

Toward a Green Economy: What's in it for Brazil?

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The Konrad Adenauer Stiftung, the Brazilian Foundation for Sustainable Development, and
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Meeting Summary

by Gary Gardner (Worldwatch Institute, Washington, DC.)

Part 1: Presentations

Gary Gardner—Worldwatch Institute, Washington, DC.-- Although no standard definition of a green economy exists today, many observers include clean energy, efficient transportation, reduced waste flows, and conservation of natural resources among the defining characteristics of a green economy.

Green technologies are experiencing rapid growth. Investment in renewable energy is up, and renewables take a growing share of total power generation--now more than 5 percent at the global level. A range of other industries, from lighting and building to low-carbon automobiles and high speed rail are also showing rapid growth. Advances in these industries lead to job growth as well: employment in the renewable energy, mass transit, and recycling industries is up.

Governments have been helpful in promoting G.E., especially through government investments and fiscal policy. "Green stimulus" packages to help nations fight the 2008-2009 recession are a good example. In some cases, as with the European Union and South Korea, the share of national stimulus packages that could be called "green" was greater than 50 percent. Governments are also helping to provide enabling legislation that promotes green economic activity. Feed-in laws that promote renewable energy are now the norm in more than 50 countries, for example.

*Maria Marta Vasconcelos, Environment Department, FIESP (Federation of Industries of the state of Sao Paulo)—*Maria presented results of FIESP research on 1300 Brazilian enterprises, including these findings:

- 71 percent have adopted environmental management systems;
- most have programs to reduce waste and energy use;
- most see reputational risk for companies that do not green their activities;
- 70 percent believe there are too few economic incentives for being green;
- 84 percent report that they will invest two-thirds more in 2010 and 2011 to bring their green investment activity up to 4 percent of total investments;
- 36 percent of the companies identified as innovative in the survey have environmental products at their very core (e.g. biotech, medicines, converting shrimp skin into medicine, etc.)

Suzana Kahn Ribeiro, Researcher of the Federal University of Rio de Janeiro

—Suzan made the argument that Brazil has a comparative advantage in sustainable development because of its low carbon energy base—but that it cannot rest on its achievements, and must continually develop its green economy potential.

Climate concerns are creating pressures for creation of low-carbon economies, which requires a reorientation of investments and priorities. These realities create opportunities for Brazil on two fronts: 1) creation of negative emissions (carbon absorption) through BioCCS/Reforestation, and 2) lower carbon intensity (emissions per unit of product), using energy efficiency and clean energy strategies.

Brazil's carbon intensity of GDP, and its carbon content of energy production are both substantially lower than the levels for South Africa, China, India, US, and the EU. And even though Brazil, China, and India have little historical responsibility for CO₂ emissions, and modest capacity to steer their economies away from fossil fuels, renewables constitute a larger share of their power output (6.6 percent) than is true in the U.S. (3.8 percent). If large hydro is included as a renewable, Brazil's renewable share of power generating capacity jumps to 83 percent, compared with 10.8 percent in the U.S.

In terms of biological carbon capture and storage (Bio CCS), several paths are open to Brazil. Carbon fixation in soils involves using biological and non-synthetic forms of fertilizer, use of nutrients to repair degraded soils (which increases the capture of CO₂), and increasing the productivity of agriculture (fewer emissions of GHGs per unit of product). Reforestation creates carbon sinks in the new trees. Biogas/biochar uses chemical processes (pirolise, for example) to generate energy with carbon fixation in the soil.

Israel Klabin, President of the Brazilian Foundation for Sustainable Development (FBDS)

—Israel began by reporting on recent UNEP-FI findings that environmental damages amounted to \$6.6 trillion in 2008, some 11 percent of the world GDP. For 2050, losses are estimated to reach \$28.6 trillion, or 18 percent of GDP. Two major areas of loss are worth noting: emission of GHG, and loss of water supply. The impact on investors includes

- Loss of productivity and a decline in dividend payments
- Greater operational risks and greater volatility in capital markets
- Payments of fines and other regulation restrictions

The Bretton Woods model ended awhile ago, but we are feeling it only now. New economic models are needed if currency stability is to be realized. Economies based on unstable currencies are just as bad as economies based on greenhouse gases.

We also need limits on consumption. Demand for non-renewable natural resources must mesh with social inclusion. A set of social inclusion tools for use by companies is needed. But because these tools are not law, pressure will need to come from consumers, the way pressure comes from consumers on environmental matters.

Awareness is growing that we're ending an economic cycle. The fact that the Green Party in Brazil garnered 20 percent of the vote in the October 3 election is significant. It is now developing a platform for the runoff election that could involve giving attention to environmental crimes and waste regulations. Negotiating mechanisms at the international level are off track because they are being carried out by diplomats and politicians, rather than by scientists and environmentalists.

Work on the financial system could be helpful, too. BNDES (Brazilian Development Bank) is developing criteria for the projects it funds. Staff at the Inter-American Development Bank and the World Bank are interested in sustainability criteria for their work, too.

Part 2: Workshop Discussion

Participants began by commenting on the presentations and asking questions of the presenters. Interest was expressed in the definition of a green economy and how it differs from a low carbon economy or a sustainable economy, about whether targets should be voluntary or compulsory, and about whether centralized or decentralized green initiatives are best.

In response, several speakers noted that a low-carbon economy could be a large step toward sustainability, but that it is narrower than a sustainable economy. An economy supercharged by clean energy would lower its carbon footprint but might also accelerate the use of resources, leading to more rapid depletion. Moreover, too great an emphasis on low-carbon economies continues the "climate primacy" error in many circles, under which climate gets a great deal of attention at the expense of critical issues like biodiversity preservation.

Most speakers felt that targets should be compulsory in one way or another, because voluntary targets have not worked. The U.S., China, and India all fall outside of the Kyoto Protocol, for example, and have not voluntarily met a Kyoto standard. Others, however, noted that mandatory standards are difficult to quantify in a way that works for all nations. And multiple indices make it difficult to get everyone on board. One speaker suggested that standards might be voluntary internally but mandatory externally.

Decentralization of energy may be a particular challenge to a country like Brazil, where hydropower is huge. Yet the country has great potential to use decentralized solar and wind technologies, and could do much more with these.

Discussion also turned to the political demand for green economies. Several participants remarked that despite the encouraging result for Marina Silva in the recent elections (she garnered almost 20 % of the votes), questions concerning environmental and climate protection are not a major part of Brazilian politics. Nuclear power plants are being planned, for example, without any apparent concern for the disposal of waste from the plants. Much more needs to be done to raise the profile of environmental issues in Brazil.