

A monthly report  
 on development and  
 the environment in  
 Latin America

## Taking a key service provider, nature, into account

Lima, Peru

If the natural environment in Peru's Amazonian region of San Martín were valued in dollars and cents, it would rank as the region's eighth-largest economic sector—just behind the hotel and restaurant industry and fuel production, says a study conducted here recently.

That's why, from a development perspective, it seems all the more counterproductive that the ecosystem deemed most valuable, the humid montane forest, turns out to be the San Martín region's most threatened.

Thanks to the study, San Martín has joined a growing list of Latin American national and local governments quantifying the economic worth of ecosystem services—for instance, climate regulation provided by forests and fresh

water supply and filtering lent by watersheds. Such initiatives go beyond the usual practice of only taking into account extractable natural-resource materials such as timber and minerals in calculating gross domestic product (GDP).

"GDP is a good indicator of growth, but a bad indicator of development, says Juan Pablo Castañeda, an environmental economist with the World Bank's Wealth Accounting and the Valuation of Ecosystem Services program (Waves). "It takes into account some natural resources, but doesn't take into account regulating services that come from ecosystems."

Adding those services to conventional accounting will help improve decision-making

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## As Games near, outdoor water venues still a worry

Rio de Janeiro, Brazil

As Rio de Janeiro has prepared for the 2016 Summer Olympics, slated for Aug. 5-21, it has had to contend with a variety of environmental concerns, the most persistent involving health impacts from water pollution.

Scientists point to elevated fecal coliform concentrations in Rodrigo de Freitas Lagoon, a man-made lake where Olympic rowing, kayaking and canoeing will occur. They also cite the potential for noxious gas emissions from waste in small, shallow lagoons in an area of town where athletes will be housed and most events will be held. Above all, they spotlight Guanabara Bay, the venue for Olympic sailing. There, critics say, sailors could face floating debris and potentially hazardous exposure to raw sewage.

"Athletes in the sailing events face health risks, from skin rashes and conjunctivitis to gastroenteritis and hepatitis," says biologist Mario Moscatelli, member of a Rio-based nonprofit working to safeguard coastal ecosystems, "especially if rains before the race increase sewage flow into the bay and if, at the time of the race, the tide is low and little Atlantic Ocean water enters the bay to dilute sewage concentrations."

Not all environment-related controversies that have emerged in the run-up to the Summer Games have involved water bodies. Some ath-

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Club rowers practice in Rodrigo de Freitas Lagoon (Renata Mello/Tyba)

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## Bolivia to hunt for oil and gas in protected areas

**B**olivia is seeking investments for an aggressive oil and gas exploration program—including in virtually all areas that have been earmarked by the national government for environmental protection.

The Economic and Social Development Plan 2016-2020, issued by Bolivian President Evo Morales in March following its approval by the Legislative Assembly, says the country will “initiate hydrocarbon exploration in protected areas employing technology that minimizes environment impact.”

The 216-page document, which sets national development goals including the eradication of extreme poverty, refers to protected areas as “ecosystems of unique characteristics,” but also as “important reservoirs of non-renewable natural resources.”

Bolivia created its first national park in 1939, but it wasn't until 1992 that the country's National System of Protected Areas (SNAP) was established. The land area SNAP encompasses today includes 22 national parks covering 17 million hectares, or 15.5% of the country's territory, the government says.

At the urging of Morales, Bolivia's 2009 constitution refers to the country's protected areas as part of the country's “natural and cultural patrimony.”

### Presidential decree

In May 2015 Morales issued a decree, since endorsed by the Legislative Assembly, authorizing oil and gas exploration and extraction in all protected areas. The measure does not apply to sanctuaries and monuments maintained by regional governments, known as departments, or to wetlands of international importance recognized under the Ramsar Convention.

Under the decree, oil and gas companies must earmark 1% of the project investment quantified in their environmental-impact statement for the “strengthening of the affected protected area.” The companies also are required to “prioritize technology that minimizes the disturbance of biodiversity in areas where there are species that are endemic or in danger of extinction.”

The principal rationale for opening protected areas to drilling, the 2015 decree says, is to reduce “the extreme poverty in communities that inhabit protected areas.” Some 200,000 people are estimated to live in national parks, according to SNAP.

“It is our right to conduct exploration in protected areas, and we are going to do it with great force,” Morales said in the eastern city of Santa Cruz last year at a conference on oil and gas development. He dismissed the decree's critics, mainly indigenous and environmental

groups, and made a point of praising some indigenous organizations that had endorsed the decree. “It's a wise, responsible decision that is not subject to the NGOs or the foundations, much less some foreign people,” he said.

Vice President Álvaro García Linera took a harder line, declaring: “Any NGO or foundation that jeopardizes the exploration of natural resources will be leaving Bolivia. We don't need foreign institutions... to jeopardize us.”

Carlos Arze, a researcher with the Center of Labor and Agrarian Development Studies (Cedla), a Bolivian think tank that is among the organizations García Linera has criticized, attributes the government's recently issued 2016-20 development plan to economic pressures caused by a drop-off in hydrocarbon income.

“While Bolivia never has had important oil production, which doesn't even cover domestic needs, it has been an important producer of natural gas, which it exports to Brazil and Argentina,” Arze says. “Lately, the decline in [Bolivian] reserves of natural gas makes it hard for the government to sign long-term contracts with those two countries.”

### Gas-supply squeeze

Arze's analysis appears to square with Argentina's announcement this year that it would import natural gas from Chile because Bolivia cannot meet its demand. (The Bolivian government challenged the assertion, saying it is in a position to sell Argentina more gas.)

According to government figures, Bolivia last year produced 60 million cubic meters of natural gas daily. Under its new development plan, it aims to extract 73 million cubic meters daily by 2020.

The U.S. Energy Information Administration (EIA) estimates that the country's gas reserves fell from 26.5 trillion cubic feet (tcf) in 2011 to 9.9 tcf last year due to depletion of existing reserves and a lack of investment in new exploration. In its new development blueprint, the government sets a goal of boosting reserves to 17.45 tcf by 2020.

Oil reserves, meanwhile, fell from 465 million barrels in 2011 to 210 million last year, says the trade publication Oil and Gas Journal, and the government hopes its exploration drive will boost them to 411 million barrels by 2020.

“Today, Evo Morales does not fear losing his environmental allies, since he doesn't need them and they complicate his objective—to guarantee natural gas exports to Brazil and Argentina, which is fundamental to sustain Bolivia's economy,” says Francesco Zaratti, an Italian-born energy analyst in Bolivia.

—Daniel Gutman

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## Documents & Resources

Bolivian decree (No. 2366) permitting hydrocarbon projects in protected areas (in Spanish): [www.cedib.org/wp-content/uploads/2015/05/DECRETO-SUPREMO-N%C2%BA-2366.pdf](http://www.cedib.org/wp-content/uploads/2015/05/DECRETO-SUPREMO-N%C2%BA-2366.pdf)