

An aerial photograph of a city, likely in a developing country, showing a dense urban area with many small, colorful buildings. In the foreground, there is a large, dark, and heavily eroded area, possibly a mining site or a large-scale construction project, with visible tracks and heavy machinery. The background shows more urban development and some green spaces.

From green revolution to mineral revolution

Repeating past mistakes?

Dr. Boris Verbrugge (HIVA-KU Leuven)

KU LEUVEN

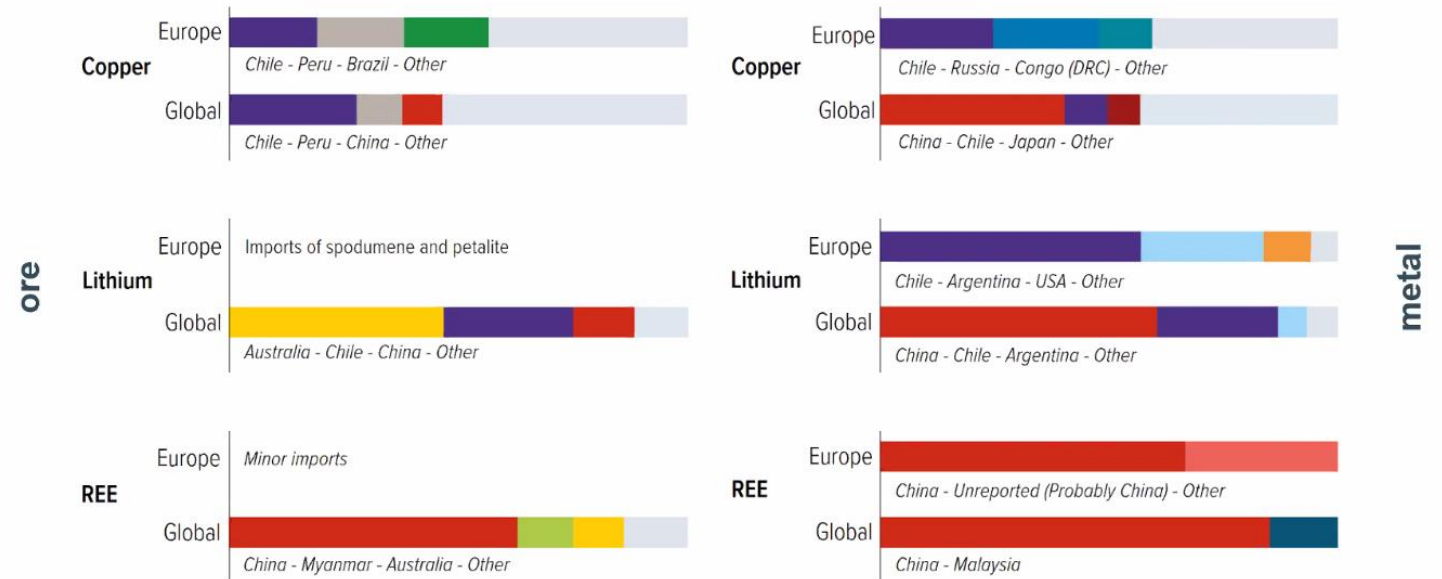
HIVA

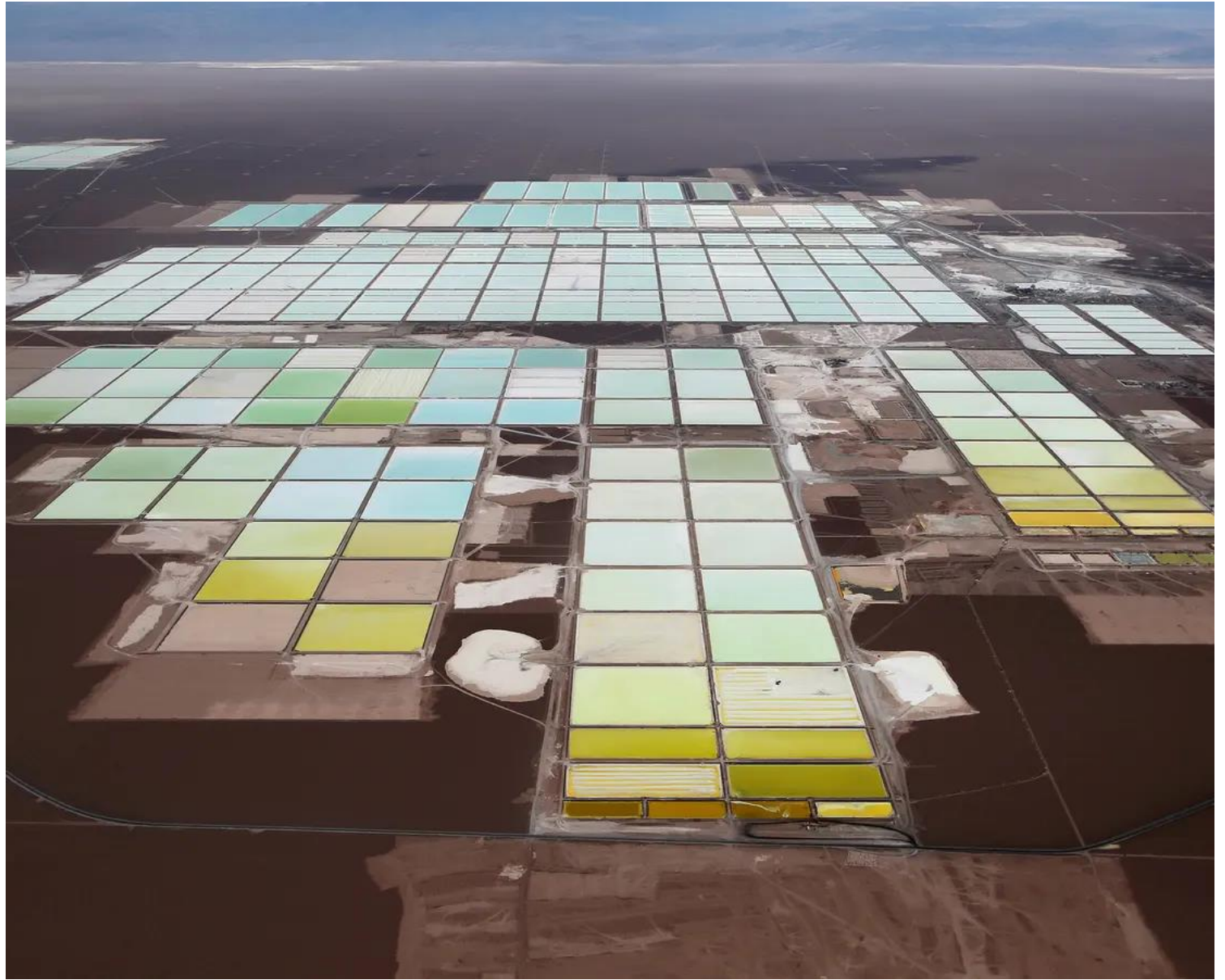
RESEARCH INSTITUTE FOR
WORK AND SOCIETY

The mineral revolution

Unprecedented effort to meet demand for 'transition minerals':

- Recycling
- Domestic production
- **Import of mined ores and manufactured metals**







What does the mineral revolution have in store for LMICs?

Do existing 'ethical supply chain initiatives' succeed in ensuring a more sustainable mineral revolution?



Flashback: the green revolution

- 1950s-1970s
- Unprecedented effort to eradicate global hunger (and the communist threat)
- Investments in agricultural research
- Diffusion of agricultural technology



Clear environmental costs

Questionable socio-economic impacts

- Consolidation of smaller (family) farms into larger holdings
- Mechanization leading to (on-farm) job loss
- Benefits those with capital to invest



Offsett by obvious benefits



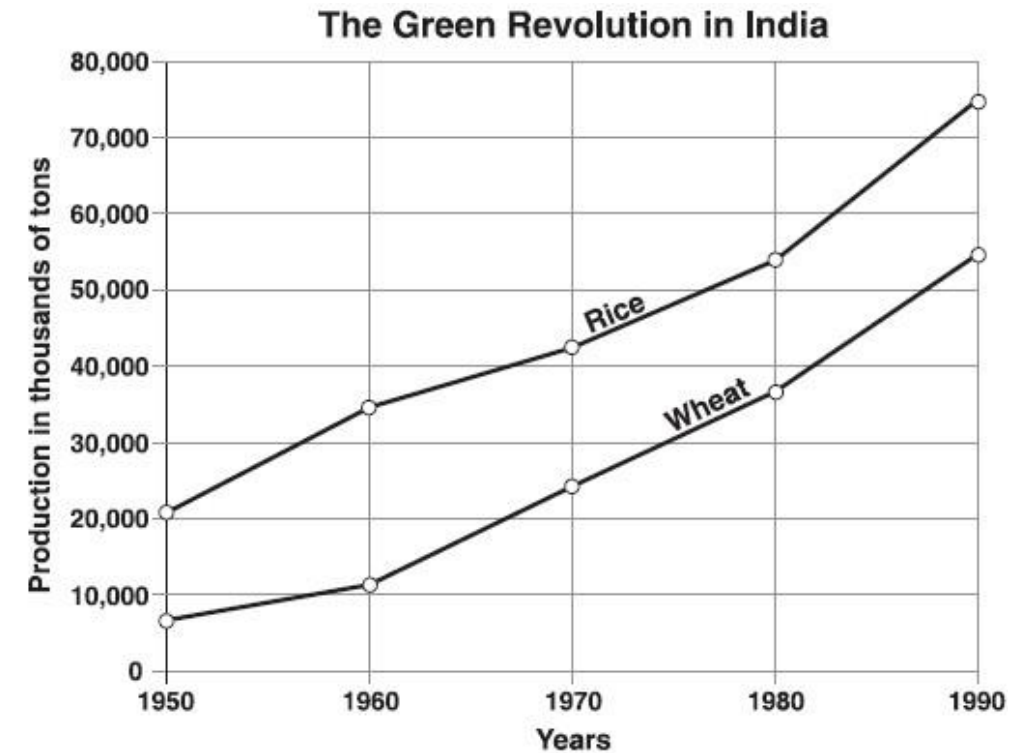
STRONG PRODUCTIVITY
GROWTH



ENHANCED FOOD
SECURITY



GROWING ON-FARM
INCOME → BOOST FOR
OFF-FARM INCOME



Source: Library of Congress, Federal Research Division (adapted)

From a
grain deficient nation
to **food security** for all



Green Revolution



The green revolution: A bilan

- Clear positive impacts for LMICs
- Blind for environmental and socio-economic externalities?





So what about the mineral revolution?



Adverse environmental impacts







Questionable socio-economic outcomes







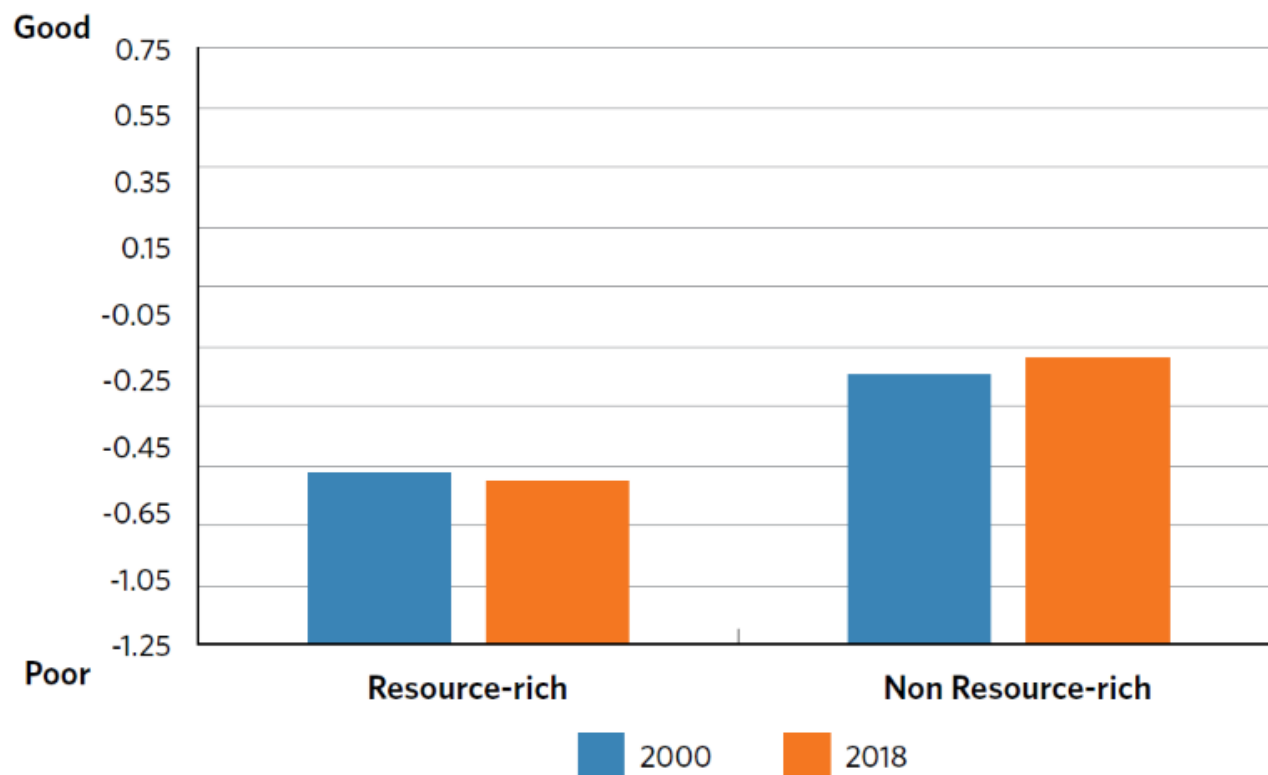
**FOR YOUR PROTECTION
PLEASE DECLARE AND
OPEN YOUR CARGOES
FOR INSPECTION. WE
ARE IMPLEMENTING
LAWS AGAINST ILLEGAL
CHEMICALS AND
ILLEGAL EXPLOSIVE.
THANK YOU FOR YOUR COOPERATION**



The resource curse explained

CHART 0.2: Control of Corruption, 2000 & 2018 (WGI): Resource-Rich and Non Resource-Rich Developing Countries

Base sample has 137 developing countries, of which country groupings include Resource-rich (79), Non Resource-rich (58).



Source: Kaufmann, Kraay, and Mastruzzi 2010, Kaufmann 2019.

The resource curse is a phenomenon that occurs when a country has an abundance of natural resources but cannot grow its economy. There are several reasons for it:

CORRUPTION

Bribery and embezzlement are rife in the mining and extractions industries, from extraction to the sale of the resources.



POOR GOVERNANCE

Often, governments rely too much on revenue from these resources and neglect other sectors of the economy.



INEFFICIENCY

Money from natural resource exploitation is used inefficiently and is not invested in the economy.



LACK OF TRANSPARENCY

The details of contracts between governments and mining companies are often kept a secret.



VOLATILE PRICES

Fluctuating resource prices also make countries that become over-reliant on their natural resources vulnerable.



THE DUTCH DISEASE

This refers to a situation where the development of one sector of the economy results in the decline of other sectors.



All bad news?

- Institutions matter
- Economic structure matters
- Type of mining matters



Science Photo Library

DEBSWANA
JWANENG MINE





Is artisanal and small-scale mining different?







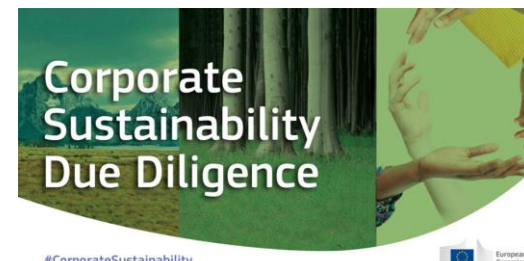


- **Key source of employment** for tens of millions of skilled and unskilled workers
- **Integrated into rural economy** through various backward and forward linkages



The mineral revolution: a bilan

- Adverse environmental impacts
- Questionable socio-economic impacts
- Benefits **not** yet there for everyone to see



Can 'ethical supply chain initiatives' do the trick?



IRMA ENGAGEMENT MAP

increasing transparency and catalyzing connections between mining stakeholders





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"Over t
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safety
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safe ar

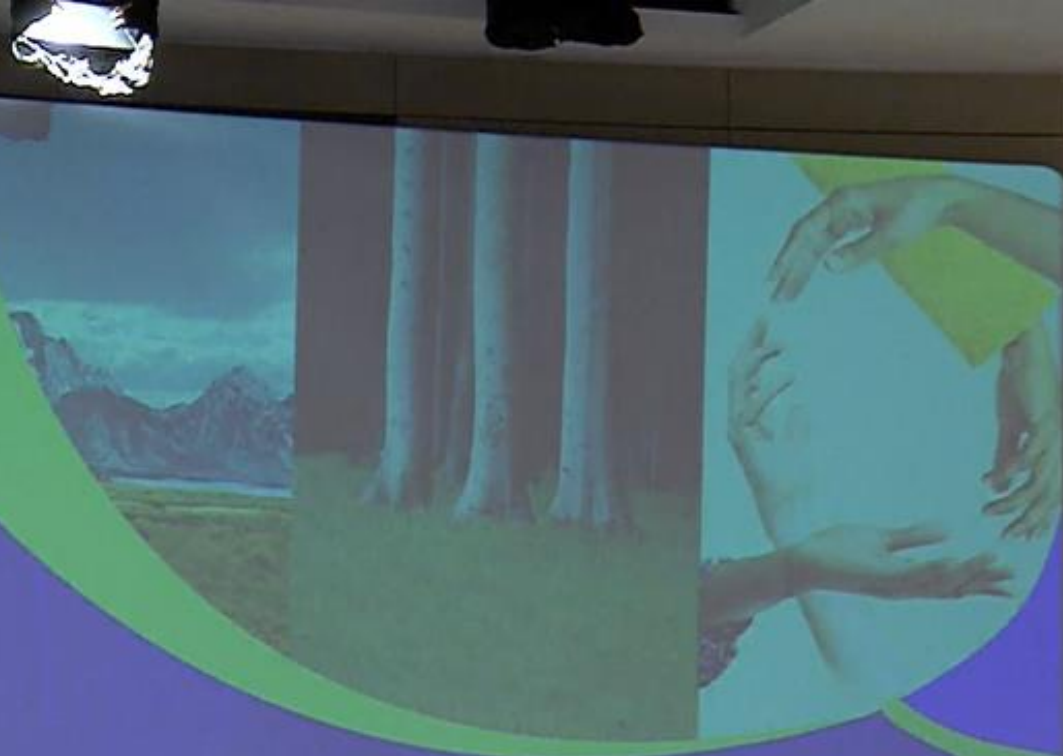


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COMPANIES TO RESPECT
HUMAN RIGHTS AND ENVIRONMENT
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