

Policy Brief

Improving Resilience in Indonesia through Coastal Community-led Climate Change Adaptation and Disaster Risk Reduction

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Saut Sagala¹, Gavin Sullivan², Chas Morrison⁴, Danang Azhari³, Medhiansyah Putra Prawira³, Ananda Prabu Dian³, Wewin Wira Cornelis Wahid³, Abimanyu A. A. Abdullah³, Iqbal Hafizhul Lisan³

1. Urban and Regional Planning, School of Planning Policy Development, Institut Teknologi Bandung, Indonesia
2. Internationale Psychoanalytische Universität Berlin, Germany
3. Resilience Development Initiative, Indonesia
4. Coventry University, United Kingdom

Summary

Indonesia's coastal area is exposed to natural hazards while home to highly vulnerable communities. Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA) are needed to reduce the effects of climate change on coastal communities and enhance their resilience against future disasters. Combining CCA-DRR governance with community-led initiatives has been proven by many scholars to be effective in strengthening coastal communities' resilience compared to top-down CCA-DRR programs. Community-led initiatives are also mentioned in the Sendai Framework for Disaster Risk Reduction (SFDRR) 2015-2030 as vital in understanding and addressing risk. This policy brief elaborates a series of recommendations on implementing community-led CCA-DRR to improve resilience in Indonesia's coastal communities.

Keywords: *climate change adaptation, disaster risk reduction, community resilience, coastal community*

2. Overview of Coastal Community Resilience

As an archipelago, Indonesia has the second longest coastline in the world. Currently, 24 out of 34 provinces have capitals in coastal areas, where an estimated 150 million people settle there. Coastal urban agglomerations develop rapidly from ports and trade, contributing to good economic opportunities that attract migration to these

areas. However, coastal communities in Indonesia face significant climatic hazards. According to the World Risk Report 2020 by Hilft and the ADB's Country Risk Report 2021, Indonesia is among the countries most vulnerable to natural hazards, and its risk is expected to increase by 19-37% by 2030. It ranks third globally in vulnerability to climate-induced hazards, compounded by

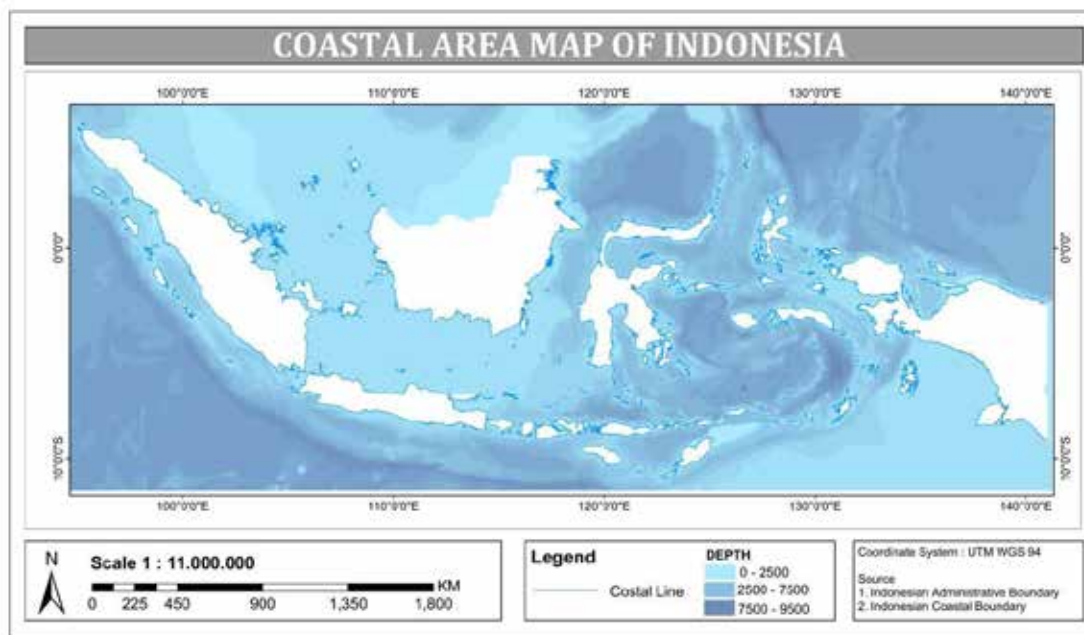


Figure 1. Coastal Area Map of Indonesia
 Source: Badan Informasi Geospasial (BIG)

limited adaptive capacities. Therefore, Indonesia should focus on Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA) efforts to reduce underlying risks, lower impacts, and increase resilience in coastal areas.

The massive damage costs caused by nature-induced disasters from 1980 to 2010, averaging around USD 100 billion, revolutionized national disaster management through the establishment of Law No. 24 of 2007, while the increasing global intensity and frequency of weather-related hazards inspired the formulation of national adaptation plan for climate change (Djalante & Thomalla, 2012). However, although CCA-DRR efforts are well prioritized and clearly specified at the national level, CCA-DRR efforts at the local level still face difficulties in planning, budgeting, governance, and practical implementation. Therefore, this policy brief was developed based on the Socio-Economic Resilience of Coastal Communities research project, which aims to convey existing CCA-DRR governance and local community initiatives in implementing it. This brief also provides a set of recommendations for the national and local

governments of Indonesia on how to integrate CCA-DRR with community initiatives and improve resilience in vulnerable coastal areas.

3. Local Value and Behavioral Characteristics of Coastal Community in CCA-DRR

When supported by other stakeholders, such as the government, private sectors, academia, and media, in multi-stakeholder collaboration, community-led initiatives can better fill programmatic gaps, better integrate CCA-DRR, and create robust solutions. More importantly, community-led CCA-DRR can leverage local knowledge and build capacities to tackle local issues, achieve collective goals, and realize resilient coastal communities (Courtney et al., 2007; Bijoux, 2015; Oktari et al., 2020). Coastal communities often have cultural values that support CCA-DRR. For instance, the story-telling tradition 'Nandong Smong' in Simeulue Island (Aceh Special Region) tells children how to detect disasters using indigenous knowledge. However, this indigenous knowledge is slowly disappearing. To tackle this, community-led CCA-DRR can provide a pathway to incorporate indigenous values and integrate them with empirical

CCA-DRR best practices.

Indonesia's coastal communities have different characteristics, but the most vulnerable communities tend to be closest to shore and share some commonalities. Socio-economically, they are primarily low-income fishermen who are more concerned about meeting their daily needs rather than formal education (ADB, 2022; Latjuba, 2022). Behaviourally, they are often very religious, less materialistic, socially cohesive, diligent, and do not like to beg (Latjuba, 2022). These communities' indigenous cultural practices were noted as scientifically valuable for prevention, mitigation, and adaptation efforts (Hiwasaki et al., 2014). They have Indigenous mechanisms to detect strong winds and build coastal forests to mitigate climate hazards. Indigenous cultural norms and the concept of 'pamali' (taboo) are also instrumental in preventing overconsumption and exploitation (Simonin, 2015).

Local culture provides valuable ways to implement community-led CCA-DRR. However, cultural erosion in coastal communities is occurring, and the lack of mechanisms to transfer knowledge could accelerate this. For example, technological advancements have changed Indonesia's coastal communities socially. Kinseng (2021) noted that Indonesian fishing communities shifted from hamlets-based to fishing-gear-based sodality. This entails shifting from culture-based to commercial-based production, triggering local conflicts between fishermen and non-fishermen for access to natural resources. Additionally, younger community members have demonstrated a reluctance to follow the 'pamali' system, threatening existing sustainable practices (Simonin, 2015). Regarding knowledge transfer, historiographies of Indonesia's coastal communities were not widely done due to their limited writing tradition (Susilowati, 2019). Furthermore, declining fishing practices

in coastal communities and the younger generation's changing priorities pose a challenge to 'who to transfer knowledge to' and Indonesia's marine future.

4. Existing Gaps and Coherent Policy Support in Coastal Community-led CCA DRR

Indonesia already has national-level plans for both CCA through the National Action Plan for Climate Change Adaptation (RAN API) and DRR through the National Plan for Disaster Management (Renas PB), which emphasize community participation and empowerment. Both require integration from local governments into their local planning and community-led CCA-DRR implementation. Indonesia has further progressed in achieving CCA and DRR through disaster management reform (Anantasari et al., 2017), for example, (i) the national action plan on disaster risk reduction and climate change adaptation; (ii) integration of CCA-DRR in the national medium-term development plan; and (iii) existing legal frameworks ensuring CCA-DRR budgeting and training.

However, heavy-handed and confusing organizational set-up, lack of budget, poor stakeholder engagement and institutional coordination, insufficient information and resource sharing, political distrust, and poor local government capacity are prevalent in CCA-DRR governance (Anantasari et al., 2017; Oktari et al., 2022; UNDRR, 2020). Although there are guidance documents for local plans for both CCA and DRR and all local DRR plans (RPB) have been mainstreamed, only 55 local CCA plans (RAD API) in 11 out of 38 provinces in Indonesia have been published, according to the Indonesian Ministry of Environment and Forestry.

To solve the above-mentioned issues, policies that ensure collaboration platforms between local governments, non-government (NGOs), civil society organizations (CSOs),

private sector agencies, academia, and communities are needed (UNDRR, 2020). Capacity building for local governments should also be done to ensure plans adequately integrate CCA-DRR and establish good governance. Most importantly, the local development planning agencies (Bappeda) should be positioned in a coordinating role through appropriate legal frameworks. Furthermore, state and local government funding policies should allow for flexible and long-term funding as community-led initiatives take time to allow for innovations and changing local needs (Thornley & Ball, 2015).

In regard to specific policies on coastal community-led CCA-DRR, technical frameworks should allow for the identification of scientifically useful indigenous knowledge in CCA-DRR efforts (Hiwasaki et al., 2014). Similarly, local regulations should support local culture in strengthening sustainable practices for CCA-DRR and stopping environmental degradation. For instance, Indonesia already has a Coastal and Small Islands Zoning Plan (RZWP-3-K) that directly governs coastal development and is required to be integrated and harmonized with other provincial-level development and spatial plans. However, active local community participation should be considered to avoid the risk of coastal livelihood exploitation.

5. Involvement of Local Community and Multi-level Stakeholders

5.1 Grassroot Initiatives and Community Involvement

Grassroots initiatives or innovation can deliver sustainable benefits where top-down measures struggle. However, they can be difficult to initiate in poor communities. A three-step model by Ibrahim (2017) can be used to initiate, support, and sustain state initiatives in community-led ones. First, developing individual awareness of issues, their goals, and their ability to achieve these goals is required. The objective can be

achieved through training by developing groups, discussing and analyzing, and empowering women. Second, social or community collaborations need to be built, defining a community vision through inclusive decision-making and creating village or community committees. Third, to sustain community action, the community needs to collaborate with the public sector, NGOs, CSOs, and donor agencies. These collaborations are delicate, but platforms where the community can consult and discuss solutions with the government and professionals are a must. Funders need to show flexibility and treat the community as equal partners. Indonesia has examples of this model, popularized as community action plans (Sara et al., 2012) which can be made a primary framework for leveraging community initiatives for CCA-DRR.

5.2 Multi-level Stakeholder Support for the Community-led Initiatives

Grassroots initiatives or innovation can deliver Government, NGOs, CSOs, academics, and donors (private or development agencies) play important roles in supporting and sustaining community-led initiatives. The government has a role in enabling community-led initiatives through policies, development and spatial plans, and funding and collaboration platforms with other penta-helix stakeholders. NGOs can help individuals assess their goals, create a collective vision, and initiate community movement (Rowlands 1997 as cited in Ibrahim, 2017), as do academics and CSOs. Facilitating the community to assess their own capacity and the coastal environment and creating community-based plans requires experts from academia, government professionals, NGOs, or CSOs. As Sara et al. (2012) elaborated, funding could come in blended schemes, in which banks (through a revolving fund) and local government budgets were used to fund coastal community-based management. Funding could also come from donor agencies, CSR, and private investment if it involves tourism. Besides implementing,

communities also play a role in accounting for their community members' actions (Simonin, 2015) and monitoring shortcomings in government roles or provisions.

6. Recommendations

Coastal communities in Indonesia have a deep understanding of local knowledge, leading to unique grassroots initiatives and strong community involvement. Currently, efforts to enhance the resilience of coastal communities in the face of climate change and disaster risks are addressed through national-level regulations, such as the Climate Adaptation Action Plan (RAN-API) and the National Disaster Management Plan (Regulation No. 24 of 2007). However, these efforts face several challenges, including unclear organizational structures, limited budgets, inadequate stakeholder engagement, poor institutional coordination, insufficient information and resource sharing, political mistrust, and weak local government capacity.

In light of these challenges, several recommendations focus on the involvement of local communities and multi-level stakeholders in implementing existing plans. The government plays a critical role in supporting community-led initiatives by creating enabling policies, integrating them into development and spatial plans, and providing funding and collaboration platforms with other government and non-government stakeholders.

The following key recommendations are proposed to ensure the optimal implementation of CCA-DRR in Indonesia for coastal community resilience:

Recommendation 1: Integrate community-led CCA-DRR in coherent policies and regulations at various levels of governance for coastal areas

The practices of DRR and CCA are inextricably linked and have the capacity to complement

one another. The integration of both approaches can modify and fill the gaps in each of their strategies. Focussing on community-led initiatives can better integrate CCA-DRR at the local level, find suitable solutions, and work together towards a common goal via participatory processes. This should be enabled by policies and legal frameworks that promote collaborative platforms, establish good planning capacity and public governance, establish a well-informed regional coordinating agency (Bappeda), provide funding flexibility, and integrate community action plans into CCA-DRR implementation frameworks.

Recommendation 2: Ensure the preservation of local culture related to CCA-DRR and leverage this into sustainable practices

Local culture emerges from the interaction between a community and its environment. With the rapid change in surroundings and the loss of passed-down collective knowledge, community-led CCA-DRR should proactively nurture indigenous capacity instead of eroding traditional knowledge. Therefore, legal frameworks that ensure the identification of useful indigenous knowledge on CCA-DRR are recommended. Blending indigenous and scientific solutions will also further enhance adaptation capabilities and resilience. Legal pathways to institutionalize sustainable indigenous practices and culture into local laws will also promote sustainable disaster preparedness and coastal communities' livelihoods.

Recommendation 3: Multi-stakeholder Collaborations to support Community-led CCA-DRR

Implementing community-led CCA-DRR in Indonesia faces problems with scale and the multi-level nature of governance. Grassroots initiatives and ensuring community involvement can reduce institutional vulnerabilities, and communities should be

encouraged and facilitated to self-organize and solve problems. Stakeholder collaboration can support this by facilitating organizational and legal enablement, funding, plan formulation, and implementation support. One Way to ensure this collaboration is to create platforms with clear, inclusive agreements on each stakeholder's role and responsibilities and robust accountability mechanisms.

7. Further Readings

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