



# SOCIAL DIMENSIONS OF CLIMATE CHANGE IN INDONESIA

## EXECUTIVE SUMMARY

**Indonesia is highly susceptible to impacts of climate change, which are likely to deepen socioeconomic vulnerabilities and challenge critical livelihoods.** Indonesia comprises 17,504 islands, 108,000 kilometers (km) of coastline, and 75 percent of its territory is at sea. As a middle-income, archipelagic nation with extensive low-lying and small island areas, Indonesia is extremely vulnerable to climate change risks, ranking in the top one-third of countries globally in natural hazard risks. Expected variation in precipitation and temperature and erratic rainfall patterns are likely to affect agricultural yields and drive food price volatility and food insecurity. The poor and economically insecure are likely to carry a disproportionate burden of the impacts. This is because they are more reliant on agriculture and natural resources, live in areas more prone to climate risk, and have a lower capacity to adapt. Increased exposure to climate risks of women and marginalized groups is expected to result in disproportionate impacts on mortality, livelihoods, food and water insecurity, migration, and threats to cultural identity.

**Indonesia has committed to significantly reduce GHG emissions under the Paris Agreement while strengthening economic and social resilience.** More than 60 percent of the emission reduction target in Indonesia's nationally determined contribution (NDC) is intended to be met through actions in forestry and other land use (FOLU) sectors. Alongside FOLU, the agriculture and energy sectors make up the bulk of Indonesia's targeted reductions in emissions. While being important to climate change mitigation, Indonesia's mangrove forests, peatlands, and terrestrial forests are some of its most important natural assets that support economic growth and sustain livelihoods for millions of people. Indonesia also is one of the world's largest coal producers and exporters, with approximately 39 billion tons of coal reserves, the fifth largest in the world.

Coal-dependent regions such as East Kalimantan and South Sumatra have special characteristics that put them among regions most drastically affected by climate change due to their reliance on an industry at the heart of global climate change mitigation efforts. The coal transition will ignite a series of direct, indirect, and induced impacts. These include job losses, dislocation of workers and their families, deepening inequalities, and loss of access to infrastructure and services. If not mitigated, these impacts could drive heightened mistrust, insecurity, and social instability.

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**Climate change and climate mitigation policies will have significant impacts on local communities, particularly on poor and vulnerable groups.** The impacts of climate change experienced by communities depend not only on their exposure to climate risks but also on the sensitivity of their livelihoods and cultures to climatic changes, and their capacity to adapt and respond to these changes. Vulnerability varies significantly across the population. Those facing discrimination, limited access to rights and governance platforms, or exclusion from social networks are likely to experience disproportionate impacts from climate risks and have a lower capacity to adapt. Over the past few decades, Indonesia has made admirable progress reducing poverty. However, not addressing the social impacts of climate change and climate change policies could risk reversing some of these gains.

**This report on the social dimensions of climate change in Indonesia provides a people-centered analysis of climate impacts and policies and puts local communities and governance systems at the heart of climate action.** The report maps differentiated vulnerabilities to climate change across the archipelago and examines the potential effects of climate mitigation and adaptation policies on local communities, with a focus on the poor and most vulnerable. The report also explores how communities and subnational actors have responded to climate impacts and identifies strategies to accelerate climate adaptation and mitigation actions while ensuring that the most vulnerable groups benefit from these initiatives. Finally, the report underscores the importance of investing in social resilience by enhancing the collective ability of communities to withstand, recover from, and reorganize in the face of transitions. Local knowledge, traditions, and skills are important drivers of social resilience, alongside securing access to rights and resources, especially for marginalized groups. Strong local governance institutions which channel resources and technical support directly to local communities play a major role within Indonesia's decentralized governance structure to manage the impacts of climate change and climate change policies.





**Inclusive climate responses in Indonesia depends to a large extent on the ability to align the interests of local communities with national transition and development goals, and to promote effective local action.**

To deliver on national commitments, strong subnational implementation systems are needed to bridge top-down policies with bottom-up processes. Given Indonesia's decentralized governance structure, effective climate policy is intimately bound up with reinforcing and clarifying the roles of subnational governments. In addition, community-based and locally led approaches will be key instruments of inclusive local climate action. More inclusive local governance and more space for citizens' voices in climate policy discussions will drive improved resilience to climate risks and promote inclusive growth.

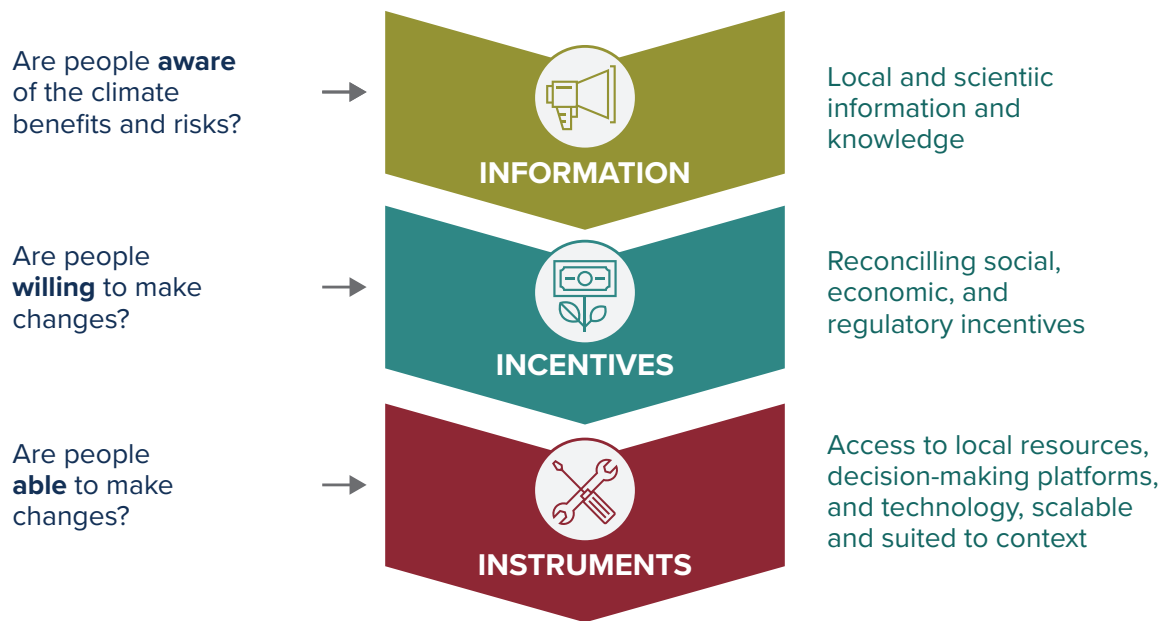
**This report proposes a simple framework to guide climate policy and program design and implementation, with a focus on drivers of local action: information, incentives, and instruments.** The framework aims to guide practitioners and policy makers in how to incorporate the diverse and dynamic nature of community vulnerability into climate change, understand and change the local incentives, and achieve scalability and cost effectiveness.

- First, the ability for local actors to access and generate *information* on climate change impacts and options for climate adaptation and mitigation is critical to generate buy-in and drives informed decisions and actions.
- Second, various *incentives*, including social, financial, and regulatory, create the conditions for a different set of outcomes by stimulating changes in the behavior and investment patterns of local populations.
- Finally, policy and operational *instruments* such as local budgets, new technologies and skills, and local decision-making bodies enable and empower people to take effective action.

All three pillars work simultaneously to empower and enable locally led climate action.



**FIGURE 0.1** Framework for Locally Led Climate Action in Indonesia



Source: Authors.

Indonesia already has a mix of policies and programs to promote adaptation and mitigation that could be further strengthened and scaled to promote sustainable and inclusive transitions. High-quality data, a suite of national commitments, and effective decentralized platforms for community-led local development provide strong foundations for Indonesia to promote locally led climate action and transition planning. To address vulnerability and implement inclusive decarbonization policies, Indonesia’s climate response will need to work effectively across scales. A combination of reforms and investments in national policies, decentralized spatial management, and bottom-up community actions are needed:

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1. *Community empowerment programs and the Village Law will continue to be key pillars of Indonesia's development toolkit to promote local climate action.* Indonesia's 75,000+ village governments spend over USD 8bn per year on local development. Village fiscal transfers can fund this diverse basket of local activities, which can be incentivized through payments for ecosystems services or environmental fiscal transfers. However, village planning and budgeting systems are not yet optimized to promote "climate-smart" development. The Village Law is a vehicle that could incorporate stronger community planning and support instruments in implementation, including integrating climate risks in planning and budgeting; strengthen technical assistance and training on climate-smart infrastructure standards and adaptation activities; and improve the monitoring of climate-related expenditures and results.
2. *The capacity of local governments for planning and technical assistance functions can be strengthened.* Effective local action linked to national policy goals is dependent on the supportive and regulatory role of local government. Local government support is especially critical in protected areas and fragile ecosystems, for which effective cross-sectoral approaches are needed to drive more sustainable and inclusive outcomes. Local climate action will require capacity development of local governments in the key functions needed for effective environmental management, including spatial planning and service delivery.
3. *Results-based carbon finance instruments will continue to incentivize mitigation, especially in forested landscapes, but can be strengthened by developing scalable systems with lower transaction costs.* The Government of Indonesia (GoI) has made noteworthy progress in piloting and testing instruments to channel climate finance to communities and implement jurisdictional approaches to climate transitions. Examples are REDD+ in East Kalimantan and a jurisdictional approach to lower emissions across the agriculture and FOLU sectors in Jambi. However, results-based carbon finance programs need more robust and inclusive community-facing outreach and benefits-sharing mechanisms.

4. *To achieve fair and equitable outcomes, community support mechanisms in coal-dependent regions could mitigate the social and distributional impacts of coal transition, and need to be initiated early.* Inclusive and meaningful engagement of communities in coal transition is the first and critical step to help prepare for potential community-wide social impacts; earn the trust of local communities; and deliver direct investments in sustainable economic development to reduce reliance on coal. The last could include providing viable alternative services, jobs, and social support. In affected areas, empowering vulnerable groups will be key to ensure that the process is legitimate and fair and generates equitable outcomes.

**Indonesia has strong foundations for effective climate action, and a range of complementary actions and reforms is necessary to strengthen these existing systems.** At the national level, the GoI and its partners can strengthen centralized data instruments and knowledge products, improve the enabling environment for partnerships with civil society and the space for citizen voice in policymaking, and invest in upstream analytics and planning to support coal transition. At the subnational level, improving systems and capacities to coordinate sustainable landscape management, finance climate adaptation and mitigation, provide technical support to villages and communities, and lead implementation of payments for ecosystem services (PES) schemes will drive stronger implementation of national commitments. At the village level, improved Village Law implementation and improved supply of climate-smart technical assistance to villages will improve inclusive local governance and enhance quality of spending. These recommendations are summarized in Table 0.1, while a more nuanced set of recommendations is provided in Chapter 7.



**TABLE 0.1** Summary Recommendations for National, Sub-National, and Village Governments

ACTION AREAS	RECOMMENDATIONS
Closing gaps in information on climate risks and opportunities, and how these risks will affect local communities.	<ul style="list-style-type: none"> <li>• Improve public access to data and analysis on vulnerability to climate change, sensitivity of local communities to various risks, and adaptive capacity to aid local planning and action.</li> </ul>
Information on the value and future values of critical ecosystems.	<ul style="list-style-type: none"> <li>• Develop and disseminate climate-smart cost-benefit assessments to inform economic development policies and programs, including benefits-sharing plans and alternative livelihoods programs.</li> </ul>
Expanding operational platforms for community and stakeholder engagement.	<ul style="list-style-type: none"> <li>• Strengthen national dialogue on inclusive climate transitions to promote high-level support to citizen engagement and coal transition planning and improve accountability, transparency, and policy design.</li> <li>• Strengthen subnational dialogue on inclusive low-carbon transitions to enhance participatory management of protected areas and critical ecosystems.</li> <li>• Ensure allocation of sufficient and reliable financing for stakeholder engagement and involve communities in monitoring and learning to increase social accountability and improve implementation.</li> </ul>
Improving efficiency, transparency, and scalability in carbon finance instruments.	<ul style="list-style-type: none"> <li>• Strengthen bottom-up accountability mechanisms for climate finance by improving “green accountability” mechanisms to track climate finance.</li> <li>• Strengthen the regulatory and institutional framework for environmental and social risk management, particularly around resettlement, labor market policies, and stakeholder engagement.</li> <li>• Strengthen and streamline mechanisms for climate finance at the subnational and village level and clarify their contributions to broader landscape and jurisdictional management plans.</li> </ul>
Expanding options for partnerships with civil society and non-government actors.	<ul style="list-style-type: none"> <li>• Improve regulatory frameworks for partnerships with civil society to promote local capacity for climate action, innovation, and locally owned implementation of emission reduction and adaptation programs.</li> </ul>
Initiating transition planning in coal-dependent regions.	<ul style="list-style-type: none"> <li>• Initiate just coal transition planning in coal-dependent regions or transition sites by conducting upstream socioeconomic assessments, identifying local development needs, and preparing community development programs to address them.</li> <li>• Broker private sector partnerships to enhance local economic development in coal-dependent regions or transition sites.</li> </ul>
Improving spatial and sectoral planning.	<ul style="list-style-type: none"> <li>• Improve provincial, district, and city spatial planning, particularly in forest conservation zones and marine protected areas, through robust assessments.</li> <li>• Integrate analysis on sensitivity to climate impacts into spatial plans and protected area management plans, both in urban and rural areas.</li> <li>• Incorporate socioeconomic data in spatial planning to identify social groups who are most at risk.</li> </ul>

**TABLE 0.1** *continued*

ACTION AREAS	RECOMMENDATIONS
<p>Strengthening local government in key functions needed for effective environmental management.</p>	<ul style="list-style-type: none"> <li>• Build the capacity of district governments to manage critical aspects of sustainable landscapes, including human capital gaps required to effectively drive local economic transition and build resilience.</li> <li>• Build the capacity of subnational governments for climate-smart planning and public financial management.</li> </ul>
<p>Aligning subnational fiscal incentives with a low-carbon economic transition.</p>	<ul style="list-style-type: none"> <li>• Expand the use of performance incentives for locally led climate action, such as through sustainability-based performance indicators for subnational governments and use of Ecological Fiscal Transfer (EFT) mechanisms in fragile ecosystems.</li> <li>• Expand use of environmental fiscal transfers by increasing allocations of Special Allocation Fund/<i>Dana Alokasi Khusus</i> (DAK) and Village Funds to address the risks and costs of transitions.</li> </ul>
<p>Optimizing village planning and budgeting systems to promote climate-smart development.</p>	<ul style="list-style-type: none"> <li>• Build the capacity of communities to participate in environmental protection and economic development programs, as well as village planning and budgeting processes.</li> <li>• Promote climate smart budgeting and expenditure monitoring, such as by revising the annual Village Fund priority guideline and updating Village Chart of Accounts and Village Law nomenclature to provide clearer budget codes for spending on climate adaptation and mitigation.</li> </ul>
<p>Increasing consistent provision of technical assistance to villages.</p>	<ul style="list-style-type: none"> <li>• Strengthen sectoral technical assistance to villages to address landscape-specific risks and undertake mitigation measures by linking village and district government planning and budgeting mechanisms.</li> <li>• Develop and roll out climate smart standards for local infrastructure development to promote the resilience of infrastructure toward predicted changes in temperature or rainfall, and specifications to build resilience to storms and tidal surges.</li> </ul>

Source: Authors.

**Indonesia requires ambitious domestic leadership and significant global support to deliver on its climate and development goals.** Looking forward, Indonesia’s highly networked population has the potential to be the engine for change, if local communities can be given the right resources and support, accompanied by transparent and accountable delivery systems. There is significant potential to strengthen one of the country’s most critical tools to reduce poverty—village development program—which will be critical to scale investments to the level needed. When facing challenging policy questions in the past, Indonesia’s government did not shy away from taking bold steps to secure its own long-term interests. It will surely rise to the challenge of addressing the social dimensions of climate change.

