

Climate Change: Who is best prepared?

PERU

Milagros Salazar in Lima

Clean energy no longer optional

Abandoning fossil fuels is a long-term task, but unavoidable.

The Peruvian government's environmental policies are teetering on suicidal. The number of cars grows exponentially every year, mining and hydrocarbon companies receive concessions that include key water sources and forests are being destroyed at an alarming rate.

"The world can't take any more abuse. We're going to have a big bill to pay," said Pedro Gamio, Peru's former deputy energy minister.

Gamio, the current regional director of GVEP International for Latin America and the Caribbean, and many others from scientists to environmentalists to business executives, say Peru should take advantage of its renewable energy potential to do its part to slow the environmental crisis, by using solar, wind and hydropower.

While some brush off the view as apocalyptic, Peruvian economist Óscar Ugarteche says that the financial crisis that began in the United States two years ago has brought to light unsustainable models — both economic and environmental.

"While we don't replace the burning of fossil fuels with clean energy on a massive scale, we cannot speak with cer-

tainty about the recovery of the global economy," he wrote in the article "The Epidemic Started in the United States," which was published by Oxfam's annual report on Poverty, Inequality and Development 2008-2009.

Gamio says oil reserves will be tapped in 45 years, sending its price soaring. Replacing this contaminating and limited fuel is compulsory to ensure energy supply.

President Alan García, who has made an aggressive push to open up the country's Amazon to oil and gas exploration and drilling, told the United Nations General Assembly this September that unconventional energy sources will account for 40 percent of Peru's supply by 2021, but is this possible?

Slow going

Nearly three-quarters of Peru's energy supply — for electricity, transportation and industrial use — comes from fossil fuels: 44 percent from oil and 29 percent of natural gas.

According to Peruvian government, 23 percent of the energy comes from "renewable" sources, if hydropower is included, though this source has environmental and social costs.

Five percent of Peru's electricity demand of 4,400 megawatts a year must be covered by renewable resources such as wind, solar and biomass power, according to Peruvian legislation.

Jaime Gianella, head of Monder, a technology company focused on the agriculture industry and biomass, says Peru has a great potential to use biomass to produce even more power. Between 2000 and 2007, sugar and cotton waste produced 70,000 terajoules, each one equal to 278 megawatt hours.

He says that waste could supply an 859 megawatt plant for 7,000 hours a year, almost equal to the Mantaro power plant in Peru's central Andes, the main supplier of the capital, Lima, which has a population of 9 million people.

"This is about using what's thrown away in the fields and not deforesting. That would be abhorrent," said Gianella.

The largest cost for renewable energy is its installation, and profit potential is one of the main concerns when switching over.

Specialist Javier Coello says renewable energy maintenance costs, large- or small-scale, are lower than fossil-fuel based methods because the use of the power supply — the sun, wind, or geothermal — are free.

Controversial power

Peru's government is also considering biofuels as an alternative to oil, though some experts warn that monoculture, particularly of palm to produce ethanol, will harm biodiversity



More than 3,000 hectares of primary Amazon forest has been cut down in the San Martín region for biofuels.

in the Amazon Basin and promote deforestation in the name of clean energy.

A symbolic case is in Barranquita, in the northeastern San Martín department, where the powerful Romero group has deforested 3,000 hectares of primary forest for palm.

Since 2007, the government established the mandatory use of biofuels in small proportions: 2% biodiesel mixed with diesel by 2009 and 5% by 2011, and 7.8% ethanol mixed with gasoline by 2010. In other words, these source of energy “do not compete with fossil fuels, but rather are a kind of additives,” adds Coello.

Director of the Peruvian Society of Environmental Law, Manuel Pulgar-Vidal, proposes an environmental study of the benefits of biofuels to clearly determine their economic, energy, environmental and social implications.

Similarly, the construction of dams in the Amazon is no longer considered a push for green energy, since the flooding of forests generates quantities of methane 20 times more contaminating than carbon dioxide emissions.

For engineer Alfredo Novoa, director of the nongovernmen-

tal organization ProNaturaleza, the social and environmental costs of dams in Peru's Amazon are too high, and the potential of 22,000 megawatts which can be produced in the Andes and the coast by wind power is sufficient.

Many small-scale renewable energy products could significantly improve supplies for small communities, according to research by Soluciones Prácticas-ITDG, a nonprofit research organization that focuses on rural, low-income communities.

Fernando Acosta, who heads the organization's biofuel area, says 52 small-scale hydroplants that generate between 10 and 30 kilowatts an hour have significantly helped communities in the northern highlands of Cajamarca.

There is no one way to produce clean energy, and efficiency and costs need to be weighed, as well as social, economic and environmental factors.

“You have to awaken in the citizenry and authorities an environmental conscience,” said Gamio. “Peru has to maintain a coherent policy to adapt and mitigate climate change. There must be a correlation with what the president is offering the world and what his officials are doing inside the country.” □

LATIN AMERICA
Cecilia Remón in Lima

A less-than-clean development mechanism

Industrialized countries refuse to stop polluting and put a price on protecting forests.

Industrialized countries and their companies do little to nothing to reduce their greenhouse gas emissions, which are in turn triggering climate change.

Instead, they have created a complex mechanism that allows them to pay to preserve forests in other regions; these expenditures, in theory, offset effects the countries and companies are producing by not reducing emissions themselves.

This process is called Reducing Emissions from Deforestation and Forest Degradation (REDD); it is part of the Clean Development Mechanisms (CDM), and its objective is to reduce the production of six greenhouse gases that cause global warming: carbon dioxide (CO₂), methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride, the latter three being fluorinated industrial gases.

CDMs were included in the Kyoto Protocol on climate change, which was adopted in 1997 and entered into force in 2004 following ratification by Russia. They allow developed countries to invest in projects that reduce greenhouse gases, for example by reducing electric power, industries that pollute, private and public transport, and deforestation.

Peruvian economist Hugo Cabieses, an expert in rural sustainable development, explains that “the Kyoto Protocol established CDMs so that industrialized countries and businesses

could reduce their greenhouse gases. One of these CDMs has to do with forestry issues, given that the burning or razing of forests generates greenhouse gases.”

One of the Kyoto Protocol's commitments is that between 2008 and 2012, industrialized countries reduce their greenhouse gas emissions by 5%, using their 1990 levels as a baseline. Nevertheless, this has yet to happen.

“Every country that ratified the Kyoto Protocol was assigned greenhouse gas emission level allowances. If a country or a business exceeds that limit and does not comply with its greenhouse gas emissions levels, there is the possibility of buying carbon credits,” elaborates Cabieses.

A carbon credit is the right to release into the atmosphere 1 TM of CO₂. For example, if a business has a 100,000 TM annual limit on CO₂ emissions, and it not only reaches this but releases 10,000 TM more, it needs to acquire carbon credits equal to the excess amount.

At the same time, projects that stop producing greenhouse gases can obtain Certified Emission Reductions (CER); each CER represents 1 TM that is not released into the atmosphere, and can be sold in the carbon credit market.

The 15th United Nations Climate Change Conference — or Conference of the Parties to the United Nations Framework Convention on Climate Change — took place in Copenhagen, Denmark, in December 2009. It failed to reach a binding agreement to reduce greenhouse gases — that is to say, no goals or timelines were decided on due to the reluctance of industrialized countries, in addition to several developing countries like Brazil. Instead, the agreement that was reached was that the industrialized countries would donate US\$30 billion during the

2010-2012 period toward climate aid to the poorest and most vulnerable nations; the accord provides for this figure to reach \$100 billion before 2020. Money fixes everything.

Industrialized countries are responsible for more than 60% of worldwide CO2 emissions, while Latin American and the Caribbean are only accountable for 12%, according to the World Bank.

Who does this mechanism benefit?

With REDD's goal of avoiding deforestation and forest degradation in developing countries, the international community saw the necessity for forest conservation efforts and the enhancement of their carbon stocks. This led to the offspring of the project named REDD+, which promotes reforestation, the sustainable management of forests, and other activities that help maintain healthy forests. REDD+ also takes into consideration indigenous communities and populations that live off of what the forests generate, at the same time as they protect it. Subsequently, REDD+ added in agricultural considerations to better address best practices to avoid deforestation; what that ultimately produced was called REDD++.

"By strengthening the forest to retain, preserve and increase carbon stocks, REDD+ offers cost-effective and immediate reductions in CO2 emissions while generating strong co-benefits for forest-dependent communities and conservation of biodiversity," says the International Union for Conservation of Nature (IUCN), based in Gland, Switzerland.

Colombian forestry engineer Patricia Tobón, currently in charge of environmental affairs at the Municipality of Medellín, highlights that "in Latin America, there are several voluntary initiatives working under international standards in Bolivia, Brazil, and Colombia, but the buyer imposes the conditions."

One example is the 2008 REDD+ pilot project in the Sustainable Development Reserve in Juma, Brazil, in the north-western state of Amazonas.

According to the World Rainforest Movement (WRM), the reserve "has an area of 589,612 Ha and [the project] will curb degradation of 366,151 Ha of the total area of tropical rainforest, as well as the emission of 210 million TM of CO2 into the atmosphere by 2050."

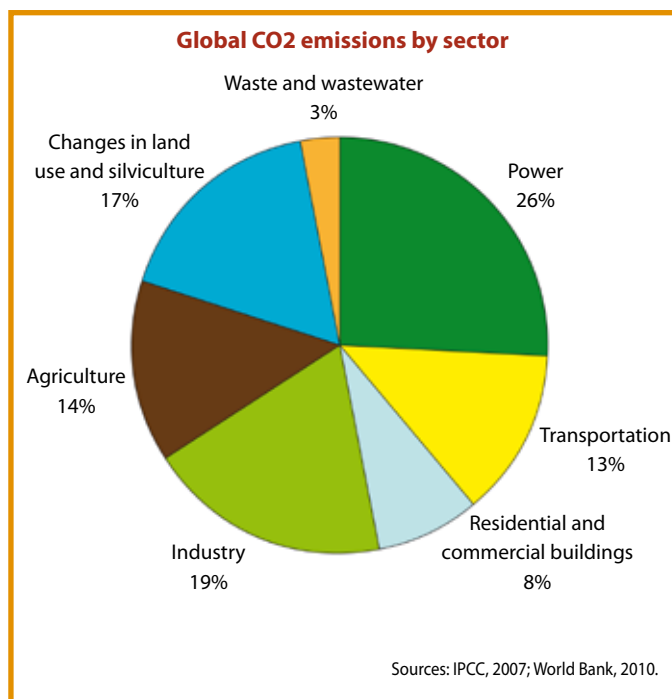
The Brazilian nongovernmental organization Amazonas Sustainable Foundation (FAS) administers the project funds, which come from public and private donors. The NGO is confident that by 2016, 7,800 Ha of rainforest will have been saved from deforestation and will have stopped 3.6 million tons of CO2 from entering the atmosphere.

The 338 families living in 35 communities in the area are receiving the equivalent of \$28 monthly through the Bolsa Floresta program to protect the forest. Each family signs a contract that prohibits chopping or burning in the forest, which will be permanently monitored.

But for the supposed beneficiaries, \$28 is not enough to survive. Before, the families grew several products, but since they signed the contract they no longer can. This means that local communities that before earned a living off of the forest will lose that resource.

A twisted mechanism?

For some experts, environmentalist groups and indigenous organizations, the REDD mechanism is "perverse" because it allows those that contaminate to pay those who do not, while making no major effort to reduce their own emissions because of their tremendous dependence



on fossil fuels like natural gas, oil and coal. Of the total amount of greenhouse gases produced globally, 25% results from deforestation and 75% from burning fossil fuels.

"What worsens the situation is that the preservation of this forest will allow contaminators to keep releasing carbon from fossil fuels," says the WRM with regards to the Juma Sustainable Development Reserve.

"This means that the inclusion of Juma in the emissions market will in reality contribute to climate change because it will allow companies and rich countries that pollute to promote the idea that there are 'compensating' for their carbon emissions by preserving a part of Brazil's rainforest. If it weren't for the World Bank's fervent support of the emissions market, its economists would define the Juma project as a 'lose-lose situation,' for the climate and for the people. But of course, they won't."

Likewise, Germany-based organization Rainforest Rescue (Salva la Selva) maintains that this type of project "is presented as if it was an opportunity for local communities. Nevertheless, the introduction of market mechanisms can easily damage social structures and pre-existing community management, as well as the values that govern the community's internal functionality."

The sale of carbon credits is also another financial resource for Juma.

Rainforest Rescue adds that "it is unclear what the procedure would be to deal with these funds and there are doubts about which institutions could manage the resources transparently. Even well-meaning financial support can be socially and morally destructive. Channeling resources through formal institutions may undermine traditional community governance."

Indigenous organizations like AIDSESP, which brings together the majority of Peru's indigenous Amazon communities, have come out against REDD. In a letter to the World Bank on October 30, they warned that "there would be no viability or sustainability for a REDD investment in Peru without clearing of land titles and a law on the right of prior consultation with the indigenous populations involved." □

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Climate justice now!

Social movements propose agenda at international conference on climate change.

Social movements from around the world, with large representation from Latin America, arrived in Cancun, Mexico, for the 16th Conference of the Parties of the UN Climate Change Conference (COP), which took place from Nov. 29 to Dec. 10. They came to lay out their demands and put pressure on the governments of industrialized countries that are unwilling to legally commit to reductions in greenhouse gas emissions.

Fishermen, campesinos, farmers, women, unionists, environmentalists, and NGOs who gathered in Cancun raised their concerns about what they call “false solutions” or “market solutions,” highlighting Genetic Modified Organisms, agrofuels, large dams, nuclear power, the carbon market, Clean Development Mechanisms (CDM) — notably, Reducing Emissions from Deforestation and Forest Degradation (REDD) — and geoengineering as the main issues, among others, facing developing countries.

Representatives of grassroots organizations believe in the need to address the structural causes of climate change, primarily the capitalist system of production and consumption. To achieve climate justice, they say, it is necessary that developed countries pay the climate debt by dramatically reducing emissions, while transferring funding and technology for developing nations to adapt to and mitigate climate change.

“Thousands from Cancun”

“*Campesina* agriculture cools the planet,” said La Via Campesina, an umbrella group of *campesino* movements from around the world that for several years has made its presence known whenever there is a debate on the climate crisis.

Leading up to the COP in Cancun, rural workers made an international appeal for demonstrations throughout the world under the slogan “Thousands from Cancun”, in reference to the implementation of “thousands” of real solutions to climate change proposed by farmers around the globe.

“We support *campesino* agriculture, direct marketing channels, agroecology as the technological production model, and cooperation among *campesino* families,” Luis Gomes, leader of Brazil’s Landless Workers’ Movement (MST), told *LATINAMERICA PRESS*.

Industrial agriculture, with its use of large machinery and technological components, as well as deforestation and the global transportation of foodstuffs under the neoliberal trading model, are among the primary sources of greenhouse gas emissions. Instead, “local sustainable food production uses less energy, eliminates dependence on imported animal feed and keeps carbon in the soil, all the while increasing biodiversity,”

La Via Campesina stated in a press release prior to COP.

To this end, “food sovereignty” has been La Via Campesina’s chief political demand to combat climate change since 1996. Food sovereignty implies the right of communities to determine what to produce and how to market it. It emphasizes small-scale sustainable production and agroecology, and mainly aims to supply the local markets.

Several indigenous representatives participated in the parallel activities of the Cancun meeting and monitored the negotiation process.

Representatives of native populations, speaking on behalf of more than 360 million people, especially objected to the REDD mechanism because they feel it implies the inclusion of forests and other ecosystems in international financial markets through the usurpation of the rights of peoples and communities to their lands and territories. They demanded that any plan to combat deforestation respect the rights of communities to their land and guarantee them participation and benefits.

Indigenous peoples are the most affected

Through a press release, the delegates for indigenous peoples asked that some “inalienable minimum conditions, deeply linked to our human rights” be incorporated into the decisions of the COP. They emphasized “the right to self-determination, lands, territories, natural and genetic resources, free and informed consent and traditional knowledge.”

They also demanded “the full, effective and direct participation of indigenous peoples in all mechanisms, bodies, and procedures established by the United Nations Framework Convention on Climate Change.”

Indigenous populations, which are among the most affected by the climate crisis because of their close relationship with nature, demanded in Cancun that eventual agreements “ensure the inclusion, recognition and protection of proprietary technologies, seeds, cultural expressions, beliefs, heritage and ancestral knowledge.”

With regard to climate funding, indigenous representatives proposed “full and effective participation of our peoples in the management and distribution of resources as well as access to relevant technologies and capacity-building processes to address climate change.”

In conclusion, family farming, food and energy sovereignty, and community management of forests are “policy umbrellas” under which the main demands and solutions from *campesino* and indigenous representatives were presented at the COP in Cancun.

These approaches, which strongly questioned the capitalist system, present another way of understanding life in harmony with nature, and if implemented, will require dramatic reductions of contaminating emissions in key sectors. This is the implementation of the “Living well” concept to maintain a balance between human beings and Mother Nature, but the political will of governments is lacking. □



Social movements demand firm commitments during Cancun summit to address climate change.