CHINA
and
LATIN AMERICA
IN A CARBON-CONSTRAINED WORLD

Lisa Viscidi
Program Director
Energy, Climate Change and Extractive Industries
Emissions from China and other developing countries are rising.

- China and the US are the world’s largest emitters.
- Emissions from developing countries, especially Asia, are growing fastest.
- LAC generally has very low emissions, on par with Europe and Africa. The big exception is Brazil, where high rates of deforestation have led to high emissions.

Source: World Resources Institute Data
Latin America accounts for a relatively small percentage of emissions. In 2011, Latin America accounted for 9% of total GHG emissions, which include Land-Use Change and Forestry. Other regions such as China (23%), United States (14%), and European Union (9%) contributed significantly more to the total emissions. The others (45%) accounted for a larger portion.

- LAC total GHG emissions decreased 11 percent between 2000 and 2010 due mainly to a decline in deforestation.
- The drop in GHG emissions occurred during a period of robust GDP growth, averaging around 3 percent per year for the entire region.

Source: World Resources Institute Data
Reductions in deforestation are expected to drive a 59 percent reduction in GHG emissions from land use between 2010 and 2050. However, growing emissions from other sectors will more than make up for this decline.

- Emissions from electricity and transportation are expected to grow most quickly in the coming decades in LAC, increasing 120 and 116 percent, respectively, through 2050.
- Industry, feedstocks, growing agriculture and fertilizer use will also boost emissions significantly.
Unlike other regions, most of LAC’s emissions stem from land use.

Figure 2.1 Sector Composition of Total Greenhouse Gas Emissions in LAC, 2005

- Roughly two thirds of LAC GHG emissions stem from land use, while energy use contributes roughly one third.

- Globally, energy use accounts for roughly two thirds of total GHG emissions.
Total emissions vary highly between countries

Figure 2.2 Country Contributions to Total LAC Emissions, 2005 (%)

- Brazil: 52%
- Mexico: 12%
- Venezuela: 6%
- Argentina: 6%
- Colombia*: 4%
- Bolivia: 3%
- Peru: 3%
- Ecuador: 3%
- Guatemala: 2%
- Chile*: 2%
- All others: 2%

Source: Authors’ elaboration based on WRI (2012) data.
* These cases do not include land-use emissions.
The composition of emissions also vary between countries.

Brazil and Argentina have high land use-emissions related to deforestation and agriculture. Mexico and Venezuela have higher energy-related emissions, the norm in most countries.
Commodities exports to China, including exports of energy resources, grew dramatically as a share of Latin America’s total exports between 2002 and 2012.
TABLE 3: LAC Exports to China by Commodity for the 2008-2012 Period

<table>
<thead>
<tr>
<th>Sector</th>
<th>Share</th>
<th>Country Share of LAC-Exports in Sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron Ore, Concentrates</td>
<td>22.1%</td>
<td>Brazil (86%)</td>
</tr>
<tr>
<td>Soybeans, Other Oilseeds</td>
<td>14.7%</td>
<td>Brazil (67%), Argentina (28%)</td>
</tr>
<tr>
<td>Crude Petroleum</td>
<td>11.9%</td>
<td>Venezuela (46%), Brazil (29%), Colombia (10%)</td>
</tr>
<tr>
<td>Refined Copper</td>
<td>10.9%</td>
<td>Chile (92%)</td>
</tr>
<tr>
<td>Copper Ores, Concentrates</td>
<td>6.9%</td>
<td>Chile (51%), Peru (32%), Mexico (13%)</td>
</tr>
<tr>
<td>Transistors and Valves</td>
<td>5.1%</td>
<td>Costa Rica (82%), Mexico (17%)</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>71.6%</td>
<td></td>
</tr>
</tbody>
</table>

Source: UN COMTRADE and authors’ calculations.

<table>
<thead>
<tr>
<th>Industry</th>
<th>% of China-LAC FDI</th>
<th>Country Share of Industry FDI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metals</td>
<td>25.3%</td>
<td>Peru (65%), Guyana (22%), Brazil (11%)</td>
</tr>
<tr>
<td>Food &amp; Tobacco</td>
<td>25.0%</td>
<td>Argentina (50%), Brazil (50%)</td>
</tr>
<tr>
<td>Automotive OEM</td>
<td>19.9%</td>
<td>Brazil (56%), Mexico (18%), Argentina (14%)</td>
</tr>
<tr>
<td>Coal, Oil, Nat. Gas</td>
<td>11.8%</td>
<td>Cuba (47%), Costa Rica (36%), Venezuela (17%)</td>
</tr>
<tr>
<td>Communications</td>
<td>8.5%</td>
<td>Brazil (84%), Colombia (10%)</td>
</tr>
<tr>
<td><strong>TOTAL:</strong></td>
<td><strong>90.4%</strong></td>
<td></td>
</tr>
</tbody>
</table>

Source: FDIMarkets and authors’ calculations.
Chinese FDI has stimulated LAC’s oil and gas industry

FIGURE 8: Inflows from mergers and acquisitions, by Industry, 2008-2012.

Source: DeaLogic
Energy-related loans account for over $25 billion of Chinese finance.

Since 2005, China has provided more than $100 billion in loan commitments to Latin American countries and firms. China's loan commitments of $37 billion in 2010 were more than those of the World Bank, Inter-American Development Bank, and U.S. Export-Import Bank combined. This interactive database provides up-to-date information on Chinese lending in Latin America by country, lender, sector, and year.

<table>
<thead>
<tr>
<th>Type</th>
<th>No. of Loans</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infrastructure</td>
<td>31</td>
<td>$54.4B</td>
</tr>
<tr>
<td>Energy</td>
<td>17</td>
<td>$26.3B</td>
</tr>
<tr>
<td>Other</td>
<td>13</td>
<td>$12.6B</td>
</tr>
<tr>
<td>Mining</td>
<td>5</td>
<td>$5.1B</td>
</tr>
</tbody>
</table>
Chinese banks and firms have been criticized for having poor environmental standards compared with their Western counterparts and major multilaterals.

- Chinese banks do include environmental and social provisions in loan and other financing agreements. However, these standards are not on par with those of Western institutions.
- Some Chinese firms have been fined for environmental degradation in Mexico, Peru and elsewhere. Certain mining cases, such as China’s Shougang project in Peru, have been widely cited as examples of poor community engagement and lax standards.
- However, cases vary widely in their impacts. There is little evidence to suggest that Chinese firms perform significantly worse overall than other energy or mining companies operating internationally.
- A new study by American University and the World Resources Institute suggests gradual adaptation and improvement in environmental and social practices among Chinese mining companies in Peru.

Source: Inter-American Dialogue
China has a leading voice in several key negotiating groups

- China participates in the group of Like Minded Developing Countries (LMDC’s) that includes major oil producers from the Middle East and ALBA nations Venezuela, Bolivia, Ecuador and Nicaragua from Latin America.
- This group argues that developed countries must take on most of the burden for combatting climate change, while developing countries be held to less stringent standards.
- China and Brazil together participate in the BASIC group (the BRICS minus Russia). At their latest ministerial meeting this August, the four countries made the case that developed countries must lead in emissions cuts and climate financing.
- But other LAC countries, like Peru, Colombia and Chile view distinctions between “rich” and “poor” countries as increasingly obsolete.
Several LAC governments have pledged unilateral emissions cuts

### Voluntary emissions reduction plans in LAC

<table>
<thead>
<tr>
<th>Country</th>
<th>Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brazil</td>
<td>Reduce emissions by 36.1% to 38.9% in 2020 compared to BAU scenario</td>
</tr>
<tr>
<td>Chile</td>
<td>Undertake Nationally Appropriate Mitigation Actions (NAMAs) to reach 20% below BAU emissions in 2020</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>Conditional commitment to become carbon-neutral by 2021</td>
</tr>
<tr>
<td>Mexico</td>
<td>Reduce emissions by 30% below BAU scenario by 2020</td>
</tr>
</tbody>
</table>

- Colombia, Peru and Costa Rica also have plans for lowering carbon emissions
- Central American countries are developing strategies to focus on climate change adaptation

Source: Climate Action Tracker, Media Reports
Developing fuel efficiency standards
- In 2013, Mexico became the first country in Latin America to enact fuel emissions standards for light vehicles. Several other countries are developing similar standards.
- China’s light duty vehicle fuel consumption regulations include its first-ever standards for fleet average fuel consumption. This is expected to make a 13 percent improvement in fleet emissions between 2008 and 2015

Creating carbon markets
- Mexico implemented a carbon tax in late 2013 and has established a voluntary trading system for carbon credits.
- In September 2014, Chile approved its first carbon tax.
- China has started pilot carbon trading systems in major cities, including Beijing, Shanghai and Guangdong. The government aims to implement a nation-wide system by 2016
Wide opportunities exist for technical cooperation and exchange

The China-Brazil Center undertakes projects strategic interest to China and Brazil. Both countries have to continue with their economic and social development without accelerating global warming.

Current projects focus on:
- Wind energy
- Biofuels
- Carbon capture & storage
- Deepwater oil production technology
China’s stake in Latin America’s hydropower industry has increased dramatically over the past five years, expanding from only handful of dams to dozens of projects throughout South and Central America.

At the same time, China’s State Grid has begun acquiring related stakes in electricity transmission and distribution. As of March 2014, the state-owned company controlled more than 10,000 km of transmission lines in Brazil.

Chinese firms have begun moving into renewable energies such as wind and solar in Latin America. The largest Chinese investment in Chile, for example, is a $900 million dollar solar farm in the north of the country.

China has also signed cooperation accords in nuclear energy with Brazil and Argentina, as both South America countries look to expand their nuclear capacity in the coming years.
China and Latin America
in a carbon constrained world

For more information:
www.thedialogue.org/energy