

CONTEXT AND PROBLEMS

The Mekong is the tenth largest river in the world by volume and the twelfth longest (UNU 1996), with at least one author referring to it as the Nile of Southeast Asia. A major difference with the Nile is that many consider the Mekong to be underutilized, especially when compared to other major river systems in the world. As Than (2006:141) writes, “The Mekong region . . . is the poorest in Southeast Asia. Sandwiched between the booming part of Southeast Asia and rapidly emerging China, the region has immense potential. Yet, like the river that runsthrough it, the economic potential of the Mekong region is so far just that—potential.” This outlook will likely soon change, however, as governments in the region are deep into the process of planning activities to promote economic growth and development initiatives that will center on tapping into the river as a regional resource for what they anticipate as being future decades of national if not general prosperity in the LMB.



Mekong Delta, Vietnam.
www.travelbrochures.org/2977/blog/vietnam

The population of the Lower Mekong Basin is well over 60 million. China and Myanmar comprise its upper basin states, while Thailand, Laos, Cambodia and Vietnam make up the lower basin states. Along its course, Mekong waters flow through large areas that are dominated by agricultural production, a region that is collectively responsible for major rice production, especially in the Mekong Delta known as Asia’s “rice bowl”. The Mekong Delta is a central feature of this highly productive agricultural area. In addition, the region’s inland fisheries

are also known to be among the most productive in the world. The occurrence of disaster events aside, the well-being of communities, livelihoods, ecosystems and biodiversity depends in large measure on the “expected” seasonality of the river’s flow.

Extremes of floods and droughts and the impacts of a changing climate are key regional hydro-meteorological concerns facing decision makers in the LMB. Although varying degrees of flooding are anticipated annually in the LMB, in some years flooding reaches disastrous levels in terms of loss of life and property, damage to agricultural lands and to rural and urban infrastructure, and a general disruption of social and economic activities, especially development prospects.



Siem Reap, Cambodia Flood Victims, 2011.
[http://archive.constantcontact.com/
fs069/1105372825216/archive/1108970569504.html](http://archive.constantcontact.com/fs069/1105372825216/archive/1108970569504.html)

The natural cause of annual flooding in the basin is related to the behavior of the southwest monsoon and every few years by the onset of El Niño and La Niña events and especially by the extreme behavior of the southwest monsoon. Year to year climate variability, quasi-periodically exacerbated by the onset of El Niño and La Niña events and especially by extreme behavior of the southwest monsoon. The longer-term consequences of a changing global climate and its regional implications, such as changes in the expected seasonal flow of glacier melt (in China) and in seasonal streamflow generally that can lead to flash flooding, are also major concerns for the LMB. This means is that into the future the Mekong is expected to continue to change in response to such influences. The mighty Mekong will be a different river in the future, than it is today for reasons related both to short and long term global processes as well as to ever-changing socioeconomic and demographic conditions.

The Mekong River Commission is mainly responsible for river management and regional flood forecasting. Because most countries in the Lower Mekong Basin require constant financial support to meet their socio-economic development needs, to fulfill its mission the MRC must also rely on contributions of cutting-edge technologies and core funding from the humanitarian and development aid programs of industrialized countries. To compensate for its chronic short-handedness in terms of the technical expertise of its core staff, however, the MRC in a push for some measure of regional self-sufficiency has as a fall-back measure utilized the “secondment procedure” through which it borrows needed expertise for relatively short periods (1 to 2 years) from member states to fulfill its key program tasks. The MRC has used secondment strategically as well as tactically to overcome chronic gaps in the expertise of its permanent staff and to adequately carry out its mission.

DRR AND THE LMB

The issue of flooding in the LMB requires the four national governments in the region—Thailand, Vietnam, Cambodia and Lao PDR—to adopt a trans-boundary perspective in order to understand its natural and human-induced causes and to propose solutions. The MRC, as an intergovernmental regional river basin organization, receives support from each of the four LMB member countries. As noted, it also receives vital external support from humanitarian and international foreign assistance agencies.

OFDA’s initial support for flood-related activities in the LMB came at an important juncture in the development of MRC’s flood preparedness and flood emergency management and mitigation program. By early 2003, in partnership with NOAA, OFDA’s support had led to the introduction of a village-level flood forecasting and warning system in Cambodia, while in the 2004-2010 period, under the Flood Management and Mitigation Program (FMMP), it provided catalytic support to enhance flood forecasting through the MRC and other member countries. As Cogels (2005) notes, “The FMMP is a good example of an integrated approach to water resource management that fits well with the MRC’s new orientation and commitment to integrated water resources management [IWRM] at

the basin level, our vision for development in the region.” Notably, OFDA also collaborates with the MRC on various operations as well as in the conduct of its ongoing research in meteorology, hydrology, flood management, capacity building of emergency personnel, LMB development programs, and dissemination of flood information (i.e. preparedness, forecasting and warning) at the community level.

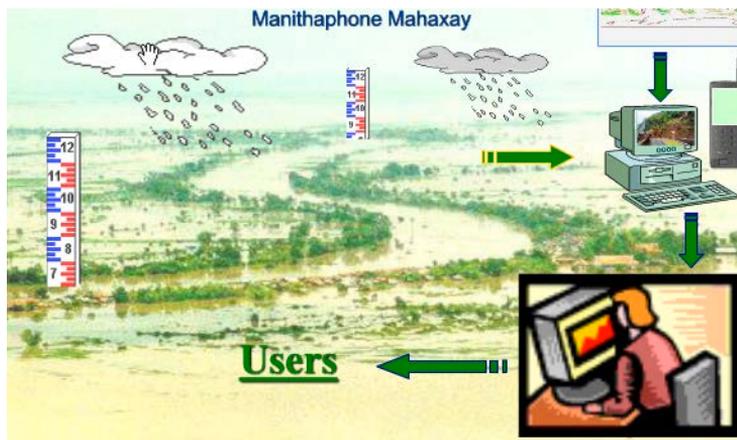
The Asia Flood Network (AFN) was developed to strengthen the capacity of national hydro-meteorological institutions in climate, weather, and hydrological forecasting while seeking to directly involve at-risk communities in reducing vulnerability to hydro-meteorological hazards in the basin. Similarly, through the OFDA-funded Technical Assistance for Hydro-meteorological Disasters project, the U.S. National Weather Service and USGS provided technical advice and guidance to the MRC and the International Center for Integrated Center for Integrated Mountain Development (ICIMOD) on various hydro-meteorological issues. Such issues have included community-based flood mitigation, data collection and transmission using telecommunication systems, and data sharing across trans-boundary river basins. The development of flood early warning systems across the Mekong River Basin also increased flood forecasting capacity and early-warning information transfer to communities in the LMB, which encouraged scientists to become more aware of the needs of at-risk populations. These scientists worked with community-based partners to develop tools, methods, and protocols to enable flood-vulnerable populations to utilize MRC flood information more effectively.



Cambodia Flood 2009.

<http://4a2010treeplanting.wordpress.com/2010/01/17/ang-pangangailangan-bagyong-ondoy/>

One of the major achievements of OFDA support in the LMB has been the development and strengthening of the Regional Flood Management and Mitigation Centre (RFMMC). As of today, the RFMMC continues to actively provide information to its member countries. “During the June-November flood season, for instance, [it] issues daily flood forecasts and warnings [based on] data from 138 hydro-meteorological stations that predict water levels at 23 forecast points in the MR system. The FMMP communicates these daily bulletins by fax, e-mail, and on the MRC homepage as well as through a dedicated Flood Forecasting Website to National Mekong Committees, NGOs, the media, and, most importantly, the public” (MRC 2013).



http://www.docstoc.com/docs/59464378/FLOOD_EARLY_WARNINGppt---FLOOD-M

The initial development of models for the Mekong Basin had two main objectives: 1) flood forecasting to mitigate the human and economic costs of large floods; and 2) ambitious plans for regional development. The biggest focus to date has been on hydrology, with a number of quantitative models having been developed and applied to assess flow, hydrodynamics and sediment dynamics. As a result, the MRC is now capable of monitoring the river waters to provide forecasts to LMB countries with a 48-hour lead-time. Moreover, LMB member states, donors and the MRC now recognize that disaster risk reduction activities (DRR and emergency humanitarian responses) and climate change adaptation activities (CCA and longer-term development)

must be linked, integrated, blended or bridged. Bridging will enhance the building of community “resilience,” though how to effectively link these two development sub-fields remains a challenge.