

One Against Disaster and Climate Risks

A Repository of Good Practices for Strengthening DRR and CCA Integration in ASEAN

SUMMARY

ASEAN Member States are highly vulnerable to climate change as is evident from the rise in disaster events and their impacts during the recent years, and in the emerging research on climate change projections. ASEAN Member States are on a pathway to rapid economic and social development and the developmental prospects of these countries will be at risk if threats posed by climate change are not addressed adequately with a sense of urgency. Integration of disaster risk reduction (DRR) and climate change adaptation (CCA) in national and local development plans will address the threats of climate change in an effective manner since they set an enabling risk governance environment for long-term risk reduction (Figure 1).

Recognising the need to integrate DRR and CCA into policies and institutions in ASEAN Member States, JICA has supported implementation of a project for 'Strengthening Institutional and Policy Framework on Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA) Integration'. The project aims to assess the current level of integration of CCA elements into DRR policies and related institutions and identify good practices that could be replicated throughout the region for maximising risk reduction.

The JICA Project Team has identified a number of good practices that provide DRR and CCA integration opportunities for ASEAN Member States through literature review, interviews with relevant stakeholders and field visits (Figure 2). The team selected practices that are transferable, applicable and a good reference for all ASEAN Member States for wider dissemination covering floods, storms, landslides and droughts. They included integrated downscaled climate projections into risk assessments and practices coordinating DRR and CCA policies, management strategies and funding systems. They have high proportion of CCA and DRR benefits compared to business-as-usual practices.

Selected good practices are presented in these six categories: laws, regulations and policies;

institutional arrangement; financial arrangement; risk assessment; planning and implementation; and capacity building. The good practices are described for their DRR and CCA benefits and factors for scalability accompanied with the source for further information.

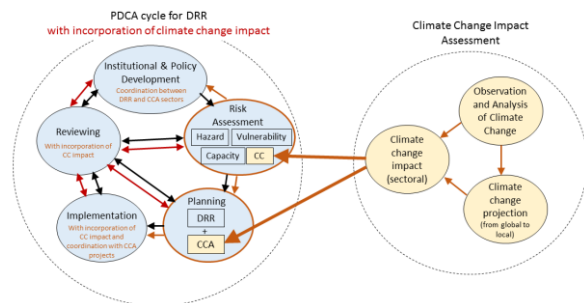


Figure 1. Integration of climate change elements into the existing decision-making framework for disaster risk reduction

Source: JICA Project Team

Topology of Good Practices

A glance at the good practices indicates that the ASEAN region has been making big strides in DRR and CCA. While achieving full potential in several areas is far from reality, the progress made is commendable and Member States are at an optimal stage to review their efforts and make course corrections to set the proper direction in the years to come.

Laws, regulations and policies: Some of the Member States are able to address DRR and CCA integration right into their development plans (as in the case of the Philippine Development Plan) that gives impetus to all the line ministries and related agencies to address these issues into sectoral plans and strategies. These policies also help mobilise required financial resources for national and sub-national government bodies to actually implement programmes and projects addressing DRR and CCA. At another level, other Member States, as in the case of the Philippines, Viet Nam, Indonesia and Cambodia, are developing sector-specific action plans that bring the agenda of climate change to individual sector level for making actual difference in the activities these line

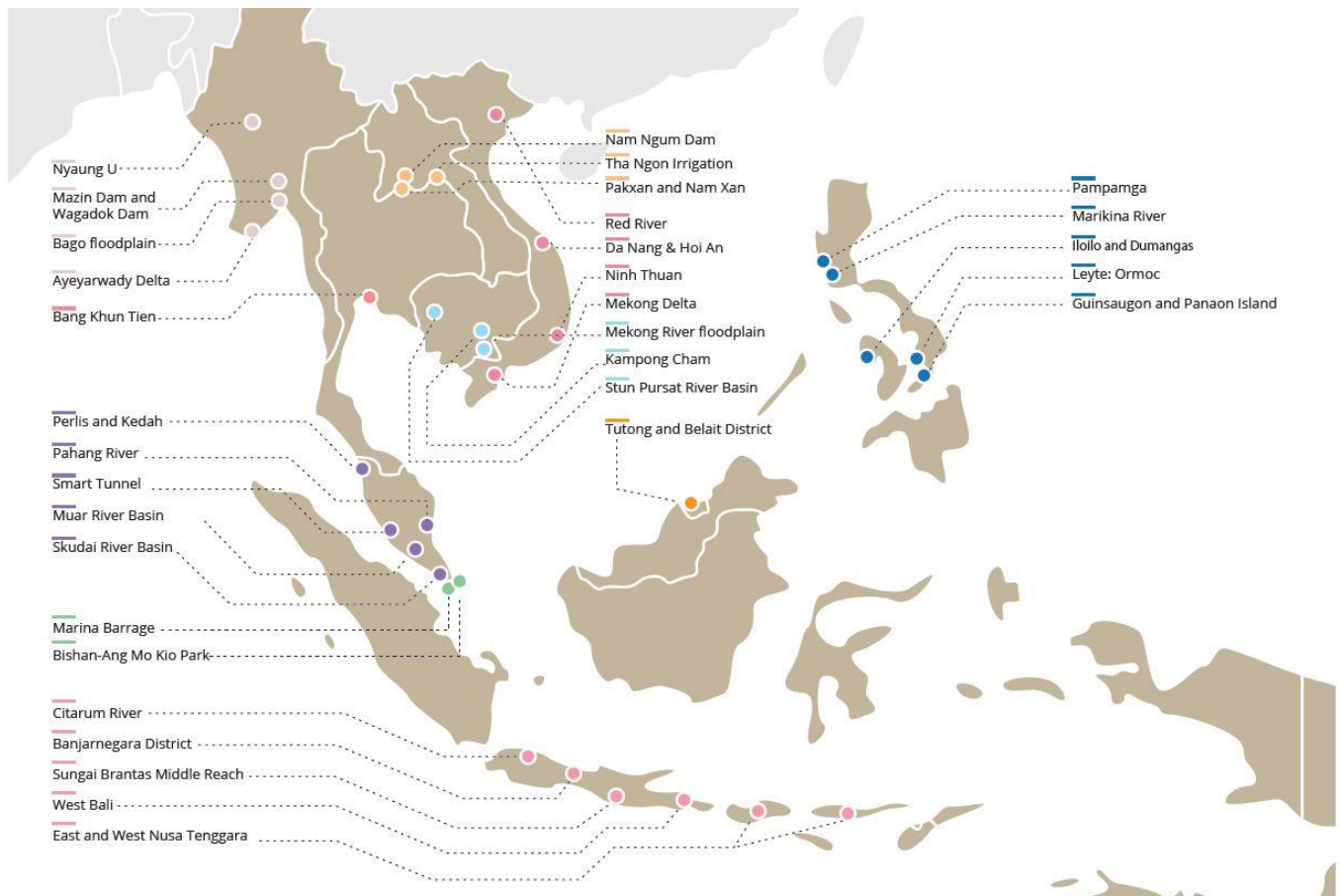


Figure 2. Sites visited by the JICA Project Team to identify good practices, September 2016 – February 2017
 Source: JICA Project Team

ministries perform. These sectoral plans are setting precedence for accountability and increasing the ownership of interventions at the ministry level. What is ubiquitous in the region are the local level DRR and CCA plans (most ASEAN Member States). DRR plans at the community level are more prominent in the region than the local level CCA plans. These local level plans are providing an opportunity for integrating DRR and CCA at the local level even though such examples are yet to emerge clearly.

Institutional arrangement: Mere promulgation of laws, regulations and plans are of no use if the supporting institutional mechanisms do not exist and unless Member States are progressively harmonising their institutional mechanisms in line with the newly set laws and regulations. These institutional arrangements span from national level to local level in accordance with the set laws and regulations. The national DRM systems of the Philippines, Cambodia and Indonesia can be seen as well developed from the national level to the local level down to the community level. These institutional systems, some of which are originally developed with a focus on response, are increasingly modelled after disaster risk mitigation, long-term risk reduction and building resilience. In addition to the dedicated institutional systems for DRR, line ministries are making efforts to streamline their own ministries by integrating

planning departments, as in the case of Regional Infrastructure Development Agency (BPIW) of the Ministry of Public Works and Housing (PU) of Indonesia, which is successful in setting policies, plans, strategies, standard operating procedures and guidelines at the sectoral level. Similarly, cross-sectoral coordination is being improved as in the case of the Philippines where the Memorandum of Understanding is being drawn between the National Disaster Risk Reduction and Management Council (NDRRMC) and the Philippine Climate Change Commission for effective cooperation and collaboration. At the local level, the river basin management offices in Indonesia are helping in promoting cross-boundary coordination and collaboration for river basin management and can play a major role in integrating DRR and CCA.

Financial arrangement: Financing is an important ingredient for policies and plans to shape them into tangible projects and programmes leaving long-lasting impacts on the ground. However, limited funding is found to be one of the important root causes for limited implementation in the region. Member States are innovating in funding risk reduction by putting in place a range of practices, including establishing national to local level disaster risk reduction funds, as in the case of the Philippines, Indonesia and Cambodia, to financial inclusion measures (Figure 3), as in the case of the Philippines and Indonesia, where the poor and

vulnerable are provided with access to microfinance that the formal banking sector is unable to reach out with. Public-private partnerships in particular are helping Member States to implement measures such as risk insurance and microfinance, and these measures are rapidly on the rise with more and more countries expanding measures to fund risk reduction (e.g. the Philippines and Indonesia). Innovative measures such as expenditure tagging are helping countries to track, monitor and evaluate the budgetary allocations made to DRR and CCA activities (e.g. Vietnam and the Philippines). These measures will go a long way in reforming risk governance in general.



Figure 3. There is a large scope for scaling up innovative risk financing including microfinance and insurance

Source: JICA Project Team

Risk Assessment: Risk assessments inform stakeholders of the probable impacts associated with a given level of disaster so that appropriate strategic decisions can be made. Putting in place a dependable disaster impact database is the first step for the robust risk assessments, with or without climate change impacts. Countries in the region have initiated measures to integrate, standardise and harmonise disaster loss and damage and weather and climate-related databases. In Indonesia, a disaster loss database developed based on open-source software provided ability to do simple analysis of historical disaster losses and to understand disaster trends and impacts. At the regional level, the Mekong River Commission hosts a hydrological data sharing and flood forecasting system that helps alert the Lower Mekong Countries. The Southeast Asia START Regional Center hosts a climate data distribution system to help climate change impact, vulnerability and adaptation assessments covering several Southeast Asian countries. While hazard mapping is being slowly improved in the region, the landslide hazard mapping in Thailand deserves special attention as it covers from the national to village scales clearly delineating the landslide susceptibility areas and defining landslide risk villages. Risk assessment is an integral part of the DRR planning that is often done based on the knowledge on the historical disaster impacts. Incorporating the future

climate change impacts on the intensity and duration of natural hazards into risk assessments is necessary for effective risk reduction. In this regard, the flood hazard mapping in Malaysia utilises available climate change projections to depict the probable flood impacts associated with a given level of floods in the future (Figure 4). Similarly, coastal inundation maps were developed by the National Institute of Meteorology,

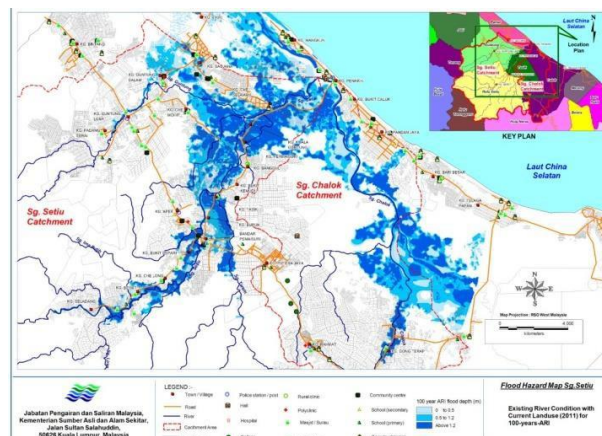


Figure 4. Integrating climate change projections into hazard mapping is an impactful policy tool

Source: JPS and NAHRIM, Malaysia

Hydrology and Climate Change (IMHEN), Viet Nam based on the projected sea level rise.

Planning and implementation: Planning and implementation aggregates all the knowledge and resources for tangible interventions at national and sub-national levels. The ASEAN region excels in this area in particular among all the areas under which good practices are described largely, as indicated through the number of good practices in this category, due to the prolonged commitment of the Member States to strengthen on-the-ground implementation and the rich presence of development partners that are willing to work with local governments and communities. Among all the good practices described under planning and implementation, practices for flood prevention and mitigation occupy the most followed by storms, landslides and droughts. Most of the practices are related to infrastructure development with few notable examples under environmental and social categories showing rising interest during recent years. Incorporating climate change considerations in design guidelines is a new area where the Department of Public Works and Highways (DPWH), the Philippines, sets an example for rest of the region. While flood resistant housing has spread in the region as a result of years of living with floods, examples from Cambodia, Viet Nam, Brunei Darussalam and the Philippines showcase the need to integrate flood resistant features into building by-laws and codes. The Bago river flood control efforts in Myanmar are unique where a combination of retarding basin, artificial channel, and a series of reservoirs along the Bago River and its tributaries has been able to mitigate floods effectively, while flood

problems caused by the neighbouring Sittaung River still needs to be addressed in an integrated manner. Dams are increasingly being designed for their multiple functions and benefits maximising economic and social aspects, as in the case of Jatiluhur Dam on the Citarum River in Indonesia, where integrated operation with the upper two hydropower dams has been undertaken. Water user associations are helping in judicial use of limited available irrigation water in several Member States that are instrumental in introducing efficient water management practices (e.g. Cambodia, the Philippines and Indonesia). The ‘closing the water loop’ approach of Singapore deserves to be mentioned here for its comprehensive approach to addressing water related issues (Figure 5).

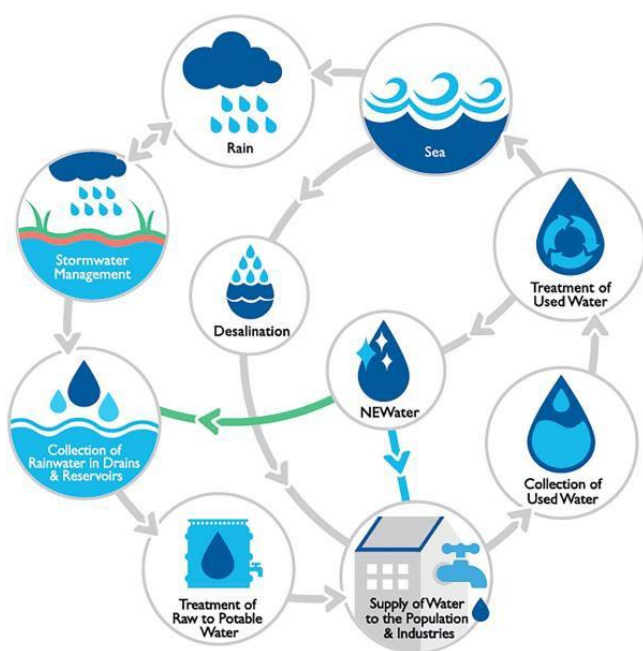


Figure 5. Closing the water loop is the way forward for the ASEAN region as a whole

Source: PUB Singapore

Conjunctive use of recycled and fresh irrigation water has helped mitigate drought impacts in the Perlis region of Malaysia and the expansion of conservation agriculture is helping subsistence farmers in buffering crops from rainfall-related shocks in Indonesia. The location-specific agro-meteorological advisory system has benefited several farmers in avoided crop loss and gain high resource use efficiency in the central dry zone of Myanmar. Prudent use of groundwater is helping to tap the abundant groundwater resources during water scarce periods for millions of farmers in several ASEAN Member States (e.g. the Philippines, Indonesia, Viet Nam, Myanmar).

Capacity Building: Human technical capacity is the ultimate limiting factor that need to be addressed for efficiency and effectiveness of interventions and this is the area where least number of good practices could be found. While

several DRR and CCA training programmes can be found in the region, their sustainability is questionable due to fragmented implementation and the lack of coherent approaches. Indonesia in particular seems to have addressed the issue with multi-stakeholder approaches in capacity building and the climate field schools are certainly noteworthy to be mentioned here.

Collaboration with national and local governments and with other development partners is being increasingly utilised in capacity building measures in almost all ASEAN Member States.

Way Forward

Overall, the range of good practices from policy level to local level presented in this publication indicates the right direction that the region is moving. However, there is still plenty of scope for scaling them vertically and horizontally in terms of number of needy areas to be reached out targeting the location-specific conditions (horizontal scaling) and in terms of covering all relevant administrative levels to reach optimal policy formulation and for their effective implementation on the ground (vertical scaling). Such expansion of good practices requires concerted efforts at the national level and regional cooperation building upon what has already been put in place under various ASEAN initiatives.

In response to such a demand, the Working Group on Prevention and Mitigation has developed a Work Plan for Strengthening Institutional and Policy Framework on DRR and CCA Integration which focuses on incorporation of climate change impact assessment in the DRR decision-making process by promoting associated activities including knowledge sharing and capacity building on planning and implementation, risk assessment and risk mapping, spatial planning, integration of relevant laws and regulations, financing, knowledge and data sharing, and monitoring and evaluation. It is expected that the Work Plan will be implemented effectively by actively using the resources listed in this publication and engaging the relevant agencies and institutions.

Contact for more information



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