netFLOWS Philippines

Network of FLOOD WARNING SYSTEMS in the Philippines
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Greetings from NETFLOWS Philippines!

About this paper: The "netFLOWS" Philippines newsletter is an undertaking by a group of individuals from various fields of endeavour who are greatly concerned at achieving and maintaining sustainable hydrological monitoring activities through the establishment of a network of operational flood warning centers at the local levels (provincial, municipal, city and/or barangay), major river basins, and other related and interested institutions-entities. Mainly, to provide timely data, information and other allied materials that will enhance Hydrometeorological-related disaster warning activities to their respective target communities.

Network of Flood Warning Systems in the Philippines: A concept in Progress

The Philippines is highly prone to typhoon activity and flood disasters. It is considered by the Center for Research and Epidemiology of Disasters (CRED) as one of the most disaster-prone countries in the world and ranks number one in a recently published paper (June 2010). Rainfall events and flooding occur annually in the country, oftentimes with devastating consequences. NDCC records show that of the many typhoons and tropical storms that hit the Philippines between 1990 and 2008, a total of about 158 destructive typhoons resulted in 13,491 deaths. The impact of climate change is likely to increase the occurrence of extreme weather events further.

Early warning systems (EWS) have received significant local and international attention over the past few years. UNISDR reported that over the last 50 years the recorded number of disasters caused by natural hazards, and the associated economic losses have increased, loss of life associated with some hazards has decreased significantly. This has been attributed to the development of early warning systems in conjunction with emergency preparedness and response planning in a number of high-risk countries around the world.

In the Philippines, during the past 3-5 years, there have been quite a number of flood warning systems mostly at the local level that has sprouted in a lot of areas within the country. The main objective of these systems is primarily for flood disaster awareness and preparedness through timely issuance and dissemination of warnings to the target areas based on local observations within the basin area of responsibility. However, a number of these systems, if not most of them, are now non-operational or no longer existing. Among the reasons for the defunct systems include, among others, (a) instrument failure due to none regular maintenance (some systems have no maintenance at all ever since they were installed); (b) failure to take observations by observers (e.g., no regular observer positions; observers require incentives or allowances to carry-out their tasks; lack of interest); and (c) failure of the LGU to support the system (e.g., change of local officials; non-priority).

A reality problem that has plagued the establishment of a local flood warning system is the issue of sustainability. Furthermore, an unfortunate vicious cycle exists which is "it is only when flood disaster

occurs that such system will again be recognized and deemed needed." While it is important and necessary to have such systems in areas that are susceptible to floods, it is best desired and preferred to have such a system that is not used than having it used quite often. Accordingly, even if there has been long period of absence of a flood event in an area where such local flood warning system exists, there is a continuing need to capacitate and maintain them through other forms of activities for sustainability purposes.

With the passage of Republic Act 10121 otherwise known as the Philippine Disaster Risk Reduction and Management Act of 2010, it underscore the importance of looking at these FEWS not just from the point of view of disaster preparedness and response but as an integral part of the DRRM policies, plans and programs at all levels. The new law emphasizes the need for these systems to help us assess the underlying causes of the flood risks and take actions to address them in a more sustainable manner.

An EWS is usually not created nor operated by a single agency. It needs involvement, acceptance and cooperation by many stakeholders and must be built to leverage institutional capacities, mandates and expertise as well as to ensure operational collaboration and coordination among a variety of stakeholders at national to local levels. Its development and sustainability requires political commitment and dedicated investments that are reflected as an integral part of national and local planning and budgeting. EWS engage several agencies and actors at all levels, with roles and responsibilities clearly reflected in the plans and enforceable legislation. Investments in this part of the EWS chain are critical for "early warnings" to lead to effective "early action".

(This paper was basically the idea of the National Conference on LFEWS held in Lancaster Hotel, Mandaluyong City, 26-27 November 2010)

The need for a Network

A major activity that can support the existence of most, if not all, of the FWS in the country is the organization of a network of Flood Warning Systems (FWS) within the country; having a set of guidelines and a regular set of officers that will maintain related activities for a dynamic interaction of all the operational systems in the network. The networking of FWS within the country involves a continuing program of technical and social activities geared at maintaining the existence of such systems even in a long absence of flood events in the area.

This idea was initially suggested during the 2008 Capacity Building Workshop of Local Flood Forecasting and Warning System organized by the Provincial Government of Bulacan, through its then Provincial Disaster Management Office (PDMO) and the Pampanga River Flood Forecasting and Warning Center *(http://cbffws.webs.com/Workshop_on_LFWS.pdf)*. Again, the need for a network was reiterated in the Cross Visit activity of Region 8 DRM teams, November 2009, to Bulacan and Pampanga provinces *(http://cbffws.webs.com/cross_visit_event_proceedings.pdf).*

Currently, an informal discussion through the formation of a yahoogroup of FWS serves as the nerve point for information exchanges and interactions among local practitioners and partners.