Carbon metrics and the Paris Agreement

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A comprehensive and multilateral response to climate change was reached with the adoption of the Paris Agreement in late 2015, after more than two decades of international negotiations. As stated by UN Secretary General Ban Ki-moon, "We have entered a *new era of global cooperation* on one of the most complex issues ever to confront humanity. For the first time, every country in the world has pledged to curb emissions, strengthen resilience and join in common cause to take common climate action. This is a resounding success for multilateralism."[1]

Indeed, 'climate change' as a unifying global narrative has gained traction over the last decade as a new paradigm for international cooperation. This movement got a decisive push with the seminal publication in 2006 of the report, *The Economics of Climate Change*, known as the *Stern Review*, the first to make 'an economic case of climate change'. Since then, the opportunities that a global transition to a low carbon economy could bring to promote (green) growth and foster the international economy has come to replace largely in the hegemonic discourse the promises offered by free trade and WTO in the last decade of the XXth century. In this sense, the Paris Agreement was a resounding success for multilateralism, as it has been instrumental to the reboot of the Bretton Woods system, its institutions and governing principles.

What we generally refer to as 'climate policy' can be described in its core as a global process of 'alignment' of national economies, where economic prospects of development and growth are subsumed under the climate reasoning – ultra reduced to CO_2 terms and equivalence.

This process, and its intrinsic contradictions, is expressed in the backbone of the Paris Agreement, the so called Intended Nationally Determined Contributions (INDCs) which most countries have submitted before Paris and now form the basis of the 'bottom-up' approach to build up global emission scenarios and temperature projections. Countries on a voluntary basis submitted how much they were commiting to reduce in CO_2 emissions to contribute to the long-term goal of the Agreement, that is: "to strenghten the global response to the threath of climate change...holding the increase in the global average temperature to well below 2° C above pré industrial levels and pursuing efforts to limit the temperature increase to 1.5° C above pre-industrial levels".[2] To this end, some countries calculated economy-wide targets; others sectoral targets and others the carbon intensity per unit of GDP. Reductions in emissions levels were calculated either over a base year as a historical reference level; or projecting into the future a business-as-usual scenario, committing to reduce in relation to the estimated increase, in this case, "avoiding" an emission that "could have been emmited". Some countries included additional scenarios with "conditional" targets: for reaching 2° C and an option for increased ambition, to reach 1.5° C, if another country wants to provide economical support.

To reach its main goal (temperature stabilization), maybe one of the most controversial provisions of the Paris Agreement is that in setting the world into a 'low carbon' future, it

has been agreed that parties can cooperate on climate change using "internationally transferred mitigation outcomes" (ITMOs). This assures that 'carbon' reductions can circulate internationally to 'offset' emissions made somewhere else in the globe, producing a global 'net' effect. This complex approach on accounting is further complicated when the core idea of 'net' effect on climate – acknowledged also by the agreement – includes that those "mitigation outcomes", ITMOs, are themselves already the result of a 'netfiyng' equation done previously domestically. That is, an unit of a "mitigation outcome" produced by a country can be the adjusted result of an "emissions by source" (an energy facility, for example) minus a "removal by sink" (at a forest). This calculus of a global 'net' optimum being made in terms of CO_2 equivalents, admitted by the science basis that supports the negotiations, is in many ways a grotesque portray of how 'environmental integrity' was forged and fitted into the dominant instrumental economic rationality, at the (very high) cost of biodiversity, traditional knowledge systems, localized impacts and conflicts, etc.

Carbon metrics

If under the climate narrative, a new universalism is being promoted, it is worthwhile a critical look on what it promotes. A consensus has been agreed in driving humanity towards a 'low carbon future'. The 'transition to a low carbon', or 'carbon neutral', future as legitimate and desirable common goal to be aspired for all societies around the globe.

Nonetheless, the sense of setting a 'global transition' whose meaning revolves around carbon seems to have been incorporated in a very fundamental level within the discourse and strategies of key hegemonic actors: mainstreaming 'carbon' in politics has even reached the G7. Comprising the largest high-income economies (the United States, Japan, Germany, the United Kingdom, France, Italy, and Canada) the group jointly announced in 2015 the commitment of its members to a *"decarbonisation of the global economy over the course of this century"*.[3]

While the end goal of 'carbon pricing' is referred as the "crown jewel" of the international climate policy by the World Bank and the International Monetary Fund, to '*put a price on carbon*' has been turned into their new 'cause'.[4] Indeed, beyond rhethorics and an opportunity for rebranding these institutions and the role they shall play in this century, "there is a growing sense of inevitability to put a price on carbon".[5]

Climate change has been, to a large extent, equated to the issue of CO_2 (carbon dioxide) emissions or simply, 'carbon'. Over the last two decades at least, carbon dioxide (CO_2), or the *über* simplified term 'carbon', has been growing in relevance as a fundamental category through which we apprehend the world we live in. 'Carbon' has become a central element because it captures and communicates the *Zeitgeist* of our times: the obsession with climate change and the threats it poses to the continuity of life on Earth (Moreno 2015).

The concern with climate change, and thus 'carbon', as a central role to the contemporary globalized mindset and the course of our shared, common narrative. The reference to "carbon" has turned into an unavoidable element of how we talk, make sense, communicate and act upon reality, and, in a very fundamental way, how we envision and plan the future. Around the word 'carbon' we have been shaping content and meaning that is central to political discourse and action in the 21st century. The reference to 'carbon' plays a central role in providing a galvanizing referent of intelligibility to a complex and multilayered phenomenon with wide implications on a vast array of social interactions as climate change.

The sense of setting a global transition whose meaning revolves around carbon relates

to the concerted effort of re-engineering the world economy away from its fossil fuel dependence. This task, unprecedented in its scale and scope, goes way beyond re-shaping energy and resource policies worldwide. It entails challenging the very core material basis on which our petro-dependant civilization was built. To this aim, an international coordination framework is needed to give support and coherence. In this landscape, we witness the current shaping and alignment of public polices all over the world to respond to an economic rationality that takes 'carbon' into account, factoring it increasingly as *a new macro-economic variable*. This process has been epitomized in the Paris Agreement. The agreement has been cherished as inaugurating 'a new era for global cooperation', where 'global' concerns the unequivocal acceptance of a single common metric and although the agreement will enter into force from 2020, it has fully embodied the 'carbon metrics' as its cornerstone, galvanizing a pattern that is here to stay.

Market based environmentalism

A decade ago, in 2006, *The Economics of Climate Change* report was launched with a major media impact for turning the environmental concerns over global warming into a "serious" economic case. Pioneering a new economic logic, the report was able to translate for the first time into economic terms the costs – but also the business and profit opportunities – of acting on climate change. It was a game-changer in the sense of succeeding in leading the environmental crisis into the main stage of international politics under the banner that the transition to a green, low-carbon economy would offer enormous opportunities for 'better and stronger' economic growth. To this end, its main recommendations were three: *carbon pricing*, technology policy and energy efficiency.

On the occasion of the report launch, lead author Nicholas Stern rounded up his reasoning: *"The science tells us that greenhouse gas (GHG) emissions are an externality; in other words, our emissions affect the lives of others. When people do not pay for the consequences of their actions we have market failure. This is the greatest market failure the world has seen."*[6] Carbon pricing, emissions trading or regulation and carbon taxes would show to society the "true cost" of their actions. Addressing climate change through accepting the redeeming character of the market as fundamentally shaped by the formal principle of economic competition, would allow, ultimately, least-cost options to mitigation and profit.

The Stern Review, as it became known, was a watershed in the consolidation of the broader 'greening of the economy' as a hegemonic and programmatic response of capitalism to a new stage of accumulation (Moreno 2013). It also crystallized in a laconic way the *mentalité* of its time, shaped by instrumental rationality and consumer culture which led to the widespread social and intellectual acceptance and naturalization of the trend towards market minded environmentalism, the one that can 'think as an economist' (Krupp 2008).

In contrast with the erosion of the conditions of life on Earth and climatological uncertainties, stands the carbon trading dogma. Taking into consideration the time span between when the idea was first officially adopted into an international mechanism, back into 1997 as one of the flexibility mechanism of the Kyoto Protocol (stemming from the experience of market based environmental policy introduced domestically in the US in the 80s'); to the operational start in 2005 of the oldest and largest established market to date, the European Union Emission Trading Scheme (EU-ETS); to the severe criticism it has received on its environmental inefficacy, to the merge of almost collapsing a few years ago, its truly stupefying how the carbon trading dogma has reached with the Paris

Agreement a global scale. Today a provision for it (Article 6 of Paris Agreement) lies at the core of the most ambitious agreement reached at multilateral level on an environmental issue. In this sense, it will play a key role in the policy strategies, economic and political discourses and 'transition thinking' landscape. We should ask here, 'transition' to where?

Counting carbon and greening capitalism

Galvanizing a pattern, the multilateral response to climate change reaffirms in a very pivotal way the carbon trading dogma. In order to prepare themselves to this common future, countries are internalizing methodologies and procedures for transparency, as all units should meet common requirements under which can be measured, reported and verified (MRV), creating registries, organizing inventories and systematically integrating this new global abstraction under the "legibility" schemes of the State, as James Scott has elaborated upon (Scott 1999). To measure, report and verify carbon units its now an integral scheme of the 'seeing like a State' apparatus, the imposition of schematic visions that do violence to complex interdependencies that are not, and cannot be, fully understood, denying the recognition of local, practical knowledge as important as formal epistemic knowledge. As a new global abstraction, 'carbon' and the *über* reductionism it implies, threatens with the risk of "epistemicide" and "cognitive injustice"(Santos 2014), submitting the complexity of local knowledges, cultures and agroecological diversities into a homogenizing accounting frame, in which the opacity of power relations is instrumental for justifying and advancing a market based, technocratic and managerial approach to the environmental crisis, led by the dogmatic rely on coming of a global carbon market.

In this context, we must consider, in addition, the emergence of private carbon rights, a new and additional layer of property rights that although associated to the land (as in a forestry carbon scheme) can be owned separately. As a new chapter of the commodification of the intangibles process, this debate weaves together old and new themes to the reproduction of capitalism. It reiterates old dynamics and installs it within contemporary platforms. If we look retrospectively, the emergence of private property has a history, as it does the historical process of creating fictitious commodities, as described by Karl Polanyi. However, this classical theme must be analyzed *vis a vis* the contemporary cognitive mandate, and the digital platform. As you are inventorying carbon, an intangible asset, this process is thoroughly mediated by overlapping layers of technology, epistemic assumptions and virtualized power in accounting devices: from remote sensing systems, satellites images, drone, temperature stations, GPS, software, computer models, algorithms inscribed into the models, baselines and data-bases that need to be adjusted/corrected, aggregated, etc. (Moreno 2016).

Largely over the course of the last decade, the reference to 'carbon' has been mainstreamed to become an essential element of the current economic rationality, as a way to factor in externalities, to value 'natural capital', giving visibility (through pricing) to the 'nature that capital can't see'. This view, backed by schools of though identified with environmental/ecological economics has been taken critically from a political ecology perspective. Consonant with the instrumental reason it has dangerously embarked in a path of widespread cognitive acceptance to became a sort of ultimate 'exchange rate', intended to communicate and serve as an essential component of intelligibility of our times, as well as a device of valuation, determinant of hard choices to be made by societies at large.

Translating a multi-dimensional and complex ecological and social crisis such as climate

change into tons of carbon dioxide equivalents (that we can measure, count, own, put a price to, and trade) not only narrows our vision of what would be truly transformative actions, but allows the actors and interests running the current system to remain unchallenged. Or worse: it can set a trail to deepen and expand the systemic powers we are trying to overcome.

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Notes

1 http://newsroom.unfccc.int/unfccc-newsroom/finale-cop21/ (27.08.2016)

2 Paris Agreement, Art. 2. §1, (a)

3 Under the slogan "Think Ahead, Act Together", G7 leaders (at their latest meeting, in June 2015 at Schloss Elmau in Germany, agreed to back the recommendations of the IPCC, the United Nations' International Panel on Climate Change, to reduce global greenhouse gas emissions at the upper end of a range of 40% to 70% by 2050, using 2010 as the baseline. *"Mindful of this goal (hold the increase in global average temperature below 2° C) and considering the latest IPCC results, we emphasize that deep cuts in global greenhouse gas emissions are required with a decarbonization of the global economy over the course of this century. Accordingly, as a common vision for a global goal of greenhouse gas emissions reductions we support sharing with all parties to the UNFCCC the upper end of the latest IPCC recommendation of 40 to 70% reductions by 2050 compared to 2010 recognizing that this challenge can only be met by a global response. We commit to doing our part to achieve a low-carbon global economy in the long-term including developing and deploying innovative technologies striving for a transformation of the energy sectors by 2050 and invite all countries to join us in this endeavor. To this end we also commit to develop long-term national low-carbon strategies.*" https://www.g7germany.de/Content/DE/_Anlagen/G8_G20/2015-06-08-g7-abschluss-eng.pdf?__blob=publicationFile (27.08.2016)

4 http://www.nytimes.com/2016/04/24/us/politics/carbon-pricingbecomes-a-cause-for-the-world-bank-and-imf.html?_r=0 (27.08.2016)

5 World Bank vice-president and special envoy for climate change Rachel Kyte http://www.worldbank.org/en/news/press-release/2015/05/26/carbon-pricing-initiatives-valued-50-billion-dollars (27.08.2016)

6 http://neweconomist.blogs.com/new_economist/2006/10/stern_review_2.html (27.08.2016)