

Deforestation debates: A little progress is in progress

A recent global analysis of forest loss published in Science magazine found that deforestation in Indonesia had doubled between the 2000-2003 period and the 2011-2012 period. This study contradicted official Indonesian data released by the Forestry Ministry, which said that the rate of deforestation had been cut in half during the same period. An article published in The Jakarta Post on Nov. 19, 2013 entitled "Google maps should be used to challenge official" accused the Forestry Ministry of not being transparent about its methods used to calculate deforestation. This article failed to report on the progress that the Forestry Ministry has achieved in making information on deforestation available to the public and sharing its methodology.

For the past three years, deforestation has received considerable national press coverage in Indonesia. According to Forestry Ministry data, the year 2013 began with encouraging news about the deforestation rate in Indonesia, which declined from over 1 million hectares per year between 2000 and 2003 to around 0.45 million hectares between 2011 and 2012. In early November, a paper published by Hansen et al. (2013) in Science included a global deforestation map. The paper stated that deforestation in Indonesia had doubled from around 1 million hectares per year between 2000 and 2003 to around 2 million hectares per year between 2011 and 2012. The methodology applied by the Forestry Ministry is available to the public. One can find it in most publications or statistic books published by the ministry. It conducts a deforestation assessment every three years in which the annual deforestation data is the average of the three-year changes. Deforestation maps are then released by the ministry based on the interpretation of medium spatial resolution (30-m pixel) Landsat 5 and 7 imagery.

The deforestation maps are also published online and updated from time to time on webgis.dephut.go.id. When this article was being written, however, the website was inaccessible. But we previously accessed this website on numerous occasions. The Forestry Ministry can also release raw data on land cover changes upon request. This shows that the government has taken some very important steps to achieve greater transparency. Therefore, one should not dismiss these positive efforts initiated by the ministry. Regarding the difference between the rate of deforestation presented by Hansen et al. (2013) and the official data from the Forestry Ministry, it occurred mainly because the two studies adopted different definitions of forest and forest change. A quick visual comparison between the maps produced by the Forestry Ministry and Hansen et al. (2013) show a significant underestimation of forest cover extent in the Forestry Ministry's map. Many forest covers included in the map of Hansen et al. (2013) are not captured as forests in the Forestry Ministry's map. Additionally, most areas where forest change (both gain and loss) occur are in areas classified as non-forests, therefore, they are not under the authority of the Forestry Ministry.

Non-forest areas, known as areas for other use (APL) are currently under the authority of local governments and the Land Agency. These are some preliminary observations that can be enhanced when Hansen et al. develop their raw data available for further detailed spatial analysis. Certainly, the accuracy and robustness of the methodology adopted by the Forestry Ministry can be improved. It could provide an enormous service to Indonesia by making its deforestation monitoring annual, by providing data for all forest areas and making digital deforestation maps available online in a timely manner. We disagree with suggestion that Indonesia should rely on Google for its forest monitoring (the Hansen et al. data is available through Google Maps). Indonesia should not depend on a private sector tool to map its forest resources and customary land rights. These tasks are too important to be "outsourced" to a company. Instead, the Forestry Ministry should improve its forest monitoring as we have recommended. We should, however, recognize the important role of independent assessments to quality-check Indonesia's official data. Robust and transparent official deforestation data is a powerful tool for good forest management.

In Brazil, where deforestation in the Amazon region has declined 70 percent, deforestation data is made available to the public every year, a strong example of good governance of vast forest frontiers. Indonesia is on track to robust and transparent deforestation monitoring. Let's hope that it continues to progress toward the goal of reduced deforestation. The writers work for the Earth Innovation Institute, developed by, from and for their own. The institution must be able to facilitate the development of community-based economic activities from production, processing and marketing, as well as access to the banking sector. It is clear that the shift from a powerless to an empowered community is a social and economic process that cannot be achieved instantly within a limited time and rigid resource allocation. Conservation at the grassroots level can only materialize through a social and economic transformation movement.

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