

Maria Cristina Oliveira Souza<sup>1</sup> (mcris.ssouza@gmail.com); Rosana Icassatti Corazza<sup>2</sup> (rosanacorazza@gmail.com)  
<sup>1</sup>PhD student in Science and Technology Policy - State University of Campinas (Unicamp); <sup>2</sup>Assistant Professor of Institute of Geosciences (State University of Campinas - Unicamp) in Department of Science and Technology Policy

State University of Campinas – Unicamp - Brazil

Keywords : Climate change; national emissions profiles; climate regime; BASIC

**Abstract:** The notion of climate regime is applied to understand the global normalization of the problem of climate change. Quantitative and qualitative data on greenhouse gas emissions are used in order to present and discuss recent changes in emissions profiles of selected countries involved in the global climate governance. In line with these changes, the climate regime has also been transformed. These changes include the emergence of the "bottom-up" approach, represented by the Paris Agreement, which crowned the 21st Conference of the Parties to the UN Framework Convention on Climate Change at the end of 2015 as an alternative to "Top-down" approach, which characterized the negotiations under the aegis of the Kyoto Protocol. Countries and group of countries GHG emissions profile changes allows to analyze new interest coalitions that take place successive rounds of negotiations, especially BASIC, a group formed by Brazil, South Africa, India and China. Recent interest configurations have been shown to give rise to new coalitions and leadership in the negotiations on the issue, while reinforcing old conflicts and creating new tensions. This paper provide elements for understanding the directions of international climate negotiations that have led to a reconfiguration of the architecture of the climate regime, with substantive changes in terms of leadership, coalition of countries and attribution of responsibilities.

## Introduction

### International regimes

"principles, norms, rules and decision-making procedures around which actor expectations converge in a given issue-area" (Krasner, 1982).

### Global Climate Regime

"one of the most complex and relevant international regimes because of its implications to global economics and environment. [...] instruments: FCCC and the international climate Protocols and Agreements" (Viola, 2002).

### Global Commons

"resource domains or areas that lie outside of the political reach of any one nation State. [...] four global commons namely: the High Seas; the Atmosphere; Antarctica; and, Outer Space" (UNEP).

### Global Carbon Budget

"the amount of carbon dioxide emissions we can emit while still having a likely chance of limiting global temperature rise to 2 degrees Celsius above pre-industrial levels." (WRI).

### This paper

by assessing and analyzing GEE emissions profiles of selected countries and group of countries, especially BASIC (Brazil, South Africa, India and China), provide elements for understanding the director of international climate negotiations.

## Methodology

## Theoretical approach

- International Relations (international regimes; climate regimes)
- Climate Economics and Governance (global commons; carbono budget)

## Semi-sistematic literature review

- Sources: SBU, Periódicos CAPES, Scielo, Google Scholar

## Databases

- GEE emissions: CAIT/WRI; SEEG/Observatório do Clima
- GDP and Population: WorldBank Database; DEESA/ONU

## News clippings

- Themes: climate change, energy, global climate negotiations; iNDC
- Sources: Folha de São Paulo, Estado de São Paulo; Valor Econômico; Agência Brasil; O Eco; Revista Pesquisa FAPESP; Deutsche Welle and Heinrich Böll Foundation.

## Results and Discussion

**When:** COP 3 (1997)

**Where:** Kyoto (Japan)

**Lidership:** Europe

### Archytecture:

Annex I : Early industrialized Parties, members of UNFCCC with mandatory GEE reductions related to 1990 levels.

**Rest of the World:** Developing countries with no mandatory emissions reductions

**Period of duration:** December 1997 to February 2005, extended to 2012

Kyoto Protocol

**Figure 1.** Selected indicators for group of countries in the initial configuration of Kyoto Protocol (by1990)

Countries		Indicators			
		Cumulative (1850 - 1990) (1) *	Current (1990) (1) *	Popula - tion**	GDP***
Annex I (2)		80,94%	65,35%	21,93%	82,45%
	Rest of the World (3)	19,06%	34,65%	78,07%	17,55%

Sources:

Own elaboration based on \* CAIT, \*\* United Nations - Department of Economic and Social Affairs e \*\*\* World Bank

Notes:

(1) CO<sub>2</sub> emissions, except AFOLU. (2) Annex I Countries according to the original configuration of Kyoto Protocol. (3) Rest of the World: All the countries of the world, except Annex I countries.

**When:** COP 15 (2009)

**Where:** Copenhagen (Denmark)

**Lidership:** US and BASIC (Brazil, South Africa, India and China)

### Archytecture:

**BASIC** – assumes GHG emissions reductions targets.

**Developed countries** – financial commitments to support less developed countries (most vulnerable) to mitigate and adapt.

**Observation:** Countries should present until 2010 their targets to avoid 2°C rise of temperature until 2100 (first drafts to Paris Agreement)

Copenhagen Agreement

**When:** COP 21 (2015)

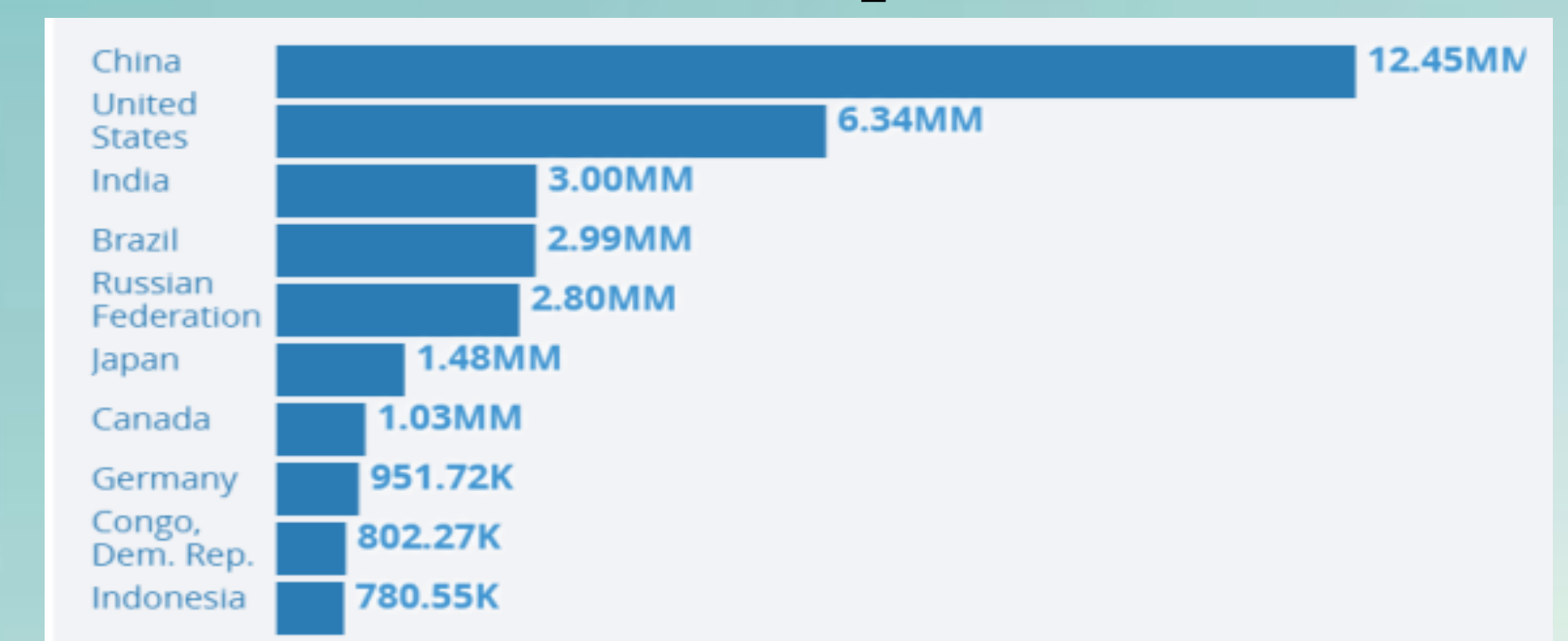
**Where:** Paris (France)

### Agreement

**Characteristic:** Determine the global average global temperature rise below 2°C above pre-industrial levels and strive to limit the temperature rise to 1.5 °C above pre-industrial levels, recognizing that this would reduce the risks and impacts of climate change; to this end, signatory countries need to present their "Intended Nationally Determined Contributions" as a way to present their own commitments for GHG mitigation.

Paris Agreement

**Figure 2.** Ranking of the ten largest GHG emitters in 2012 (in Kt CO<sub>2</sub>e)



Source: WorldBank Database (2017)

## Conclusions

- The change from the Kyoto Protocol regime to the Paris Agreement meant a change as the iNDCs are presented **voluntarily** by the sending countries, while the Kyoto Protocol proposed **mandatory** targets for countries from Annex I ;
- How can countries accomplish and will maintain their goals?
- The voluntary goals presented by the countries in the Paris Agreement must be legally binding so that there is an effectiveness that promotes the achievement of the goals;
- It is not possible to conclude whether the goal of limiting global warming to 2 degrees Celsius without mandatory action on the largest corporate issuers could be realized. There is an urgent need for corporate engagement to be on the agenda of global climate governance.

## References

BUENO RUBIAL, María del Pilar, "El Acuerdo de París: ¿una nueva idea sobre la arquitectura climática internacional?", Relaciones Internacionales, nº 33, 2016, ps.75-95.

CAIT. Climate Data Explorer - Historical Emissions. 2016.

United Nations - Department of Economic and Social Affairs. Population. 2016.

VIOLA, Eduardo. A dinâmica das potências climáticas e o Acordo de Copenhagen. Boletim da Sociedade Brasileira de Economia Ecológica. Edição Especial n. 23-24. Jan. a ago. 2010. p. 16-22.

World Bank Open Data (Org.). World Bank Open Data. 2016.

Authors gratefully acknowledge the financial support of CNPq in the form of a Masters' scholarship, the institutional backing from Technological Science and Policy Graduate Program at UNICAMP's Geosciences Institute. As costum, authors take intere responsibility for remaining erros or imprecisions.