Social Forestry Can Help Indonesia Meet Its Climate Pledge

A Case Study of Social Forestry Contribution to the Achievement of Indonesia's Climate Target (NDC)

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Key Messages:

• Accelerating the realization of social forestry target may contribute. significantly to achieving NDC target

• Many social forestry permits have measured their carbon stock but fall short of achieving certified emissions reduction.

• Continuous empowerment is key to realizing social forestry positive contribution to NDC achievement.

Individual Highlights:

The Great Potential of Social Forestry for NDC

> *"Acceleration of social forestry in medium-to-high deforestation risk areas holds the potential to contribute 34.6% to the unconditional NDC target of Indonesia."*
>
> Madani and Climate and Society Foundation (2019), "*Social Forestry Contribution to NDC Achievement.*"

One of the Government of Indonesia's national priority programs, social forestry, holds a huge potential to help Indonesia meet its climate pledge in its First Nationally-Determined Contribution or NDC.

The current NDC targets necessitate the country to reduce emissions in the forestry sector by 497 Mton CO2e with its own efforts up to 650 Mton CO2e with international support from the BAU level in 2030.This means that this sector has the onerous task of achieving approximately 60% of Indonesia's unconditional and conditional emission reduction target by 2030.

Much of this target is planned to be met by reducing both planned and unplanned deforestation. To meet the unconditional NDC target, from 2018 to 2030 Indonesia must keep its deforestation not to exceed 3.963 million hectares with only 0.845 million hectares left to meet the conditional target.

Social forestry is projected to play a significant role in reducing emissions to meet the NDC target by reducing deforestation and forest degradation, enhancing forest carbon stock, and reducing emissions from peatland through peatland restoration and development of peatland-adaptive agroforestry, which entails no drainage.

The area reserved by the Minister of Environment and Forestry for social forestry called PIAPS (Indicative Map of Social Forestry Area) holds approximately 6.14 million hectares of natural forests, among which 21.5% or around 1.37 million hectares are classified as having medium-to-high deforestation risk.

Acceleration of social forestry in these medium-to-high deforestation risk areas, coupled with strong empowerment program to help communities better protect their forests thus holds the potential to contribute 34.6% to the unconditional NDC target of Indonesia.

Calculating Contributions of Social Forestry to NDC:
Case Study of Bukit Barisan Forest Management Unit in West Sumatra

Realizing the Dream of "Forests for People"

Out of the 13.8 million hectares of PIAPS (Indicative Social Forestry Area) set by the government, 3.436 million hectares have actually been granted to communities comprising 6,112 social forestry permits. This constitutes 27% of the national target, which is 12.7 million hectares. The Minister of Environment and Forestry has set a target of granting 4 million hectares to communities in the period of 2020-2024.

Madani and Climate and Society Foundation (2019), "Social Forestry Contribution to NDC Achievement."

A recent research conducted by Yayasan Madani Berkelanjutan in collaboration with Climate and Society Foundation found that just three social forestry units in Forest Management Unit (KPH) of Bukit Barisan, West Sumatera, contributes 0.025% to the national emission reduction target of reduction of deforestation by reducing 235.254 tCO2/year, 0.05% to the NDC target of forest degradation by reducing 483.941 tCO2/year and 0.024% of the NDC target of reforestation by reducing 226.246 tCO2/year.

The study was conducted in three social forestry units in KPH Bukit Barisan in West Sumatera, namely Forest Farmer Group of Putra Andam Dewi – Sungai Nyalo Mudiak Air in District of Pesisir Selatan, Village Forest of Sungai Buluh in District of Padang Pariaman, and Village Forest of Gamaran in District of Padang Pariaman.

Before receiving social forestry permits, communities in the three areas depended on illegal logging for their livelihood. After receiving social forestry permits, they gradually shifted to procuring non-timber forest products from their forests, such as rattan (in the case of Putra Andam Dewi) and ecotourism (in the case of Sungai Buluh and Gamaran).

The rate of illegal logging in the three social forestry units declined by 83.68% after receiving social forestry permits, equivalent to reduction of forest degradation by 3,866 hectares (0.05% of the NDC target of degradation) and reduction of deforestation by 338.3 hectares (0.025% of the NDC target of deforestation). Meanwhile, the potential for revegetation of low carbon stock areas in the three social forestry locations through development of agroforestry is 444.9 hectares or 0.024% from the NDC target of land and forest rehabilitation.

Contributions of the three social forestry units under this study may seem small, but with the current number of permits (6,112 units) and the planned acceleration in the 5 years of President Joko Widodo's second term, the potential contribution of social forestry to NDC is significant.

The key to realizing this positive contribution is proactive facilitation and support from the Forest Management Unit (KPH) and other stakeholders, including the national government and non-governmental organizations (NGOs) in the development of alternative livelihood for communities and forest or peatland management.

"Patience is Bitter, but Its Fruit is Sweet"
Community REDD+ Project in Bujang Raba Landscape

"Bukit Panjang Rantau Bayur" or Bujang Raba landscape spreads across four sub-districts in the District of Bungo, Jambi, Sumatera. The landscape houses the upstream of three major watersheds in the area in the ecosystem of Batanghari river.

In 1993, natural forest cover in the landscape was 93,307 hectares. In 2013, natural forest cover dropped to 80,970 hectares with the rate of deforestation of 617 hectares or 0.66% per year.

KKI-Warsi, a community-based conservation NGO in Indonesia, developed a community REDD+ project in five social forestry units (village forest) in Bujang Raba

landscape: Sungai Telang, Sangi Letung, Lubuk Beringin, Sungai Mengkuang, and Senamat Ulu. With a reference area of 42,423 hectares, the rate of deforestation from 1993 to 2013 was 1.6% per year. Communities managed to reduce deforestation to zero in 2018.

Together with the communities, they also initiated rehabilitation of degraded land by planting high-economic value commodities such as durian, cacao, rubber, kapulaga, gardamunggu, and others. They also developed ecotourism and renewable energy. To protect the forests, they conduct regular patrol around the area.

The community REDD+ project yields annual net carbon benefit of 37,377 tCO2e with a total of 373,774 tCO2e (2014-2023). Plan-Vivo certified, this project has successfully sold 6,009 tCO2e to TUI Travels. The reaped benefits are distributed to the five Village Forests through a benefit-sharing system agreed together by the communities. The proceeds are used by communities for education, health, capacity building, economic training, and further securing their forests.

Materials: Courtesy of KKI-Warsi
An excerpt from Untung Widyanto, *"Menjaga Hutan, Merawat Iklim: Praktik Terbaik Perhutanan Sosial dalam Menjaga Iklim Bumi"* Madani, 2019

Social Forestry Best Practices for Climate:

Forests Preserved, Communities Prosper, Climate Safe

Community-based forest management as an alternative paradigm to the centralistic, state-based and timber-based forest management has been around for at least 4 decades in Indonesia. However, even until now, communities still control a mere one ninth of forest area controlled by large corporations.

During President Joko Widodo's administration, social forestry becomes one of the national priority programs to alleviate poverty. The government reserved 13.8 million hectares of forest area to be granted for communities with a target to realize 12.7 million hectares of social forestry permits with the realization of 3.436 million hectares by November 2019. In Jokowi's second term (2019-2024), the government set a target of granting 4 million hectares of social forestry permits for communities.

Finding the Red Thread

Evidence on how indigenous people and local communities protect and sustainably manage forests and thus provide water, biodiversity, and other badly needed ecosystem services are abundant, but their role in achieving the national climate target is largely underdocumented. In a recent study conducted by Untung Widyanto, a senior journalist previously working with *Tempo,* Yayasan Madani Berkelanjutan looked into several social forestry units, including village forests, customary forests, and community forests to learn about how communities implemented forest and land management, institutional management, and business management and their contribution to addressing climate change.

Village forests under study are Padang Tikar Landscape (West Kalimantan), Bujang Raba Landscape (Jambi), and Jorong Simancuang (West Sumatra).

The customary forest under study is Marena (South Sulawesi) and community forestry under study are Kalibiru and Tani Manunggal Bleberan (Yogyakarta).

Community forestry in Kalibiru has a carbon stock of 9,698 tonnes, Bleberan has 11,031.35 tonnes, village forest of Jorong Simancuang has 65,734.04 Mg C, Padang Tikar landcape has 8.7 million tonnes of carbon from mangrove and 2.2 million tonnes from peatland not counting from natural forests, and Bujang Raba landscape has 1.5 million tonnes of carbon.

"Almost all social forestry units under study have measured their carbon stock, but most of them are still a long way from getting certified emission reductions."

The size of forests managed by community among social forestry units under study varies greatly. Community forestry in Kalibiru is only 29 hectares and in Bleberan 40 hectares. These pale in comparison with community-managed forests in Bujang Raba Landscape, which forest cover amounts to 5,336 hectares in 2015 or Padang Tikar Landscape, which area amounts to 76,370 hectares.

The main markers of "successful" social forestry are whether there is an increase in the community's welfare and whether communities manage to preserve and/or restore forest/land cver. Emissions reduction or carbon stock preservation/enhancement are not yet in the standard package but rather a logical consequence of conservation and/or sustainable management of forests practiced by the communities.

The study shows that social forestry's role in reducing emissions from deforestation, forest degradation, conserving forests and enhancing forest carbon stock relates to whether communities are enabled to reap benefits from the forests in at least three ways: provision of direct income that substitute previously forest-harming income (for example from illegal logging), reliable ecosystem services to support their main livelihood (mostly agriculture), and prevention of natural disasters that disrupt their livelihood. The majority of forests granted to communities is protection forests that are off-limits to log. Therefore, agroforestry, non-timber forest products and ecotourism become relied upon as alternative sources of income. The biggest challenge in this regard is off-taker and market in the case of agroforestry and non-timber forest products and large competitors in the case of ecotourism.

The social forestry units under study managed to prove that they can preserve and even improve forest and land cover, manage peatland sustainably, and prevent forest fires. Community forestry in Bleberan has planted more than 44 thousand of teak trees alongside agroforestry. Village forests in Padang Tikar landscape saw an increase of forest cover by a significant 4,918 hectares through replanting and land rehabilitation. Communities in Bujang Raba landscape managed to reduce deforestation to zero. Jorong Simancuang managed to eradicate illegal logging and Marena customary forest is committed to conserving their sacred forests and manage their forests sustainably with their customary law.

Continuous Empowerment is Key

With all these achievements, all social forestry units under study have at least measured their carbon stock but not their emissions reduction. Only Bujang Raba and Padang Tikar landscapes managed to cash in on account of being able to achieve certified emission reductions using voluntary schemes such as Plan Vivo. Others are still a long way from that, mostly due to the cumbersome and expensive process of designing a REDD+ project and getting certified, which while NGOs' resources are very limited. The role of national government, regional government, university, and the private sector are therefore much more expected than before to help strengthen communities that have obtained social forestry permits so that they are not only able to increase their welfare and preserve forests and the climate, but also be rewarded for it. [*]

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Yayasan Madani Berkelanjutan is a non-profit organization aimed at bridging relations between key stakeholders to find innovative solutions in forest and land governance sector.