An Environmental Big Push for Latin America and the Caribbean

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American Steel Dialogue - IEA

São Paulo

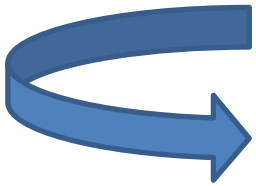
August 22, 2018



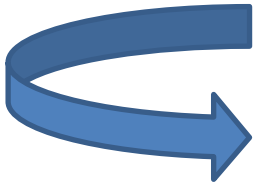
Buckminster Fuller (1895 – 1983)

"You never change things by fighting the existing reality. To change something, build a new model that makes the existing model obsolete".

Wasteful Economy



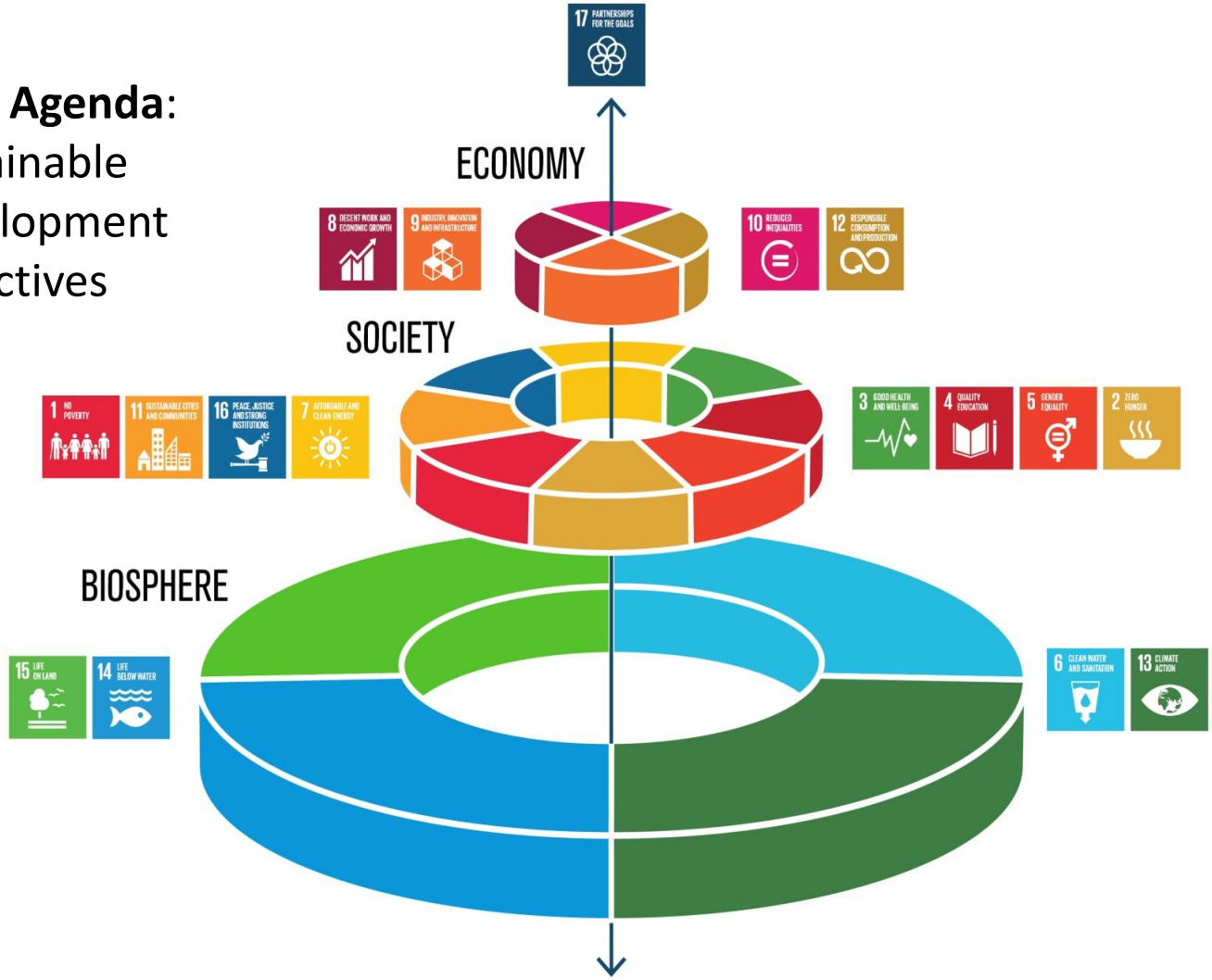
Sustainable Economy



Regenerative Economy

In the context of…

2030 Agenda:
Sustainable
Development
Objectives

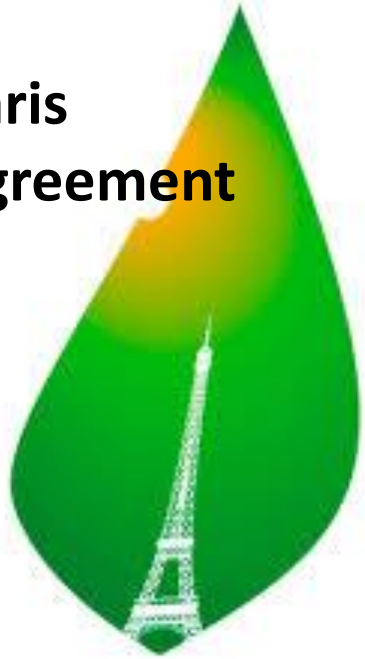


Graphics by Jerker Lokrantz/Azote

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In the context…

Paris Agreement



PARIS2015
UN CLIMATE CHANGE CONFERENCE
COP21·CMP11

Habitat III

HABITATIII
QUITO 17-20 OCTUBRE 2016

PRESENT DEVELOPMENT "MODEL"

INEGUALITY ENVIRONMENTAL CRISIS RECESSION BIAS

TECTONIC CHANGES

CHINA - USA

WORLD TRADE: WARS OR NEW AGREEMENTS

TECHNOLOGY REVOLUTION

CLIMATE CHANGE

DEMOGRAFIC CHANGE

LABOR MARKET EMPLOYMENT

THE ROLE OF THE STATE

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2030 Horizons

NEW INSTITUTIONS AND PUBLIC PRIVATE PARTNERSHIPS

Global level
Governance for new global public goods and services

Regional level
Consolidate regional joint positions and integration

National level
"Environmental Big Push""

Progressive Structural Change based on a "environmental big push"

Schumpeterian Efficiency
Sector intensives in knowledge and innovation

Keynesian Efficiency
Aggregate Demand Growth and active green fiscal policy

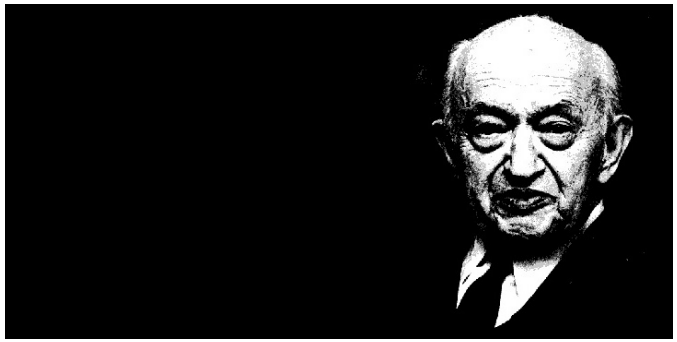
Environmental Efficiency
Economic growth with better living standards with decreasing use or generation of CO_2

The Big Push…

Paul Rosenstein-Rodan (1902 – 1985)

Theory of the "big push" – 1943

"…a certain minimum amount of resources must be devoted for developmental programs, if the success of programs is required. As some ground speed is required for the aircraft to airborne, in the same way, certain critical amount of resources be allocated for development activities. This theory is of the view that through 'Bit by Bit' allocation no economy can move on the path of economic development…"



…is an ambitious goal or idea



- Historical examples:
  - Silicon Valley in the USA
  - Production chains development in China
  - Renewable energy and waste management in Germany
  - Technological development in Japan and South Korea
  - Urban "suburbia" development in the USA

→ Convergent trend of multiple and different actors, sectors, investments; result of a reorientation of coordinated policies, investments, regulations, tax regimes, etc.

Environmental Big Push

- Mazzucato & Perez (2014): the direction of an environmental big push is defined as a fundamental strategy

    - A path towards sustainability has to be place in march by a set of clear, coherent and continuous public policies, without which investments, tax, regulation, prices and other components of the big push, if not it will not go through an innovation trend.

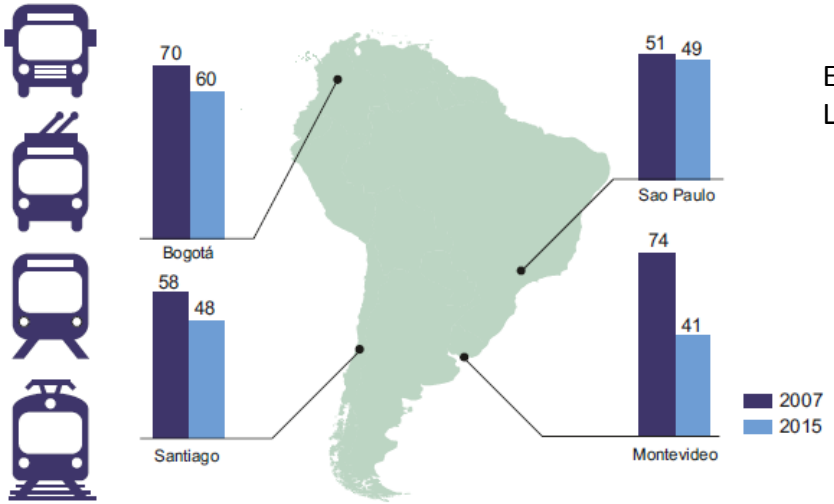
- Harris (2008): change in the energy and technological matrixes and in production patterns to greater energy efficiency and new low carbon sources. Necessary investments to make the transition to a low carbon economy should be seen as a gain more than costs.

→ **Environmental Big Push:** economic growth, employment generation, new production chains, lessening the environmental footprint and maintenance and recovery of production capacity of natural capital (including environmental services).

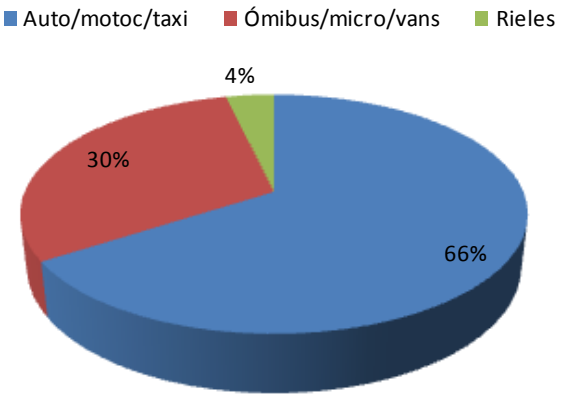


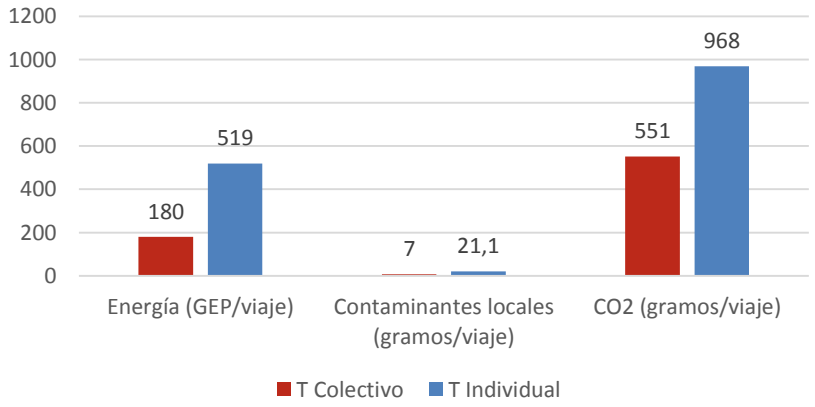
URBAN CONDITIONS

Selected cities: change in the share of public transports, 2007 y 2015 (in percentages) – CAF (2015)



Energy use by main transport mode , in urban areas of Latin America (in percentages) – CAF (2016)

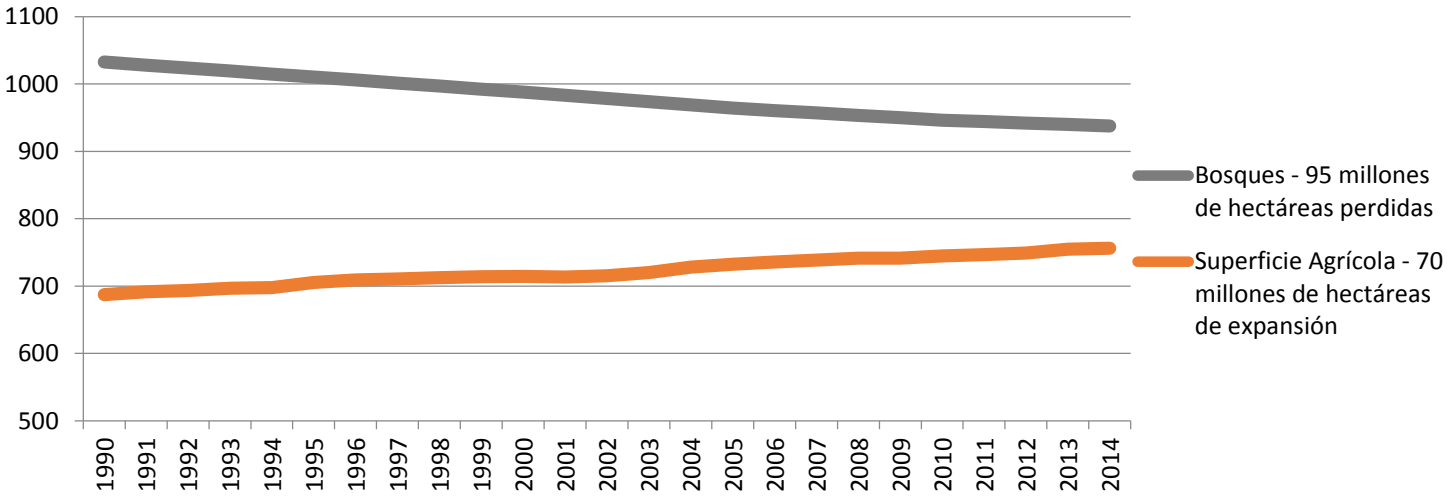


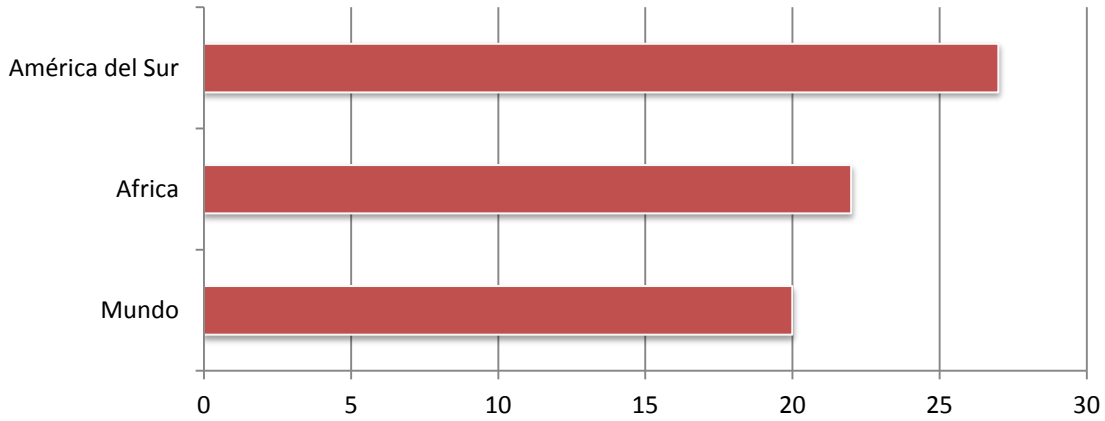


Energy use and emissions by trip: cities with more than 60 thousand hab. Brazil – 2014. ANTP (2015)

Rural conditions…

Use of soil 1990-2014 (faostat.org)



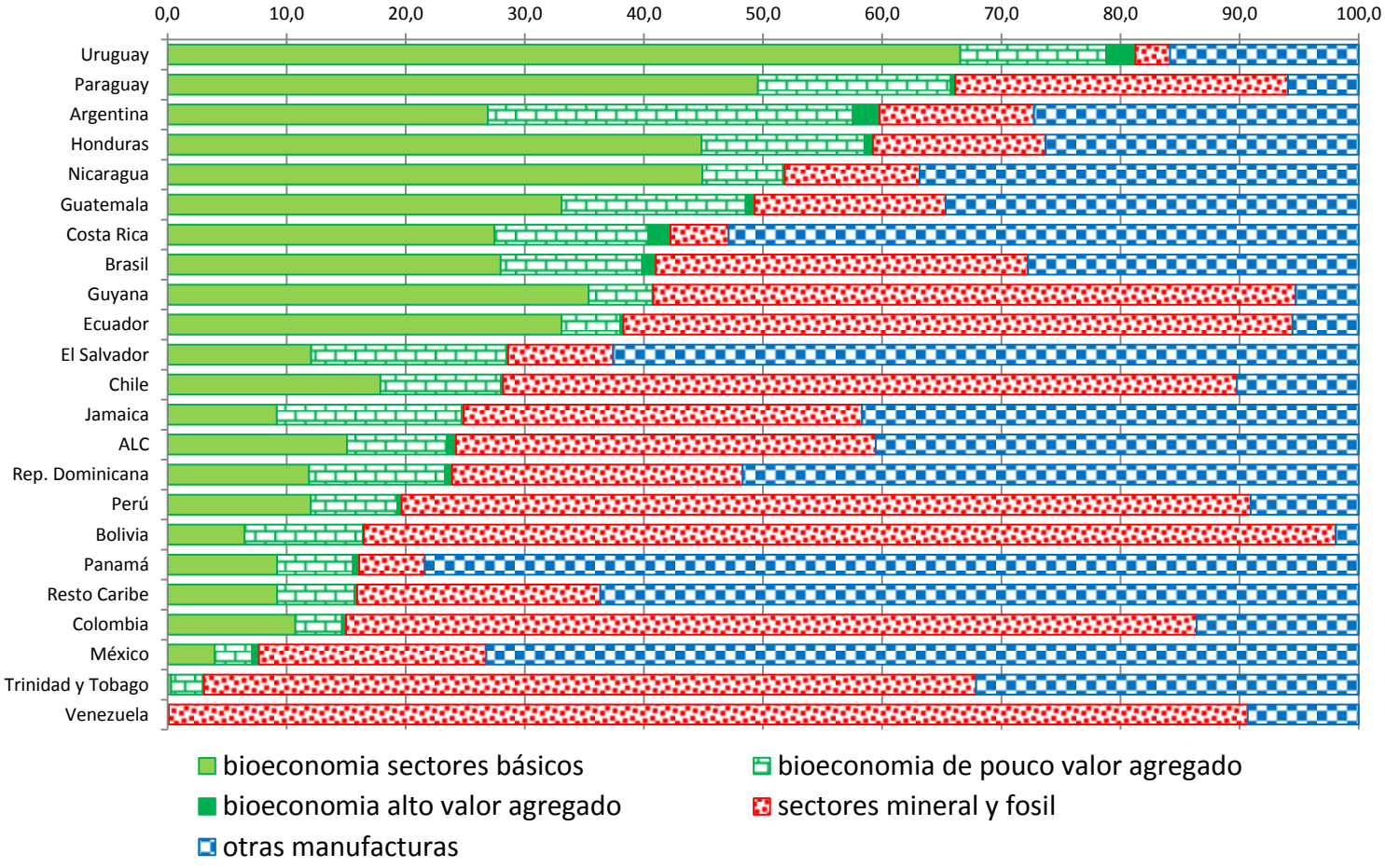


Land Productivity 1999-2013 (Global Land Outlook, 2017)

- percentaje de áreas estresadas, con pérdidas moderadas y en declive en relación a la superfície con cubierta vegetal

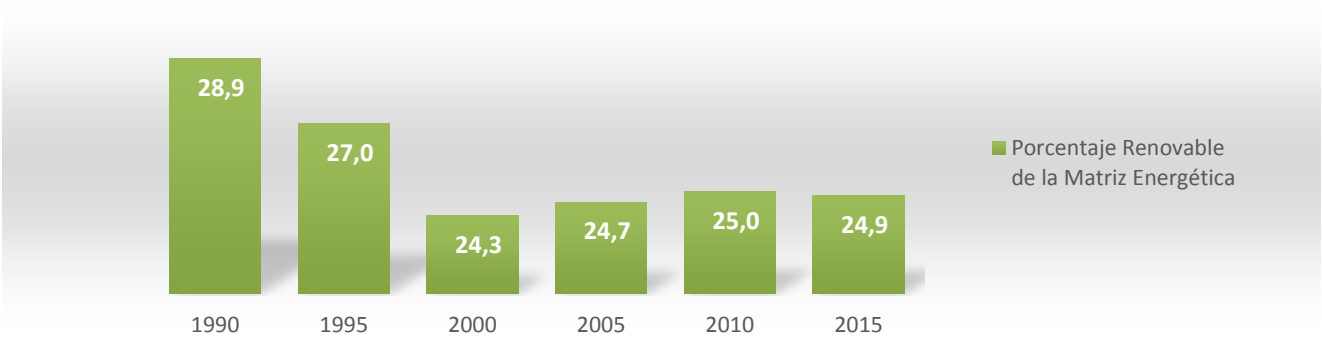
Natural resources conditions

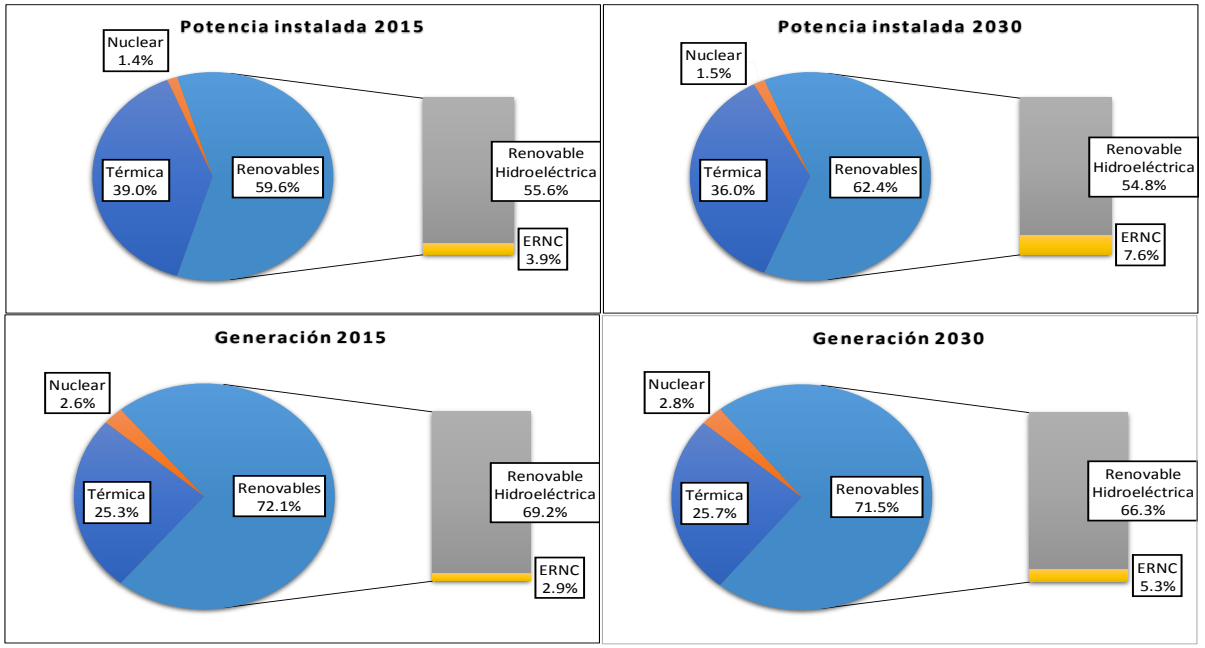
Export Composition according to its importance to bio economy, by countries 2010-2015 (Rodriguez et al, 2017)



Renewable Energies conditions …

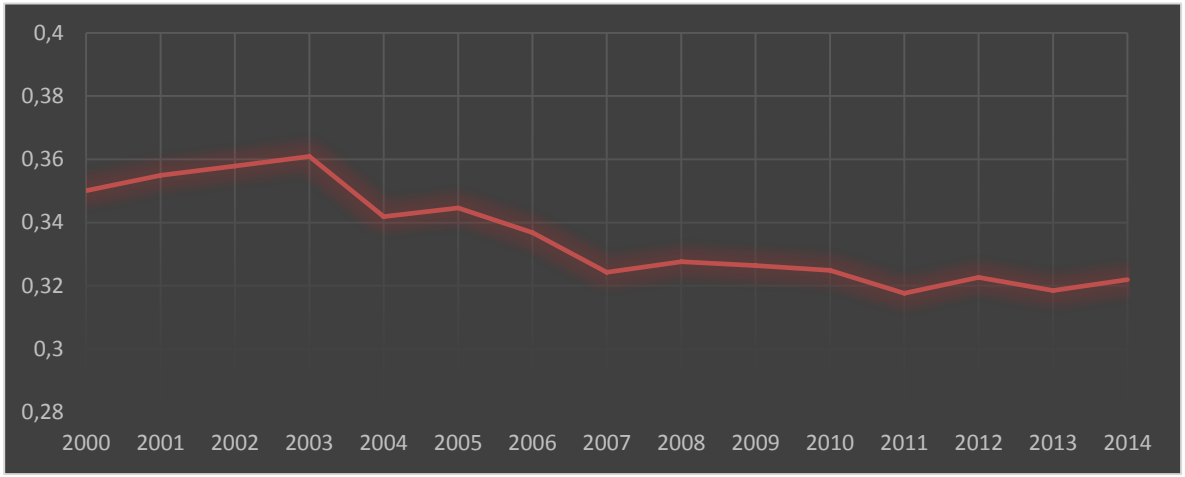
Participation of supply of renewables in the Energy Matrix of Latin America and the Caribbean (Cepalstat - sep/17)



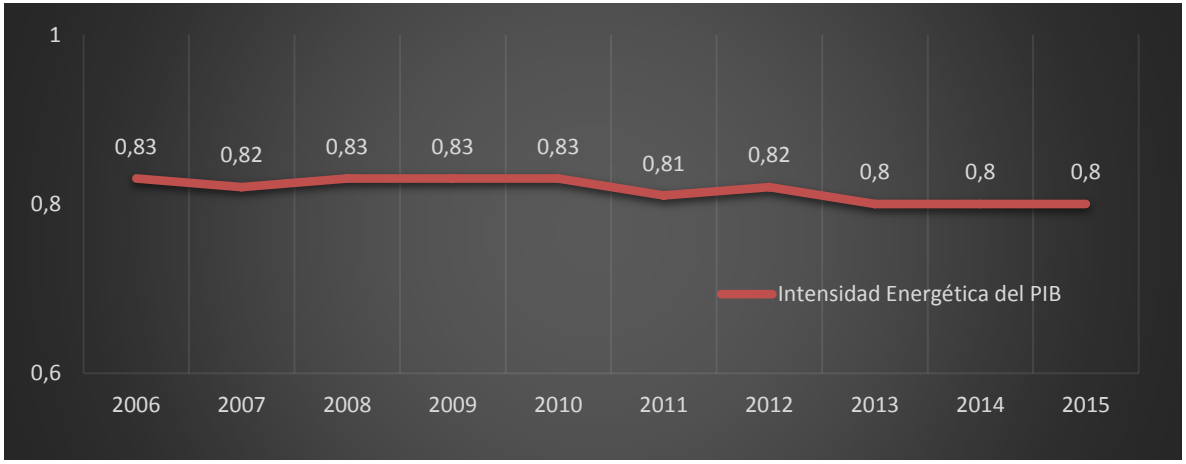


Installed Output and effective generation of New Renewable energies in the electric matrix in South America until 2030 CAF (2016)

Energy, carbon and material intensities

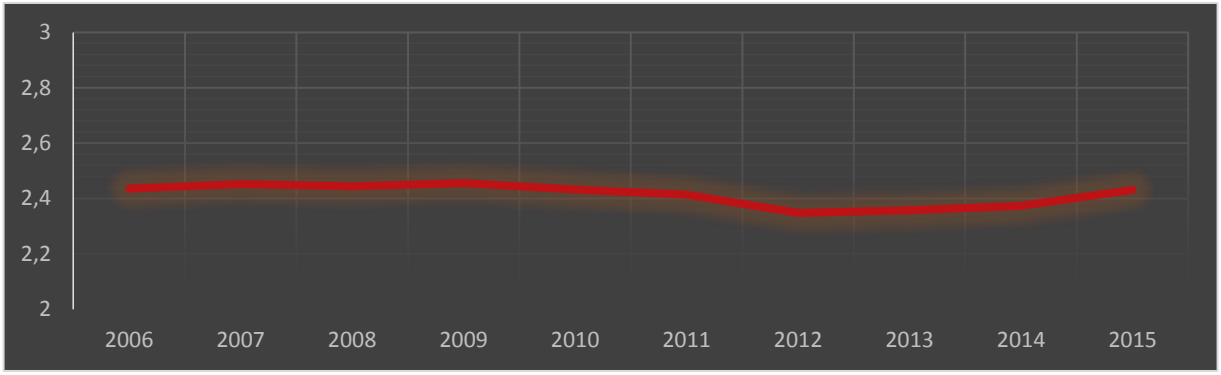


Carbon intensity of the economy (kg CO2 for each GDP dollar (2010) - World Development Indicators", 2017



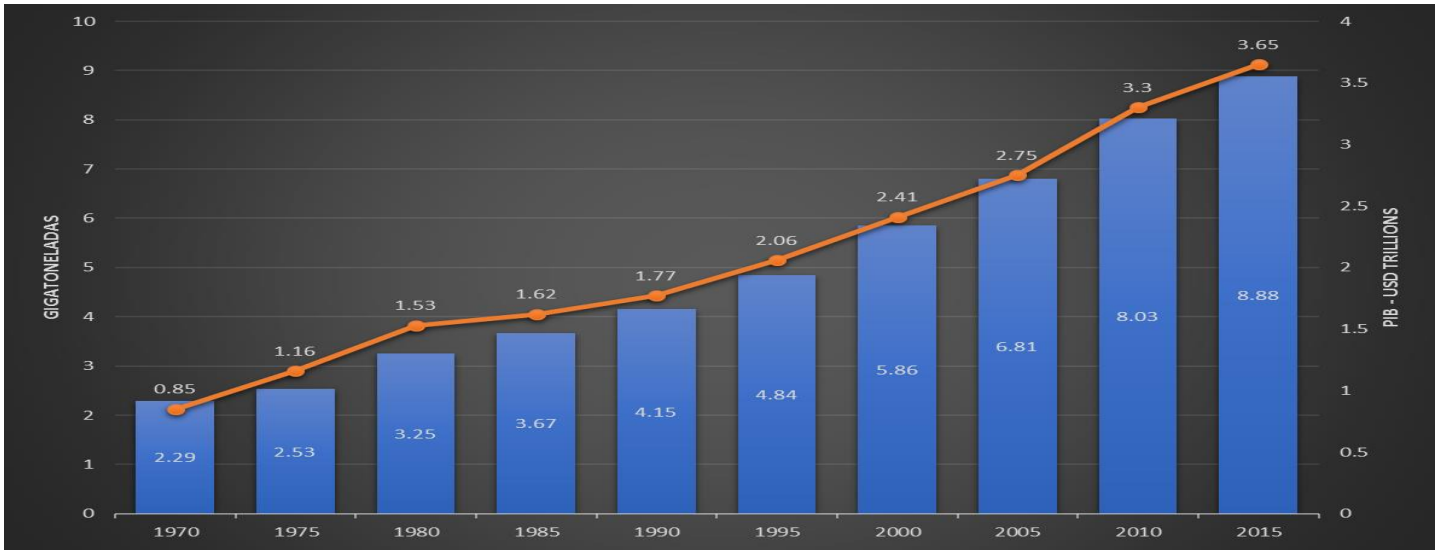
Energy intensity of the GDP in LAC
(in thousand of barrels equivalents per million of dollars of GDP at 2010 prices)
Cepalstat, 2018

Energy , Carbon and Material intensities



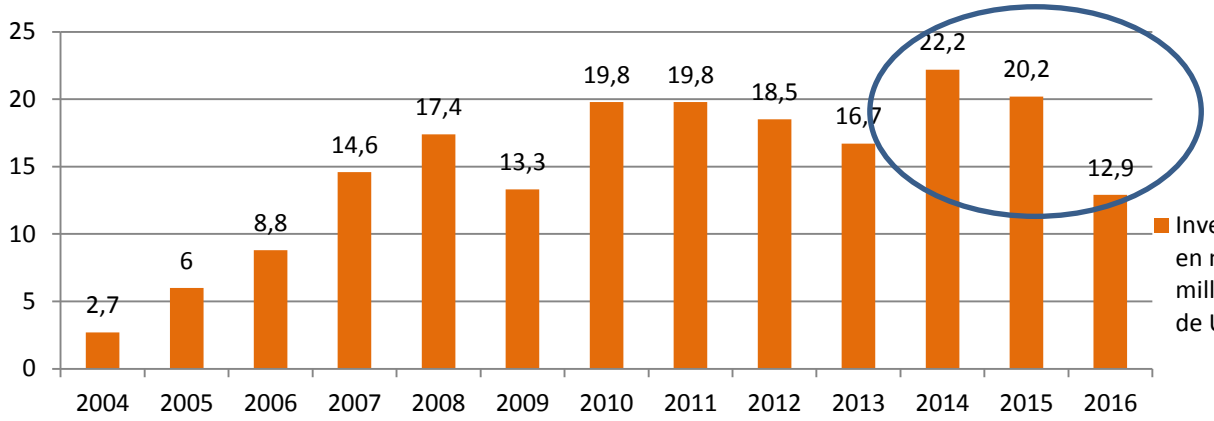
Material intensity- Domestic Extraction (kg per USD 2005) - ALC 2006-2015

Material Intensity : Domestic Extraction Total (less air and water) and GDP– LAC:1970-2015



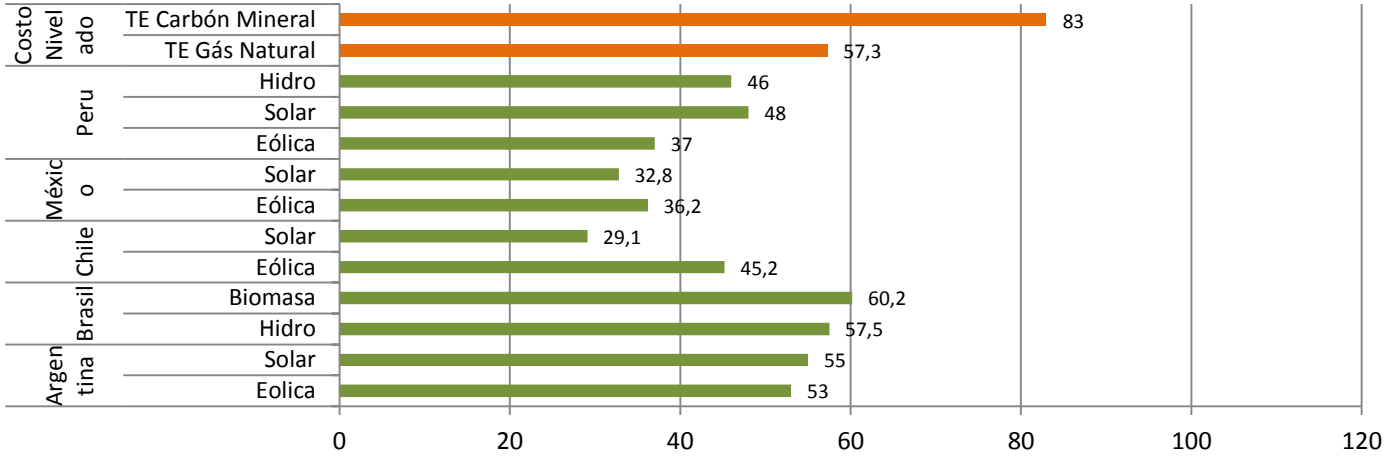
Fuente: UN Environment International Resource Panel Global Material Flows Database - julio/2018

Renewable Energies conditions…

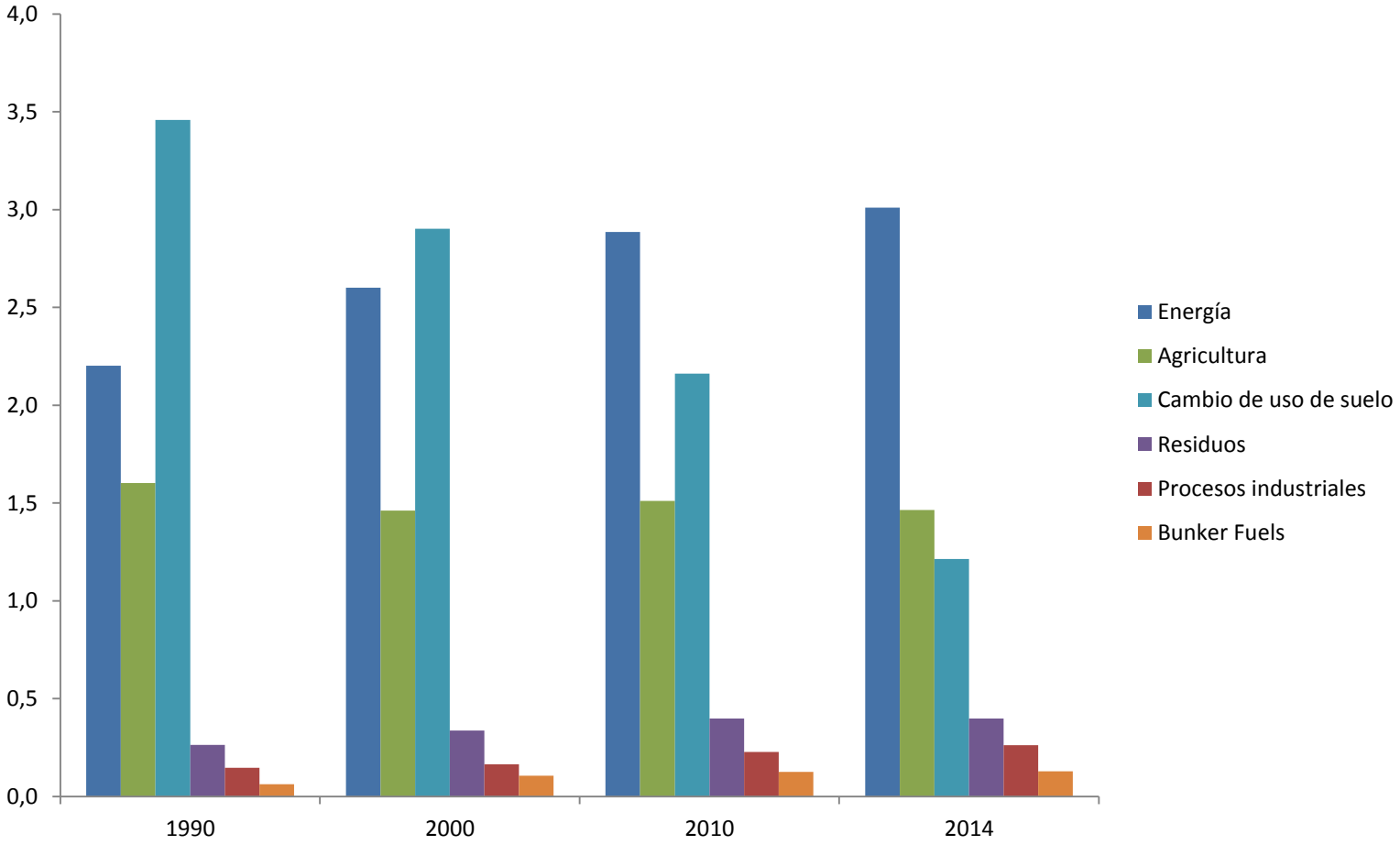


Total Investments in Latin America and the Caribbean 2004-2016 (IRENA Dashboard)

Leveled cost of Thermoelectric units with fossil fuels and auction prices of renewable energies in USD/MWh - IRENA (2017), EIA (2017) y EPE, 2016



Per Capita Emissions (tCO2 e) - C 1990-2014



Fuente: Comisión Económica para América Latina y el Caribe (CEPAL) con datos de Climate Analysis Indicators Tool (CAIT) 2.0. ©2015. Washington, DC: World Resources Institute. Available online at: http://cait2.wri.org

Public Policies for Sustainable Development

Information and Diagonosis

Incorporate decision variables

- Economic Impacts of Climate Change studies
- Sea shore impacts of Climate Change studies
- Expenditure and Investment on Environment i

Environmental Performance

Impact on environmental performance investment as motor of sustainability.

- Evaluations
- Instruments, laws, policies
- Big push environment projects

International Agenda

Access to information, public participation, accountability, sustainable society an development

- SDG/ 2030 Agenda
- Escazú Agreement





Muito obrigado!

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