

German Technical Cooperation, GTZ

Provincial Governments of Northern Samar and of Leyte

15 Local Government Units in Region 8

Strengthening DRM Integration into Local Development Initiatives in the Eastern Visayas Region, Philippines

Republic of the Philippines: Six watersheds in Northern Samar, Eastern Samar, Leyte, Southern Leyte

July 2010 - September 2011

Components: Flood modelling, EWS, LGU capacity-building

Result 1: Enhancement of FEWS

1. Correction of errors of the Global Digital Elevation Model (ASTER) in order to get a model suitable for flood modelling.
2. Data gathering and installation of computer software for flood modelling.
3. Training of LGU staff in running the flood modelling software.
4. Use of different Climate Change scenarios to calculate the possible influence on floods.
5. Distribution of maximum calculations to land use planners and political decision makers
6. Material GTZ support for drills and preparedness training in high risk barangays.
7. Analysis of very destructive but rarely occurring hazards with respect to their exact geographic distribution, frequency and magnitude/severity.
8. Modification of the existing FEWS to include flash flood and storm surge warnings in selected high risk areas with the technical assistance of PAGASA.
9. Introduction of early detection methods of high probability situations for rain-induced landslide-prone areas and connection to the FEWS.
10. Linking existing FEWS to tsunami warnings coming from the Pacific Tsunami Warning Center (PTWC) via PHIVOLCS for coastal areas.
11. Inclusion of persons with disabilities into the communication chain.
12. Extensive awareness raising for different natural hazards and different warning schemes
13. The Operation Centers and DCCs of the FEWS will get additional equipment and training with regards to the new hazards and improved communication.
14. Purchase of rescue equipment for the OCs/LGUs to deal with additional tasks

Result 2: LGUs are provided with hazard mitigation measures

1. Development of proposals by LGU and their implementation with the assistance of GTZ; Likely activities: slope stabilization with low tech methods, river bank stabilization for erosion prevention, tree planting to increase the water retention capacity, improvement of drainage systems.

Result 3: Awareness of local natural hazards and disaster risk reduction options is raised

2. Briefing of newly elected political decision makers on DRM and how they can actively contribute to reducing risks in their constituencies in the third quarter of 2010.
3. Information of inhabitants of areas rarely frequented by severe impact hazard events in the target municipalities about these hazards and how to cope with them.
4. Awareness raising of residents of exposed municipalities regarding the possible influence of climate change on natural hazards.
5. Distribution of IEC material to community institutions in risk areas.

Result 4: DRM capacities of LGUs are strengthened

1. Climate change and its influence on hydro-metrological and geo-hazards
2. Hazard identification and assessment (scientific methods, community-based methods)
3. Vulnerability identification and assessment (vulnerability curves, social vulnerability, etc.)
4. Risk calculations (single hazard risk, multi-hazard risk, probability, severity)
5. Damage assessments (standardization of procedures, calculations, projections, secondary effects)
6. Cost benefit analysis of DRM interventions
7. Interpretation of hazard maps (sources of maps, probability, severity)
8. GIS, use of remote sensing for spatial planning
9. Land-use zoning (hazard-sensitive planning, conditions for certain land use, vital installations)
10. Integration of DRM into Comprehensive Land Use Plans (CLUP) and Comprehensive Development Plans (CDP)
11. Project assessment (influence of projects on natural hazards, influence of natural hazards on projects).

12. Operationalization of the NEDA guidelines to enhance subnational planning processes (Integration of DRM into Regional/ Provincial Development and Physical Framework Plans (R/PDPFP).
13. Organizational support for the establishment of local Disaster Risk Reduction Management Offices (incl. hardware) and strengthening of operating DCCs (incl. hardware).

Links to previous outputs on DRR & CCA

Establishing a Flood Early Warning System Using Space-based Information	Slides (PDF)	September 2008	Presentation at a conference in Fiji	http://www.oosa.unvienna.org/pdf/unspider/Fiji2008_presentations/18%20-%20NEUSSNER%20-%20GTZ%20FEWS%20Philippines.pdf
Utilization of Satellite-Based Land Use Maps for the Production of Natural Disaster Risk Maps in Leyte, Philippines	scientific article (PDF)	1 March 2010	Describes how GTZ quantified vulnerability, hazard and risk in Leyte, 12 pages	http://www.planet-action.org/automne_modules_files/polyProjects/public/r6606_93_gtz_full_paper_-_final.pdf
Flood Warning Levels	Slides (PPT)	2009	4 slides with instructions for Operation Center, LGU, brgy	http://www.planet-action.org/automne_modules_files/polyProjects/public/r3901_93_warning_levels_binahaan.ppt
Binahaan Flood Early Warning System	Poster (JPG)	2009	Poster with the lines of communication	http://www.planet-action.org/automne_modules_files/polyProjects/public/r3904_93_binahaan_fews_communication.jpg
Physical Vulnerability of Land Uses	maps (JPG)	2010	3 maps of vulnerabilities in Leyte	http://www.planet-action.org/automne_modules_files/polyProjects/public/r5888_93_leyte_vulnerability.jpg
Manual, Local Flood Early Warning Systems, Experiences from the Philippines	handbook (PDF)	Oct. 2009	100 pages	http://www.planet-action.org/automne_modules_files/polyProjects/public/r5886_93_gtz_phil_lfews_manual_dec09_low_res.pdf
Reducing flood risks caused by expected effects of Climate Change in the Eastern Visayas, Philippines	report (PDF)	Dec 2009	Year end report for Planet Action, 2 pages	http://www.planetaction.org/automne_modules_files/polyProjects/public/r5912_93_philippines_feedback_2009.pdf
Reducing flood risks caused by expected effects of Climate Change	presentation (PPT)	2008	4 pages presentation about the Planet Action – GTZ project	http://www.planetaction.org/automne_modules_files/polyProjects/public/r3108_93_planet_action_gtz_project_brief.ppt
Using Geoinformation Technology for the Establishment of a Local Flood Early Warning System	scientific article (PDF)	Dec. 2008	overview on how to use satellite technologies for FEWS, 5 pages	http://www.planetaction.org/automne_modules_files/polyProjects/public/r3109_93_olaf_neussner_allen_molen_thomas_fischer_conference_bangkok_dec08.pdf

Planned products

Correction method for ASTER-GDEM

Flood models

IEC material concerning additional hazards for EWS

Contribution to manuals integrating DRM/CCA into spatial and development planning

Focal points and partner agencies or institutions:

Office of Civil Defense (OCD) - focus on emergency management, training

Department of Interior and Local Government/National Economic Development Authority - focus on mainstreaming DRM into local governance, developmental and spatial planning

Department of Science and Technology bureaus PAGASA/PHIVOLCS and DENR's Mines and Geo Science Bureau. - focus on technical solutions to DRM

Provinces, municipalities and barangays (coordination with the respective DCCs and other relevant local department and offices of the local government) - focus on Flood Early Warning Systems

About German Technical Cooperation, GTZ:

The Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) is a federally owned organisation. GTZ works worldwide in the field of international cooperation for sustainable development and provides viable, forward-looking solutions for political, economic, ecological and social development in a globalised world. Sometimes working under difficult conditions, GTZ promotes complex reforms and change processes. Its corporate objective is to improve people's lives on a sustainable basis.

For more information contact:**Dr Walter Salzer**

Programme Director, German Development Center, 2B PDCP Bank Centre
V A Rufino St corner L P Leviste St, Salcedo Village, Makati City, PHILIPPINES
Phone +63 2 892 9051 local 10 Fax +62 2 892 3374 Email walter.salzer@gtz.de website:www.gtz.de/philippines

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