Project Title: Strengthening the Capacity of Science and Mathematics Teachers on Disaster Risk Reduction and Management (DRRM)

Cooperating Agencies/ Institutions:
- Visayas State University (VSU)
- Central Luzon State University (CLSU)
- Mariano Marcos State University (MMSU)
- Bicol University (BU)
- Department of Education (DepEd)

Activity: Trainers’ Training Program

Accomplishments:

**METHODOLOGY/IMPLEMENTATION STRATEGIES:**

The trainers training was conducted among a total of 147 teachers from selected districts of Nueva Ecija, Ilocos Norte, Albay and Leyte provinces in the months of April and May 2011. In the said provinces, the following institutions/RSTC’s (Regional Science Training Center) served as training sites: Central Luzon State University (CLSU), Mariano Marcos State University (MMSU), Bicol University (BU) and Visayas State University (VSU).

The training content was developed through inputs gathered from experts of PAGASA, PHIVOLCS, OCD, and MGB. Resource persons tapped to deliver lectures also came from these offices. The training program lasted for 5 days, with an additional day devoted for technical tour to PAGASA and PHIVOLCS stations.

To set the over-all direction of the project and provide technical advise on the implementation, a National Steering Committee was formed. This was composed of experts from agencies directly involved with disaster management and education. In addition, an Inter-Agency Committee Working Group (IAC-WG) and Regional Training Coordinators composed of coordinators/representatives of the various regions was formed to take charge of the delivery of the project in the respective area (Annex 1).

**RESULTS:**

Participants of the Training Program
The participants for the training program were identified through the assistance of DepEd Central, Regional and Division Offices and University training coordinators, taking into consideration the criteria set by the National Steering Committee which were the following:

I. DepEd Trainers

- 12 elementary school master teachers in science and math, actually teaching and have specialization in the discipline (must be grade 5 or 6 teacher)
- 12 HS Master teachers in science and math and have specialization in the discipline

II. Faculty of Partner Universities

- 4 representatives handling environmental and earth science courses
- 4 representatives from the faculty of BS Meteorology consortium program
- 3 representatives from the Science Education faculty

Conduct of Trainers Training

<table>
<thead>
<tr>
<th>Training Venue</th>
<th>Training Dates</th>
<th>Technical Tour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visayas State University</td>
<td>April 25-29, 2011</td>
<td>April 30, 2011</td>
</tr>
<tr>
<td>Baybay, Leyte</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central Luzon State University</td>
<td>May 9-13, 2011</td>
<td>May 16, 2011</td>
</tr>
<tr>
<td>Science City of Muñoz, Nueva Ecija</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mariano Marcos State University</td>
<td>May 9-13, 2011</td>
<td>May 16, 2011</td>
</tr>
<tr>
<td>Laoag City, Ilocos Norte</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bicol University</td>
<td>May 23-27, 2011</td>
<td>May 28, 2011</td>
</tr>
<tr>
<td>Legaspi City, Albay</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As shown in the table the trainers training was conducted in four (4) partner universities on the dates stated above. As a culminating activity, a technical tour was also conducted to expose the participants to the various equipment introduced during the training and how they function in forecasting and monitoring of natural disasters. For the VSU participants, the tour was done in PAGASA Tacloban City and PHIVOLCS Palo Seismic Station. Participants from Bicol University, on the other hand, visited the PAGASA Legaspi City Station and PHIVOLCS Mayon Volcano- Lignon Hill Observatory.
A joint tour for MMSU and CLSU participants was organized. PAGASA and PHIVOLCS main offices in Quezon City were visited.

**Profile of Participants**

The training program targeted thirty-five (35) participants for each training venue. There was a 32% increase in the number of participants in VSU due to requests of VSU President, Dr. Jose Bacusmo and DOST-8 Regional Director Engr. Edgardo Esperancilla for additional slots. BU and MMSU fell short of the target with 32 and 34 participants, respectively. CLSU generated 35 participants. A total of 147 teacher-trainers were capacitated on DRRM, higher than the overall target of 140.

![Figure 1. Distribution of participants by University/ Training Venue](image)

There was a high turnout in the number of faculty members who attended the training at VSU compared to BU, while a comparable number at MMSU and CLSU (*Figure 2*). Twelve (12) teacher-participants from elementary and secondary levels were targeted for this training. The number of elementary teachers met the target, with VSU having 13. On the other hand, the number of secondary school teachers exceeded the target except in MMSU (VSU, 13; CLSU, 13; MMSU, 11 and BU, 14).

![Figure 2. Distribution of participants by level](image)
The distribution of participants by Gender in all training venues revealed that it was female dominated, as shown in Figure 3. From the total number of 147, only 40 were Male and the remaining 107 were Female or a Male, Female ratio of 1:2.68.

DepEd teacher-participants were selected from the Schools Division covering the training venue and nearby Divisions. This was to ensure accessibility for the participants considering that the activity was a live-out program. The number of representatives from identified Schools Divisions is presented in Table 2.

Table 2. Number of participants by Division

<table>
<thead>
<tr>
<th>DepEd Division</th>
<th>Number of Representatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leyte</td>
<td>29</td>
</tr>
<tr>
<td>Nueva Ecija</td>
<td>11</td>
</tr>
<tr>
<td>San Jose City</td>
<td>3</td>
</tr>
<tr>
<td>Science City of Muñoz</td>
<td>11</td>
</tr>
<tr>
<td>Ilocos Norte</td>
<td>23</td>
</tr>
<tr>
<td>Legaspi City</td>
<td>8</td>
</tr>
<tr>
<td>Albay</td>
<td>7</td>
</tr>
<tr>
<td>Ligao</td>
<td>2</td>
</tr>
<tr>
<td>Tabaco City</td>
<td>3</td>
</tr>
<tr>
<td>Sorsogon City</td>
<td>2</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>99</strong></td>
</tr>
</tbody>
</table>
Although the criteria set by the National Steering Committee (NSC) for DepEd teacher-participants should have a teaching position of Master Teacher (MT), the training program gathered teachers with Teacher-1, Teacher-2, and Teacher-3 positions. The major factor identified was the small number of teachers holding MT position from the classified DepEd Division of Schools. Figure 4 presents that the number of teachers in all venues with MT1 positions outnumbered the number of other teaching positions.

Science and Mathematics (S&M) teachers were identified as participants for this training program considering that they have basic knowledge in the science related to DRRM. Among the 99 DepEd elementary and secondary school teachers, fifty five (55) were teaching Science and forty four (44), Mathematics (Figure 5).
Part of the program was the preparation of Action Plan or the list of activities the participants intend to do after the training program. Participants prepared the said Action Plan by group: Elementary, Secondary and the University Group.

A. Visayas State University

- **VSU Group**

<table>
<thead>
<tr>
<th>ACTIVITIES</th>
<th>OPR</th>
<th>WHEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Submission of Activity Report to the Office of the President through the Vice President of Administration and Finance</td>
<td>Dr. Roberto C. Guarte and all the VSU participants of the DRRM training</td>
<td>May 9, 2011</td>
</tr>
<tr>
<td>Request a Memo from the Office of the President regarding the formation of the AdHoc committee on the formulation of DRRM</td>
<td>Prof. Efren Saz</td>
<td>May 9, 2011</td>
</tr>
<tr>
<td>Planning Meeting of the Pool of Trainers (review of modules, IEC materials and tasking, GIS group for mapping)</td>
<td>Prof. Efren Saz – designated by the Office of the President as lead person of the DOST=SEI activities</td>
<td>May 11, 2011</td>
</tr>
<tr>
<td>Request of specific Fund Allocation for Disaster Preparedness (.5% of VSU Income ~ PhP 1.25M )</td>
<td>Dr. Roberto C. Guarte</td>
<td>May 11, 2011 (request for income will require BOR approval)</td>
</tr>
<tr>
<td>Formalization of the DRRM Council and various teams of VSU to include the group who will work on the modules and IEC materials</td>
<td>Prof. Efren Saz</td>
<td>May 18, 2011</td>
</tr>
<tr>
<td>Formalize Agreements with the different offices such as OCD, Red Cross, BASERT, BFP, ACCESS, RHU and WLPH, PNP, DPWH, Barangay Officials, LGU</td>
<td>Office of the President in collaboration with the Legal Office of VSU</td>
<td>May-June 2011</td>
</tr>
<tr>
<td>Conduct of capability training of respective DRRM teams (ex. First Aid, Rescue, Evacuation, Disaster control, etc)</td>
<td>Prof. Efren Saz and respective teams</td>
<td>June 3, 2011</td>
</tr>
</tbody>
</table>
Conduct of 1st semester DRRM Training for VFES, VSU-LHS, Dormitories, Offices

Post training evaluation by the respective teams

- Teacher-participants from elementary and secondary school level committed themselves to coordinate with their SDS and respective school heads for the conduct of echo seminar.

B. Central Luzon State University

OCD Regional Director Ms. Neri Amparo facilitated the Way Forward activity where participants committed to conduct echo seminar to respective schools.

C. Mariano Marcos State University

- **MMSU Group**

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>WHEN</th>
<th>WHO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Organize Disaster Control Group</td>
<td>ASAP</td>
<td>MMSU Participants, AdCo, SSD</td>
</tr>
<tr>
<td>2. Re-echo Seminar-Workshop</td>
<td>June 22, 2011</td>
<td>MMSU Participants/ NSC, SEI, PAGASA, PHIVOLCS</td>
</tr>
<tr>
<td>3. Prepare proposal for Curriculum Integration</td>
<td>ASAP</td>
<td>Curriculum Committee</td>
</tr>
<tr>
<td>4. Production of IEC Materials</td>
<td>Year-Round</td>
<td>CMR</td>
</tr>
<tr>
<td>5. Installation of Early Warning System</td>
<td>ASAP</td>
<td>PPGSD</td>
</tr>
<tr>
<td>6. Community Trainings</td>
<td>2nd Quarter</td>
<td>Extension Division</td>
</tr>
</tbody>
</table>

- **ELEMENTARY GROUP**

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>BY WHOM</th>
<th>BY WHEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Re-echo Seminar</td>
<td>DepEd Officials Trainer</td>
<td>June 2011</td>
</tr>
<tr>
<td>2. Organize School Disaster Brigade</td>
<td>School Administrators Teachers PTA</td>
<td>June 2011 (Opening of Classes)</td>
</tr>
</tbody>
</table>
### Stakeholders

| 3. Organizing Disaster Drills on:  
| a. Earthquake  
| b. Fire  
| c. Flood |  
| 4. Conduct Community Information Dissemination Drive |  
| School Administrators  
| Teachers  
| PTA  
| Stakeholders  
| DepEd Officials  
| Trainers  
| Barangay Officials |

### Quarterly

### Conduct Community Information Dissemination Drive

| DepEd Officials  
| Trainers  
| Barangay Officials |

### SECONDARY GROUP

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>PERSONS INVOLVED</th>
<th>TIME FRAME</th>
</tr>
</thead>
</table>
| 1. Re-echo  
| • Division DCG | Seminar Participants  
| Division Personnel | June 2011 |
| 2. School Re-echo  
| • School DCG  
| a. Info drive/identify the hazards  
| - School  
| - PTA  
| - Barangay Assembly  
| b. Mitigation/Adaptation  
| c. Monitoring  
| d. Evaluation  
| e. Sustainability | School Teachers  
| Principals  
| Head Teachers  
| Parents  
| Brgy. Officials  
| LGU’s | July 2011 |

### Bicol University

### ELEMENTARY GROUP

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>PERSONS INVOLVED</th>
<th>AGENCY INVOLVED</th>
<th>TIME FRAME</th>
</tr>
</thead>
</table>
| A.  
1. Planning for a division level DRRM training  
2. Preparation of the training design | DRRM Trainers  
| DRRM Trainers | DepEd  
| DepEd | June 13, 2011  
| June 15, 2011 |
| B.  
1. Submission of the training design for approval  
2. Finalization of the training design | DRRM Trainers  
| DRRM Trainers | SDS Education Supervisors in Science & Health, Math  
| DepEd | July 17, 2011  
| June 23, 2011 |
### C. Conduct of the Training

<table>
<thead>
<tr>
<th>Activity</th>
<th>By Whom</th>
<th>To Whom</th>
<th>By When</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Group</td>
<td>DRRM Trainers</td>
<td>DepEd, DOST, OCD, MGB, PHIVOLCS, PAGASA, APSIMO, CDRRM, MDRRM</td>
<td>July 6-8, 2011</td>
</tr>
</tbody>
</table>

### D. Evaluation of the Training

<table>
<thead>
<tr>
<th>Activity</th>
<th>By Whom</th>
<th>To Whom</th>
<th>By When</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Group</td>
<td>DRRM Trainers</td>
<td>Division Science and Math Supervisors, DRRM Trainers</td>
<td>July 8, 2011</td>
</tr>
</tbody>
</table>

### E. Monitoring

<table>
<thead>
<tr>
<th>Activity</th>
<th>By Whom</th>
<th>To Whom</th>
<th>By When</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Group</td>
<td>DRRM Trainers</td>
<td>DepEd</td>
<td>Year Round</td>
</tr>
</tbody>
</table>

#### SECONDARY GROUP

<table>
<thead>
<tr>
<th>Activity</th>
<th>By Whom</th>
<th>To Whom</th>
<th>By When</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-planning</td>
<td>Core Group</td>
<td>SDS, ES, School Heads, MDRRM/CDRRMC</td>
<td>Last week of July</td>
</tr>
<tr>
<td>Planning</td>
<td>Core Group</td>
<td>SDS, ES, School Heads, MDRRM/CDRRMC</td>
<td>1st Week of August</td>
</tr>
<tr>
<td>Echo Seminar Workshop on “Strengthening the Capacity of S&amp;M Teachers on DRRM”</td>
<td>Core Group, SDS, ES, School Heads, MDRRM/CDRRMC</td>
<td>Division Office PAGASA PHIVOLCS MGB OCD</td>
<td>Last week of August</td>
</tr>
<tr>
<td>Organize SBDRRMC</td>
<td>Participants in the Echo Seminar Workshop and School Heads</td>
<td></td>
<td>1st Week of September</td>
</tr>
<tr>
<td>Monitoring</td>
<td>Core Group</td>
<td></td>
<td>2nd week of September</td>
</tr>
</tbody>
</table>

#### BICOL U. GROUP

<table>
<thead>
<tr>
<th>Activity</th>
<th>To Whom</th>
<th>By Whom</th>
<th>When</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seminar: &quot;Strengthening the Capacity of Bicol University Teachers, Non-Teaching and Students on DRRM&quot;</td>
<td>All BU Campuses-related offices and students (CN, CE, CS, CAL,CBEM, CSSP, IPESR, CENG, CIT, Polangui Campus, Gubat campus, CAF, Tabaco Campus, BUGS)</td>
<td>DRRM Trainers</td>
<td>July</td>
</tr>
<tr>
<td>Fire and earthquake drill</td>
<td>do-</td>
<td>BFT, OCD 5</td>
<td>July 2011</td>
</tr>
<tr>
<td>Basic Life Support Training</td>
<td>-do-</td>
<td>Red Cross, DOH-BRTTH, AHEM</td>
<td>October 2011</td>
</tr>
</tbody>
</table>
Program Evaluation:

The evaluation forms distributed during the training program were gathered and analyzed. Results showed very positive feedback on aspects like topic, lecturer, delivery, venue, materials, food and facilities. In a scale of 1-5, with 1 as the lowest and 5 as the highest, the responses ranged from 4-5 only. The result was true for the four venues where the training was done.

Figure 6. Evaluation of training particulars

Figure 7. Other comments of participants
Figure 7 shows other comments gathered from the evaluation form. Generally, they were positive comments, while others were constructive criticisms and recommendations on how to improve the project.

Annex 1

List of Personnel Involved:

I. National Steering Committee (NSC)
   Chair: Dr. Leticia Catris Deputy Director, DOST-SEI
   Members:
   Engr. Nonilo Peña DOST- PCIERRD
   Ms. Ma. Mylene Villegas DOST- PHIVOLCS
   Ms. Maria Cecilia Monteverde DOST- PAGASA
   Ms. Fe Villalino DepEd- Bureau of Elementary Education
   Mr. Jose Tuguinayo, Jr. DepEd- Bureau of Secondary Education
   Atty. Priscilla Duque NDRMMC- Office of Civil Defense
   Mr. Raymond Thaddeus Ancog DENG- Mines and geosciences Bureau
   Dr. Ruby Ephraim Rubiano AGHAM Party-List

II. Technical Staff/ Secretariat
   Ms. Lilia Lauron DOST-SEI
   Ms. Cynthia Gayya DOST-SEI
   Ms. Joan Salise DOST-SEI

III. Training Staff and Resource Persons by Training Venue

A. Visayas State University
   Training Coordinator - Dr. Jose Bacusmo
   Training Support Staff - Prof. Efren Saz

   Resource Persons:
   PAGASA
   1. Mr. Vicente Palcon, Jr.
   2. Ms. Sharon Juliet Arruejo
   3. Mr. Roy Badilla
   4. Mr. Renito Paciente
   5. Ms. Daisy Ortega
   6. Ms. Rusy Abastillas

   PHIVOLCS
   1. Ms. Ma. Mylene Villegas
   2. Ms. Lucille Rose del Monte
   3. Mr. Nemesio Cañete

   MGB
   1. Mr. Rey Gozon

   DepEd- Bureau of Elementary Education
   DepEd- Bureau of Secondary Education
   NDRMMC- Office of Civil Defense
   DENG- Mines and geosciences Bureau
   AGHAM Party-List
   DOST-SEI
   DOST-SEI
   DOST-SEI
B. **Central Luzon State University**

Training Coordinator - Dr. Teodora Battad  
Training Support Staff - Ms. Ma. Corazon Vera Cruz

Resource Persons:

PAGASA
1. Dr. Carina Lao
2. Mr. Niño Relos
3. Mr. Roy Badilla
4. Mr. Renito Paciente
5. Ms. Edna Juanillo

MGB
1. Mr. Raymond Thaddeus Ancog

PHIVOLCS
1. Ms. Ma. Mylene Villegas
2. Ms. Isabel Abigania
3. Mr. Wilmer Legaspi

OCDRC-3
1. Ms. Neri Amparo
2. Mr. Roberto Manalo

C. **Mariano Marcos State University**

Training Coordinator - Dr. Miriam Pascua  
Training Support Staff - Dr. Lily Ann Pedro

Resource Persons:

PAGASA
1. Mr. Vicente Palcon, Jr.
2. Mr. Joel Jesusa
3. Ms. Rosalie Pagulayan
5. Ms. Daisy Ortega
6. Ms. Rusy Abastillas

PHIVOLCS
1. Mr. Julio Sabit
2. Ms. Lucille Rose del Monte
3. Mr. Julius Galdiano

OCDRC-1
1. Mr. Andrew Alex Uy  
2. Ms. Imelda Acosta  

MGB  
1. Dr. Maybellyn Zepeda  

D. Bicol University  

Training Coordinator - Dr. Fay Lea Patria Lauraya  
Training Support Staff - Ms. Cristy Balunsay  

Resource Persons:  
PAGASA  
1. Mr. Vicente Palcon, Jr.  
2. Mr. Joel Jesusa  
3. Ms. Rosalie Pagulayan  
4. Dr. Landrico Dalida, Jr.  
5. Dr. Carina Lao  
6. Ms. Edna Juanillo  

PHIVOLCS  
1. Mr. Eduardo Laguerta  
2. Ms. Lucille Rose del Monte  

OCDRC-5  
1. Mr. Florito Dapena  

MGB  
1. Ms. Arlene Dayao