



Food and Agriculture
Organization of the
United Nations

Forest Measurement, Reporting and Verification

The Science of Climate Change and UNFCCC Negotiations



The science of climate change

how did we get here?

- First signs of increasing CO₂ noted in 1960 and 1970s
 - Correlation with steady increase in global temperatures
 - Backed up by ice core research and anecdotal evidence
- The Intergovernmental Panel on Climate Change was established in 1988 by the World Meteorological Organization (WMO) and the United Nations Environment Program (UNEP)
- IPCC has well-established role
 - Reviews research
 - Issues regular assessment reports
 - Complies special reports and technical papers
 - Reflect the work and observations of thousands of scientists
- IPCC reports are frequently used as the basis for decisions made under the Convention.



The science of climate change

how did we get here?

- 2 decades after the first signs of climate change governments responded with the creation of the United Nations Framework on Climate Change Convention (UNFCCC)
- Convention signed in 1992 at the Earth Summit
 - IPCC first assessment report instrumental to speed at which negotiations were conducted
 - *global warming was happening and something had to be done about it.*



The science of climate change

how did we get here?

- Basic Established links:
 - The concentration of greenhouse gases in the earth's atmosphere is directly linked to the average global temperature on Earth;
 - The concentration has been rising steadily, and mean global temperatures along with it, since the time of the Industrial Revolution; and
 - The most abundant greenhouse gas, carbon dioxide, is the product of burning fossil fuels.



The science of climate change where are we going?

- Historical observations used in models to project outcomes indicate on a worldwide level:
 - Agricultural yields are expected to drop in most tropical and sub-tropical regions (and some temperate regions)
 - Diseases, especially those carried by vectors like mosquitoes, could spread to new areas in the world
 - Millions of people are expected to be exposed to increasing water stress
 - More intense weather-related disasters
 - Extinctions



The science of climate change

where are we going?

- IPCC Fifth Assessment Report (AR5) part 1 took stock of where we are and what we now know.
 - Provided a comprehensive assessment of sea level rise, and it causes
 - Able to estimate cumulative CO₂ emissions since pre-industrial times
 - Provided a CO₂ budget for future emissions to limit warming to **2 degrees**
 - **About half of this budget was already emitted by 2011!**



UNFCCC – international response to climate change

- 1979 —first World Climate Conference (WCC)
- 1988 — The Intergovernmental Panel on Climate Change (IPCC) set up.
- 1990 — IPCC first assessment report released. IPCC and second World Climate Conference call for a global treaty on climate change. United Nations General Assembly begin negotiations on a framework convention.
- 1991 — First meeting of the Intergovernmental Negotiating Committee (INC)
- 1992 — The INC adopts UNFCCC text. At the Earth Summit in Rio, the UNFCCC is opened for signature .
- 1994 — UNFCCC enters into force.
- 1995 — The first Conference of the Parties (COP 1) takes place in Berlin.
- 1996 — UNFCCC secretariat established to support action under the Convention.



UNFCCC – International response to climate change

- **1997** — Kyoto Protocol formally adopted at COP 3.
- **2001** — IPCC Third Assessment Report released. Bonn Agreements adopted, based on the Buenos Aires Plan of Action of 1998. Marrakesh Accords adopted at COP 7, detailing rules for implementation of Kyoto Protocol, setting up new funding and planning instruments for adaptation, and establishing a technology transfer framework.
- **2005** — Entry into force of the Kyoto Protocol. First Meeting of the Parties to the Kyoto Protocol (MOP 1) in Montreal - REDD+ first tabled at the UNFCCC negotiations.
- **2007** — IPCC's Fourth Assessment Report released. Climate science entered into popular consciousness. At COP 13, Parties agreed on the Bali Road Map.



How did REDD evolve?

- **2009** — [Copenhagen Accord](#) drafted at COP 15 in Copenhagen. Countries later submitted emissions reductions pledges or mitigation action pledges, all non-binding.
- **2010** — [Cancun Agreements](#) drafted and largely accepted by the COP, at COP 16.
- **2011** — The [Durban Platform for Enhanced Action](#) drafted and accepted by the COP, at COP17.
- **2012** - The [Doha Amendment](#) to the Kyoto Protocol is adopted by the CMP at CMP 8. Several decisions taken opening a gateway to greater ambition and action on all levels.
- **2013** - Key decisions adopted at COP 19 in Warsaw include decisions on further advancing the Durban Platform, the Green Climate Fund and Long-Term Finance, [the Warsaw Framework for REDD Plus](#) and the Warsaw International Mechanism for Loss and Damage. Under the Durban Platform, Parties agreed to submit “intended nationally determined contributions”, known as INDCs, well before the Paris conference.



How did REDD evolve?

- **2014** - At COP 20 in Lima in 2014, Parties adopted the '[Lima Call for Action](#)', which elaborated key elements of the forthcoming agreement in Paris.
- **2015** - Intensive negotiations took place under the Ad Hoc Group on the Durban Platform for Enhanced Action (ADP) throughout 2012-2015 and culminated in the adoption of the Paris Agreement by the COP on 12 December 2015.

