had used before the scheme was implemented
- Another benefit of the intervention is how people see a benefit to participation in village planning as the intervention responded to a plan raised by the community and incorporated into the commune investment plan
- Those who became members of the Water User Committee now have increased skills in conducting meetings, simple bookkeeping as well as improved technical knowledge
1.3 Summary of implementation

Step 1 – Community discussion & mobilization

Communities will already have identified such a possible project in their village development (or disaster risk reduction) plan. Village meetings need to be conducted to assess the relative priority of this (compared to other mitigation measures in their plans. If deemed a high priority, implementing agency explains the key components and necessary contributions (both to the original capital investment and the ongoing running costs).

Step 2 – Selection of Water User Committee (WUC)

Meetings are held with community to identify suitable members for the WUC. Roles and responsibilities need to be clearly explained before potential candidates are proposed. Election then takes place to select the required number.

Step 3 – Training of WUC

Training conducted on roles & responsibilities regarding:
- Participation in design and construction of the scheme
- How to facilitate discussion on villagers’ participation (labor requirement, user fees, etc.)
- Bookkeeping (recording user fees and expenses incurred)
- Technical maintenance of the scheme

In order to prepare WUC for promoting efficient and effective use of water with users, additional training conducted on the following topics:
- Agriculture practices using low water technology
- Basic hygiene training

Step 4 – Technical design

Technical expertise is provided by the implementing agency (or from relevant government department if required) to carry out the following tasks:
- Topographical surveys are conducted to determine the land layout from the water source to the beneficiary households.
- Designs are made for the construction of water storage system
- Plans are developed with the WUC and community for preferred layout of the pipe system
- Bill of quantities is drawn up for all inputs
- Prices quotations are obtained from suppliers

Step 5 – Mobilization of resources

WUC hold meetings with the community and all relevant stakeholders with the following agenda:
- Disseminate design and cost of implementation
- Agree on community contribution to the construction costs (either in cash or kind – e.g. labor contribution)
- Implementing agency and/or local authority (e.g. commune council) provide details on their contribution
- Suppliers are selected (from the price quotations received)
- Skilled contractor is identified for leading the construction works
- WUC agree on division of responsibility for monitoring

Step 6 – Implementing & monitoring construction
In order to translate the design into action, the following tasks are carried out:
- Implementing agency (or WUC) purchases necessary supplies
- WUC receive, store and manage supplies
- Implementing agency and WUC assign tasks to laborers (for construction of water storage and laying of pipelines)
- Implementing agency and WUC monitor work of skilled contractor and laborers to ensure the work is in line with the agreed designs
- Pay the suppliers, contractors and laborers for the work when completed to satisfaction

**Step 7 – Ongoing operation and maintenance**

After the construction of the scheme, the following tasks are carried by the WUC out on an ongoing basis:
- Regular monitoring of the water storage to ensure there are no leakages or breakages
- Regular monitoring of the pipelines to ensure no leakages or breakages
- Read the household water meters on a monthly basis and collect agreed fees based on usage (if any water meter broken, negotiate fair payment from the household)
- Use water user fees to purchase any materials required to repair any breakages
- Record income and expenditure in cash book
- Hold monthly meetings with users to report on financial status and discuss any problems arising
- Disseminate to members about agriculture techniques that use less water
- Promote good hygiene practices among users

**1.4 Lessons learnt and recommendations for implementation**

The key lessons learnt from the implementation of the Prey Khae water supply system are:
- It is low cost and can be easily replicated elsewhere, if the right conditions prevail
- It is essential to have a well functioning WUC
- Agreement in advance with the community on contributions to construction and user fees is essential to avoid possible future problems
- Good quality materials purchased during construction of the system will reduce future expenditure on repair or replacement
- No matter the quality of pipes purchased, it is difficult to avoid pipe breakages so it is important that user fees are set at a rate that ensures sufficient funds for pipeline maintenance
- Water meters are problematic and in cases of breakdowns, it is useful to have good records of households’ monthly usage of water so some payment can be negotiated in case the meter stops working
- An integrated approach combining the provision of water supply with agriculture practices that minimize water use as well as improved hygiene promotion enhances the overall benefit of the project

**1.5 Contacts for further information**

**DCA/CA:**  
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Model 2 – DRAT (bamboo irrigation)

2.1 Technique Description

This technique has been implemented by LWD in Chambak Prasat village of Kraing Skear commune in Teuk Phos district of Kampong Chhnang province. There are two main elements to the technique: using a cement bag to retain moisture content in the soil and the slow release of water to the plants through perforated bamboo. This technique was implemented by LWD based on experiences gained from a study tour to Takeo province during which they saw this type of drip irrigation being implemented by beneficiary farmers of CEDAC.

Upon return from the study tour, farmers in Chambak Prasat village were very interested to try this so LWD initially selected 20 farmers to try it out. They found it a very low cost, easy system to use and have since disseminated to their neighbors such that almost all the 369 families in Chambak Prasat village have now adopted this technique.

The project of LWD was not merely training on the use of this technique; it was a component of an integrated project on DRR and climate change. The study tour to CEDAC was an element of capacity building under this project whereby their increased understanding of these topics (DRR and climate change) enabled them to quickly appreciate the relevance of bamboo irrigation as a coping strategy in cases of water shortages.

2.2 Benefits of the technique

- Materials easily available and cheap
- More effective use of limited water – less wastage/leakage - pump the water into the bamboo one time it can irrigate vegetable in the sack one or two day.
- Users can easily grow vegetables for home consumption
- If produce excess vegetables, can sell to increase family income
- Can grow any season, it can move from place to place (for example in case of rainy season with flood situation)
- Can be done in limited space – useful for families with small land size
- Project linked this technology to training on DRR and climate change, thus increasing families’ understanding on these concepts

2.3 Summary of implementation

Step 1 – increase understanding on DRR and climate change

An important aspect of this model was training on DRR and climate change in order for community to understand why they face certain problems they have not experience before and to appreciate the need for changes in behavior to adapt to changing circumstances.

Materials for training on DRR were adapted from the training materials of the NCDM (National Committee for Disaster Management) and IEC materials on climate change were adapted from those of
Following the training, the community conducted Participatory Hazard, Vulnerability and Capacity Analysis (PHVCA). This exercise enabled them to identify key hazards faced by their community and develop plans to reduce their risks and increase their coping capacities.

Step 2 – study tour to expose participants to new techniques

An important step to the successful implementation of this technique was the exposure visit to families who were actually practicing it. Farmers learn quickly from seeing actual implementation by other farmers much quicker than disseminating new techniques via word of mouth or through training materials. After they saw the CEDAC target farmers successfully using this technique, they were immediately anxious to try it themselves.

Step 3 – implementing the technique

- Cut the bottom out of the bag and poke small holes around the side (4-5 holes according to the size of the bag)
- Bamboo stems should have approximate diameter of 10 cm and should be cut into approximately 30 cm lengths. One end of the bamboo should be cut below the natural bamboo joint so making a seal at one end. Water holding capacity ½ - 1 liter
- Small Holes (nail size) should be made around the bamboo (5-7) allowing the water to slowly drip out.
- Put one bamboo stem per bag
- Mix soil with compost before filling bag
- Refill with water on average every two days

2.4 Lessons learnt and recommendations for implementation

- Introducing communities to the theory of climate change and DRR helps them to appreciate the relevance of such a technique
- Good only for vegetables, not for other plants
- Similar to other vegetable growing techniques, can be susceptible to insect and pest damage (need to control as in traditional types of vegetable gardens)
- Not easy to get cement bags at the village level – but some villagers have adopted the technique to using other types of containers or even hollow stumps of palm trees (see photos below)

- Some of families are not confident to implement the grow vegetables in sacks

JCCI (Joint Climate Change Initiative project: “A guide to climate change response: A learning Manual for Cambodian Organizations and Institution”). These materials can be accessed from the NCDM or via the contact details given in section 1.5 below.
Commitment of the farmers contributes to success (especially to ensuring they maintain the vegetable growing throughout the whole year)

2.5 Contacts for further information

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Takeo province
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Model 3 – DRR in schools

3.1 Technique Description

ActionAid began to integrate DRR in schools in 2007, working in partnership with three local partner NGOs (one each in Svay Rieng, Kratie and Banteay Meanchey provinces). The objective of this work was to develop DRR preparedness at the school level, mobilize students for awareness building within and to the surrounding communities, as well as linking academic institutions with the DRR initiatives being undertaken by the commune, district and provincial authorities.

Starting from 2007 with 14 schools, ActionAid and its partners have now expanded this work to 34 schools (27 primary schools and 7 secondary schools) throughout the three target provinces, working in partnership with the following local NGOs:
- CHRD (Cambodian Human Resource Development) in Banteay Meanchey
- ADIFE (Association for the increase in Development of Family Economy) in Svay Rieng
- KAFDOC (Khmer Association for the Development of the Countryside) in Kratie

The key elements of the project included:

- Orientation to the Ministry of Education, Youth and Sports,
- Development of context-specific IEC materials
- Training of selected school authorities and teachers
- Those trained then provided DRR training to the students at the school level
- Each school then conducted hazard analysis and developed preparedness plans
- The schools were provided with a small grant for small scale mitigation activities
- The students implemented awareness programs at the village level and to children not attending school through “child to child” approaches
- Inter-school competitions on DRR
- Establishment of Cultural Groups to assist with dissemination of DRR through drama and songs
- Inter-face Meetings between school children and local authorities (in particular, commune council officials – see picture on right in Svay Rieng province)

3.2 Benefits of the technique

The key benefits derived from the implementation of DRR in schools are:

- Increased capacity amongst education officials to provide DRR education
- Increase awareness of DRR amongst students, young people and target communities.
- Creating awareness on DRR and preparedness among the youth creates a “mentality of safety” from a young age which can remain with them throughout their lives.
- Education of the youth on DRR is particularly important given that some of these youths can become future leaders in their communities.
- Improved awareness results in improved mitigation and DRR/Contingency Planning in communities – increased awareness can also motivate increased demand for use of community/commune resources to implement appropriate mitigation measures.
- Engagement of young people in discussions on natural hazards and DRR interventions - this provides a platform for the voice of the youth to be heard by local authorities and decision makers.
It also builds their confidence to engage in advocacy with authorities on behalf of their schools and communities (from initial engagement on DRR issues, they can use this confidence to advocate on other issues of importance to them)

- Reduced injuries or deaths of (young) people related to natural (or man-made) hazards.

### 3.3 Summary of implementation

**Step 1 – orientation on planning with Ministry of Education**

- Meetings with relevant departments in the Ministry of Education to develop joint understanding on what is to be achieved
- Signing of MOU to set out each parties roles and responsibilities and commitment to the project

**Step 2 – development of IEC materials**

- Development of Teacher Training Curriculum
- Development of Student Training Curriculum
- Design of Teacher TOT training package
- Design of hazard specific IEC material/ student and teacher training aides
- Design of other child friendly materials/tools such as Risk Mapping Games/drawing competitions
- Printing of materials – after getting approval from MOEYS

**Materials developed for sharing with other practitioners include:**

<table>
<thead>
<tr>
<th>Materials</th>
<th>Cost of reproducing these materials **</th>
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<tbody>
<tr>
<td>Risk Land Game for Students</td>
<td>$1.10 per booklet if print more than 2,000</td>
</tr>
<tr>
<td>Risk Land Game Teachers Guide</td>
<td>$0.55 per booklet if print more than 500</td>
</tr>
<tr>
<td>Flood Preparedness Booklet</td>
<td>$0.45 per booklet if print more than 1,000</td>
</tr>
<tr>
<td>DRR quiz book for primary schools</td>
<td>$0.25 per booklet if print more than 1,000</td>
</tr>
<tr>
<td>DRR quiz book for lower secondary schools</td>
<td>$0.40 per booklet if print more than 500</td>
</tr>
<tr>
<td>Various posters on DRR for display</td>
<td>1 set of 4 posters costs $1.20</td>
</tr>
</tbody>
</table>

**(These materials can be accessed by contacting the persons listed in 3.5 below)**

**Costs in 2012**

**Step 3 – training of trainers**

- Facilitation of TOT training for provincial ‘Master’ Trainers
- Facilitation of Teacher training for target schools

**(Curriculum for conducting TOT can be accessed by contacting the persons listed in 3.5 below)**

**Step 4 – conducting DRR in the selected schools**

- HVCA in target schools – to understand the situation/ context in target schools
- Facilitation of DRR education sessions for students (these are organized in different ways by different schools – some introduce the DRR concepts during morning assembly, some do it with the students on the Thursdays, for secondary schools it is normally integrated in the geography or other relevant curriculum subjects)
- Target schools developed DRR Plans
- Small grants given to each school to implement some mitigation measures included in their DRR plans
Examples of small-scale mitigation measures implemented in schools:

- Filling in dangerous holes within the school compound
- Repairing leakages in the school roof
- Repairing school toilets
- Providing water filters for the school
- Installed anti-lightening antenna
- Replaced broken water jars
- Repaired fencing around the school
- Built a kiln for burning rubbish
- Made a signboard to signal traffic to stop for children crossing

Note: The average cost of these mitigation measures was about $400 per school

Step 5 – linkages with the community

- Formation of Peer Groups for DRR sessions/ discussions
- Establishment of Cultural Groups/community theater for DRR promotion – interested youth are organized and trained on drama; scripts for drama and songs are produced and practiced **
- DRR Community Theater performances conducted in schools and in the surrounding communities

** Drama scripts and songs are available on DVD from the contact persons mentioned in 3.5 below

Step 6 – advocacy

- Interface Meetings between schoolchildren, teachers and commune councilors to encourage children to raise issues in their schools and their communities and demand action from the commune council officials

Step 7 – learning for improvement

- Internal and external monitoring of activities
- Feedback meetings with key stakeholders
- External evaluations (see contact details below for evaluations conducted to date)
- Feedback and adjustment of strategies based on lessons learnt from M&E and feedback

3.4 Lessons learnt and recommendations for implementation

- Developing close links with the Ministry of Education is critical to getting approval to work with the schools and to getting approval of relevant IEC materials
- At the provincial level, equally important is to work closely with the Provincial Department of Education – their approval of DRR education in schools will be an enabling factor to gaining active teacher participation
- Introducing DRR at the provincial Teacher Training Institutes will provide good foundations for conducting TOT later in the schools
- AAC found that bringing together a core group of teachers involved in the DRR training to reflect on the process and content was an important contribution to the development of IEC materials and to identifying best practices for dissemination to students
- Ultimately integration of DRR into the full school curriculum is what the project is aiming for – so far it is still on the periphery as it is only done in schools supported by NGO projects. Further advocacy and follow up is needed by AAC and other stakeholders to ensure this happens.
• Follow up and monitoring plays a very important part in motivating the teachers to continue DRR education (during the implementation of this model, this was done by the local NGO partners mentioned in the introduction above and supplemented by further monitoring by AAC)
• Supporting the schools to implement small-scale mitigation measures identified in their DRR plans is a strong motivating factor for the teachers and students
• Interface meetings between schools (teachers and students) and local authorities (in particular, commune council officials) helps to develop the advocacy skills of the students and allows the local authorities an opportunity to listen to the voice of the youth in their community

3.5 Contacts for further information

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AAC may add another contact (for MOEYS) before publishing this in the GPG
Model 4 – Community Safe Areas

4.1 Technique Description

Since 2012 ActionAid Cambodia, through its local implementing NGO partner CHRD, has been supporting the development of two safe areas in Banteay Meanchey province by making use of existing community facilities rather than specifically designated safe hills. One of the safe areas is a Pagoda in Sok San village of Sangkat Nimith in Poipet municipality and the other is a commune office in O’Bei Chuan (OBC) commune, O’Chrou district. These sites were selected because they are situated close to the Thailand border in Banteay Meanchey and flood waters from Thailand have inundated the villages surrounding these sites on an annual basis over the last few years, causing many people to have to evacuate their villages.

The aim was to provide people with a safe relocation site. ActionAid encouraged safe sites in locations that will not flood and also where they are connected with community/local government institutions – rather than elevated remote locations (safe hills). The reason for this was to more easily ensure regular maintenance (and use) of facilities and have personnel available to perform dedicated roles and responsibilities at times of displacement of people to the sites.

The key principles underlying the development of this model were:
- Choice of community facility for the safe area
- Community level engagement
- Provision of WASH and shelter facilities
- Planning with other stakeholders.

In line with these principles, the key inputs and activities were as follows:
- Meetings and discussions with CCDMs, local authorities and affected communities
- Conducting HVCA and preparing disaster risk reduction plans
- Provision of clean water and sanitation facilities
- Provision of plastic tarpaulin and mobile tents
- Development of evacuation plans and designating roles and responsibilities (this aspect had not yet been completed at the time of the assessment)

Beneficiaries:
A total of 3,961 persons currently benefit, which is based on the four villages near by the two Safe Areas who would potentially use the Safe Areas on a near annual basis.

Cost of physical inputs:
- Water tank with free flow filters set 4 x $ 1320 = $ 5280 (2 at OBC and 2 at Sok San)
- Toilets 16 room x $ 872.5 = $ 13,960 (8 rooms at OBC and 8 rooms at Sok San – separate blocks of 4 rooms each for men and for women
- Concrete, accessibility ramp, hand rail and water connection system = $ 5,640 for 2 of safe areas
- Tarpaulins (5m x 7m) 8 x $ 30 = $ 240
- Mobile shelters 4 x $ 870 = $ 3,480 (only OBC safe area)
- Concrete platform 16 m x 28m x 100 cm = $8,963 (only OBC, planned but not yet done)
4.2 Benefits of the technique

- Availability of dedicated safe areas with basic infrastructure
- Availability of WASH and shelter facilities
- Clear plan for roles and responsibilities to support relocated communities/families
- Clear plan for evacuation and relocation
- All year round use of installed facilities/with clear maintenance agreements
- Community involvement in management/maintenance committees.

4.3 Summary of implementation

The intervention to develop Community Centered Safe Areas at the two locations commenced in late 2012 during the flooding that affected the areas. ECHO emergency flood response project funds paid for the installation of (2 x 4 unit) toilet blocks, separated for males/females, ECHO money also paid for the installation of two large water towers with Hyflux filters to provide a source of safe drinking water. ActionAid funding was then used to make these toilet blocks disabled/elderly accessible (ramps/railings) –hand washing facilities and drainage areas were added around the water towers to improve safety.

For the OBC Commune Council Office tents were purchased to provide shelter to displaced people and lighting rigs were purchased for deployment at times of need to improve safety/security.

Committees were established to monitor construction and to maintain the facilities and have clear roles and responsibilities in place at times of displacement of people due to flooding.

Establishing these safe areas can be summarized in the following steps:

**Step 1 – assessment and identification**

- Conduct HVCA in target communities
- From outputs of HVCA, facilitate identification of suitable safe areas
- Conduct feasibility assessments on the proposed safe areas (including potential sources of sufficient water supply)

**Step 2 – formation & training of management/maintenance committee**

- Identification of suitable candidates
- Election of committee members
- Training on roles and responsibilities

**Step 3 – installation of water & sanitation facilities**

- Procurement of supplies (note: Hyflux 60 filters for the water supply were procured from Social Venture Capital in Kompong Channang province who also provide booklets on their usage and maintenance – see contact details below)
- Selection of contractors for construction works
- Monitoring the construction and installation
Step 5 – provision of shelter

- Procurement of tarpaulins and mobile tents
- Organize appropriate storage of the tarpaulins and tents in safe/easily accessible place

Step 5 – community training & evacuation planning

- Conduct training for potential user communities on use of the safe area and its facilities (including hygiene awareness training during times of evacuation)
- Prepare evacuation plan with potentially affected villages – this will include plans for evacuation of vulnerable groups, where to locate animals and specific roles and responsibilities for service provision during evacuation

4.4 Lessons learnt and recommendations for implementation

- Safe area should be really “safe” – so it is important to identify an area that is not affected itself by the disaster (e.g. it does not flood when other areas flood)
- A safe area is only useful if the affected people can reach it safely during a disaster – provision should be included in a safety plan to ensure such access
- Engagement of relevant government officials and sub-national structures of the NCDM in all the planning is crucial
- Community participation in planning and maintenance enhances the success of the project
- Use of community resources (such as commune offices, pagodas or schools) ensures that the inputs provided are used and maintained between emergency response needs (and can be a justification for the costs of the inputs required)
4.5 Contacts for further information

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5.1 Technique Description

Shelter rehabilitation is one of the most expensive humanitarian interventions. The cost estimates of CRC for house reconstruction with DRR measures is approximately 500 USD – far beyond the financial capacity of the majority of the poor in Cambodia living in the disaster prone areas.

The typical rural or urban shelter is made of various materials available to the household (bamboo, timber, palm leaves, plastic sheets, etc.). It is typically built on stilts. During PIN post 2011 floods assessments it became evident that poor dwellers lack back basic skills in “building back better” shelter reconstruction. A large percentage of these makeshift shelters remain prone to collapse.

Drawing lessons from other flood/tropical storm prone countries such as Myanmar, Pakistan or Bangladesh, PIN in partnership with Collective Studio decided to elaborate simple manuals containing illustrative information how to rebuild stronger and disaster resilient house at low cost.

A total of 35 houses in 19 villages of Pursat province were selected for this initial pilot project. The project only started in July 2013 and is planned to be completed by November 2013.

The key components of the model are:
- Identification of houses for pilot reconstruction
- Technical assessment of the structural failures of the houses
- Development of practical manuals for reconstruction
- Conduct practical workshops in the community on the reconstruction
- Hold workshop to disseminate lessons learnt to NGOs and academics involved in construction, DRR and housing

Two underlying principles are applied:
1. Use only locally available materials and skills
2. Ensure the cost of reconstruction does not exceed $250

As well as the cooperation with Collective Studio on the assessment of the housing structures, PIN also collaborates with UN Habitat for technical consultancy and evaluation of technical manuals developed.

5.2 Benefits of the technique

- Providing a model of reconstruction of vulnerable houses to a quality that can withstand floods or storms at a low cost can reduce the financial burden to affected families
- Producing an illustrated manual of key techniques for house strengthening increases the knowledge and skills of those who get access to it
- Use of only locally available materials increases the possibility for other families to replicate the reconstruction process on their own houses

5.3 Summary of implementation

Step 1 – Identification of houses for reconstruction

The aim of the model was to identify simple DRR construction measures that can be applied by the rural, poor families themselves and local builders at low cost. PIN’s local partners used the following criteria to identify the model families:
- House with several structural failures due to exposure to weather
- Household living in a disaster prone area.
- ID poor 1 or 2

Step 2 – Structural assessment

The structural assessment results confirmed earlier assumptions and patterns from other countries. The following are the main identified structural problems that reduce houses’ resistance:
- Weak foundation- stilts not installed in the ground properly
- Walls-lack cross braces, continuity, poor quality materials used
- Open shutters allowing strong wind to enter the house and blow the roof off by strong wind
- Weak roofs- not properly fixed to the walls (no hurricane straps)

Step 3 – Development of training manual

Following field visits and desk review of other similar models and manuals in the region, Collective Studio architects elaborated a black and white manual in Khmer. This is to reduce the printing costs and ensure wide spread use. Once the manual has been developed it was distributed to the selected families and local builders to observe if people understand its content and to record their comments. Simultaneously with reconstruction of selected houses further small changes were made to the manual by Collective Studio team. The final draft has been consulted with housing experts from Habitat from Humanity, Caritas, and UN- Habitat as well as Ministry of Land Management, Urban Planning and Construction. Manual can be accessed through the contact persons listed under section 5.5 below.

Step 4 – Planning house reconstruction

In the selected villages, local partners of PIN identified builders who supported the reconstruction of houses. The reconstruction of the house was done by the families themselves with support from skilled workers from PIN/ Collective Studio and one local builder. The construction materials were purchased locally by PIN and delivered to each household. Level of donation to each household varied depending on the severity of needs for improvement. The highest donation in kind was 350 USD.

Step 5 – Community training on reconstruction

Although the training was open to all the families willing to attend the training, on average 3-5 non beneficiary families attended the reconstruction- training sessions in the villages. PIN partners and village authorities (incl. VDMGs) informed the villagers about the event and its purpose in beforehand. All the participants received copies of the manual and participated in the reconstruction effort. Additional copies were delivered to VDMGs for further distributions. As part of the model implementation 1000 copies of the manual were distributed.

Step 6 – Workshop to disseminate lessons learnt to NGOs/other stakeholders

In the end of November 2013, when the final version of the manual will be elaborated PIN and Collective Studio will conduct a workshop in cooperation with Royal University of Phnom Penh- Department of Architecture and Urban Planning. The purpose of the workshop is to expose students and academics to low tech and low cost housing reconstruction methods.

5.4 Lessons learnt and recommendations for implementation

Full lessons learnt from this model will not be available until mid-November is the earliest. But two initial issues have been identified already by PIN:
- Need to address sustainable housing finance in the future. How do people access funds to rehabilitated/ upgrade their shelters?
- Several families may be under threat of eviction due to Economic Land Concessions.
5.5 Contacts for further information

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Model 6 – EWS through mobile phone technology

6.1 Technique Description

PIN in collaboration with Provincial Committee for Disaster Management in Pursat, InSTEED and Open Institute is currently developing a Natural Disaster Early Warning System for Pursat province.

The aim of this model is to provide disaster prone communities in Pursat province with adequate information about the natural disasters hazards through recording voice messages by PCDM officials and disseminating them to registered phone numbers.

The voice messaging system Introduced in Cambodia by Open Institute and InSTEDD can be easily integrated into existing early warning systems as a supplementary method by sending voice messages to the population that can be affected by the disaster as soon as PCDM/ PDWRAM generates accurate information. The recorded messages will contain specific information about the disaster (its expected scale, impact and time of arrival) as well as preparedness’ reminders (e.g. household emergency kit, documents).

The introduction of voice messages does not aim to replace existing early warning mechanisms. It is meant to supplement them. In example, rural communities are used to observing the river levels and other signs of nature. PIN in collaboration with PDWRAM will construct small scale EWS infrastructure (water gages, disaster preparedness education) as well as contact local media in order to establish good environment for information sharing.

The key components of this model are:

- Survey on existing Early Warning Systems
- Establishing link between target communities and PDWRAM
- Training of PCDM on using Verboice platform developed by INSTEED
- Provision of laptops to PCDM in Pursat
- Simulation Exercise
- Post simulation exercise survey
- Advocating telecom Cambodia to issue a free emergency phone number for Pursat
- Scaling up- introduction of self registration system in Pursat province (and later to other provinces)

6.2 Benefits of the technique

- Can reach many people instantaneously
- Is relatively low cost to operate (and possible in the future may be available free)
- Using mobile phones to pass warnings on potential hazards is implemented in conjunction with other traditional warning systems so it complements these systems, thus increasing the potential for warnings to reach more people
- Mobile phones are usually carried by their owners (unlike TVs or radios) so even when outside the home, warning messages can reach them
6.3 Summary of implementation

Step 1 – conducting PHVCA in affected villages

Participatory Hazard, Vulnerability & Capacity Assessment (PHVCA) is the basis for developing and planning the Community-Based Early Warning System (CBEWS), involving an assessment of the flood hazard, exposure, vulnerability and capacities. This first step in setting up the CBEWS involves reviewing the PHVCA outputs in order to identify:

From Flood Hazard Map:
- specific areas and level of risk to flood: high, medium, low risk areas
- elements prone to potential loss or damage (elements at risk)
- safe sites (pagoda, safe hill, school, etc.) and routes
- which household will move to safe area 1,2,3, etc.

And to review the Flood Hazard Assessment to understand the nature and behavior of flood:
- when it occurs, duration, frequency, impact, etc.

Step 2 – Emergency Preparedness Plan

Each household in the community develops a preparedness plan of what to do before, during and after a flood (or other hazard) occurs. This includes checklists of important items to prepare in case of evacuation, plans for moving livestock, location of nearest safe area, etc.

Step 3 – Public Awareness Raising

The people in the community need to have clear understanding of the risks they face and other possible hazards. They need to be involved in developing the CBEWS. The following are some of the actions to raise awareness in the community:
- IEC materials such as posters placed on public places, leaflets, brochures, etc.
- Periodic meetings to review and update plans and systems

Step 4 – Installing flood monitoring gauges

PDWRAM helps to facilitate the installation of flood markers (as stand-alone structure or on post, tree or houses). To do this they:

- collect information from the community on historic flood information (i.e. which areas of the village flooded to what levels during previous floods) and
- conduct topographical surveys to determine the appropriate places in the village to install markers to serve as indicators of water level changes. These markers can be made for a very low cost (about $60 a set of three markers at different levels).

These meter boards are installed at different levels in the village – so if the people can see the water levels rising on the lowest one, they can already begin to prepare their emergency preparedness.
Step 5 – Training community observers/committee members

A committee is established in the villages to observe the water levels on the meter boards and pass information on to the villages (and via the CCDMs to the PCDM). They record the data on water level changes during key periods – the time and the level so that the rate of change can be determined. This data, when maintained over a period of time, will provide a historical record to assess flood cycles.

Step 6 – Information dissemination via mobile phones

This system is set up as follows:

- Install poster with information to register for NDEWS.
- Voice instructions after registering: “Welcome to NDEWS Mobile Phone Messaging System in Pursat province. If you are from District A, please press 1; if you are from District B, please press 2”. When the main character selects Districts he can select Commune: “If you are from Commune A, please press 1, if you are from Commune B, please press 2. Thank you for registering”.
- The number gets registered at the Verboice platform on the computer
- PDWRAM monitors its data and other information sources and passes any relevant warnings about upcoming disasters to the PCDM.
- PCDM gets approval from provincial governor to send the alert message to the population.
- Representative of PCDM records an early warning message on his/her computer and sends it to the numbers registered on Verboice platform.
- All registered numbers are rung up simultaneously and people answer their phones and listen to the message.

Upon receiving a warning message:

- Village chief still uses loudspeaker (or other means) in the village to reach people without a phone. Neighbors who received message go to inform others without phone about the threat.
- People put essential items to baskets and sacks: torch/ candles, batteries, mobile phones, documents, water filter, pots, food for seven days, clothes, tarpaulin, radio
- If flood warning, people go to the safe place (Pagoda, school, or other community safe site such as elevated hill)

6.4 Lessons learnt and recommendations for implementation

- Need to invest time in training PCDM to be able to use Verboice platform
- Limited capacity of IVR servers. Currently the system sends simultaneously 250 messages. For 20 second messages, the system can send messages to 740 households within one minute. Open Institute is currently expanding capacity of their servers.
- The accuracy of information passed through the voice messages is dependent on PDWRAM/PCDM being able to generate accurate Early Warning Messages.
- The main limitation of this system is that it does not reach those who do not have a mobile phone. This is why we consider this system a complementary one and it should not replace other EWS such as radio announcements, community warning groups, etc.
- Due to lack of accurate weather forecasts, the system will at this stage inform the population only about sudden onset disasters such as floods, hurricanes and storms.
- The message is only sent once, it will not be repeated
6.5 Contacts for further information

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Open Institute: Mr. Javier Sola
Director
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PIN may add contacts later for PCDM Pursat and PDWRAM Pursat
1.7 Model 7 – Capacity building of sub-national DM structures

7.1 Technique Description

The aim of this model is to increase the capacity of sub-national committees for disaster management through skills development and practical application of the training. The model has gradually evolved since 2008 through the actions of DCA Consortium partners leading to the current model which has the following key components:

- In cooperation with NCDM, build a team of trainers at PCDM level for current target provinces
- Provincial trainers to train at least one or two more persons per target district
- Assist district trainers to train all target CCDMs (can rotate responsibilities of provincial trainers to assist each DCDM)
- Target CCDMs guided on how to form VDMGs in villages
- Assist VDMGs to conduct PHVCA in target villages and prepare DRR plans for incorporation into commune, district and provincial plans
- Support small-scale mitigation activities identified through HVCA process as a practical exercise for sub-national committees
- Based on the above activities, prepare provincial, district and commune contingency plans for emergency preparedness and response
- Supporting target provinces to hold provincial DRR forums
- Increase understanding of DRR among CSO and improve linkages to sub-national DM structures

Currently this model has been implemented to certain extent in eight provinces of Cambodia – Pursat, Battambang, Banteay Meanchey, Kratie, Prey Veng, Svay Rieng, Kompong Speu and Kompong Channang. The extent depended on the specific target areas of the partners, which are shown in the table below:

<table>
<thead>
<tr>
<th>Province</th>
<th>Districts covered</th>
<th># Communes</th>
<th>Partner</th>
</tr>
</thead>
<tbody>
<tr>
<td>Banteay Meanchey</td>
<td>Malai</td>
<td>1</td>
<td>AAC/CHRD</td>
</tr>
<tr>
<td></td>
<td>O’Chrov</td>
<td>1</td>
<td>AAC/CHRD</td>
</tr>
<tr>
<td>Battambang</td>
<td>Samlout</td>
<td>2</td>
<td>DCA/LWD</td>
</tr>
<tr>
<td></td>
<td>Sampov Lun</td>
<td>1</td>
<td>DCA/LWD</td>
</tr>
<tr>
<td></td>
<td>Bovel</td>
<td>1</td>
<td>DCA/LWD</td>
</tr>
<tr>
<td></td>
<td>Phnom Proeuk</td>
<td>1</td>
<td>DCA/LWD</td>
</tr>
<tr>
<td>Pursat</td>
<td>Bakan</td>
<td>5</td>
<td>PIN/PK/AARR</td>
</tr>
<tr>
<td></td>
<td>Krakor</td>
<td>6</td>
<td>PIN/EPDO</td>
</tr>
<tr>
<td>Kampong Chhnang</td>
<td>Samaki Mean Chey</td>
<td>4</td>
<td>DCA/LWD</td>
</tr>
<tr>
<td>Kampong Speu</td>
<td>Thpong</td>
<td>2</td>
<td>DCA/LWD</td>
</tr>
<tr>
<td></td>
<td>Oral</td>
<td>2</td>
<td>DCA/LWD</td>
</tr>
<tr>
<td></td>
<td>Phnom Srouch</td>
<td>4</td>
<td>DCA/LWD</td>
</tr>
<tr>
<td>Kratie</td>
<td>Prek Prasob</td>
<td>3</td>
<td>AAC/KAFDOC</td>
</tr>
<tr>
<td>Prey Veng</td>
<td>Prey Sdach</td>
<td>2</td>
<td>DCA/PADEK</td>
</tr>
<tr>
<td></td>
<td>Kompong Trabaek</td>
<td>7</td>
<td>DCA/PADEK</td>
</tr>
<tr>
<td>Svay Rieng</td>
<td>Svay chrum</td>
<td>2</td>
<td>AAC/ADIFE</td>
</tr>
<tr>
<td><strong>8 provinces</strong></td>
<td><strong>15 districts</strong></td>
<td><strong>44 communes</strong></td>
<td></td>
</tr>
</tbody>
</table>

There are of course many other agencies implementing (or have implemented) some sub-national capacity building aspects of this model in other provinces (or other districts of the same provinces).
7.2 Benefits of the technique

- Disaster Management officials at all sub-national levels have increased understanding of DRR (assessment and planning) as well as emergency preparedness and response
- Training of provincial focal trainers can ensure wider (and faster) dissemination of DRR concepts throughout their provinces (reduced dependence on trainers from NCDM)
- Greater understanding of DRR among sub-national levels can increase the integration of DRR into all local development planning
- Inclusion of key focal persons from relevant technical line departments broadens the technical capacity of the PCDMs
- Training of CCDMs on how to select and train VDMGs as per the NCDM guidelines ensures a wider pool of resources for conducting HVCA and preparing DRM plans
- Improved village level planning, feeding into the CCDM, DCDM and PCDM plans results in a more accurate assessment of risks and better quality preparedness and response plans

7.3 Summary of implementation

Step 1 - preparation

- Liaison with NCDM to define process for cascading training to sub-national levels and agree priority provinces to start with
- Work with NCDM capacity building unit to develop IEC materials for TOT training (*TOT manual developed and approved by NCDM – copies available from contact persons mentioned under section 7.5 below*)
- Liaise with PCDM focal persons to identify provincial trainers (where possible selected from the Provincial/District Facilitation Teams who previously worked on decentralized planning as well as DRR focal person from key line departments and CRC)

Step 2 – TOT to provincial training team

NCDM trainers need to be actively involved in this step. The TOT for the persons identified in Step 1 above was conducted in two stages and the content is summarized as follows (for full details, refer to the manual noted above):

1st Stage (5 days):

- Introduction and objectives of the TOT
- Legal framework of disaster management in Cambodia (including structure, roles & responsibilities)
- DRR concept and terminology
- Disaster risk management cycle (including group exercises on this)
- Climate Change concepts and adaptation
- Introduction to Participatory HVCA
- Explanation and practice of tools for conducting PHVCA
- Introduction to community DRR planning
- Field work exercise to collect data and develop community DRR plan
- Introduction to Provincial and District level Contingency Planning
- Relation between DRR and development
- Integration of DRR into local planning process (starting from commune level)
- Facilitation skills – practicing listening
- Facilitation skills – practicing questioning
- Facilitation skills – practicing probing
- Facilitation skills – practicing paraphrasing
- Facilitation skills – practicing dialogue
2nd Stage (5 days):
- Reflection on the lessons learnt from the first stage
- Practicing reframing and inclusive solutions
- Practicing tracking and finding common ground
- Practicing personal feedback
- Conduct one day field work to collect information using HVCA tools
- Reflection on field work exercise
- Data extraction analysis – using templates provided by trainers
- Facilitation methods
- Adult learning principles
- Session planning
- Develop action plan for Trainers to cascade the training to DCDM and CCDMs

Step 3 – training of DCDMs and CCDMs

The Provincial Trainers trained under Step 2 above conducted training to DCDMs, with the assistance of the NCDM (for their first practices – as they develop their skills and understanding). Training to DCDMs followed similar content to that received by the Provincial Trainers, with the exclusion of specific TOT topics. Thus DCDM training could be conducted in 4 days (a few DCDMs can be brought together for such training, depending on resources and geographical distance).

The DCDMs, with the assistance from at least one of the Provincial Trainers then conducted training to the CCDMs on the same subjects. At this level, an additional topic is introduced – assisting the CCDMs to understand how to form VDMGs as per the guidelines issued by the NCDM.

Step 4 – assist CCDMs to facilitate HVCA in their target villages
- CCDMs facilitate the formation of VDMGs for the villages in their communes
- CCDMs (with assistance from DCDM and at least one of the Provincial Trainers) assist the VDMG to conduct HVCA in their villages and produce village DRR plans
- CCDMs collection all village DRR plans for compilation into the commune DRR plan (for integration into the commune development planning)
- Support pilot mitigation measures identified through village and commune planning to give CCDMs and VDMGs practical experience in implementation

Step 5 – contingency planning
- Based on results from the commune DRR plans produced under Step 4 above, DCDMs can compile a district level contingency plan.
- All district plans can then be compiled into one provincial DRR plan
- Based on the analysis and outputs of the district and provincial DRR plans, the PCDM have the information to prepare their Provincial Emergency and Response Plan as per the format provided by the NCDM (*format can be obtained from the NCDM through the contacts listed in section 7.5 below*)
- All Provincial DRR plans and Emergency Response Plans are approved by the Provincial Councils and submitted to the NCDM for inclusion in the national planning

Step 6 – learning and exchange
- Support target PCDMs to participate in national DRR forums
- Cross-province exchange visits to allow PCDMs and DCDMs to see successful examples in other provinces.
- Organization of sub-national DRR forums, which will include field exposure to successful CBDRR models and contingency planning processes.
- Facilitate and provide support to the PCDMs to conduct regular meetings and ensure that DRR issues are raised and discussed in the Provincial Council meetings.
- Orientation and training for members of local civil society institutions and journalists in the target provinces on DM structure, CBDRR concepts and tools

### 7.4 Lessons learnt and recommendations for implementation

- **Provincial Focal Trainers** are a key asset to ensure establishment and training of DCDMs and CCDMs. Their role as trainers of these lower level structures increase a sense of ownership and develops good linkages for future cooperation. It is also less costly to train DCDMs and CCDMs by trainers based in the province rather than relying on teams of trainers from national level. Nevertheless, as these Provincial Trainers are still relatively new, there is still a need for at least one person from NCDM (or an experienced person from support agencies) to do some backstopping during the training of DCDMs (and at least some of the CCDMs until they gain further experience).

- **A key restriction** to the work of all persons on sub-national committees is that the DRR responsibilities assigned to them are in addition to other workload – i.e. they all have other roles to play and their time is limited.

- **IEC materials developed with NCDM support** are relevant for training all levels (PCDM, DCDM and CCDMs) and should be used as standard. But there is still a need to develop more IEC materials which are hazard specific.

- **Provincial Trainers** need budget to conduct training to DCDMs and CCDMs (costs include travel and per diems for DCDM/CCDM members to come to the training as well as copying relevant training materials and snacks for the participants). As there is no indication at this stage that NCDM structures will have separate budget line for such trainings, there is still a need for donors or support agencies to provide such funding. Clear MOUs should be developed with the PCDMs setting out what is required by all parties.

- **There needs to be follow up** after the training (refresher trainings) to enhance the learning (as those who receive training for the first time do not absorb the entire contents). Regular refresher training should be built into future support models.

- **DCDMs and CCDMs** need support from Provincial Trainers to select and train VDMGs on their roles and responsibilities and on how to facilitate HVCA. To date the number of support organizations active in DRR has been limited in some provinces. The inclusion in this model of awareness on DRR concepts and structure to CSOs active in the target provinces may broaden the available support to VDMGs as most CSO work closely with village structures – before their orientation on DRR, they would have been unlikely to link with the VDMG due to their lack of understanding on the topic of DRR.

- **Need to train Focal Trainers** at district level to help with training and support to CCDMs (this will reduce the burden on Provincial Trainers). The model could be refined in future to build similar training expertise among the DCDMs such as is now planned for the PCDMs.

- **Among provincial trainers** to date, those with previous teaching experience have proven to be the best at absorbing the content of the training and the most skillful in disseminating it further. Therefore in the selection of future provincial or district trainers, the presence of at least some teachers would be very helpful.

- **Conducting HVCA** in all target villages by VDMGs is important to ensuring completeness of commune, district and provincial DRR/Emergency Preparedness & Response plans. If these are prepared by the PCDM with only the participation of district and commune leaders (as is the
current situation in some provinces), there is a danger that hazard specific information at the village level is not entirely captured in the plans.

7.5 Contacts for further information

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