

## Reducing Poverty While Cutting Carbon Emissions

Harry Surjadi

*Harry Surjadi, founder and executive director of the Society of Indonesian Environmental Journalists, has reported on environmental issues for two decades. A graduate of Bogor Agricultural University, he has written for magazines and newspapers, and he now maintains an environment blog on the Internet. He was a Knight International Journalism Fellow and has given workshops to journalists and nongovernmental organizations in Indonesia.*

*In Indonesia, the impacts of climate change will be most keenly felt by the poor, as extreme weather upsets agriculture and drives up food prices. Staving off poverty is a critical component of climate change policies, Surjadi writes.*



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Courtesy of Harry Surjadi

How many Indonesians have ever read or heard about the issue of global warming and climate change? Studies have shown that climate change awareness is increasing, but this is largely among the educated.

According to an ACNielsen Omnibus survey in six Indonesian cities in February 2007, 70 percent of the 1,700 people surveyed said they had not read or heard anything about the issue of global warming. Only 28 percent said they had. The same study found that 50 percent of people surveyed attributed rapid global warming to human activities like driving cars and other uses of fossil fuels. Only 24 percent said the causes are natural changes in the climate, while 25 percent said both nature and human activity were factors. About 76 percent considered climate change “fairly serious” or “very serious.”

One year later, in March 2008, people surveyed who were aware of climate change had increased 3 percent, and significantly more of them considered climate change very serious. Mass media successfully educated these people that climate change is a serious threat to Indonesia.

But have 43 million farmers, fishers, and local people who depend on forests read or heard about climate change? Have many of the 32.5 million Indonesians under the poverty line ever read or heard about global warming and climate change? Probably not.

If they had, and were asked, “What are the most serious threats climate change presents to Indonesia?” their answers would be scarcity of basic necessities. Their greatest concern is greater poverty and the lack of food and water, whether this comes from climate change or other causes.

Studies have shown global warming will likely increase the frequency and intensity of drought and floods in many areas. Three major El Niños, in 1973, 1983, and 1997, caused severe drought in Indonesia. Hundreds of rice paddy fields have failed harvests due to drought. Hundreds of thousands of people living in more than 50



Trees smolder after a clearing fire in a Sumatran forest in Indonesia. Such clearings release massive amounts of carbon dioxide into the atmosphere, a major contributor to global warming.

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land clearing, transportation, and power plants. The forestry sector contributes about 850 million tons CO<sub>2</sub>e (carbon dioxide equivalent) per year. The deforestation rate is around 1 million hectares per year, which emitted 562 million tons CO<sub>2</sub>e. Degraded forest is responsible for 211 million tons CO<sub>2</sub>e per year. And forest fires are responsible for 77 million tons CO<sub>2</sub>e.

According to the McKinsey study, Indonesia could potentially reduce emissions 64 percent, or as much as 2.3 gigatons of CO<sub>2</sub>, by 2030 through the adoption of 150 different programs focused on forestry, peat land, and agriculture sectors.

It is clear that developed countries can help Indonesia to mitigate climate change. The CCNC, based on the McKinsey study, recommended bilateral cooperation

villages across Central Java Regency now face a shortage of clean water as an ongoing drought worsens.

Extreme weather affects agriculture and can raise prices for staple foods, such as rice, important to poor households. Indonesians who earn less than \$2 a day will suffer first, and the number of poor people will increase. Poverty is Indonesia's greatest concern, and climate change will increase the number of poor people and worsen their poverty.

Meanwhile, Indonesia will continue to emit carbon dioxide (CO<sub>2</sub>). In 2005 Indonesia was already the world's third-largest CO<sub>2</sub> emitter, after the United States and China, with emissions around 2.2 gigatons, or billion tons, CO<sub>2</sub> per annum. A study conducted by McKinsey and Company, a consultant company for the Indonesian government's Climate Change National Council (CCNC), predicted that Indonesia's greenhouse gas emissions would increase by 2 percent annually.

According to CCNC Secretary General Agus Purnomo, in 2020 emissions were expected to jump to 2.8 gigatons CO<sub>2</sub> and then to 3.6 gigatons by 2030, if Indonesia takes no action. The main sources of emissions — responsible for 80 percent of the total projected 2030 emissions — are deforestation and peat

with developed countries on programs to halt or reduce deforestation and encourage reforestation. The study estimated the cost to reduce emissions from the forestry sector is about 7 euros (approximately \$10 U.S.) for every one ton of CO<sub>2</sub> equivalent.

To implement programs to reduce emissions about 1.1 billion tons of CO<sub>2</sub> equivalent per year, Indonesia would need \$10.8 billion of funding.

But the government must take responsibility

and move more quickly. "It takes five years [for the government] to change. In five years we need help from outside world. The outside world should show the money. Money is the easiest policy tool to get real and fast results," said Purnomo in a recent interview.

The developed countries should make sure every dollar or euro they invest addresses not only climate change mitigation but also safeguards Indonesians against poverty. Reducing poverty is a main goal of all emissions reduction programs.

"At the end of the day," says Purnomo, "the government of Indonesia can only create an enabling environment." ■

*If [the poor] were asked, "What are the most serious threats climate change presents to Indonesia?" their answers would be scarcity of basic necessities, water and food.*

*The opinions expressed in this article do not necessarily reflect the views or policies of the U.S. government.*