



Comprehensive Disaster Management Programme (CDMP)

Policy, Programme and Partnership Development (PPPDU)

Disaster Management and Relief Bhaban, 92-93 Mohakhali C/A, Dhaka-1212, Bangladesh.

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Comprehensive Disaster Management Programme (CDMP) Monthly Progress Report

Component No.: BGD/01/004-CDMP/EC/4a/PC-III

Name: Seismic Hazard and Vulnerability Assessment for Dhaka, Chittagong, and Sylhet City Corporation Areas

Task:

- Active Fault Mapping & Trenching
- Soil drilling, sampling & laboratory analysis
- Geophysical data acquisition & Database preparation
- Building survey of Level-0, 1, 2 & 3 (Dynamic Behavior)
- GIS & Lifeline Information Collection and Database entry

Name of SIA: Asian Disaster Preparedness Center (ADPC)

Reporting Month: November 2008

Date of Submission: 27 November 2008

1. Activities and outputs

<i>Activity</i>	<i>Corresponding output</i>
Detail active fault mapping and site selection for trenching around Feni & Sylhet regions	- Time Predictive Fault Modeling - Trenching to find deformation events
Finishing additional requirement (as per TAG recommendation) for soil drilling and soil samplings (disturbed & undisturbed) in 3 cities and SPT measurements.	- Engineering Geologic Mapping - Database preparation for analysis in Japan
Continuation of soil mechanic analysis for undisturbed soil samples in reputed laboratory (BUET and DU) as per TAG recommendation	- Engineering Geologic Mapping - Database preparation for analysis in Japan
Continuation of additional geophysical data acquisition as per TAG recommendation in and around Dhaka, Sylhet and Chittagong city corporation areas.	- Engineering Geologic Mapping - Database preparation for analysis in Japan
Start to send all necessary digital data for analysis to Oyo International Corp (OIC) in Japan for further analysis and report preparation	- Time Predictive Fault Modeling & Report - Engineering Geologic Maps & Report - Seismic Hazard Maps & Report
Finishing the building survey for Level-0, 1, 2,	- Hazard Vulnerability Mapping



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<p>3 as well as GIS data entry as database preparation for HAZUS Analysis in Dhaka (10.000 building) & Sylhet (3300 building) and continuation of detail building survey in Chittagong (6000 building)</p>	<ul style="list-style-type: none"> - Understanding of the behavior of typical buildings in three cities during different magnitude of earthquake and other physical conditions. - To develop the fragility curve of different types of buildings within 3 cities for developing HAZUS analysis in Bangladesh context
<p>Finishing GIS database entry for the collection of secondary information regarding lifeline in Sylhet and Chittagong.</p>	<ul style="list-style-type: none"> - Hazard Vulnerability Mapping - All this information will be converted into digital format to be used for GIS analysis and data preparation - Further details of the digital format will be converted for suitable use in HAZUS Analysis for Bangladesh context.
<p>Start to send all necessary digital data for analysis to Asian Institute of Technology (AIT) in Thailand for further analysis and report preparation</p>	<ul style="list-style-type: none"> - HAZUS analysis in the context of Bangladesh - Hazard Vulnerability Maps and Report - Loss Estimation Maps and Report

2. Deviations from plan

<i>Nature and extent of deviation</i>	<i>Reasons for deviation</i>	<i>Mitigation measure</i>
<p>Delay on finishing some geophysical measurements in the field and detail building survey in Sylhet & Chittagong areas</p>	<ul style="list-style-type: none"> - Limited number of microtremor equipments to be used for geophysical measurement and detail building survey (by 2 different teams) - Data entry for field survey result to be incorporated into GIS database - Permission to access some important additional data from other institutions (gas, electricity, telecommunications, etc) 	<ul style="list-style-type: none"> - Number of engineer for building survey and number of additional assistant for GIS entry database had been increased to speed up the works - ADPC and all national partners (DU, SUST & CUET) are working together to discuss the schedule for equipment's availability to be used for different purposes

3. Activities to be undertaken during next month

The long-term vision of the Government of the People's Republic of Bangladesh on Disaster Management is to reduce the vulnerability of people, especially to the poor, to the effects of natural, environmental and human-induced hazards to a manageable and acceptable humanitarian level.



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3.1. Seismic Hazard

- Active fault identification in the field through trenching works around Feni and Sylhet regions
- Sampling for C14 dating analysis from trenching area and sending the samples to Japan for laboratory analysis
- Incorporating additional primary data of soil analysis and CPTs from GSB to be sent to Oyo International Corp. in Japan.
- Analysis of additional geophysical data (Single & Array Microtremor, shallow seismic) with national partner (DU) to be sent to Oyo International Corp. in Japan.
- Finalizing field report of additional soil drilling and report of soil analysis in 3 cities to be sent to Oyo International Corp. in Japan.
- Finalizing results of soil mechanic analysis (disturbed & undisturbed samples) from reputed laboratory
- Sending digital database for analysis and taking necessary action after getting feedback from Oyo International Corp in Japan

3.2. Vulnerability Assessment

- Sending digital database for analysis and taking necessary action after getting feedback from Asian Institute of Technology in Thailand
- Starting HAZUS analysis in Asian Institute of Technology (AIT) in Thailand
- Finishing field works of Dynamic behavior measurement of building in Chittagong City
- Finishing lifeline survey and digital database entry into GIS platform in Chittagong City
- Continuation of GIS database entry and acquisition for detail maps (Ward wise, building and lifeline data)

4. Challenges encountered

<i>Nature of challenge</i>	<i>How challenge met</i>
Getting additional primary data of soil analysis and CPT from GSB	<ul style="list-style-type: none"> • ADPC team actively approach GSB team to get the data to be sent to Japan • ADPC had asked for assistance from CDMP in this regard.
Permission for Dynamic Measurement of Buildings	<ul style="list-style-type: none"> • ADPC team approached the owner of the building and able to convince people for the permission of the buildings to be surveyed. • Lots of assistance was mostly from general people than that of institution or government owned buildings due to the reason that common people are more aware of their buildings
Permission to access some important	<ul style="list-style-type: none"> • ADPC is still trying to overcome the situation by



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information and data from other (Government) organization (i.e. Gas, electricity, telecommunication, etc)	different approach and intensive communications with the assistance from CDMP.
Detail survey in restricted areas	<ul style="list-style-type: none">• Due to the existing regulations, it was not possible to conduct survey in restricted areas like cantonment, police station and other places.• ADPC had asked for assistance from CDMP in this regard.

5. Lessons learnt/ Additional comments

Name and signature of sender

Dicky Muslim