

Working together for Amazonia

This month, President Jair Bolsonaro took office in Brazil. He must now lead a country that is undergoing its worst recession and political divisions in a generation—a daunting time to take up the reins. Unfortunately, his immediate solutions are a threat to the Amazon forest—a resource that most Brazilians want to protect. For this sentiment to continue to flourish, science and its role in policy-making must be strengthened, not reduced. Brazil must keep environmental conservation and sustainability as priorities if it wants solutions that benefit all of its people, as well as the greater Earth ecosystem, for future generations.

Until 5 years ago, science was booming in Brazil. From 2003 to 2014, many new universities and national labs were created, and Brazil sent about 80,000 students abroad for training. With a focus on conservation, climate change reduction, and sustainable economic development, the country reduced Amazon deforestation from 27,700 to 4,500 km² during this time. As the world's largest and most diverse tropical rainforest, the Amazon plays a major role in regulating climate change. Brazil's deforestation success made the nation a global leader in climate change mitigation.

After 2015, however, political and economic crises arose. Severe budget cuts were made

in science agencies. Since then, many labs have been operating with very little money, and some professors have used their own salaries to support labs and graduate students. Important federal institutions, such as the National Institute for Space Research and the National Institute of Amazonian Research, are now trying to run on 30 to 40% of their 2015 budget. The deep cuts to science have weakened the inclusion of science in public policies and services that preserve the Amazon. Over the past 4 years, deforestation has grown, reaching 8,000 km² last year.

Rather than addressing Brazil's crises with renewed commitment to science and sustainable solutions, the Bolsonaro government is favoring agribusiness and mining interests that intensify these activities in Amazonia. Already, the new government has transferred adminis-

tration of indigenous lands from the Ministry of Justice to the Ministry of Agriculture, putting protected areas and the hundreds of thousands of indigenous people of Amazonia in danger. About 20% of the Brazilian Amazonia is already deforested. The new agenda could undermine Brazil's "Forest Code," which requires landholders to maintain a percentage (80% in the Amazon biome) of their land under forest cover. The government is also working on a system that puts nongovernmental organizations (NGOs) under close government "monitoring." Many NGOs play an important role in

helping the government to preserve Amazonia through efforts such as fire detection and control in deforested areas, defending human rights, and the development of sustainable socioeconomic strategies for public policies.

In addition, the climate section was eliminated from both the Ministry of the Environment and the Ministry of Foreign Affairs (see the News story on page 330). Brazil is now threatening to leave the United Nations Paris Agreement, rather than to continue its global leadership role in addressing climate change. Brazil's ambitious nationally determined contribution to the Paris Agreement aims at reducing greenhouse gas emissions by 43% by 2030 based on

2005 emissions. Much of these emission reductions depend on ending illegal deforestation and reforesting 12 million hectares. These intentions are now in conflict with the desire of agribusiness to expand pasture and intensive agriculture in the Amazon rainforest and the vast Cerrado savannah.

Destroying the Amazon is not the answer to Brazil's problems. The rainforest is a Brazilian treasure that must be well maintained for this and future generations. Brazilian scientists are poised to advise the new government on ways to preserve the Amazonian forest and Cerrado region while increasing food production and growing the economy. Let's work together to devise strategies for Amazonian development that also protect its rich biodiversity and indigenous peoples.

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Science

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