Establishing Survey Protocols and Monitoring Systems for Advisory and Early Warning Systems for River Basins in the Philippines

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SUMMARY

The Philippines is frequentws by typhoons and monsoonal rains that bring about heavy precipitation and subsequenlty cause riverine flooding, surface flooding in urbanized areas and coastal flooding in the low-lying seashores. This paper outlines on the progress, current efforts, performance and experiences in producing early warning systems for key river basins in the Philippines that are prone to flooding. From the 5 automated rain gauges (ARGs) and 10 water level sensors (AWLSs) in 2010, the combined efforts of key government agencies has enabled installation of 772 ARGs and 482 AWLS all over the country by the early half of 2015. From the 4 systems that were monitoring in 2010 mainly located in Metro Manila, 22 such systems had been developed by 2015. By end of 2016, 257 more rivers are expected to have complete line of products and services such as fine-scale flood hazard maps depicting different 24-hour rainfall-scenarios, online water level hydrological models and equivalent flood information (at advisory, alert and early warning). However, the surveys required and installation of the ARGs and AWLSs must be thoroughly strategized in order to achieve optimal results in terms of enabling issuance of accurate and precise information to communities and disaster managers for their proper response, preparation and spatial planning. Key insights and observations on operationalization aspects and challenges will be discussed and analyzed.