

Admitting the problem of forests

New evidence has revealed that Indonesia is losing its forests at a rate far greater than previously thought. How should we respond?

Indonesia's forests are some of the world's greatest storehouses of species and carbon and are some of the nation's most valuable resources in terms of water storage, climate regulation and livelihoods for millions of forest communities.

The forests also contain extraordinarily valuable timber, occupy highly productive agricultural land and have vast mineral resources. Indonesia's development strategies to date have largely been built around exploiting these natural resources and this creates tension between economic development and the protection of forests.

The Indonesian government has long recognized the importance of forests and has adopted policies to help protect them.

There are millions of hectares in legally protected national parks and nature reserves, protection forests zoned to safeguard watersheds, and production forests that allow selective logging but restrict conversion.

Indonesia has been a world leader in the development of a national timber legality assurance system to help combat illegal logging, and is now dramatically expanding institutional capacity to manage national forests locally.

More recently, the government has committed to measurably reducing greenhouse gas emissions, largely through the improved protection of forests, and has initiated a wide range of supporting policies.

Despite these efforts, as Indonesia's natural resource-based development continues to speed up, the forests continue to be lost. A major new study published in the journal *Nature Climate Change* indicates that more than 6 million hectares of primary forest were lost from 2000-2012 and the rate of loss nearly doubled during that period to around 840,000 hectares in 2012.

The University of Maryland study, titled *Primary Forest Cover Loss in Indonesia Over 2000-2012*, was led by Indonesian researcher Belinda Arunarwati Margono and was published in one of the world's leading scientific journals. The study has mapped primary forests that retain their natural composition and structure and have never been cleared and replanted.

Importantly, this definition includes both "primary intact forests" that have never been disturbed and "primary degraded forests" that have been previously logged.

These primary "degraded" forests are still tremendously valuable for biodiversity, utilization by local residents, the provision of watershed services and carbon storage. They can also regenerate rapidly so managing them well is critically important.

The dynamics of forest loss on the major islands were analyzed separately, as were different ecosystem types and different administrative areas. The study revealed that around 28 percent of primary forest losses were in areas where conversion was either prohibited or restricted.

About 31 percent of primary forest losses happened within areas zoned for non-forest uses, highlighting the importance of detailed land use planning for palm oil development and other land uses.

As lowland forest areas decline, the conversion of wetlands has been increasing, with dire consequences for greenhouse gas emissions. Given that 98 percent of primary forest losses have happened as a second step following road building and logging, Papua's low rate of primary forest losses may be about to change, following a period of expansive road building and logging.

The moratorium on new concessions for the conversion of peat and natural forest, a central component of the national Reducing Emissions from Deforestation and Forest Degradation (REDD+) strategy, also warrants a review based on results of this study.

The term "natural forests" was used in the original plan for the moratorium, and this aligns relatively well with the definition of "primary forest" used in the study. This includes both intact and degraded forests that have natural composition and structure.

In implementation of the moratorium, however, the term was revised to focus only on undisturbed forests, which was analogous to "primary intact forests". What is at risk by choosing not to prioritize the protection of "primary degraded forests"?

With this study, it is now relatively easy to independently analyze this type of question, which could perhaps stimulate a discussion on other ways to enable the protection of these valuable forests.

The study provides valuable information for government decision-makers, local communities, and many others with an interest in Indonesia's forests. We should all see this as a major opportunity to improve the management of the nation's forests.

Unfortunately, the study is not in line with the government's own deforestation data, raising important questions about how the government will respond. The Forestry Ministry reports that annual deforestation was around 1.1 million hectares between 2000 and 2005 and that the rate declined to about 400,000 hectares a year between 2009 and 2011.

While the methods and definitions vary between the recent study and the Forestry Ministry, the fact that they show the exact opposite trend in forest losses indicates a problem that needs to be addressed.

Advances in satellite imagery mean that Indonesia's forests can now be observed by almost anyone with access to the Internet. Brazil, once the country with the highest rate of forest loss in the world, was in a similar situation of being confronted with evidence of high deforestation rates.

Beginning in the 1980s, the Brazilian government invested in a world-class forest monitoring system for its Amazon forest region, and its annual deforestation reporting is widely seen as an indicative parameter of the government's commitment to sustainability, just as gross domestic product (GDP) is seen as a reflection of economic growth. From 2005-2012 deforestation declined by nearly 80 percent in Brazil's Amazon region, at the same time as agricultural commodity production in the region increased – a model that Indonesia could replicate.

The first step in solving any problem is admitting that there is one. How quickly can Indonesia make the switch from resisting new information to admitting the need for improvements to harness the right information to support effective land use decision making and management?

It is important for the government to start by being more transparent about its data and methods and to work openly and quickly to improve the robustness of the methodology to measure forest cover loss. Then it will be possible to accurately assess conservation priorities and opportunities to improve the management of forests.

Luckily, large areas of primary forests still remain and continue to be important for people and nature, but Indonesia is facing increasing competition for land for food, fiber, forests, minerals, and energy.

Indonesia needs to develop methods to appropriately value nature alongside economic development opportunities, and then prioritize areas for conservation and development.

Providing good analysis to support stakeholders in this process is more important than ever, and this requires accurate data, including forest cover maps.

The results of the study, together with the approach of the dry season and the threat of a drought-causing El Niño, are timely reminders of the threat facing Indonesia's forests.

The failure to stem the growing rate of forest loss creates the risk of further forest fire crises and other environmentally driven disasters, presenting a significant challenge for the country's new president.

His willingness to admit the problem created by inadequate information and create a culture among top government officials encouraging the integration of the best science and objective analysis into decision-making is a crucial first step.

It may well determine whether Indonesia is able to protect its increasingly threatened forests and the immense benefits they bring to the economy and to millions of Indonesians.

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