

Taking a Cue From Brazil's Sustainable Development Practices Past and Present

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Brazil's Long-Standing Commitment to Sustainability

Brazil arguably boasts some of the most breathtaking natural wonders and extensive natural resources worldwide. Covering a total area of over eight and a half million square kilometers, Brazil features more than two hundred million hectares of rangeland, over six million hectares of farmland, and one hundred million hectares of unexploited land.

In acknowledgement of its natural beauty and extensive though finite resources, Brazil has focused on research and development of green initiatives, most notably renewable energy, since the early 1970s. In order to implement these and other green land use initiatives, Brazilian authorities have utilized various legal techniques to secure financing from foreign and domestic investors and to ensure compliance with development and environmental laws. This dedication has not gone unnoticed. In a March 8, 2011 United Nations press conference in preparation for the 2012 UN Conference on Sustainable Development, Sha Zukang, Under-Secretary-General for Economic and Social Affairs, stated, "Brazil has certainly shown the world how to put sustainable development into practice."

Numerous countries worldwide, including the United States, can duplicate Brazil's environmental and developmental success through the similar legal tactics, governmental initiatives and economic incentives as those implemented in Brazil. This article will discuss how this country was able to attain the title of the world's most forward thinker in terms of sustainability and green development.

As a modern day trailblazer, Brazil has strived for many years to generate electricity in innovative ways, rather than relying on the use of fossil fuels. In conjunction with this effort, companies are voluntarily signing up for Brazil's GHG Protocol Program, a program aimed at reducing carbon emissions. Thanks to the country's dedicated application of a variety of green energy initiatives, including the required use of ethanol, [1] Brazil has reduced its carbon dioxide emissions by two billion tons.

The push toward sustainable development is partially the result of Brazil's alarming growth rate. Due in large part to a successful economy where more Brazilians are moving into the middle class every day, consumption of cars, electronics, luxury items and new homes is increasing faster than these products can be supplied. For example, in 2010, it was estimated that 43,000 new cars were on the roads each day in Brasília, the capital city. The growing middle class puts pressure on antiquated power grids and roads ill designed for large numbers of vehicles. As the country ramps up infrastructure, development must move forward at a sustainable pace. International Green Energy Council ("IGEC") President Ralph Avallone recently commented, "Brazil will need to move very fast to take advantage of a growing economy. They need mass transit systems, a more reliable power grid and sustainable development plans."

In order to capitalize on Brazil's dedication to sustainability, the IGEC established a new chapter in Brazil in 2010, appointing Leandro Cararro as the chapter's first president. In conjunction with this, the IGEC has already presented many manufacturing opportunities to the Brazilian government, from solar panel manufacturing, LED street light manufacturing, asphalt and cement plants, to biomass facilities and sustainable development projects throughout Brazil. Another factor compelling Brazil towards further sustainable development is its recent victorious bids for the 2014 World Cup and 2016 Olympics. Rio de Janeiro is also the home to the 2012 UN Conference on Sustainable Development. These events mean that Brazil will experience huge influxes of foreign and domestic visitors. With these upcoming events, the Brazilian government is embarking upon a \$200 billion reinvention of its infrastructure and is insistent on presenting Brazil as a forward thinker on sustainable development. Brazilian officials hope this demonstration will secure new investors, form new business partnerships, and propel Brazil forward as a global competitor in industries such as energy, logistics, and security.

In an attempt to achieve this goal, the state government of Rio de Janeiro has created the Green Economy Department ("GED"), an organization developed in January of 2011. Despite its youth, GED has been working hard to bring many sectors of state and national government together in order to collaboratively plan for and implement initiatives to further green economic strategies and bolster the number of "green-collar jobs."

GED priorities include: sustainable constructions, electricity, agriculture, finance, tourism and water. GED hopes to attain its innovative vision through green gross domestic product, green jobs, financial flows, the use of market mechanisms to solve environmental issues, and fiscal and tributary incentives. Among GED's first projects are the laying of rubber asphalt, urban agriculture projects, new housing developments built with green building practices, and reforestation.

Further, in May 2011, Rio de Janeiro opened a branch office of the Climate Policy Initiative ("CPI"), a global analysis and advisory organization that supports nations' efforts towards green and low-carbon growth. CPI Rio will examine low-carbon growth policies and program in Brazil in areas such as forestry and agriculture, finance and cap-and-trade systems.

In addition, Brazil has been reaching out to foreign countries, like the United States, in order to explore a cohesive blend of environmental and economic priorities. In March 2011, President Obama traveled to Brazil to meet with President Dilma Rousseff. The heads of state agreed on a number of measures, including the decision to work together on sustainability for urban infrastructure. In furtherance of this decision, government, industry, academic and nonprofit officials from both the United States and Brazil met in August 2011 in order to both learn from each other and share their own expertise and success stories. United States' participants to the collaboration included representatives from the Environmental Protection Agency, Microsoft, Morgan Stanley, Alcoa, Harvard University and Philadelphia Mayor Michael Nutter.

While devising new and groundbreaking ways to pursue green development, Brazil has utilized a variety of legal and legislative avenues, including public agency agreements, local government initiatives, and development and construction agreements. Brazil, or any other country seeking to expand the traditional notions of mixed use, could benefit

from employing some techniques applied by Sheppard, Mullin, Richter, & Hampton LLP's land-use practice in the United States. The firm has extensive experience in coastal and waterfront development, urban redevelopment, mixed use projects, and environmentally-conscious timber and mining, all of which are areas impacted by Brazilian development. Sheppard Mullin's recent work has focused on the clean-up and reuse of contaminated land, habitat conservation and the adaptive reuse of historic buildings, and could act guiding precedent for the newly established Brazilian and international green organizations.

Brazilian Case Study in Sustainable Development

Curitiba, capital of the Brazilian state of Paraná, is a city of 1.5 million people and has been said to rival Chicago as the center for progressive urbanism.^[2] Examples of this progressiveness abound. First, in an effort to combat urban sprawl, Curitiba utilizes a system of "tradeoffs" to expand its green space. This system distributes city government sponsored incentives to private developers to encourage the exchange of undeveloped land in neighborhoods or outskirts of the city for rights to build larger, higher-density buildings in more urbanized parts of the city.

Second, Curitiba implements a number of GHG-emission reducing measures. Specifically, the city boasts a transit system that rivals many American counterparts. The city employs a wide range of bus lines that cover the spectrum from neighborhood shuttles to high-speed transit lines. This public transit system relies solely on buses traveling as fast as subways but costs a mere 1/40 of what rail transit costs. This system is used by seventy-five percent of all residents. Additionally, the city features a "twenty-four hour street." This partially enclosed pedestrian-only walkway is lined with businesses open twenty-four hours. This street was created in response to residents' concerns of downtown crime and safety, but has become a booming commercial marketplace and encourages walkable developments.

Third, Curitiba's government actively encourages architectural preservation. The city allows owners of historic buildings to develop next to the architectural significant structures or to transfer building rights to another location, in exchange for the developer's restoration of the historic building. The end result is an aesthetically pleasing architecture, cultural preservation and a reduction in development waste.

Challenges Facing Brazil's Continued Sustainable Development Success

While Brazil has received well-deserved respect for the country's forward thinking approach, the path to sustainability has not been an easy road to travel. Brazil has been heavily criticized for hydroelectricity projects since the 1980s. In recent years, the country has been under fire for the decision to move forward with plans to build dams on the Xingu River, which lies in the Amazon basin. The most infamous of these dams is the "Belo Monte," which, while greatly increasing Brazil's ability to harness hydroelectricity, carries the potential to transform the tributaries of the world's largest river into "an endless series of stagnant reservoirs."^[3] Belo Monte may also displace indigenous people in the area.

In addition, any sustainability program implemented at a state or national level may take many years to clear the current obstacles facing Brazilian society. First, despite the recent success of the country's economy to survive the 2008 downturn, poverty remains widespread. Second, rural areas that were once the home of established community-based agriculture enterprises are losing ground to urbanization and sprawl. Third, regardless of Brazil's successful quest for alternative forms of fuel, fossil fuel dependence is still present.

Despite these apparent shortcomings and challenges, Brazil appears poised to come into its own as a global power without leaving a trail of environmental waste and natural resource destruction. Brazil has a veritable arsenal of proven tools, including legal tactics, legislative precedent, and community support, that can be utilized to further advance its reputation as a sustainable and self-sufficient green country.

^[1]According to Mario Garnero, founder and Chairman of Brasilinvest Group, nearly 80% of Brazil's cars run on flex-fuel engines.

^[2]Carmen Vidal-Hallett and Mark Hallett, Learning from Curitiba, Presentation, Evanston, IL, October 26, 2006.

^[3]Sigourney Weaver, Amazon Watch and International Rivers, *10-minute Tour in 3-D Highlights the Dam's Harmful Impacts on Xingu River and Greener Alternatives*, August 30, 2010.