

United Nations Framework Convention on Climate Change

Current and emerging
data needs of the global climate change regime:

What has changed / is changing after Paris?

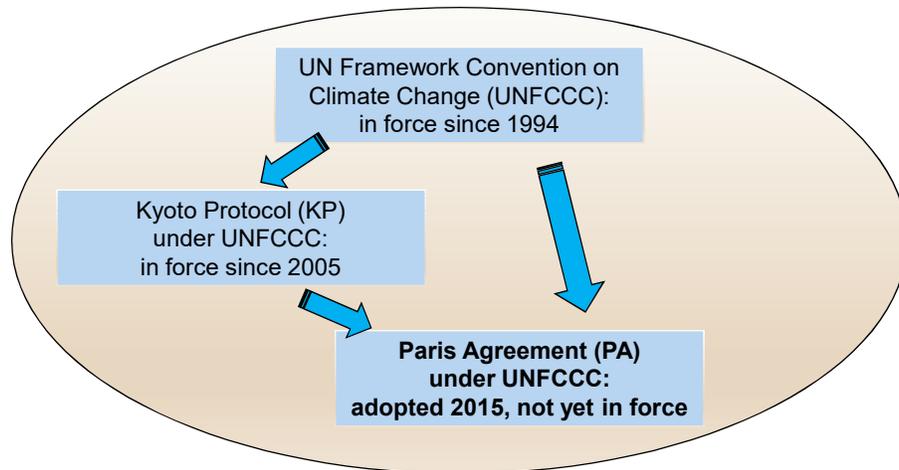


Presentation to address:

- Reminder: UNFCCC, Kyoto Protocol, Paris Agreement...
- Reporting/data requirements before Paris
- **What has changed / is changing after Paris?**
- **New: NDCs – transparency – global stocktake**
- Q&A / discussion (by topic?)



International climate change regime: UNFCCC and its legal instruments



International climate change regime: evolution from Rio (1992) to Paris (2015)

UNFCCC (Climate Change Convention), with 196 "Parties":

- one of the three "Rio Conventions", adopted at "Rio Earth Summit" (1992); entered into force in 1994
- ultimate aim = preventing "dangerous" human interference with the climate system

Two major groups of Parties under the UNFCCC:

- Annex I Parties ("developed countries")
- Non-Annex I Parties ("developing countries")

Kyoto Protocol, with 192 Parties:

- a "Protocol" to the Convention, adopted in Kyoto, Japan, in 1997; entered into force in 2005
- introduced legally-binding targets/commitments to reduce/limit GHG emissions and more stringent reporting/review requirements
- these targets and rules apply only to Annex I countries

Paris Agreement (Paris, 2015):

- adopted in 2015, already signed by more than 180 countries
- not yet legally in force; conditions for entry into force to be fulfilled: ratification by 55 countries accounting for 55% of global emissions
- agreement for all Parties, with flexibility for developing countries



International climate change regime: reporting / data requirements before Paris

Foundation: Articles 4 and 12 of the Convention

- Each Party, taking into account their common but differentiated responsibilities ... to develop, periodically update, publish and communicate, national inventories of anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol, using comparable methodologies... ”
- Each Party to communicate a “description of steps taken or envisaged to implement the Convention”
- Exact provisions are detailed in specific decisions/guidelines

Main reporting mechanisms:

- National communications, GHG inventories, biennial reports, biennial update reports...

GHGs to report on:

- Direct GHGs: CO₂, CH₄, N₂O, HFCs, PFCs, SF₆, NF₃
- Indirect GHGs: CO, NO_x, NMVOCs, SO_x

Annex I / non-Annex I Parties have different requirements

- Different methodological basis (versions of IPCC guidelines)
- More extensive and frequent reporting for Annex I Parties
- Reporting by non-Annex I Parties is conditioned by funding
- Annex I Parties have a rigorous review process



Paris Agreement: COP-21, Paris, Dec.2015



Article 2.1. This Agreement, in enhancing the implementation of the Convention ... aims to strengthen the global response to the threat of climate change, in the context of sustainable development and efforts to eradicate poverty, including by:

- (a) **Holding the increase in the global average temperature to well below 2°C** above pre-industrial levels and pursuing efforts to limit the increase to 1.5°C above pre-industrial levels...

Article 4.1. In order to achieve the long-term temperature goal set out in Article 2, Parties aim to reach **global peaking of GHG emissions as soon as possible**, recognizing that peaking will take longer for developing country Parties, and to undertake rapid reductions thereafter..., so as to achieve a **balance between anthropogenic emissions by sources and removals by sinks of GHGs in the 2nd half of this century**, on the basis of equity, and in the context of sustainable development and efforts to eradicate poverty.



Paris Agreement: new “page” in climate regime

- Aims to strengthen the global response to the threat of climate change by keeping a global temperature rise this century **well below 2 degrees Celsius** above pre-industrial levels and to pursue efforts to limit the increase **even further to 1.5 degrees Celsius**.
- Brings **all nations in a common framework** to take ambitious efforts to combat climate change and adapt to its effects, with enhanced support to developing countries
- Requires all Parties to put forward their **best efforts through “nationally determined contributions” (NDCs)** and to **strengthen these efforts over time**.
- Aims to **strengthen the ability of countries to deal with the impacts of climate change**. To reach these ambitious goals, appropriate financial flows, **a new technology framework and an enhanced capacity building framework will be put in place**, supporting action by developing countries and the most vulnerable countries, in line with their own national objectives.
- Provides for **enhanced transparency of action and support through a more robust transparency framework for action and support**.
- Introduces **a global stocktake every 5 years** to assess the collective progress towards achieving the purpose of the agreement and to inform further actions by Parties.



Paris Agreement: entry into legal force? Soon...



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KEY STEPS

PARIS AGREEMENT - STATUS OF RATIFICATION

The Paris Agreement shall enter into force on the 30th day after the date on which at least 55 Parties to the Convention accounting in total for at least an estimated 55 % of the total global greenhouse gas emissions have deposited their instruments of ratification, acceptance, approval or accession with the Depositary.

62 Parties have ratified
of 197 Parties to the Convention

Accounting for 51.89%
of global GHG emissions

Entry into force

Authoritative information on the status of the Paris Agreement, including information on its signatories, ratification and entry into force, is provided through the United Nations Treaty Collection website.

The status on 3 October 2016...



What has changed / is changing after Paris?

- **The Paris Agreement is an Agreement under the UNFCCC**; the new data or reporting requirements are to be developed based on what already exists, thus building-up on the data/reporting requirements established under the UNFCCC and the Kyoto Protocol, as explicitly indicated in the Agreement:
 - The transparency framework shall build on and enhance the transparency arrangements under the Convention...
 - The transparency arrangements under the Convention, including national communications, biennial reports and biennial update reports, international assessment and review and international consultation and analysis, shall form part of the experience to be drawn upon...
- A large part of detail on exact practical changes brought about by the Paris Agreement will need to be worked out now as part of the post-Paris work programme; it is **too early to define exact “new requirements”**
- Of particular importance in the Paris Agreement, in terms of data and reporting requirements, are
 - Articles 3 and 4 defining the **“Nationally determined contributions”**,
 - Article 13 defining the new **“transparency framework”**, and
 - Article 14 defining the new **„global stocktake“**

NDCs (Article 4): key element / core obligation

Article 4.2. Each Party shall prepare, communicate and maintain successive **nationally determined contributions (NDCs)** that it intends to achieve. Parties shall pursue **domestic mitigation measures**, with the aim of achieving the objectives of such contributions.

Article 4.3. Each Party's successive NDC will represent a **progression** beyond the Party's then current NDC and reflect its **highest possible ambition**, reflecting its **common but differentiated responsibilities and respective capabilities, in the light of different national circumstances**....

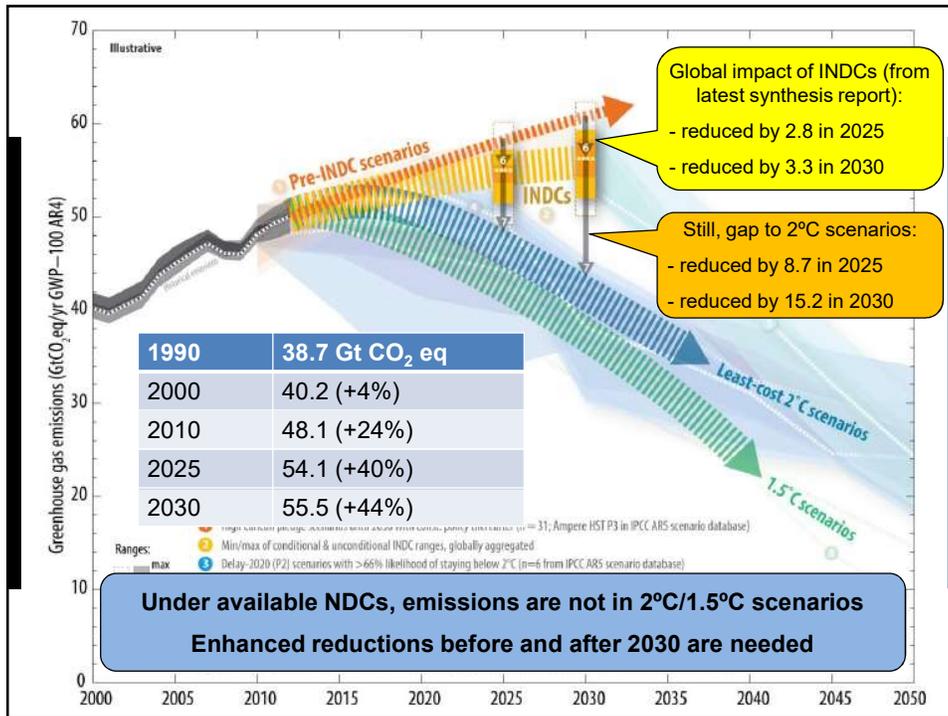
Article 4.8. In communicating their nationally determined contributions, all Parties shall provide the information necessary for clarity, transparency and understanding in accordance with decision 1/CP.21 and any relevant decisions...

=> **current NDC content requirements**: quantifiable information on the reference point (e.g., a base year); time frames and/or periods for implementation; scope and coverage, planning processes, assumptions and methodological approaches, how an NDC contributes towards stabilization of GHG emissions

Article 4.9. Each Party shall communicate a nationally determined contribution **every five years** in accordance with decision 1/CP.21 and any relevant decisions of the Conference of the Parties serving as the meeting of the Parties to this Agreement and be informed by the outcomes of the global stocktake referred to in Article 14.

Article 4.10. The Conference of the Parties serving as the meeting of the Parties to this Agreement shall **consider common time frames for NDCs** at its first session.....





“Transparency” (Article 13): basis for data needs

§7: **Each Party shall regularly** provide the following information:

(a) **A national inventory report of anthropogenic emissions by sources and removals by sinks of greenhouse gases**, prepared using good practice methodologies accepted by the Intergovernmental Panel on Climate Change and agreed upon by the Conference of the Parties serving as the meeting of the Parties to this Agreement; and

(b) **Information necessary to track progress made in implementing and achieving its nationally determined contribution** under Article 4.

§8. Each Party should also provide **information related to climate change impacts and adaptation** under Article 7, as appropriate.

§9. Developed country Parties shall, and other Parties that provide support should, provide **information on financial, technology transfer and capacity-building support provided to developing country Parties under Articles 9, 10 and 11.**

§10. Developing country Parties should provide **information on financial, technology transfer and capacity-building support needed and received** under Articles 9, 10 and 11.

§11. **Information submitted by each Party under paragraphs 7 and 9 of this Article shall undergo a technical expert review.** In addition, each Party shall participate in a **facilitative, multilateral consideration of progress** with respect to efforts under Article 9, and its respective implementation and achievement of its nationally determined contribution.

§13. **The first Meeting of the Parties to the Agreement shall adopt common modalities, procedures and guidelines, as appropriate, for the transparency of action and support**



Global stocktake (Article 14): new key concept

Article 14.1. The Conference of the Parties serving as the meeting of the Parties to this Agreement shall **periodically take stock of the implementation of this Agreement to assess the collective progress towards achieving the purpose of this Agreement and its long-term goals** (referred to as the "global stocktake"). It shall do so in a comprehensive and facilitative manner, considering mitigation, adaptation and the means of implementation and support, and in the light of equity and the best available science.

Article 14.2. The Conference of the Parties serving as the meeting of the Parties to this Agreement shall undertake its **first global stocktake in 2023 and every five years thereafter** unless otherwise decided by the Conference of the Parties serving as the meeting of the Parties to this Agreement.

Article 14.3. The outcome of the global stocktake shall inform Parties in **updating and enhancing, in a nationally determined manner, their actions and support** in accordance with the relevant provisions of this Agreement, as well as in enhancing international cooperation for climate action.



What is really new/ has changed?

Element / concept	Change brought by Paris
Differentiation in reporting and other requirements between Annex I ("developed") and non-Annex I ("developing") Parties	Differences will remain but within one common framework (e.g., "The transparency framework shall provide flexibility in the implementation of the provisions of this Article to those developing country Parties that need it in the light of their capacities")
Consideration of the information provided (GHG inventories, information to track progress, information on climate change impacts and adaptation, information relating to financial, technology transfer and capacity-building support)	"Information submitted by each Party ... shall undergo a technical expert review": this is a change (before, only Annex I Parties had "reviews")
Obligations and work relating to NDCs	NDC is a new concept, with its own "workflow" and information/data needs
Matters relating to the global stocktake	"Global stocktake" is a new concept, with its own "workflow" and information/data needs

The exact requirements for key new concepts are currently not yet known fully
The work on relevant modalities, rules and procedures has started but will require time



Conclusions

- There are already extensive reporting/review requirements under the UNFCCC; they differ between developed and developing countries but are challenging for both
 - For those existing requirements, comprehensive and accurate statistical data are indispensable
 - The new climate-related agreement in Paris in Dec.2015 will result in more requirements, such as the reporting in the form of NDCs; also, many provisions of existing requirements may be enhanced or made applicable to a greater number of countries
 - Most of such new requirements will emerge as part of the implementation of the new transparency framework established by Article 13 of the Paris Agreement
 - There are still large uncertainties about the exact nature of new or changed data/information requirements; the implementation of the post-Paris work programme is expected to bring clarity in that respect – this process has been already launched under the UNFCCC
 - The change will be gradual but is significant; developing capacity to cope with this change is important
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The Q&A sessions / discussion

What has changed or is changing after Paris:

- 1) Data/information needs for greenhouse gas inventories
 - 2) Data/information needs relating to mitigation
 - 3) Data/information needs on vulnerability and adaptation
 - 4) Data/information needs on support to climate action
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The Q&A sessions / discussion

General questions received in advance:

- How will the more detailed/technical data requirements be agreed upon? Who will be involved?
- Will there be a review of available data that could be used?
- Is it likely that the new reporting obligations will increase the need to collect new data?
- Can the producers of environmental data and statistics (Statistical Offices or Environment Agencies influence the process of setting data requirements? How?
- What is the schedule for agreeing on the data requirements? It should be taken into account that new data may need to be collected for a year before it can be reported to get baseline data



The Q&A sessions / discussion

1) Data/information needs for greenhouse gas inventories

- Each Party, taking into account their common but differentiated responsibilities ... to develop, periodically update, publish and communicate, national inventories of anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol, using comparable methodologies
 - Direct GHGs: CO₂, CH₄, N₂O, HFCs, PFCs, SF₆, NF₃
 - Indirect GHGs: CO, NO_x, NMVOCs, Sox
- Information submitted shall undergo a technical expert review

Questions for discussion:

- Experience and lessons learned: what statistics is needed to ensure that national GHG inventories are based on solid statistical data?
- Challenge of periodicity: how to make provision of data and data cooperation efficient and sustainable
- Challenge of comparability: if methods for inventory estimates change, can national statistics adjust swiftly?
- What are the capacity and training needs?



The Q&A sessions / discussion

1) Data/information needs for greenhouse gas inventories

Questions already received in advance:

- Is it likely that the reporting requirements of GHG inventories from non-Annex I countries will become more similar to the requirements for Annex I countries, e.g. by increased demand for long time series?
- Will the requirements for institutional arrangements for GHG inventories change with the results of negotiations after the Paris Agreement? In particular, will non-Annex I countries get more stringent requirements?
- Are any new measures foreseen to make all data providers take into account the greenhouse gas inventory requirements, required detail of aggregations and quality issues when they produce their data that are used in the inventory?



The Q&A sessions / discussion

2) Data/information needs relating to mitigation

- Parties shall pursue domestic mitigation measures, with the aim of achieving the objectives of the nationally determined contributions (NDCs)
- Information necessary to track progress made in implementing and achieving its nationally determined contribution - quantifiable information required
- In communicating their nationally determined contributions, all Parties shall provide the information necessary for clarity, transparency and understanding

Questions for discussion:

- Experience and lessons learned: what statistics is needed to estimate impact of measures to reduce GHG emissions?
- First "wave" of "nationally determined contributions" under UNFCCC in 2015 and 2016: were national offices involved? How? Or not?
- What are the capacity and training needs?



The Q&A sessions / discussion

2) Data/information needs relating to mitigation

Questions already received in advance:

- In National Communications Annex I countries should quantify the effect of mitigation efforts on greenhouse gas emissions. While there are guidelines for the NC reporting, the calculation requirements seem less stringent than those for GHG inventories.
- Have there been any discussions on making more detailed guidelines on quantification of effect of mitigation actions?



The Q&A sessions / discussion

3) Data/information needs on vulnerability and adaptation

- Each Party should also provide information related to climate change impacts and adaptation

Questions for discussion:

- Experience and lessons learned: what do decision-makers want and what are the data needed to estimate the impacts of climate change?
- What are the main data gaps for the assessments of vulnerability and adaptation, and how to address them?
- What are the capacity and training needs?



The Q&A sessions / discussion

3) Data/information needs on vulnerability and adaptation

Questions already received in advance:

- Is it likely that there will be demands for more quantification of reporting other than on GHG inventories, such as information on climate change impacts and adaptation?
- Will there be funding mechanisms that countries could use when they start developing new climate adaptation statistics?



The Q&A sessions / discussion

4) Data/information needs on support to climate action

- Developed country Parties to provide information on financial, technology transfer and capacity-building support provided to developing country Parties
- Developing country Parties to provide information on financial, technology transfer and capacity-building support needed and received
- Information on support provided shall undergo a technical expert review

Questions for discussion:

- Experience and lessons learned: what statistics is needed to know, on one hand, how much assistance has been provided and, on the other hand, how much assistance was received and used?
- Data on provision or receipt of financial, technology transfer and capacity-building support: can one distinguish among these and measure them?
- What are the main data gaps and how to address them?
- What are the capacity and training needs?



The Q&A sessions / discussion

4) Data/information needs on support to climate action

Questions already received in advance :

- Will quantified data be required on technology transfer and capacity-building support?

