

ASSESSMENT OF THE LEVEL OF INTEGRATION OF CLIMATE CHANGE ADAPTATION AND DISASTER RISK REDUCTION POLICIES IN NATIONAL DEVELOPMENT PLANS IN CAMBODIA, INDONESIA, AND MALAYSIA

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ABSTRACT

More than 50 per cent of global disaster mortality occurred in Southeast Asia between 2004 and 2014, and four of the Association of Southeast Asian Nations (ASEAN) member states are ranked in the top 10 countries most affected by climate risk between 1996 and 2015. As climate concerns and their attendant disaster risks are influenced by, and will affect, human activities across broad sectors, a holistic approach to addressing the issues is needed. In this regard, integrating climate change adaptation and disaster risk reduction frameworks within the context of national development becomes critical. By ensuring an integrated approach in development plans, sufficient resource allocations can be better ensured and climate adaptation and disaster risk reduction efforts can be implemented more effectively.

To enable further estimate of ASEAN's readiness to face the effects of climate change, this study examines the level of integration of disaster risk reduction and climate change adaptation in national development plans of select ASEAN member states. It specifically looks at the structure and design of climate adaptation and disaster risk reduction agenda within the development plans in Cambodia, Indonesia, and Malaysia.

The assessment discovers that there is a varying degree of climate change adaptation, disaster risk reduction, and development convergence in the countries under study, and concludes that Cambodia has them fully integrated while Indonesia and Malaysia have integrated them partially.

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Introduction

Southeast Asia is one of the most hazard prone areas in the world. In the last two decades, the region has suffered major catastrophic events including the 2004 Indian Ocean Tsunami, the 2008 Cyclone Nargis in Myanmar, and the 2013 Typhoon Haiyan in the Philippines, among many others.

Considering its susceptibility to natural hazards that are increasingly attributed to the changing climate, countries in the region have been progressively making efforts to increase their resilience. Their involvements in global

initiatives such as the 1994 United Nations Framework Convention on Climate Change (UNFCCC), the 2005 Kyoto Protocol, and the 2005–2015 Hyogo Framework for Action, among others, have provided the impetus for numerous ensuing climate- and disaster management-related policies at national and regional levels. National action plans for climate adaptation and disaster management mechanisms started to spring up in the period between 2006 and 2010. At the regional level, the historic Association of Southeast Asian Nations (ASEAN) Agreement on Disaster Management and Emergency Response was signed in 2005, and the ASEAN

Working Group on Climate Change was established in 2009.

As climate concerns and their attendant disaster risks are influenced by, and will affect, human activities across broad sectors, a holistic approach to addressing the issues is needed. In this regard, integrating climate change adaptation (CCA) and disaster risk reduction (DRR) frameworks within the context of national development becomes critical. By ensuring an integrated approach in development plans, sufficient resource allocations can be better ensured and climate adaptation and DRR efforts can be implemented more effectively.

This paper is built upon a previous study by Lassa and Sembiring (2017)¹ where a preliminary baseline assessment of the convergence of CCA and DRR in ASEAN member states' national development plans has been carried out. The study observed that almost all of the ten ASEAN member states have incorporated climate- and disaster-related frameworks within their development plans. While such preliminary finding may suggest that ASEAN is on the right track towards addressing climate-related concerns, examining the level of such integration is important to enable further estimate of ASEAN's readiness to face the effects of climate change.

The overall objective of this paper is to analyse the different levels of CCA-DRR-development convergence in three ASEAN member states namely Cambodia, Indonesia, and Malaysia.

Research Frameworks and Methods

Policy integration essentially attempts to bring the management of complex issues that are often cross-sectoral in nature under more concerted mechanisms. Underdal (1980)² argues that the criteria for policy integration include *comprehensiveness* along the dimensions of time, space, actors and issues, *aggregation* in examining the matters from an overall lens, and *consistency* of policies reflected in policy and institutional harmony across concerned sectors. Peters (1998)³ points out that differentiated strategies may be needed to achieve effective policy coordination. Particularly for cross-cutting issues, of which climate change and disaster are part of, it is necessary to recognise "the degree and type of interactions occurring among existing

policies (as well as among existing policy deficiencies)."⁴

Meijers and Stead (2004)⁵ observes that while policy integration carries similar understandings as "*coherent policy making* (OECD, 2006), *cross cutting policy-making* (Cabinet Office, 2000), *policy co-ordination* (Challis et al, 1988; Alter and Hage, 1993), *concerted decision-making* (Warren et al, 1974) and *holistic government policy co-ordination*, or also known as *joined-up policy* (Wilkinson and Appelbee, 1999) or *joined-up government* (Ling, 2002)",⁶ policy integration essentially embodies a deeper level of interplay as it "requires more interaction, accessibility and compatibility... needs more formal institutional arrangements, involves more resources, requires stakeholders to give up more autonomy and is more comprehensive in terms of time, space and actors."⁷

This study focuses mainly on examining the interaction of climate- and disaster-related policies within national development plans. It looks at the structure and design of climate adaptation and DRR agenda within such plans. A total integration will be characterised by a single dedicated section for a comprehensive climate adaptation and DRR strategies. Addressing both issues from the same viewpoint signifies an understanding of the interlinkages between climate change and disasters. In this regard, climate change factors and climate change impacts are simultaneously considered as risk determinants and will be handled concurrently in the national development plan.

A partial integration, on the other hand, will reflect an explicit mention of both CCA and DRR, but they are found either: a) in two separate sections, or b) in one single section but lacks comprehensive strategies. The lack of comprehensiveness may mean: a) such strategies exist in other, often sectoral, documents such as the national climate adaptation plans, b) such strategies only focus on limited sectors, or c) such strategies are written in an unsystematic manner. In other words, partial integration recognises the need to incorporate CCA and DRR in national development plan, but the holistic understanding of the influence of climate change on disasters is either missing or incomplete. Strategy formulation is therefore unable to capture both issues comprehensively and development plan may run the risk of not being able to completely

address climate and disaster risks despite having them ‘converged’ in the development plan.

In addition to analysing the policy conversation in national development plan’s structure and design, the priority sectors mentioned in the development plans will also be examined vis-à-vis national adaptation and/or climate change policies. A total policy integration will be reflected in the incorporation of all or most sectors indicated in the national adaptation and/or climate change policies within the development plans, and a partial integration will only include some of the sectors discussed in relevant policies and plans. This study uses existing secondary sources including formal policy reports, and relevant grey and peer review literature.

Results

Cambodia

Cambodia’s National Development Plan 2014-2018⁸ explicitly acknowledges the linkage between climate change and disasters. The document contains a pledge to implement national Action Plan for Disaster Risk Reduction 2014-2018 with the National Committee for Disaster Management (NCDM) taking the lead. The Action Plan prioritises the building of DRR governance system, the development of prevention and preparedness capacities with an emphasis on addressing risk factors by integrating CCA and DRR in different sectors. CCA is clearly spelled out in the national development plan, and this signifies that Cambodia has fully captured the criticality of resilience building through the convergence of DRR and CCA.

This integrated approach is further reflected in the Cambodian Climate Change Strategic Plan (CCCSP) 2014-2023.⁹ Cambodia’s National Climate Change Committee (NCCCC) has identified that the country is vulnerable to the risks of declining rice grain yield due to prolonged drought, sea-level rises, typhoons, coastal erosion, and flooding. Devising adaptation plans in food, water, and energy sectors, addressing climate impacts on gender and health, building climate resilience of critical ecosystems, biodiversity, protected areas and cultural heritage sites, adopting low-carbon growth, enhancing climate response know-how, formulating financing mechanisms for climate adaptation efforts, strengthening national climate governance, and promoting climate cooperation at regional and global levels are the strategies

employed to achieve climate-resilient Cambodia. The convergence of climate adaptation and DRR, therefore, is prominent in Cambodia’s national agenda.

Indonesia

Indonesia’s National Medium-Term Development Plan (RPJMN) 2015-2019¹⁰ explicitly spells out disaster management and DRR among Indonesia’s development priorities. It adopts three strategies summarised as follows: 1) *strengthening DRR policy framework particularly at the local level* through internalising DRR framework within national and local development plans, risk maps, Disaster Response Plan and Action Plans, land use planning, contingency planning; 2) *reducing disaster vulnerability* through better communication and information dissemination, better coordination particularly with donors and humanitarian actors, and better disaster response aimed at building community resilience in the long run; and 3) *improving disaster response capacity* through strengthening the capacities of institutions, human resources and management, infrastructure and effective response systems.

Based on this stated approach, it is evident that the Indonesian government’s emphasis for DRR lies on the building and strengthening of disaster risk governance both at national and local levels. Indeed, in its national progress report on the implementation of the Hyogo Framework for Action (2013-2015),¹¹ Indonesia acknowledged that coordination and distribution of roles and responsibilities between involved government agencies at national and local levels still need to be clarified.

The RPJMN 2015-2019 does envision climate-resilient Indonesia through the development of green cities, green open space, green transportation, green energy and green economy, but the discussion takes place in a separate section from DRR. This shows that the approach to DRR has the tendency to focus on preparedness and response and less on prevention, although the latter can be achieved through CCA. The document that looks at both issues in an integrated manner is the 2013 National Climate Adaptation Plan (RAN-API). The RAN-API makes reference to the studies conducted by the National Development Planning Agency and the Ministry of Environment in 2010 and identifies the following disaster risks associated with climate change (Table 1).

Table 1: The risk levels of climate-induced disasters in 7 areas in Indonesia.¹²

Risks	Sumatra	Java-Bali	Kalimantan	Sulawesi	Nusa Tenggara	Maluku	Papua
Decrease in water availability	M, H, VH	H, VH	L, M	H, VH	H, VH	L, M	L
Flood	H, VH	H, VH	L, M, H	L, M, H	L	L	L, M
Drought	H, VH	H, VH	L	L, M	L, M, VH	L	L
Coastal inundation	M, H	M, H, VH	M, H, VH	M, H	M, H	M, H	M, H
The spread of dengue fever	L, M, H	L, M, H	L, M	L, M	L, M	L, M	L, M, H
The spread of Malaria	L, M	L, M, H	L, M	L, M, H	L, M, H, VH	M, H	M, H, VH
The spread of Diarrhea	L, M, H	L, M, H	L, M, H	L, M, H	L, M, H	L, M, H	L, M, H, VH
Decrease in rice production	H, VH	H, VH	-	-	H, VH	-	-
Forest fires	M, H, VH	M, H	-	-	-	-	-

Note: L: Low; M: Moderate; H: High; VH: Very High

To adapt to such risks, resilience building plans are categorised into five areas namely: 1) economic resilience encompassing food and energy sectors, 2) livelihood resilience encompassing health, settlement and infrastructure, 3) ecosystem resilience, 4) special areas resilience encompassing urban area, and coastal and small islands area, and 5) supporting system. Action plans are designed for each cluster, and the plan for the development and use of adaptive technologies are observed across most clusters.

The above approach suggests that climate resilience remains primarily within the remit of climate change adaptation efforts although CCA and DRR has been made part of Indonesia's development plan.

Malaysia

Malaysia has integrated CCA and DRR in its 11th Malaysia Plan (2016-2020).¹³ Under the Pursuing Green Growth for Sustainability and Resilience agenda of the 11th Malaysia Plan (2016-2020), 'strengthening resilience against climate change and natural disasters' is featured as one of the focus areas. Three strategic initiatives to achieve a climate-resilient Malaysia include establishing a strong disaster risk management regime, strengthening flood mitigation efforts through projects, long-term planning, enhanced forecasting and warning systems, and promoting CCA by formulating national adaptation plan, strengthening infrastructure resilience, creating and establishing natural buffers in water and agricultural sectors and raising awareness of health impacts.¹⁴

Malaysia's adaptation plan in the national development plan focuses on selected sectors namely water resources, agriculture, and infrastructure. This is despite the 2009 National Policy on Climate Change that calls for an

integration of climate adaptation and mitigation measures into the policies of agriculture and food security, natural resources and environment (water, biodiversity, forestry, minerals, soil, coastal, marine and air), energy, industrial, public health, tourism, transportation, infrastructure, land use and land use change, human settlements and livelihood, waste management and DRR sectors.¹⁵ On public health, the Plan aims at raising public awareness of climate change impacts on health. While it is the first step in the right direction, there is a lot more to be done to build public resilience against climate-induced diseases.

Although CCA and DRR have been integrated in Malaysia's national development plan, its concentrating on few selected sectors suggests that the convergence may only be partial. However, as Malaysia plans to formulate dedicated climate adaptation and mitigation plan, and disaster risk management policy, regulatory and institutional framework, the breadth of climate adaptation efforts in the development plan may eventually get expanded.

Discussion

The mapping of the design of CCA and DRR within the national development plans of three ASEAN member states discussed in this study reveals that CCA-DRR-development integration is interpreted differently across states.

In Cambodia, the design of CCA and DRR convergence in the National Development Plan 2014-2018 is mainly taken from DRR perspective and supplemented by the Cambodian Climate Change Strategic Plan (CCCSP) 2014-2018. The CCCSP 2014-2018 also incorporates DRR approach as it lays down some possible disaster scenarios relating to the changing climate such as declining rice grain yield due to prolonged drought, sea-level rises, typhoons, coastal erosion and flooding. While Cambodia's climate adaptation measures primarily focus on food, water and energy sectors, it also considers broader areas such as gender and health and the protection of critical ecosystem and cultural heritage sites. From policy lens, therefore, the level of the integration of CCA and DRR in the national development plan appears ideal.

In Indonesia, although DRR and climate resilience are mentioned in the National Medium-Term Development Plan (RPJMN) 2015-2019, they are discussed in separate sections. DRR

priorities are heavily tilted towards strengthening the enabling environment such as coordination between relevant agencies at national and local levels, and early warning systems and preparedness. Disaster prevention aspect in which CCA may play an important part is largely absent. Instead, there is a standalone section on a vision for a climate-resilient Indonesia, of which green economy is the main thrust. CCA and DRR, therefore, are not completely converged in the national development plan. The 2013 National Climate Adaptation Plan (RAN-API), on the other hand, contains such integration and approaches climate adaptation efforts from DRR perspective. In Indonesia, therefore, the integration of CCA and DRR in national development plans can be categorised as partial. The implementation of CCA plans are likely to continue to fall under a separate climate rubric instead of within an integrated CCA-DRR-development framework.

In Malaysia, the convergence of DRR and CCA is alluded to in the 11th Malaysia Plan (2016-2020). It approaches climate adaptation measures from DRR perspective as evidenced in flood mitigation efforts and the vision to create natural buffers in water and agricultural sectors. The sectors mentioned in the national development, however, fall short from what is envisioned in the 2009 National Policy on Climate Change. This suggests that the integration may only be partial.

Conclusion

The three countries of ASEAN under study have shown notable efforts in crafting CCA policies. Although the idea of integrating CCA and DRR in national development plans has been adopted, the degree of such convergence differs. The varying approaches and level of integration may reflect the different challenges that each country is facing in terms of priorities, institutional structures, policies, human resources, and budgets.

While a full integration of CCA and DRR in national development plans like in the case of Cambodia is ideal, the more sectoral approach to climate adaptation as seen in Indonesia, or the more selective approach as seen in Malaysia, also has their merit. Ultimately in all cases, political commitment to executing the policies is the one playing a central role in achieving the policy objectives. Governments, therefore, need to ensure that such commitment is strongly upheld.

Further research can look into the outcomes of the different levels of integration in the three countries.

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