CONCLUDING REPORT

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Title: Roadmap toward Effective Flood Hazard Mapping in Lao P.D.R.

OUTLINE OF NEED FHM:

In the Economic Policy Framework of the 5 years plan 2005-2010, the Government of Lao PDR has stated its objectives, among others as followers:
1) *General:* ensure a transition to a market oriented economy; accelerate socio-economic development; halt the degradation of the natural resource base.
2) *Energy:* increased export earnings, maximize the benefits of hydropower;
3) *Agriculture and forestry:* expand and diversify a subsistence level; improve returns from sustainable management and conservation of forest resources:
4) *Environment:* promote sustainable use of forest, land and water resource; ensure conservation of biodiversity.

The Governments commitment to liberate the country from being one of the world's least developed nations and to eliminate mass poverty by the year 2020 is reflected in its development strategy. The main thrust area leading to the year 2020 plans are concerning with DMH activities as for human resources and services development.

In Lao have a committee concerning water and water resources matter is called Water Resources Coordination Committee (WRCC) in Science Technology and Environment Agency (STEA), Office of Prime Minister (OPM). The WRCC is key organization of the overall government and coordinator of the water and water resources matter.

The DMH is one of the Technical Departments under the MAF, with its functions to provide Meteorology and Hydrology services. The DMH has responsibility for undertaking flood and drought forecasting. At present the procedures exist which have the potential to provide flood forecast estimates inflow into Nam Ngum Reservoir and Vientiane Plain.

THE EXPECTATION FROM THIS TRAINING COURSE:

1. The parts of the curriculum were most insightful:

The first more importance thing we have to know about the hazard map, it is showing reasonable of inundation and information for evacuation. And a flood hazard map is made to prevent damage to people in the event there is flooding. That mean object to mitigate flood and inundation damage. The municipality officer (local governor), who is responsible for issuance of evacuation guidance.

Matters to record in a flood hazard map can be divided into 2 types:

- Information Helpful for Refuge,
- Information Helpful for the study of disasters.

1.1 Information Helpful for Refuge mean also evacuation information map easy for understanding it should be covers as follows:

- Estimation and actual results of inundation,
- Refuge shelters,
- Areas that require evacuation.

1.2 Information Helpful for the study of disasters mean disaster education information map that information can be entered in a hazard map:

- Mechanisms for the occurrence of a flood, topography and form of inundation,
- Danger of flooding, details of damage and results of past floods,
- Matters concerning weather information,
- Instructions in case of a flood, etc.

2. My country or organization needs to do for effective flood disaster mitigation:

From the foregoing synopsis, it is clear that the Government of Lao sees that the country's natural resource lease will drive economic development. In turn the need to preserve the natural resource as a basis of Lao sustainable development and maintenance of the overall system. As we know, In Laos, natural disasters can be seen as flood, drought, erosion, sedimentation; pests in agricultural section, and etc., are considered as the major obstacles for the watershed management in river basins. That spreads problems National Government must be conduct such as Local Government, Ministry concerns and organization of disaster mitigation to be act/manage of those natural disasters. And in turn way before flood and drought occurred might have to be issue information of forecasting of the hazards to mitigate of damages.

3. List the actions that will be possible:

As short:

- ❖ Back to Office Report on FHM was help in Tsukuba, Japan 2005, to DMH.
- ❖ Attached purpose unit/team of FHM with approval of DMH and cc to WRCC at Office Prime Minister to make comment.
- ❖ Compilation of map.
- ❖ Inundation of pilot area.
- ❖ Data collection/analyze and acting plan.
- ❖ Request for funding support.

As mid term:

- ❖ Negotiate with Local Governor of flood event.
- ❖ Necessity for the improvement of disaster control measures.
- ❖ Upgrade of understanding of FHM for staff team and local staff.
- ❖ Guide line of FHM.
- ❖ Making easy FHM

As long term:

- ❖ Improvement of residents used of FHM.
- ❖ Education of the school system.
- ❖ Monitoring/upgrading of FHM.
- ❖ Enhancement of specific measures.

4. Flood management in Japan

The flood management in Japan has been started long times ago (before modernization 1850's and modernization of flood control technology 1880's) with non-structural mitigation measures and structural measures with high technology, huge budget and powerful.

As we known in Japan have long-term investment on flood control works, disaster management scheme, new type of floods in Japan, flood management and etc, but in detail mention only national level organization activities why don't start from the base action to instruct for us, what they were done before? In the local side prefecture/municipality and other committee those experiences needs for us also to be active on flood control/management.

3. For a more meaningful training course

For training course has meaningful lectures, exercise and group work presentation and group trip visit national and local offices has to know what they action. Some small commend for transferred knowledge to the Asian countries to be activeness on the job training can not be of all to gather, because the causes different by countries. For example some have FHM already issue in country and other not start yet as well as in cause big different in practice, should be separately instruct group by group. Even though, some country have limited fund to do this expensive project, how to seek/request fund to submit/start this object to be success, if possible your historical session covering to be best.

In this course I learn and chare experience on survey, implementation of flood control and flood disaster prevention, operation of flood runoff analysis and flood inundation analysis, and flood management from the field trips, and many other of mitigation of flood damage will be dealt with so that the participants can enhance their knowledge in designing and management of FHM project.

Attention is paid to the influence of human activities on the hydrological cycle and feedback mechanisms between flood event and mitigation of damage. And these technical like FHM needed to be improved for sub-catchments basin also in Lao in the near future for monitoring and management.

CONCLUSION.

In cause of the Vientiane plain flood plain going is not applied yet except the regulation decree on land use water resources protection and flood control. In this course shown me to prepare expression of hazard itself and find step to be make up FHM through technical data collection/analysis by concern institution management of information and human resources and also for organizing community for effective use.

The FHM technique spreads over in the developing country, because it is a tool or non-structural measure for water management and for mitigation or prevention the natural disaster or in turn of economic growth.