

China
Índia

Brasil

2ª CONFERÊNCIA INTERNACIONAL
17 E 18 DE ABRIL DE 2007 – SÃO PAULO

DESAFIOS EMERGENTES

a ascensão econômica de
China e Índia e seus
efeitos para o **Brasil**

China

Índia

Brasil



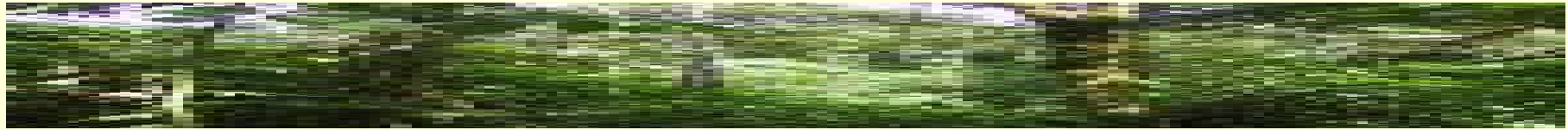
Elizabeth C. Economy

Council on Foreign Relations - CFR

CHINA'S ENVIRONMENTAL IMPACT

April 17, 2007

**Dr. Elizabeth C. Economy
Council on Foreign Relations**



State of the Environment in China

Elizabeth C.
Economv





An Overview of China's Environmental Challenge

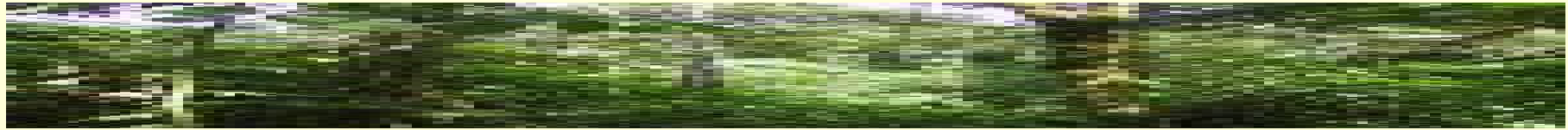
- **Air, water, and land resources all under significant stress**
- **Environment affecting economic productivity, migration, public health, and social stability**
- **President Hu and Premiere Wen's development agenda includes environmental benefits, but effective protection still elusive**



Access to Clean Water is China's Most Serious Environmental Challenge

Annual per capita water availability of water is 25% of the global average

- **110 of approx. 660 cities in China water scarce**
- **Demand growing 3-5% annually; leaky pipes lose upwards of 20% of water**
- **80% of water in China's seven major river systems no longer supports fish**
- **30% of monitored river water is worse than Grade 5 (not suitable for agriculture or industry)**



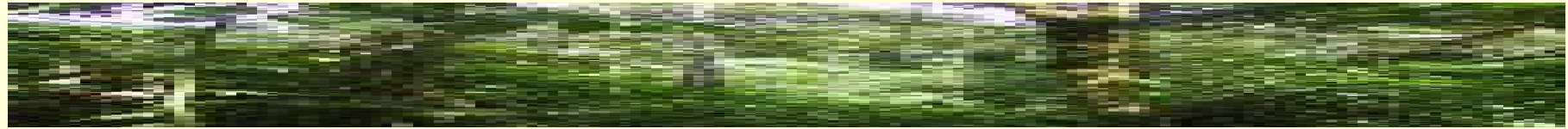
Air Pollution Threatens Health and Development

- **China is home to 16 of the world's 20 most polluted cities**
- **Acid rain affects a third of China's agricultural land and a fourth of land overall**
- **Reliance on coal; poor implementation of pollution control technologies; and low energy efficiency all contribute to air quality problems**
- **Transportation sector growing rapidly, with car use expected to jump from 25m to 140m by 2020**



Land Degradation Progressing Despite Government Efforts

- **More than a quarter of China is already desert, and desertification is advancing by 1900 sq miles annually**
- **At 18%, China's forest coverage is well below the world average of 30%--Brazil's coverage is 57%**
- **Sources of land degradation include deforestation, over-grazing of grassland, and over-cultivation of farmland**



Gov't Awareness of Desertification Growing



Vice Minister of SEPA Pan Yue spoke at a tree-planting event to combat desertification...



...only to be interrupted by a sudden sandstorm, an increasingly common occurrence in many parts of China.



Why the Environment Matters Now

Economic

- Pollution and degradation cost China 10% GDP annually from lost industrial and crop output, missed days of work, etc. according to the SEPA
- Deputy Minister of the Environment predicts 150m internal “environmental refugees”

Public Health

- 400,000 people die annually from respiratory disease from air pollution
- Water pollution sickens hundreds of millions living along rivers

Unrest

- Environment top source of social instability
 - Over 50,000 pollution disputes in 2005

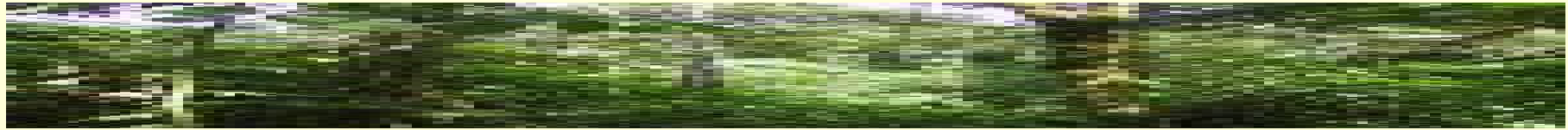
Elizabeth C.
Economy





China's Environmental Approach

- **Maintain small central bureaucracy**
 - Earmarks 1.5% of GDP for environmental protection but significant funds lost to corruption or misappropriation
- **Devolve authority to local officials**
 - Some localities are improving their environmental record but lack of incentives means environmental regulations typically poorly enforced due to prioritizing economic growth
- **Engagement on the part of the international community**
 - Largest recipient of international environmental assistance and extensive engagement with international NGOs
 - MNCs often raise environmental standards, although criticized for seeking “pollution haven” in China
- **Role of civil society and rule of law uncertain**



New Environmental Agenda

- President Hu and Premier Wen believe environmental protection necessary to achieve a “Harmonious Society”
- Olympics increasing pressure to improve environmental record
- Government set goal to reduce energy intensity by 20% by 2010 and use 16% renewable energy by 2015

BUT

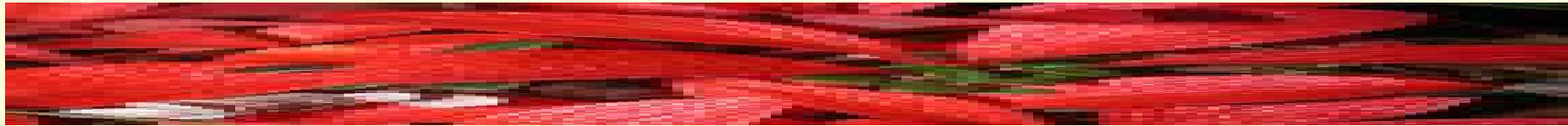
- China failed to meet energy intensity targets last year
- Coal and oil use projected to double during 2000-2020
- Lack of political and economic incentives for local officials and businesses to protect the environment
- Resurgence of investment in heavy industry



China's Global Environmental Impact

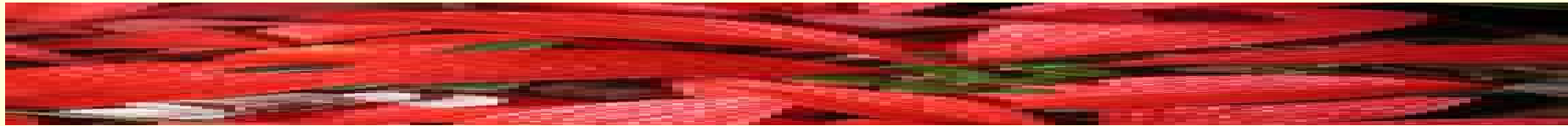
Elizabeth C.
Economv





The Global Reach of China's Pollution

- **China's SO₂ emissions responsible for ½ acid rain in Korea and Japan**
 - **Mercury and other toxic substances travel around the world through the atmosphere**
 - **30% of mercury in US ground soil and waterways from China**
- **Dust storms are increasing in number and intensity**
 - **Dust from China reaches as far as the west coast of the US**
- **Yangtze Delta biggest cause of marine pollution in the Pacific Ocean**
 - **60% of China's total wastewater dumped into Pacific**



China's Environmental Impact on Brazil

Two Main Areas:

- **Climate Change**
- **Global Resource Quest**



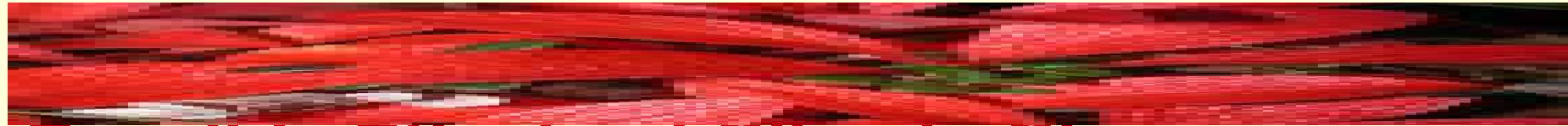
China and Climate Change

- China consumes more coal than the US, Japan, and the EU combined
- Beijing plans to build 562 new coal-fired power stations by 2012, enough to nullify all cuts required under the Kyoto Protocol from industrialized nations
- Over past 30 years, China's CO² emissions have tripled
- China to surpass US in greenhouse gas emissions in 2009
- CO² emissions from cars increasing rapidly
- China is an active participant in Kyoto Protocol CDM but existing steps will not be enough to address the problem



Brazil and Climate Change

- **Brazil top CO2 emitter in the region**
- **Emissions due almost entirely to Amazon deforestation, which is responsible for 5% of global emissions**
- **87% of Brazilians say global warming is a “very serious problem,” double the number of Americans**
- **Stalemate between developed and developing countries on fighting climate change**
 - **President Lula da Silva says wealthy countries are responsible for global warming, should stop interfering in Amazon**
 - **Same general position held by Chinese government**

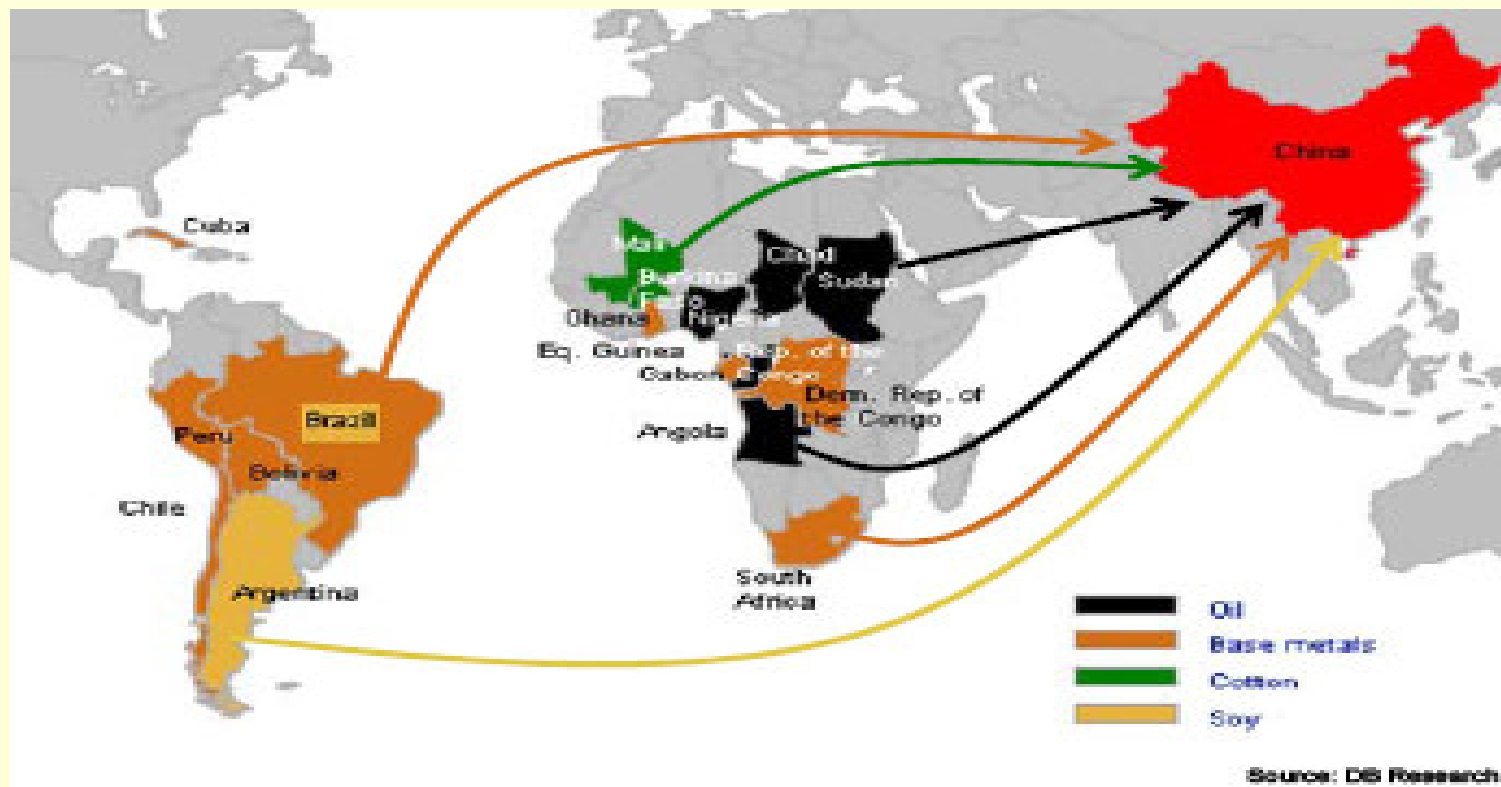


Possible Effects of Climate Change on Brazil

According to Brazil's National Space Research Institute, if the pace of emissions continue unabated:

- **Rising waters could create a refugee problem along coasts**
- **Higher temperatures and a drop in rainfall could cause more forest fires, greater water shortages**
- **Rising swamp water could cause a sharp rise in diseases like malaria and yellow fever**
- **Wide extinction of wildlife and reduction of biodiversity**

China's Global Resource Quest

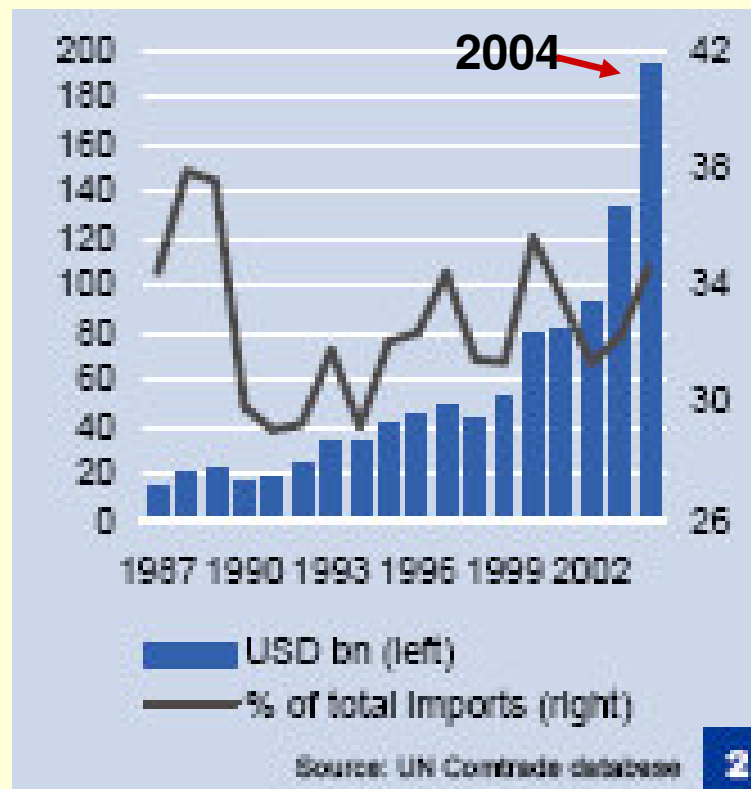


China looks to Africa and Latin America for key commodities.

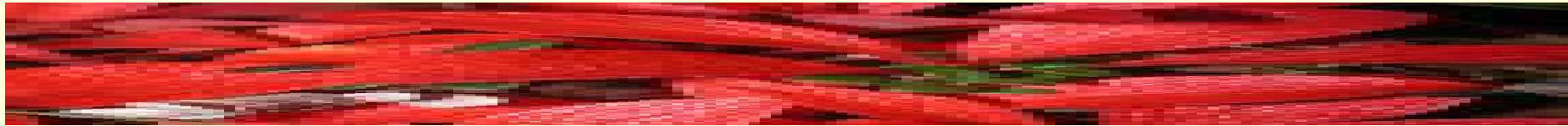
Elizabeth C.
Economv



Rising Chinese Commodity Imports

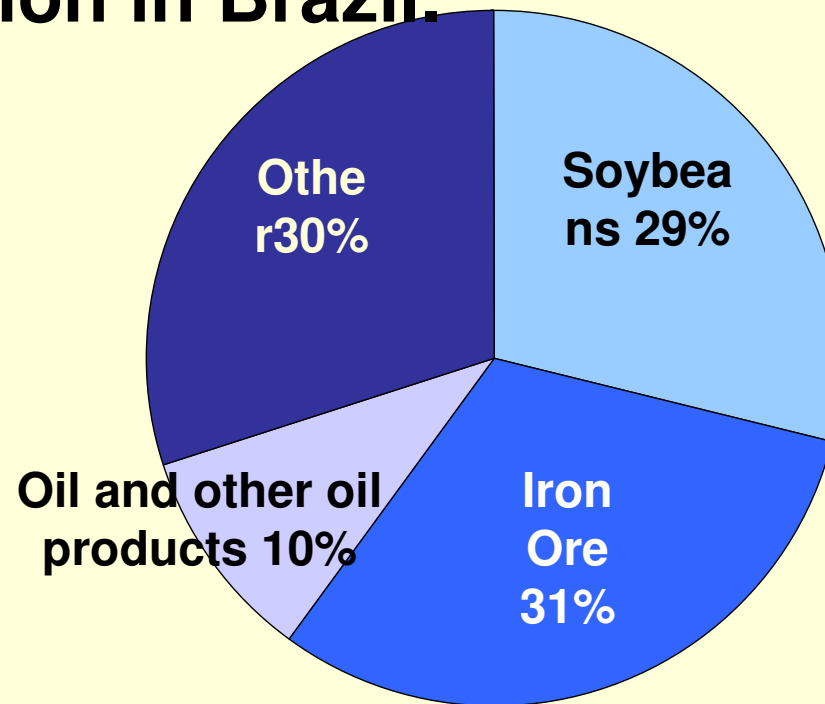


- Chinese imports reached \$5b in 2005 and have risen by 50% on average since 2000
- Latin America and Africa only receives 1-2% of FDI from China, likely to increase
- Should use commodity revenues to diversify economies, generate sustainable growth



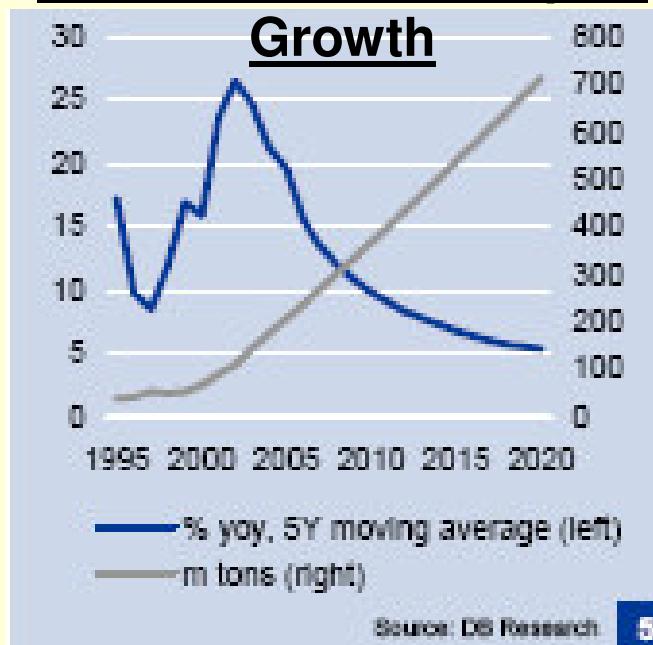
Brazil-China Trade

China is Brazil's second-largest trading partner, and imports predominantly primary resources and land-intensive commodities that encourage deforestation in Brazil.

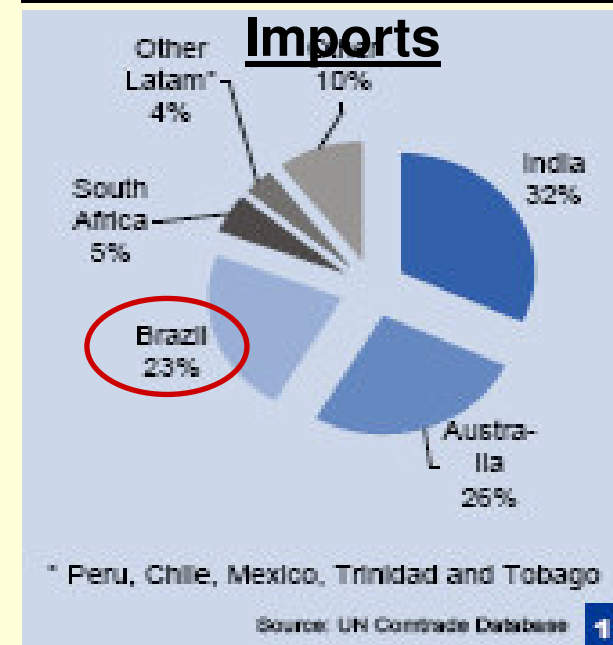


Chinese Iron Ore Imports

Chinese Iron Ore Import



Share of China's Iron Ore Imports



- China accounts for 43% of world imports of iron ore
- Brazil is China's third largest supplier after India and Australia
- Growing domestic steel industry drives iron ore demand

Chinese Soy Imports

Chinese Soy Import



Soy Imports from

Argentina/Brazil



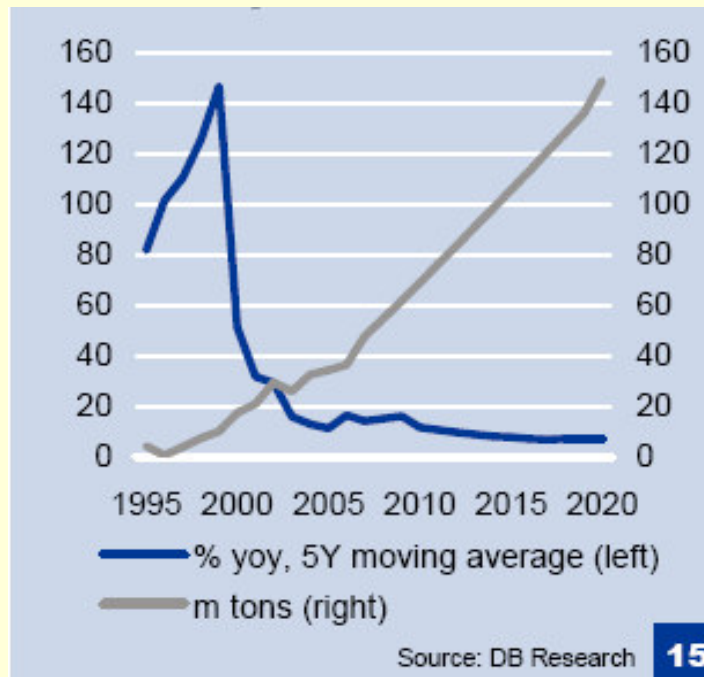
- Brazil and Argentina account for 45% of world soybean exports
- China is largest soy importer with 38% share of global imports
- Brazil is China's second largest supplier after the United States, providing approx 11 million tons in 2006
- Growth driven by increased consumption, feed for livestock to meet growing meat demands

Chinese Oil Imports



- Crude oil is China's dominant import commodity
- Is the world's third largest importing nation, accounting for 6% of world imports
- Energy conservation may be outweighed by strategic oil reserves, keeping import growth steady
- Brazil supplies 2 percent of China's crude oil

Chinese Timber Imports

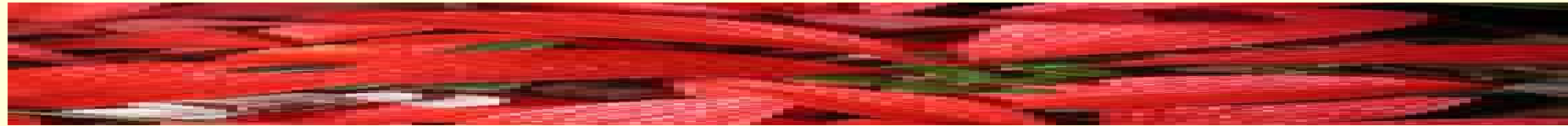


- China's wood imports reached \$4.2b in 2004
- For rough wood, China corners over a quarter of world imports
- WWF predicts that China will only be able to meet half its demand for wood with domestic production by 2010
- China imports 8% of pulp and paper from Brazil



Chinese Companies in Brazil, e.g.

- **Baoshan Iron and Steel -- \$1.5b JV steel plant**
- **Chalco – \$1b JV aluminum/bauxite plant (2007)**
- **Sinopec – Oil pipeline and exploration with Petrobras**
- **China National Machinery and Equipment Import and Export Corp (CMEC) – JV with Central Termoeletrica do Sul, plans to build coal plant**
- **Compensa – Chinese owned plywood company**
- **Shanghai Anxin Flooring – Chinese owned timber processing company**



Consequences of China's Resource Quest

- **Increased pace of infrastructure development**
- **New transcontinental highway will cut through the rainforest to bring Brazilian goods to Peruvian ports for shipment to China**
- **China's booming demand for energy resources, raw materials, and agricultural goods significant contributor to deforestation in Brazil**
- **China has pledged to invest billions in Brazilian infrastructure, particularly for natural resource transport**

Elizabeth C.
Economv



Potential Environmental Challenges Posed by China's Resource Quest

- Chinese SOEs have poor understanding of environmental corporate social responsibility
- Domestically, mining companies treat only 4.2% of wastewater at acceptable level
- Chinese companies have encountered difficulties worldwide: Shougang in Peru, Gami in Philippines, Metallurgical Construction company in PNG, Sinopec in Gabon



Elizabeth C.
Economv



Potential Environmental Challenges, cont.

Deforestation

- **China is world's largest importer of illegally logged timber: half of Asian and majority of African imports illegal**
- **In Brazil, estimated that 80% of China's timber imports are illegal**
- **Growing challenge is deforestation for soybeans production destined for China**
- **Chinese company Compensa charged with repeated violations of logging regulations in Amazon (1990s, 2004)**
- **Anxin Shanghai Flooring made controversial purchase in protected indigenous lands (2004) but now certified by WWF's Forest Stewardship Council**



Where to From Here?

- **Brazil and China need environmental partnership to ensure development and environment go hand in hand**
- **Brazil needs strong domestic capacity in environmental protection: monitoring, enforcement, clear system of land rights, vibrant civil society**
- **Chinese companies should be encouraged to join initiatives that promote international best practices in resource extraction--International Council on Mining and Metals, Extractive Industries Transparency Initiative, FSC**

Elizabeth C.
Economv



Where to From Here cont.

- Growing number of public listings of Chinese companies offers incentive for better practices (Anxin) and new opportunities for shareholder pressure (Sinopec in Sudan)

China
Índia

Brasil

2ª CONFERÊNCIA INTERNACIONAL
17 E 18 DE ABRIL DE 2007 – SÃO PAULO

DESAFIOS EMERGENTES

a ascensão econômica de
China e Índia e seus
efeitos para o **Brasil**