

ClimasCOPE

Exploring the challenges behind the Paris Agreement #COP21

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Heading towards the 21st Conference of the Parties (COP 21) to the United Nations Framework Convention on Climate Change (UNFCCC) to be held in Paris from November 30th to December 11th 2015, I4CE - Institute for Climate Economics, in partnership with ADEME, the French Environment and Energy Management Agency, attempts to shed some light on the challenges surrounding this Paris Climate Conference 2015. We will be exploring what can be expected from the post-2020 climate agreement in Paris. We will also be discussing some keys success indicators of such an agreement. Over the course of six issues, ClimasCOPE will provide analysis related to carbon pricing, Climate Finance, greenhouse gas (GHG) emissions' accounting, the role of subnational actors, adaptation to climate change and the compatibility of government commitments with the scenario wherein global mean temperatures would rise by no more than 2°C.

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Editorial – A “Paris Alliance” to lay the post-COP 21 groundwork

COP 21 will undoubtedly result in the creation of a “Paris Alliance” that will comprise of one central pillar – an international agreement negotiated under the UNFCCC framework – and three additional pillars:

- **intended Nationally Determined Contributions (INDCs)** of Parties to the UNFCCC that should offer a global vision of how the Parties plan to follow a trajectory to a low-carbon economy;
- **financial and technological mechanisms** to support developing countries' efforts, which may include a road map for the mobilization of \$100 billion in annual climate finance for developing countries (North-South flows) from 2020 as well as for other commitments, particularly on adaptation;
- the **«Agenda of Solutions»**, that focuses on the actions of non-state actors (cities, regions, investors, companies, private-sector coalitions and alliances, international institutions, civil society groups etc.) that offer climate co-benefits.

The negotiation of the Paris agreement is thus, only one of the pillars that will shape, during COP 21 and after, the long-term success of the “Paris Alliance”.

Those observers who say that UN negotiations have stalled in recent years and that the results of COP 21 will be just as underwhelming, are mistaken in their analysis. While the Paris agreement will not set sufficiently ambitious GHG-emissions reduction targets, it will provide the governing framework for each country to achieve its targets based on a pledge-and-review process.

The Paris conference does not represent the end of the process but rather the start of a new road map. The Paris agreement will serve as a framework to structure stakeholder actions. In this framework agreement, the UN has a key role as it will ensure oversight, by recording Parties' and economic actors' contributions, aggregating climate actions and most importantly, helping maintain the momentum of current efforts. In this context, the effectiveness of the Paris agreement – and, on a broader scope, COP 21 – will be measured by Parties' ability to agree on long-term mechanisms and transparency measures regarding their commitments and the achievement of their targets.

"The question now is whether these joint efforts will be quick and efficient enough over the next few years to remain below the 2°C target."

Regarding implementation, Parties will certainly have their share of responsibility, but non-state actors will also have to establish local or internal policies – voluntary or mandatory – to reach one essential goal: redirecting financial flows towards a low-carbon economy. Carbon market mechanisms will be necessary within this framework and should be defined on a national basis. Other mechanisms for financial actors will be equally indispensable and useful; some are already in place. Greater awareness of the climate stakes by governments, industrial actors (especially in the energy sector), and by financial actors, means that it will be impossible to maintain a ‘business as usual’ attitude after Paris. The question now is whether these joint efforts will be quick and efficient enough over the next few years to remain below the 2°C target.

To respond to this question in the coming years, a new tool – the «Agenda of Solutions» – has been made available to economic actors. Its goal is to facilitate and expand all cooperative actions outside of the Convention that provide notable climate co-benefits (development, economic, health, etc.). The Agenda, which has been in place since COP 20 via the Lima-Paris Action

Agenda (LPAA), oversees contributions from non-state actors. The greatest legacy the Paris conference could offer would be to fully integrate multilateral cooperative action into the international process.

Ultimately, the “Paris Alliance” is expected to provide strong signals to all stakeholders and economic players that encourage comprehensive investment to ensure a transition to a low-carbon society that is resilient to climate change. Getting as many countries as possible to sign an agreement, that includes long-term targets and a mechanism to regularly review the ambition of INDCs, would provide the minimum structural basis to maintain the current momentum. This momentum could be boosted with more ambitious targets from more countries, increased transparency of national contributions, financial commitments (both national and international), technology transfers and capacity-building efforts for developing countries. Lastly, the capacity of the Agenda of Solutions to strengthen global ambitions through cooperative action will be crucial if the world is to limit global temperature rise to 2°C, and especially to close the pre-2020 ambition gap.

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The Challenge – Understanding the 2°C target and its link with countries' commitments

In the lead up to COP 21, the 2°C target has been under the spotlight, especially as a means to assess the ambition of countries and of the forthcoming Paris agreement. However, the concept of 2°C is more complex than it seems and needs to be clearly understood before making any such assessments.

The 2°C target is not the ultimate safeguard against climate damages

The 2°C target is a political objective to contain the rise of global temperatures below 2°C, relative to pre-industrial levels (before 1850). This target was first officially adopted by governments in the 2010 Cancún agreement¹. Calculating GHG emission reductions trajectories to meet a 2°C scenario is, in reality, complex and based on many assumptions. While 2°C is an absolute target, it cannot be regarded as a “magic number”, or a threshold, below which we avoid climate calamities. It is, in fact, a target that contains an *acceptable* level of climate-related damages, part of which is even being seen today (increase in droughts, resource scarcity, and extreme climatic events etc.), and which will be amplified with greater temperature rise.

Since we cannot be sure to reduce emissions by the required amount in the future, governments should not focus only on mitigation actions. Simultaneous adaptation action needs to be accounted for and will serve as a crucial response to the changing climate.

Beyond 2°C, disruptive and non-linear changes are expected. This has led some insurance companies to state that while able to insure a world below 2°C, an unpredictable above-2°C world may not necessarily be insurable. This precarious picture shows that respecting the 2°C target will allow us to at least perceive risks and better understand how to manage them.

“2°C cannot be regarded as a magic number or threshold below which we avoid climate calamities.”

The challenges behind deciphering intended Nationally Determined Contributions (iNDCs)

As of November 27th, 152 iNDCs have been submitted by Parties to describe their pre-2030 emissions reduction contributions towards meeting the 2°C target. While iNDCs represent *intended* commitments, they do not systematically include specific or concrete policies and measures to implement such intentions. Thus, drawing conclusions on the effectiveness that the implementation of iNDCs will have in meeting emission reduction trajectories is not an easy exercise. Assessing country efforts as a whole, based only on iNDCs, is also challenging, due to their heterogeneity (on sectoral coverage, relative vs. absolute targets, reference years, conditionality etc.). Furthermore, iNDCs mostly focus on efforts to meet a mid-term target that may not cover post-2030 action.

¹ In fact, the first political recognition of the 2°C target was made at the 2009 G8 meetings; however, no clear commitments were agreed upon at this meeting on how to achieve this target

Due to all such uncertainties in interpreting the impact of iNDCs, it is difficult to say whether iNDCs will follow a 2°C trajectory. Nevertheless, out of various possible emission reduction trajectories to meet a 2°C target, the current iNDC trajectory does not represent the most efficient one. Instead, it is likely to follow a more costly trajectory requiring additional reduction efforts to achieve the 2°C target; such a trajectory, in fact, increases the risk of not staying below 2°C.

“Concurrence in investment time-frames must be taken into account by policymakers in their decision-making.”

Closing the gap between iNDCs and the 2°C target requires taking the appropriate steps at the right time

To increase the likelihood of meeting the 2°C target cost-effectively, some short-term steps can be taken (e.g. reducing the share of coal, removing fossil fuel subsidies etc.). However, even medium-and long-term structural changes (e.g. improving the energy mix in electricity production, decarbonising transport and building sectors etc.) will require investments to be made in the short-term. This concurrence in investment time-frames results in a trade-off situation that policymakers must consider when making policy and investment decisions. Simultaneously, in the event we exceed 2°C, this concurrence could be intensified as negative emissions solutions will demand financing as well. Carbon Capture and Storage (CCS), for example, will require significant investment in order to be scaled-up and become commercially viable. Making climate investments early on also prevents the risk of locking economies into carbon-intensive technologies and infrastructure. In addition, the more we delay climate investments, the earlier we consume more of our carbon budget² and thus, more aggressive emissions reductions will be required in the future, particularly in the form of negative emissions reductions.

It is within this context that iNDCs should be treated as a continuous process and not just a one-shot target. This would help in reviewing ambition and national climate strategies to facilitate closing the gap between countries' commitments and the 2°C target.

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² The global carbon budget refers to the amount of “allowed” GHG emissions that can be emitted to maintain a 2°C trajectory.

Share of global emissions of countries that have submitted iNDCs¹



Source: I4CE, November 2015

¹ Calculations updated as of November 27th of 2015 and includes LULUCF

Find Out More

- The 5th IPCC Assessment Report, September 2013, <http://www.ipcc.ch/report/ar5/wg1/#.UmY-FJTF1pe>
- The 6th UNEP Emissions Gap Report, November 2015, <http://uneplive.unep.org/theme/index/13#indcs>

Differentiation – Equity and differentiation: a major issue in climate negotiations

Origins of the principle and the consideration of climatic and economic changes among countries

Article 3 of the UNFCCC states that “[...] on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities [...] the developed country Parties should take the lead in combating climate change”. Based on this principle of differentiation, in 1992, the UNFCCC divided the Parties to the Convention into two groups: Annex I for developed countries (which include OECD members in 1992 and former Soviet Union countries¹) and Non-Annex I for developing countries. Annex B countries are those developed countries that have binding targets under the Kyoto Protocol in 1997.

However, in recent years, economic capacities and emissions of emerging markets have risen sharply. Since 1850, most cumulative emissions have stemmed from developed countries. The fact that the majority of future emissions will come primarily from emerging markets changes the paradigm. Certain Parties feel that the principle of differentiation must evolve to reflect current economic realities² while also taking into account the specific circumstances of least developed countries and small island nations.

Offering a more flexible system of differentiation

Since COP 17 in Durban in 2011, Parties agreed to sign a new agreement that would be “applicable to all” for the post-2020 period: the Paris agreement, intended to provide the structural framework that includes Parties’ intended Nationally Determined Contributions (INDCs) to reduce their GHG emissions. This new bottom-up approach revises the initial view of differentiation to include a self-assessment system, encouraging all Parties to engage in mitigation actions regardless of their economic status or emissions levels.

Differentiation will nonetheless remain a guiding principle in the Convention and will continue to be used by developing countries as a reminder to industrialised countries of their historical responsibility. In particular, this includes the issue of financing, a natural extension of developing countries’ historical responsibility and equity given that reducing the volume of future emissions will depend above all, on opportunities and existing constraints.

The notion of differentiation appears to be evolving from an explicit, two-pronged structure to an implicit distinction between countries based on their respective capabilities and “in light of different national circumstances”³, that is more closely aligned with the bottom-up approach of the INDCs.

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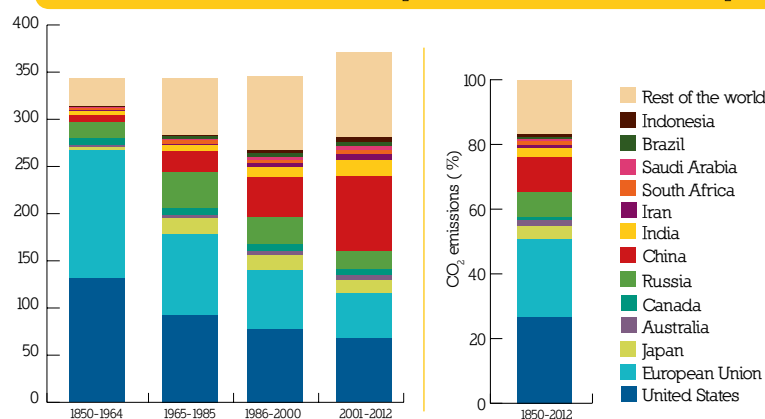
¹ Annex II refers only to OECD countries that must provide financial support.

² This paradigm shift of the differentiation is also visible in the post-2015 sustainable development agenda that applies to all countries that must set sustainable development goals (SDG) based on their capabilities and development levels.

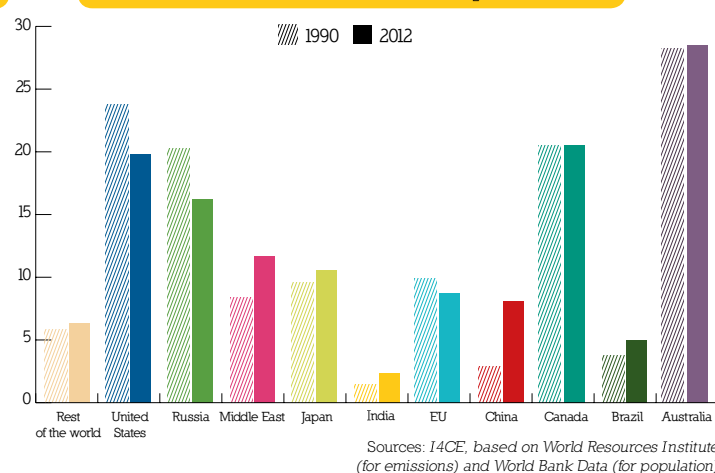
³ This term, used for the first time in a declaration between the USA and China in 2014, reflects decisions taken at Lima and is considered by some as a sign of a more flexible differentiation model.

4 indicators to understand countries’ differentiated responsibilities

1. Distribution of cumulative CO₂ emissions since 1850 (in GtCO₂e)

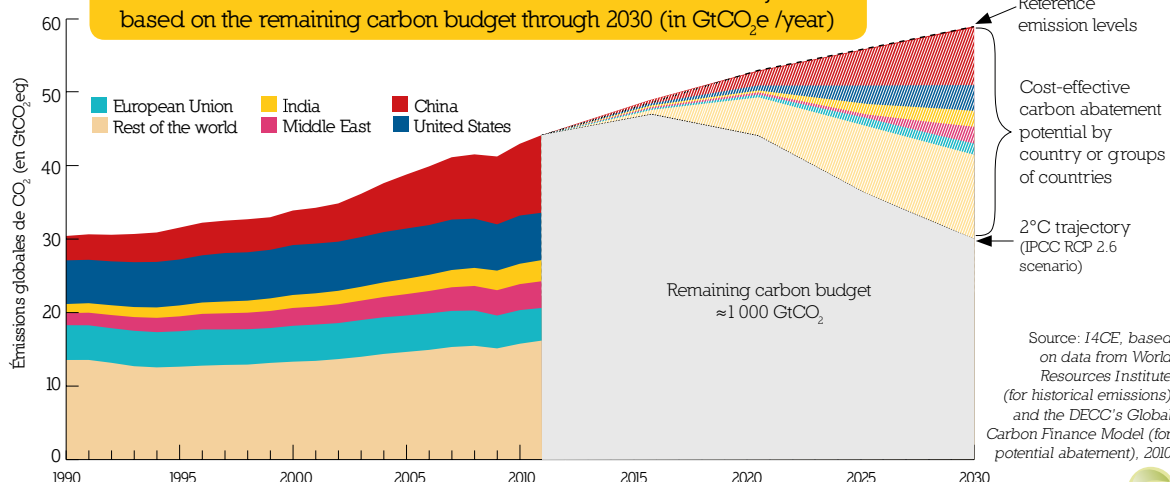


2. Per capita GHG emissions (in tCO₂e per capita)



Cumulative emissions (Fig. 1) show Parties’ historical responsibilities with regards to climate change (already 1°C above pre-industrial levels). Nevertheless, other indicators must also be taken into account: a. **Per capita emissions** (Fig. 2), which incorporates demographic considerations; and b. **Annual emissions** (Fig. 3), which indicate changes in emissions over time. Figure 3 presents these emissions along with the potential mitigation efforts required from Parties to achieve a 2°C scenario cost-effectively. It also illustrates the corresponding **carbon budget** (1,000 GtCO₂e from 2011 onwards according to a scenario of a 66% chance of limiting global warming to 2°C. This sum represents less than 30 years of emissions (at 2011 levels) to meet the carbon budget). It should be noted that all of these emissions are calculated based on domestic production, which excludes imported and exported emissions.

3. Global GHG emissions from 1990 to 2011 and GHG emission trajectories based on the remaining carbon budget through 2030 (in GtCO₂e /year)



2016–2020: What will happen before the Paris Agreement enters into force?

The targets announced by the UNFCCC Parties for the second Kyoto Protocol commitment period (2013–2020) are not sufficient to limit global temperature rise to 2°C¹. To close this gap during the pre-2020 period, collective actions that aim to cut GHG emissions and mitigate climate change, both by governments and economic actors, must be strengthened and amplified.

The Agenda of Solutions aims to do just that by recognising all actions, having noteworthy climate co-benefits, implemented by non-state actors. Highlighted on an international level by Ban Ki-moon during the New York Climate Summit, the Agenda of Solutions has been used, since COP 20, by the Peruvian and French COP Presidencies under the Lima-Paris Action Agenda (LPAA) framework. During COP 21, sectors identified via the LPAA will be focused on during a series of thematic events.

Additionally, UNFCCC negotiations on the pre-2020 ambition will be included within Workstream 2 of the Ad Hoc Working Group on the Durban Platform for Enhanced Action (ADP). These negotiations take place in the form of Technical Expert Meetings (TEM) to influence the development of national public policies within sectors (similar to those in the LPAA).

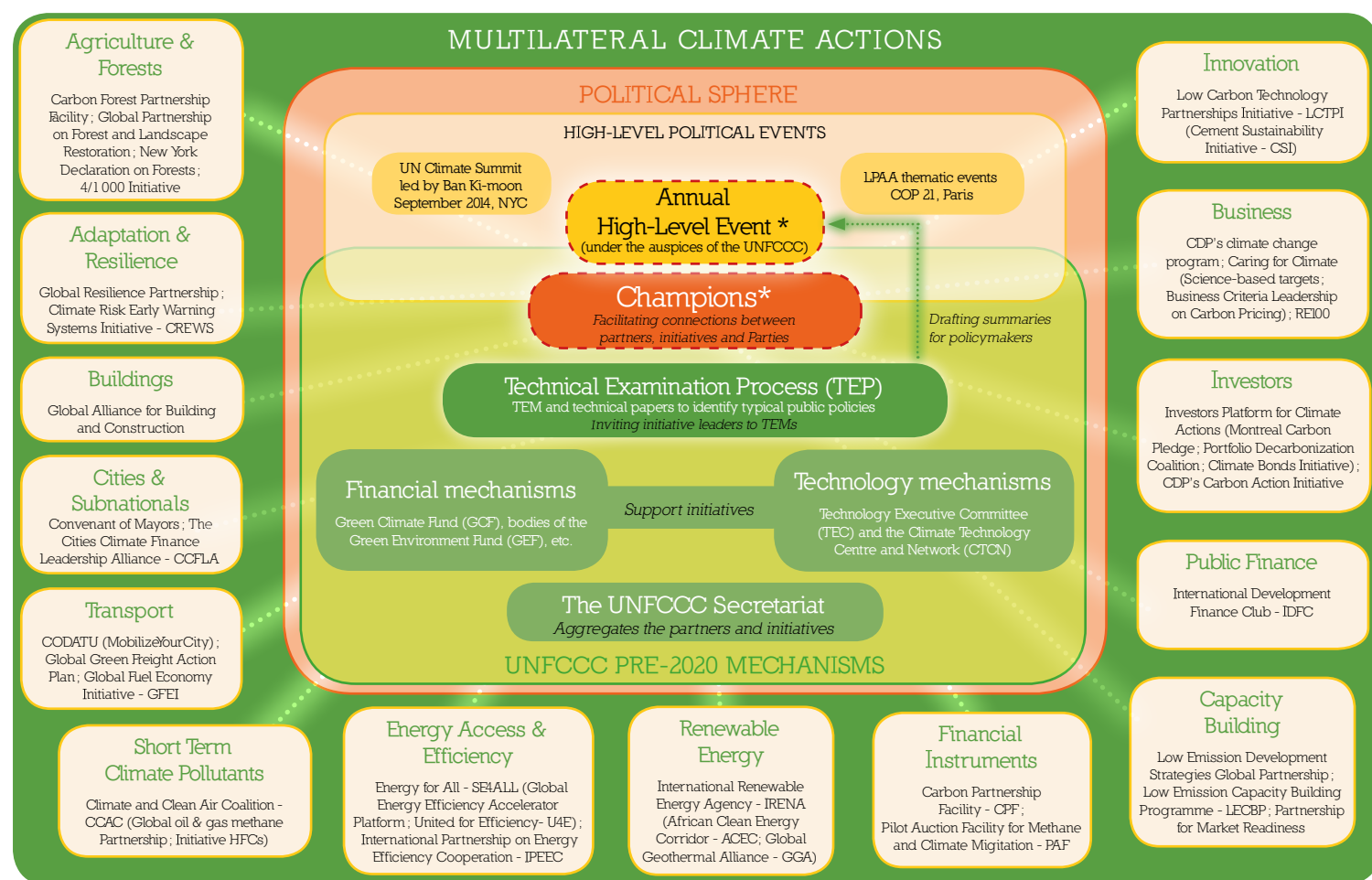
With the ADP mandate set to expire during COP 21, one priority will be to define a new framework for discussion within the UNFCCC that continues this dynamic by linking the general ambition of the Parties to multilateral cooperative actions. By addressing all stakeholders' interests, this framework for action will rise above political differences, strengthen the pre-2020 ambition, and above all, offers levers of action to further the transition to a low-carbon economy.

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¹ The targets set by the Parties are all less ambitious given that the Doha Amendment that extends the second commitment period of the Kyoto Protocol is not binding. It has been ratified by only 53 of the 144 Parties required to enter into force. The pledges are only made on a voluntary basis.

Strengthening the pre-2020 political ambition through cooperative actions¹



MULTILATERAL CLIMATE ACTIONS

Actions identified in the Non-State Actor Zone for Climate Action, or NAZCA (cities, regions, businesses, investors) and other civil society initiatives (e.g. education, awareness-raising, mobilisation, related to consumers etc.)

* In the future, High-Level Events may be held annually to keep up the momentum generated by the "Agenda of Solutions". Alongside the COP presidencies, 'Champions' have been selected among UNFCCC Parties to build on the momentum of the "Agenda of Solutions" within the UNFCCC and play the role of intermediaries for non-state actors. The aim is to centralise multilateral cooperative actions under the UNFCCC.

¹ The examples of partnerships and initiatives given in this figure do not represent an exhaustive list.

Source: I4CE, based on UNFCCC data, November 2015

I4CE – Institute for Climate Economics is supported by Caisse des Dépôts Group to deliver independent expertise when assessing economic issues related to climate & energy policies in France and throughout the world. Its aim is to help public and private decision-makers improve the way in which they understand, anticipate, and encourage the use of economic and financial resources aimed at promoting the transition to a low-carbon economy. The herein opinion and analysis do not bind ADEME.

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