

# Implementation of the climate village program (Proklim) related to gender-based

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**Abstract.** The Climate Village Program (PROKLIM) experienced development and positive responses from 2011 to 2022 from various stakeholders. From the start, PROKLIM has prioritized sustainability aspects in climate change adaptation and mitigation efforts at the grassroots level. With an effectiveness level reaching 80%, the implementation of PROKLIM can be seen from the active participation of the community in every stage of decision-making, from planning and implementation to monitoring activities in climate village locations, strengthening the sense of ownership of ongoing programs and activities. Even though it is considered adequate at 80%, according to SRN-PPI data, PROKLIM coordinators in each region must remain vigilant and strive to change the community's mindset and knowledge regarding climate change adaptation and mitigation actions. The success of PROKLIM activities depends on forming a sustainable community mindset in preserving and transforming the environment. The SIDIK, SPECTRUM, and SRN-PPI platforms are expected to facilitate PROKLIM implementation and stakeholders, ensuring that community-based climate change adaptation and mitigation actions can be recorded, accounted for, and validated effectively. Keywords: PROKLIM, Effectiveness, Community Participation, Mitigation and Adaptation Actions, Gender Equality. Keywords: Proklim, Effectiveness, Community Participation, Mitigation and Adaptation Actions, Gender Equality.

## 1 Background

In recent years, we have witnessed and experienced various climate-related disasters in Indonesia and other countries. This phenomenon is related to the findings of global climate change experts associated with the Intergovernmental Panel on Climate Change (IPCC) in 2021-2022. According to their study, one of the impacts of climate change is the increase in extreme weather events. These events continue to recur with expanding impacts, prompting us to strengthen efforts to control climate change. The IPCC's 6th assessment report emphasizes the urgency of taking immediate action to save life on Earth from the threats of climate change [1], [2].

The IPCC report includes studies on scientific foundations [3–11], impacts, adaptation, and vulnerability [12–18], as well as Climate Change Mitigation [19, 20]. The scientific foundation section states that human activities' greenhouse gas (GHG) emissions have led to a global temperature increase of approximately 1.1°C from 2010–2019 compared to 1850–1900. The Paris Agreement, within the framework of the Climate Change Convention, aims to limit the global average temperature increase to below two °C and strives to limit the rise to below 1.5°C above pre-industrial levels [21–23]. Without ambitious GHG emission reduction efforts, the temperature rise will exceed two °C during the 21<sup>st</sup> century. Indonesia ratified the Paris Agreement through Law No. 16 of 2016 [24].

Given the importance of the success of climate change control efforts at the national, sub-national, and global levels, it is essential to ensure that climate change control actions can be monitored and reported transparently and accountable. The United Nations Framework Convention on Climate Change (UNFCCC), through Decision 1/CP-21 UNFCCC regarding Non-Party Stakeholders (NPS), states that financial institutions, communities, the private sector, local governments, and NGOs are expected to increase the capacity of efforts to reduce emissions and build resilience to the impacts of climate change [25]. The Indonesian government is committed to sustainable NPS involvement, outlined in the Nationally Determined Contribution (NDC) submitted to the UNFCCC Secretariat in 2016.

The Indonesian government's strategy to involve the NPS in controlling climate change involves the Ministry of Environment and Forestry (KLHK) through the Climate Village Program (PROKLIM). PROKLIM aims to actively involve the community by increasing understanding of climate change and its impacts and encouraging the implementation of concrete actions to strengthen community resilience and contribute to reducing GHG emissions. The Ministry of Environment and Forestry manages this national initiative under the Directorate General of Climate Change Control, guided by the legal basis outlined in the Minister of Environment and Forestry Regulation Number 84 of 2016 concerning the Climate Village Program. [26].

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Active community participation in PROKLIM involves:

- Raising awareness of environmental protection.
- Empowering communities.
- Fostering partnerships.
- Developing community skills.
- Preserving local culture by Law No. 32 of 2009 on Environmental Protection and Management.

PROKLIM is a collaboration between the government, local governments, the private sector, universities, and NGOs to achieve climate change control targets at the national and global levels.

This article discusses the implementation of PROKLIM as a tangible action for climate change adaptation and mitigation at the grassroots level. While some regions may still need to show significant improvement, this is due to outcomes in the implementation of PROKLIM that may take time to be visible. Therefore, the author aims to explain the effectiveness of PROKLIM in carrying out adaptation and mitigation actions at the grassroots level.

## 2 Implementation of PROKLIM

At the 21st Conference of the Parties or COP in Paris in 2015, mobilizing more robust and more ambitious climate action agreed upon by Parties and Non-Party Stakeholders (NPS) was critical to achieving the goals of the Paris Agreement. NPS includes local governments, businesses, academics, community groups, financial institutions, and NGOs/CSOs.

Recognition of the role of indigenous peoples, local communities and civil society, including young people and children, in overcoming climate change continues to be taken into account, as stated in the decisions of the Parties at subsequent meetings, such as the Glasgow Climate Pact Meeting adopted at COP 26 of 2021 in Glasgow, England. [30].

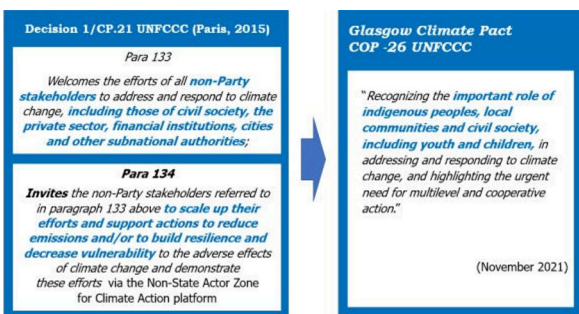


Fig. 1. The Role of Non-Party Stakeholders (NPS) in UNFCCC Party Discussions.

The parties' decision at COP 27 in Sharm el-Sheikh, Egypt, emphasizes the crucial role of community involvement.

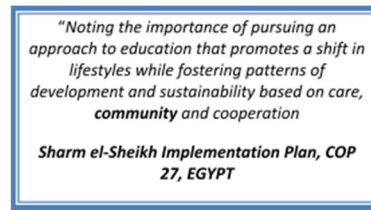


Fig. 2. The Crucial Role of Communities in COP-27 Decisions

Through the Nationally Determined Contributions (NDC), Indonesia has set targets for three resilience aspects: economic resilience, social resilience, and livelihoods, as well as ecosystem and landscape resilience. For this reason, one of the efforts undertaken by the Ministry of Environment and Forestry (MOEF) is to promote the realization of climate resilience and GHG emission reduction at the grassroots level through the Climate Village Program (PROKLIM). The Indonesian government is committed to strengthening the implementation of the NDC as outlined in the Enhanced NDC document submitted to the UNFCCC Secretariat in September 2022. Indonesia's commitment is strengthened by increasing the target for reducing greenhouse gas emissions from 29% to 31.89% without conditions, utilizing the resources and capabilities of countries, and increasing it from the previous 41% to 43.20% with international support.

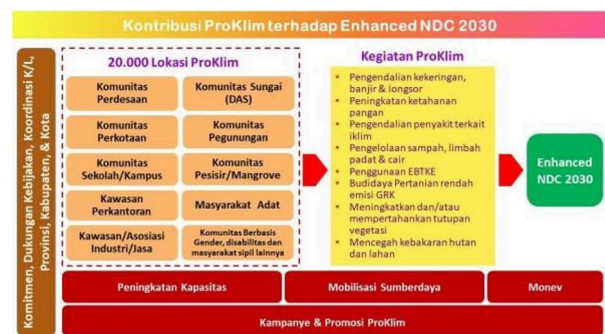


Fig. 3. PROKLIM's Contributions to the Implementation of Indonesia's NDC.

In the implementation of the Nationally Determined Contributions (NDC), the Ministry of Environment and Forestry, as the National Focal Point (NFP) for the United Nations Framework Convention on Climate Change (UNFCCC), continues efforts to build and strengthen cross-sectoral collaboration by involving all stakeholders. In line with the decisions of the UNFCCC parties at the international level, strengthening climate change adaptation and mitigation actions in Indonesia by involving stakeholders at all levels

will contribute significantly to the implementation of national development that is climate resilient and has low GHG emissions.

Efforts to enhance awareness, knowledge, technology, and procedures for local communities and Indigenous peoples in addressing and responding to climate change by building a comprehensive platform for exchanging experiences and best practices in adaptation and mitigation by strengthening coordination, facilitation, collaboration and synergy and gathering support from all parties. Indonesia's commitment at the global level through real action down to the grassroots level involving all stakeholders. PROKLIM is a strategic program of the Indonesian government with a bottom-up approach synergized with a top-down approach to build climate resilience at the local level.

As stated in the NDC Adaptation Action Plan document, strategic indicators to achieve the NDC Adaptation Action Plan strategy include strengthening local capacity through resilience-based activities and programs to increase local wisdom—stakeholder participation through organizing activities at the regional level. In Indonesia's long-term strategy for a low-carbon and climate-resilient future in 2050 (Indonesia LTS-LCCR 2050), it is explained that PROKLIM implementation will continue to be improved, including the transformation of PROKLIM into a community-based national movement for climate change adaptation and mitigation. The aim is to increase understanding of climate change and its impacts and encourage the implementation of adaptation and mitigation actions at the local level. PROKLIM is encouraged to develop by considering the risks faced by communities related to climate change in line with implementing the 2020-2024 rural development policy strategy, supporting food self-sufficiency and sustainable management of natural resources and the environment in villages by utilizing appropriate innovation and technology.

PROKLIM is one of the strategic steps that need to be taken in implementing Presidential Regulation No. 98 of 2021 regarding the Implementation of Carbon Economic Value (NEK) to achieve nationally set contribution targets and GHG emission control in national development. According to this regulation, mitigation, adaptation, and NEK organizers include businesses and the community. Based on data from SIDIK (Vulnerability Index Data Information System) developed by the Ministry of Environment and Forestry, the number of villages with moderate to high vulnerability levels exceeds 90%. Therefore, it is necessary to formulate strategic steps to reduce the

vulnerability of villages by implementing best practices that can lower the risks and threats of climate change.

According to the provisions concerning PROKLIM outlined in Minister of Environment and Forestry Regulation No. 84 of 2006, regional heads play a crucial role as overseers of PROKLIM at the provincial/district/city level. Following PROKLIM's transformation into a national grassroots climate change control movement in 2015, regional heads have issued various policies/regulations, provided financial support, and established collaboration networks with stakeholders at the regional level to support the implementation of PROKLIM in their respective areas. This serves as tangible evidence of regional heads' commitment to addressing the impacts of climate change and reducing greenhouse gas (GHG) emissions at the grassroots level through the implementation of PROKLIM.

In recognition of the efforts of regional governments, since 2016, the Minister of Environment and Forestry has acknowledged regional governments that have enacted policies/regulations endorsed by regional heads at the provincial/district/city level and have provided resource support and network development cooperation with stakeholders. Furthermore, the involvement of the business sector and various entities in accompanying and supporting communities in carrying out climate change control activities at the grassroots level has witnessed an increase. Initiatives such as mentoring, community service programs, university community service programs, and executing programs/projects in collaboration with various non-governmental organizations continue to expand. Hence, starting from 2021, the Minister of Environment and Forestry has also expressed appreciation for PROKLIM supporters.

PROKLIM is implemented in rural and urban areas to foster a more resilient community in the face of climate change and advocate for a low-carbon lifestyle. Additionally, PROKLIM plays a pivotal role in enhancing the development of environmentally friendly and climate-resilient cities/villages, carefully considering the equilibrium among social, economic, and environmental aspects.

PROKLIM adopts the concept of Community-Based Development rooted in local resources and sustainability. This approach empowers communities to select and reinforce adaptation and mitigation measures essential for bolstering resilience against climate change. Drawing upon data and information from the Vulnerability Index Data Information System (SIDIK) developed by the Ministry of Environment and Forestry, it is

evident that most villages in Indonesia exhibit a medium to very high vulnerability index to the impacts of climate change.

Overall, climate change adaptation and mitigation activities in 2022, spanning 4,218 locations, have proven effective, with an accomplishment rate of 80%. This success is evident in the enhanced capacity of communities achieved through empowering community members in ongoing processes or supporting institutions in the production process. Notably, the principles of equality, irrespective of status and expertise, security, sustainability, and collaboration, harmoniously converge in implementing climate change adaptation and mitigation actions.

Activities related to adaptation efforts are the community's efforts to adjust to unavoidable climate change. Adaptation efforts to the impacts of climate change can be carried out through activities such as:

1. Increasing food resilience.
2. Controlling drought, floods, and landslides.
3. Controlling climate-related diseases.
4. Handling or anticipating sea-level rise, storm surges, seawater intrusion, abrasion, ablation, or erosion due to wind or high waves.
5. Other activities related to efforts to enhance adaptation to climate change.

Meanwhile, climate change mitigation efforts are widely carried out in areas rich in local wisdom, as evidenced by ongoing initiatives in specific regions of Maluku, Papua, Bali, and Java. These mitigation efforts aim to address the root causes of climate change and reduce the increase in greenhouse gas emissions into the atmosphere. Mitigation activities at the grassroots level involve the surroundings of homes and communal initiatives that engage residents in villages experiencing climate change. These efforts include implementing energy conservation practices, effective waste management, tree planting initiatives, promoting eco-friendly transportation, and fire control measures in land and forest areas.

### 3. Institutional Strengthening and Sustainability Support

The Directorate General of Climate Change Control has the Climate Change and Forest Fire Control Center (BPPIKHL) as a Technical Implementation Unit (UPT) to facilitate the enhancement of regional capacity in climate change adaptation and mitigation, forest and land fire prevention, as well as conducting inventories of Greenhouse Gas (GHG) emissions in the region and evaluating and reporting local action plans for GHG reduction.

In implementing PROKLIM, BPPIKHL plays an active role as a verifier by checking PROKLIM proposal data in the field.

In the regions, local governments offer comprehensive support for implementing PROKLIM. This support is evident through the issuance of PROKLIM implementation regulations at the district, city, and provincial levels. Moreover, regional heads have established cross-sectoral task forces to streamline the development and execution of PROKLIM in local areas.

To strengthen ownership of the program and activities, institutional components and sustainability support are crucial for the continuity of PROKLIM. Institutional involvement in the implementation of PROKLIM is at the central and regional government levels (province, district, city) and at the grassroots level to address the impacts of climate change in their respective areas.

For the sustainability of PROKLIM implementation, in 2017, the Ministry of Environment and Forestry (KLHK) created a portal called SPECTRUM. The SPECTRUM tool, based on Android, aims to validate data and calculate GHG emission reductions from climate change mitigation actions in PROKLIM activities based on the Android application. Reporting on climate change mitigation actions is integrated with the National Climate Change Control Registration System (SRN-PPI). SRN-PPI serves as a registration platform for PROKLIM and a repository for managing data and information related to adaptation and mitigation actions and resources for climate change in Indonesia. Thus, integrating data and information related to adaptation and mitigation actions' impacts from climate change can reduce the data-related issues so far.

### 4. Conclusion

The launch of PROKLIM was in 2011. Until 2022, the program has undergone development and received positive responses from various stakeholders. The PROKLIM concept has emphasized sustainability aspects in climate change adaptation and mitigation efforts at the grassroots level since the beginning. The implementation of PROKLIM is categorized as effective, with a success rate reaching 80%. This is evident from community participation at every decision-making stage, from planning to implementation and monitoring activities in climate village locations. Such active involvement enhances the sense of ownership of the ongoing program and activities.

Even though it is considered 80% effective based on SRN-PPI data, PROKLIM managers

in each region must remain proactive and try to change the community's mindset and knowledge regarding climate change adaptation and mitigation actions. PROKLIM activities can run optimally if the community's commitment to preserving and transforming the environment is consistently strong.

The SIDIK, SPECTRUM, and SRN-PPI platforms are expected to facilitate PROKLIM implementers and stakeholders so that community-based climate change adaptation and mitigation actions can be recorded, accounted for, and validated effectively.

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