CHAPTER - 23

CLIMATE CHANGE ORGANIZATIONS

23.1. UNFCCC

- UN Summit Conference on Environment and Development (UNCED) held in Rio de Janerio in June 1992 adopted, by consensus, the first multilateral legal instrument on Climate Change, the UN Framework Convention on Climate Change or the UNFCCC.
- In 1992, countries joined UNFCCC, to cooperatively consider what they could do to limit average global temperature increases and the resulting climate change, and to cope with whatever impacts were, by then, inevitable. There are now 195 Parties to the Convention.
- The UNFCCC secretariat supports all institutions involved in the international climate change negotiations, particularly the Conference of the Parties (COP), the subsidiary bodies (which advise the COP), and the COP Bureau (which deals mainly with procedural and organizational issues arising from the COP and also has technical functions).
- All subsequent multilateral negotiations on different aspects of climate change, including both adaptation and mitigation, are being held based on the principles and objectives set out by the UNFCCC.

> **Do you know?**
> The major difference Tortoise vs turtle being that the land dwelling ones are called Tortoises and water dwelling are called Turtles. Tortoise are herbivorous where as turtle are omnivorous

23.2. KYOTO PROTOCOL: COP-3.

- By 1995, countries realized that emission reductions provisions in the Convention were inadequate. They launched negotiations to strengthen the global response to climate change, and, two years later, adopted the Kyoto Protocol.
- The Kyoto Protocol was adopted in Kyoto, Japan, on 11 December 1997. Due to a complex ratification process, it entered into force on 16 February 2005.
- In short, the Kyoto Protocol is what "operationalizes" the Convention. It commits industrialized countries to stabilize greenhouse gas emissions based on the principles of the Convention.
- The major distinction between the Protocol and the Convention is that while the Convention encouraged industrialized countries to stabilize GHG emissions, the Protocol commits them to do so.

23.2.1. Targets

- KP, as it is referred to in short, sets binding emission reduction targets for 37 industrialized countries and the European community in its first commitment period.
- It only binds developed countries because it recognizes that they are largely responsible for the current high levels of GHG emissions in the atmosphere, which are the result of more than 150 years of industrial activity.
- KP places a heavier burden on developed nations under its central principle: that of "common but differentiated responsibility".
- Overall, these targets add up to an average five per cent emissions reduction compared to 1990 levels over the five-year period 2008 to 2012.

The architecture of the KP regime: What makes KP tick?

- The Kyoto Protocol is made up of essential architecture that has been built and shaped over almost two decades of experience, hard work and political will. The beating heart of KP is made up of:

1. Reporting and verification procedures;
2. Flexible market-based mechanisms, which in turn have their own governance procedures; and
3. A compliance system.

- So, two things make KP tick.

1. Emissions Reduction Commitments

- The first was binding emissions reduction commitments for developed country parties. This meant the space to pollute was limited.
- Greenhouse gas emissions, most prevalently carbon dioxide, became a new commodity. KP now began to internalize what was now recognized as an unpriced externality.

> **Do you know?**
> Indian Water Monitor lizard is one of the largest as well as the heaviest species of lizards, second only to the Komodo Monitors

2. Flexible Market Mechanisms

- This leads us to the second, the flexible market mechanisms of the KP, based on the trade of emissions permits. KP countries bound to targets have to meet them largely through domestic action– that is, to reduce their emissions onshore.
- But they can meet part of their targets through three "market-based mechanisms" that ideally encourage GHG abatement to start where it is most cost-effective-- for example, in the developing world. Quite simply, it does not matter where emissions are reduced, as long as they are removed from the planet's atmosphere.
- The Kyoto Flexible Market Protocol mechanisms:
  - Joint Implementation (JI)
  - The Clean Development Mechanism (CDM)
  - Emission Trading

23.2.2. The objectives of Kyoto mechanisms:

- Its objective is to facilitate, promote and enforce compliance with the commitments under the Protocol.
  - Stimulate sustainable development through technology transfer and investment
  - Help countries with Kyoto commitments to meet their targets by reducing emissions or removing carbon from the atmosphere in other countries in a cost-effective way
  - Encourage the private sector and developing countries to contribute to emission reduction efforts

Joint Implementation:

- The mechanism known as "joint implementation", allows a country with an emission reduction or limitation commitment under the Kyoto Protocol (Annex B Party – developed country) to earn emission reduction units (ERUs) from an emission-reduction or emission removal project in another Annex B Party, each equivalent to one tonne of CO_2, which can be counted towards meeting its Kyoto target.
  - Joint implementation offers Parties a flexible and cost-efficient means of fulfilling a part of their Kyoto commitments, while the host Party benefits from foreign investment and technology transfer.
  - Projects starting as from the year 2000 may be eligible as JI projects, ERU issued from 2008

Clean Development mechanism:

- The Clean Development Mechanism (CDM) allows a country with an emission-reduction or emission-limitation commitment under the Kyoto Protocol (Annex B Party) to implement an emission-reduction project in developing countries.
- It is the first global, environmental investment and credit scheme of its kind, providing standardized emissions offset instrument, CERs
- Such projects can earn saleable certified emission reduction (CER) credits, each equivalent to one tonne of CO_2, which can be counted towards meeting Kyoto targets.

Example

- A CDM project activity might involve, for example, a rural electrification project using solar panels or the installation of more energy-efficient boilers. The mechanism stimulates sustainable development and emission reductions, while giving industrialized countries some flexibility in how they meet their emission reduction or limitation targets.
- Most of the CDM projects were implemented in China and India as climate in these countries is favorable for implementing projects for almost all the spheres such as Agriculture, Waste handling and disposal, Afforestation and reforestation. Such CDM projects are also to be supported by the approval of Annex B countries - those which have quantified obligations according Kyoto Protocol.

Carbon Trading:

- Carbon trading is the name given to the exchange of emission permits. This exchange may take place within the economy or may take the form of international transaction.
- Two types of Carbon trading:
  1. Emission trading and
  2. Offset trading.

Emission trading/ 'cap-and-trade',

- Emission permit is known alternatively as carbon credit. For each Annex I country, the protocol has assigned a fixed amount of carbon emission in the agreement. This amount is actually the amount of emission which is to be reduced by the concerned country.
- On the other hand, it implies that the country was permitted to emit the remaining amount. This emission allowance is actually one kind of carbon credit.
- The total amount of allowance is then subdivided into certain units. The units are expressed in terms of carbon-equivalent. Each unit gives the owner the right to emit one metric tonne of carbon dioxide or other equivalent green-house gases.

Offset Trading/ Carbon Project/ 'baseline-and credit' trading:

- Another variant of carbon credit is to be earned by a country by investing some amount of money in such projects, known as carbon projects, which will emit lesser amount of green-house gas in the atmosphere.
- For example, suppose a thermal plant of 800 megawatt capacity emit 400 carbon-equivalent in the atmosphere. Now a country builds up a 800 megawatt wind energy plant which does not generate any amount of emission as an alternative of the thermal plant. Then by investing in this project the country will earn 400 carbon-equivalent.
- According to an estimate made by the World Bank's Carbon Finance Unit, volume of carbon trade through Emission Trading route alone had shown a 240 percent increase in 2005 over the previous year.

Benefits of Flexible Market Mechanisms

- This has the parallel benefits of stimulating green investment in developing countries and of including the private sector in this endeavour to cut and hold steady GHG emissions at a safe level.
- It also makes "leap-frogging" more economical that is, the possibility to skip older, dirtier technology for newer, cleaner infrastructure and systems, with obvious longer-term benefits.
- The Kyoto Protocol compliance mechanism is designed to strengthen the Protocol's environmental integrity, support the carbon market's credibility and ensure transparency of accounting by Parties.

Do you know?

One of the unique features of the Rock pythons of India is that they can raise their body temperature above the ambient level, through muscular contractions. Rock python of India is an endangered species. The reason for this is that it is killed for its fine skin, meat and even for medicinal purposes.

23.2.3. Non-Compliance of Kyoto And Penalties

- Like most things in life, failure to comply with the Protocol carries penalties.
- If a country does not meet the requirements for measurements and reporting said country looses the privilege of gaining credit through joint implementation projects.
- If a country goes above its emissions cap, and does not try to make up the difference through any of the mechanisms available, then said country must make up the difference plus an additional thirty percent during the next period.
- The country could also be banned from participating in the 'cap and trade' program.

23.3. BALI MEET:

- Bali Meet was the meeting of 190 countries that are party to a UN treaty on climate change held in December 2007.

Objectives:

- The treaty's aim was to push the world towards taking action that reduces the greenhouse gases in the atmosphere which cause climate change.
- Bali was to discuss what happens after 2012—what are countries expected to do after the first phase of Kyoto ends in 2012.
- As per developed countries, after 2012, even the developing countries like India and China, which are increasing their emissions as they grow economically, also undertake some kind of emission cuts. This meant a complete overhaul of the existing UN treaty.

- In Bali, the nations have decided upon a new set of principles that will, help the countries decide a post-2012 deal.

23.3.1. Bali Roadmap

- The participating nations adopted the Bali Road Map as a two-year process to finalizing a binding agreement in 2009 in Copenhagen.
- The Bali Road Map includes;
  - The Bali Action Plan (BAP)
  - The Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol negotiations and their 2009 deadline,
  - Launch of the Adaptation Fund,
  - Decisions on technology transfer and
  - On reducing emissions from deforestation.

23.3.2. Bali Action Plan

- The Conference of Parties decided to launch a comprehensive process to enable the implementation of the Convention through long-term cooperative action up to and beyond 2012, by addressing:
  - A shared vision for long-term cooperative action, including a long-term global goal for emission reductions.
  - Enhanced national/international action on mitigation of climate change.
  - Enhanced action on adaptation.
  - Enhanced action on technology development and transfer to support action on mitigation and adaptation.
  - Enhanced action on the provision of financial resources and investment to support action on mitigation and adaptation and technology cooperation.

Do you know?

Russell's Viper is responsible for the more deaths due to snakebite than any other venomous snake. It is highly irritable and when threatened, coils tightly, hisses, and strikes with a lightning speed. Its hemotoxic venom is a very potent coagulant, which damages tissue as well as blood cells.

23.4. COP 15 COPENHAGEN SUMMIT:

- A legally binding agreement could not be arrived n CoP 15, Copenhagen mainly due to discord between developing and developed nations.
- The summit concluded with the CoP taking a note of Copenhagen Accord (a five nation accord- BASIC and US).
- The Copenhagen Accord is a non-binding agreement.
- The Accord states that deep international emissions cuts are needed to hold the increase in global temperature to under two degrees Celsius.
- Under the Accord, developed countries agree to set targets for reductions in their greenhouse gas emissions by 2020.
- Developing countries agree to pursue nationally appropriate mitigation strategies to slow the growth of their emissions, but are not committed to reducing their carbon output.
  - Recognizes the need to establish a mechanism (including REDD-plus) to enable the mobilization of financial resources from developed countries to help achieve this
  - Developing countries, specially these with low-emitting economies should be provided incentives to continue to develop on a low-emission pathway
  - Agrees that developed countries would raise funds of $30 billion from 2010-2012 of new and additional resources
  - Agrees a "goal" for the world to raise $100 billion per year by 2020. New multilateral funding for adaptation will be delivered, with a governance structure.

23.5. COP 16 CANCUN SUMMIT

- The Cancun Agreements include decisions under both the Convention and Kyoto protocol negotiating tracks.
- As per the Cancun Agreements, all Parties to the Convention (including the developed and developing countries) have agreed to report their voluntary mitigation goals for implementation.
- These will be subject to measurement and verification or international consultation, as appropriate, in accordance with agreed international guidelines.

23.5.1. Cancun Agreements

- Industrialized country targets are officially recognized under the multilateral process and these countries are to develop low-carbon development plans and strategies and assess how best to meet them, including through market mechanisms, and to report their inventories annually.

- Developing country actions to reduce emissions are officially recognized under the multilateral process. A registry is to be set up to record and match developing country mitigation actions to finance and technology support from by industrialized countries. Developing countries are to publish progress reports every two years.
- A total of $30 billion in fast start finance from industrialized countries to support climate action in the developing world up to 2012 and the intention to raise $100 billion in long-term funds by 2020 are included in the decisions.
- In the field of climate finance, a process to design a 'Green Climate Fund' under the Conference of the Parties, with a Board with equal representation from developed and developing countries, is established.
- A new Cancun Adaptation Framework is established to allow better planning and implementation of adaptation projects in developing countries through increased financial and technical support, including a clear process for continuing work on loss and damage.
- Governments agree to boost action to curb emissions from deforestation and forest degradation in developing countries with technological and financial support.
- Parties have established a technology mechanism with a Technology Executive Committee and Climate Technology Centre and Network to increase technology cooperation to support action on adaptation and mitigation.

23.5.2. Mechanism of COP 16

- Three mechanisms that are outcome of CoP 16 are
  1. Technology mechanism
  2. Green climate fund
  3. Adaptation fund

Technology Mechanism

- A Technology Mechanism, under the guidance of and accountable to the Conference of the Parties (COP), was established by the 16th session of the COP in Cancun 2010.
- The Technology Mechanism is expected to facilitate the implementation of enhanced action on technology development and transfer in order to support action on mitigation and adaptation to climate change.

Green Climate Fund

- At COP 16, Parties, established a Green Climate Fund (GCF) as an operating entity of the financial mechanism of the Convention under Article 11.
- The GCF will support projects, programmes, policies and other activities in developing country Parties. The Fund will be governed by the GCF Board.
- The World Bank was invited by the COP to serve as the interim trustee of the GCF, subject to a review three years after operationalization of the Fund.
- The COP also decided that an independent secretariat will support the operations of the Fund. The COP also decided that the GCF was to be designed by the Transitional Committee (TC).

Do you know?

At the time of nesting, the female hornbill starts living in a tree hollow sealed with dung and pellets of mud. The male collects the pellets, swallows them and regurgitates small saliva-cased building materials. This material is given to the female, along with food, through a slit in the tree seal. The process of incubation continues for 6-8 weeks. The female hornbill comes out only after she has molted and fresh feathers have grown on her and her young ones.

Adaptation Fund

Do you know?

The only endemic genus in the hotspot is the Namadapha flying squirrel which is critically endangered and is described only from a single specimen from Namdapha National Park

- The Adaptation Fund was established to finance concrete adaptation projects and programmes in developing country Parties to the Kyoto Protocol that are particularly vulnerable to the adverse effects of climate change.
- The Adaptation Fund is financed from the share of proceeds on the clean development mechanism project activities and other sources of funding. The share of proceeds amounts to 2% of certified emission reductions (CERs) issued for a CDM project activity.

- The Adaptation Fund is supervised and managed by the Adaptation Fund Board (AFB). The AFB is composed of 16 members and 16 alternates and meets at least twice a year.
- Upon invitation from Parties, the Global Environment Facility (GEF) provides secretariat services to the AFB and the World Bank serves as trustee of the Adaptation Fund, both on an interim basis.

23.6. COP 17 DURBAN SUMMIT

New global climate change regime

- India had gone to Durban with two major demands — that the principle of equity remain intact in any new climate regime and that this new global deal be launched after 2020.

Outcome

- New deal to be finalized by 2015 and launched by 2020
- Second phase of Kyoto Protocol secured
- Green Climate Fund launched, though empty as yet Green tech development mechanism put in place
- Equity finds place back in future climate talks
- Adaptation mechanism
- Transparency mechanism
- Secures 10 years of economic growth without carbon containment Intellectual Property Rights and technology not as well anchored in new deal
- Loopholes for developed world not fully blocked
- Agriculture brought in by developed nations under climate change

23.7 DOHA OUTCOMES COP 18, 2012

Global Climate Change Agreement

Governments agreed to work towards a universal climate change agreement by 2015 covering all countries which will come into effect from 2020.

Amendment of the Kyoto Protocol

The Kyoto Protocol is the only existing and binding agreement under which developed countries undertake quantitative commitments to cut greenhouse gases. It was amended so that it could seamlessly continue.

- 8-year second commitment period, which started on January 1st 2013.
- The Kyoto Protocol's Market Mechanisms - the Clean Development Mechanism (CDM), Joint Implementation (JI) and International Emissions Trading (IET) - will continue.
- Access to the mechanisms remains uninterrupted for all developed countries that have accepted targets for the second commitment period.
- A key element was added to the measurement, reporting and verification (MRV) framework for developed countries with the adoption of the tables for the biennial reports known as common tabular format, thereby strengthening transparency and the accountability regime.
- Surplus assigned amount units (AAUs) can be carried over without limit from the first to the second commitment period of the Kyoto Protocol by Parties included in Annex I that have a target for the second commitment period. But there were restrictions on the use of these carried-over AAUs for the second commitment period and quantitative limits on how many of these units may be acquired from other Parties.

Completion of new infrastructure

- In Doha, governments advanced the completion of new infrastructure to channel technology and finance to developing nations and move toward the full implementation of this infrastructure and support.
- Songdo, the Republic of South Korea will be the host of the Green Climate Fund (GCF) and the work plan of the Standing Committee on Finance.
- UNEP-led consortium will be host of the Climate Technology Center (CTC), for an initial term of five years.
- The CTC, along with its associated Network, is the implementing arm of the UNFCCC Technology Mechanism. Governments also agreed the constitution of the Climate Technology Center Network (CTCN) Advisory Board.

Do you know?

Found only in Manipur's Keibul Lamjao National Park, the sangai is one of the four species that have been included in the Centre sponsored endangered species recovery programme. The other three are the great Indian bustard, the Gangetic dolphin and the dugong.

23.8 WARSAW OUTCOMES,COP 19, 2013

2015 Agreement

- Governments advanced the timeline for the development of the 2015 agreement.
- Nationally determined contributions would be put forward in a clear and transparent manner.

Closing the pre-2020 ambition gap

- Governments resolved to strengthen measures to close the "ambition gap" - the gap between what has been pledged to date and what is required to keep the world below a maximum average 2 degrees Celsius temperature rise - before the new agreement enters into force in 2020.
- Additionally, governments urge the voluntary cancellation of Certified Emission Reductions (CERs) under the Kyoto Protocol's Clean Development Mechanism.

Strengthening efforts to mobilize USD 100 billion by 2020

- To mobilize USD 100 billion annually by 2020 to support developing countries in their climate change actions, developed countries agreed to make their efforts on a biennial basis from 2014 to 2020.
- The Green Climate Fund is open for business and will begin its initial resource mobilization process in the middle of 2014.

Cutting emissions from deforestation – "the Warsaw Framework for REDD+"

- Governments agreed on a set of decisions on ways to reduce emissions from deforestation and forest degradation.
- Global deforestation accounts for some 20 percent of the world's CO_2 emissions. The set of decisions bolsters forest preservation and sustainable use of forests with direct benefits for people who live in and around forests.
- It establishes the means for results-based payments if developing countries can demonstrate the protection of forests.

Progress on driving adaptation

- Developed countries met the target capitalization of USD 100 million for the Adaptation Fund, which can now continue funding priority projects.

Progress towards accountability

- The framework for measuring, reporting and verifying mitigation efforts, including by developing countries, is now fully operational. It is an important agreement because it means that the mitigation, sustainability and support efforts of countries can now be better measured.

Technology to boost action on climate change

- CTCN, established in Cancun in 2010, has now moved to the operational stage to support action by developing countries in response to their requests for support through their national designated entities.
- The CTCN is ready to respond to requests from developing countries on issues related to the development and transfer of technology.

23.9 LIMA OUTCOMES,COP 20, 2014

- The Lima Climate Conference achieved"firsts" in the history of the international climate process.
- Pledges were made by both developed and developing countries prior to and during the COP that took the capitalization of the new Green Climate Fund (GCF) past an initial $10 billion target.
- Levels of transparency and confidence-building reached new heights as several industrialized countries submitted themselves to questioning about their emissions targets under a new process called a Multilateral Assessment.
- The Lima Ministerial Declaration on Education and Awareness-raising calls on governments to put climate change into school curricula and climate awareness into national development plans.

Steps Forward on Adaptation

- Progress was made in Lima on elevating adaptation onto the same level as the curbing and cutting of curbing greenhouse gas emissions. This will be done through National Adaptation Plans (NAPs).
- NAPs will now be made more visible via the UNFCCC website which should improve the opportunity for receiving backing.
- A NAP Global Network was launched involving Peru, the US, Germany, the Philippines, Togo, the UK, Jamaica, and Japan.
- The Lima Adaptation Knowledge initiative--a pilot project in the Andes under the Nairobi Work Programme--has underlined that establishing the adaptive needs of communities can be successfully captured.
- Countries supported the idea of replicating this in Least Developed Countries, Small Island Developing States and Africa.

More Countries Accept the Kyoto Protocol Doha Amendment

- Nauru and Tuvalu submitted their instrument of acceptance to the Doha amendment, bringing the number of Parties to 21. Acceptance of 144 countries are required to bring it into force.

New climate action portal

- Peru launched a new portal, Nazca Climate Action Portal, with support from the UNFCCC, to increase the visibility of the wealth of climate action among cities, regions, companies and investors, including those under international cooperative initiatives.

Lima Work Programme on Gender

- The Lima conference agreed a Lima Work Programme on Gender to advance gender balance and to promote gender sensitivity in developing and implementing climate policy.

UNFCCC NAMA Day

- A special event took place on actions to reduce emissions with the help of so-called "nationally appropriate mitigation actions" (NAMAs).
- NAMAs are plans of developing countries to reduce emissions and to develop sustainably which can be supported by developed countries. The UNFCCC secretariat has established a registry to match requests for and offers of support.

Climate action on the ground celebrated by the UN

- The UNFCCC secretariat's Momentum for Change Initiative presented awards to representatives of some of the best examples of climate solutions in the world which inspire increased climate action.
- The Momentum for Change initiative this year for the first time included the category of Information and Communication technology.

23.10 PARIS CLIMATE CHANGE CONFERENCE COP 21, 2015

Objectives of the Paris Agreement

- To hold the increase in global average temperature to well below 2 °C above pre industrial levels and
- To pursue efforts to limit temperature increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change.
- The Agreement also talks about reaching the global peaking of emissions by the second half of the century, recognizing that peaking will take longer for developing country Parties.

Nationally determined contributions

The Paris Agreement requires all Parties to put forward their best efforts through "nationally determined contributions" (NDCs) and to strengthen these efforts in the years ahead. This includes requirements that all Parties report regularly on their emissions and on their implementation efforts.

In 2018, Parties will take stock of the collective efforts in relation to progress towards the goal set in the Paris Agreement and to inform the preparation of NDCs.

There will also be a global stock take every 5 years to assess the collective progress towards achieving the purpose of the Agreement and to inform further individual actions by Parties.

The Paris Agreement entered into force on 4 November 2016. The first session of the Conference of the Parties serving as the Meeting of the Parties to the Paris Agreement (CMA 1) took place in Marrakech, Morocco from 15-18 November 2016.

By the close of the Marrakech conference, it had been ratified by 111 countries representing more than three-fourths of global emissions.

The agreement defines parties' basic obligations and establishes new procedures and mechanisms. But for these to be fully operational, their details must be further elaborated. This requires the adoption by parties of an extensive set of decisions known loosely as the "Paris rulebook."

23.11 MARRAKECH CLIMATE CHANGE CONFERENCE –COP22, 2016

Beyond developing the Paris rulebook, parties took actions and made announcements on a range of other issues, including:

Finance

The Paris Agreement requires developed countries to provide biennial reports on financial support provided or mobilized through "public interventions," and on projected levels of future support. In Marrakech, SBSTA began considering how to account for public finance. Issues include whether the accounting should apply only to flows from developed to developing countries or to broader flows of public finance.

Global Stocktake

In Marrakech, parties began discussing how to structure the stocktake, including its format, inputs, timeline, duration, and output, and its linkage to other elements of the Paris architecture.

"Orphan" issues

One of the most contentious items in Marrakech was how to treat a set of so-called orphan issues that are referenced in the Paris Agreement but not assigned to the APA or another body for further consideration. These issues include whether to establish common timeframes for NDCs (parties adopted different timeframes in the first round); any rules around the adjustment by parties of their NDCs; and the development of a new collective finance goal beyond 2025. Unable to agree on any specific direction, parties simply asked the APA to continue its consideration of "possible additional matters relating to the implementation of the Paris Agreement."

Adaptation Fund

One holdover issue from Paris was whether the Adaptation Fund established under the Kyoto Protocol, which provides adaptation support to developing countries, would continue under the Paris Agreement. Although developed countries would prefer to channel support through the newly establish Green Climate Fund, developing countries pushed very hard to keep the Adaptation Fund alive. Parties decided the fund "should serve the Paris Agreement," pending decisions on governance and other issues.

2018 Facilitative Dialogue

In Paris, anticipating that the Paris Agreement would not be in force for several years, parties decided to conduct an early stocktake through a "facilitative dialogue" in 2018. (The next round of NDCs is due in 2019/20.) In Marrakech, parties asked the presidencies of COP 22 and COP 23 to jointly undertake consultations on how to organize the facilitative dialogue, and to report back at COP 23.

Mid-century Strategies

The Paris Agreement encourages countries to prepare and submit "long-term low greenhouse gas emission development strategies" outlining the kinds of actions needed to achieve much deeper emission reductions. In Marrakech, Canada, Germany, Mexico, and the United States became the first countries to submit what have come to be known as mid-century strategies. A new initiative called the 2050 Pathway Platform was launched, with support from a broad array of national governments, cities, states, and companies, to help other countries develop their own mid-century strategies.

Finance

Heading into Marrakech, developed countries released a roadmap outlining how they foresee meeting the goal of mobilizing $100 billion a year in public and private finance for developing countries by 2020. In Marrakech, the UNFCCC's Standing Committee on Finance released its second biennial assessment, showing that total global climate finance increased 15 percent in 2013-14, reaching a high-bound estimate of $741 billion in 2014.

Countries and others announced a variety of new financial pledges, including:

$23 million for the Climate Technology Centre and Network (CTCN), which provides technical assistance and capacity building for developing countries.

More than $50 million for the Capacity-building Initiative for Transparency established in Paris to help developing countries build the capacity to meet new transparency requirements; and

A doubling of World Bank climate finance for the Middle East-North Africa region to $1.5 billion by 2020.

Loss and Damage

Parties conducted the first review of the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts (WIM). The mechanism, established as an interim body at COP 19 and subsequently brought under the Paris Agreement, is charged with developing approaches to help vulnerable countries cope with unavoidable climate impacts, including extreme weather events and slow-onset events such as sea-level rise. The next review will take place in 2019, and further reviews will be conducted on a five-year cycle, which could align with the global stocktakes.

23.12 BONN CLIMATE CHANGE CONFERENCE - COP23, 2017

Fiji presided over UNFCCC's COP23 in Bonn. COP23 took place in Bonn, Germany in November 2017.

Key outcomes agreed at the UN climate talks in Bonn

Powering Past Coal Alliance

It is launched in COP23, Bonn and led by UK and Canada. It has more than 20 members aimed at accelerating clean growth and achieving the rapid phase-out of traditional coal power.

Alliance declares that the coal phase-out is required in the OECD and EU28 by 2030, and no later than by 2050 in the rest of the world" to meet the Paris Agreement. But it does not commit signatories to any particular phase-out date. It also does not commit the signatories to end the financing of unabated coal power stations, rather just restricting it.

Fiji's COP

Fiji is the first small-island state to host the UNFCCC climate talks.

The outcomes were the

- Gender Action Plan - highlights the role of women in climate action and promotes gender equality in the process.
- Local Communities and Indigenous Peoples Platform - aims to support the exchange of experience and sharing of best practices on mitigation and adaptation.
- Ocean Pathway Partnership - two-track strategy for 2020 supporting the goals of the Paris Agreement that includes; 1. Increasing the role of the ocean considerations in the UNFCCC process and; 2. Significantly increasing action in priority areas impacting or impacted by the ocean and climate change.

Talanoa Dialogue

"Talanoa is a traditional word used in Fiji and across the Pacific to reflect a process of inclusive, participatory and transparent dialogue.

Talanoa Dialogue is a process designed to help countries implement and enhance their Nationally Determined Contributions by 2020. The process of Talanoa involves the sharing of ideas, skills,and experience through storytelling.

It will be structured around three questions - Where are we? Where do we want to go? How do we get there? Originally called the facilitative dialogue, the name was changed to Talanoa dialogue in Bonn UNFCCC meeting under the Fijian COP presidency.

Insu Resilience Global Partnership

The InsuResilience Global Partnership for Climate and Disaster Risk Finance and Insurance Solutions was launched at the UN Climate Conference COP23 in Bonn.

It brings together G20 countries in partnership with the V20 nations, as well as civil society, international organizations, the private sector, and academia. The V20 is a group of 49 of the most vulnerable countries including small islands

Its vision is to strengthen the resilience of developing countries and to protect the lives and livelihoods of poor and vulnerable people from the impacts of disasters by enabling faster, more reliable and cost-effective responses to disasters.

It aims to increase the number of poor and vulnerable people in developing countries benefiting from direct or indirect insurance by up to 400 million by 2020.

COP24

COP24 will take place in December 2018, in Katowice, Poland. Poland will hold the Presidency of the Climate Convention for the third time.

> **Do you know?**
>
> The Relict Dragonfly is an endangered species found here with the only other species in the genus being found in Japan. The region is also home to the Himalayan Newt the only salamander species found within Indian limits.

23.13. OTHER MECHANISMS OF UNFCCC

1. Special Climate Change Fund (Sccf)

- The Special Climate Change Fund (SCCF) was established under the Convention in 2001 to finance projects relating to: adaptation; technology transfer and capacity building; energy, transport, industry, agriculture, forestry and waste management; and economic diversification.
- The Global Environment Facility (GEF), as an operating entity of the financial mechanism, has been entrusted to operate the SCCF.

2. Finance Mechanism for Climate Change

- The Financial resources that have been made available to Non-Annex I Parties to the UNFCCC consist of the following three modules:
  - **The "National Communications Module":** This module presents information communicated by Annex II Parties on the provision of financial re-

sources related to the implementation of the Convention through their fourth and fifth national communications.

Fast-Start Finance

- During the Conference of the Parties (COP15) held in December 2009 in Copenhagen developed countries pledged to provide new and additional resources, including forestry and investments, approaching USD 30 billion for the period 2010 - 2012 and with balanced allocation between mitigation and adaptation. This collective commitment has come to be known as 'fast-start finance'.
- Following up on this pledge, the Conference of the Parties (COP 16)in Cancún, in December 2010, took note of this collective commitment by developed country Parties and reaffirmed that funding for adaptation will be prioritized for the most vulnerable developing countries, such as the least developed countries, small island developing States and Africa.
- At COP 17 Parties welcomed the fast-start finance provided by developed countries as part of their collective commitment to provide new and additional resources approaching USD 30 billion for the period 2010–2012, and noted the information provided by developed country Parties on the fast-start finance they have provided and urged them to continue to enhance the transparency of their reporting on the fulfillment of their fast-start finance commitments.
- **The "Funds Managed by the GEF Module"** is a joint effort between the secretariat of the UNFCCC and the secretariat of the Global Environment Facility (GEF). This module presents information on financial flows that have been channelled, mobilized and leveraged by the GEF in its role as an operating entity of the Financial Mechanism of the UNFCCC.

Do you know?

The Andaman and Nicobar Islands is the first territory in the country to initiate a species recovery programme for the dugong and restoration of sea grass meadows under the Centrally Sponsored Scheme of the Central Ministry of Environment, Forests and Climate Change.

23.14. REDD & REDD+

- REDD (Reducing Emissions from Deforestation and Forest Degradation) is the global endeavour to create an incentive for developing countries to protect, better manage and save their forest resources, thus contributing to the global fight against climate change
  - REDD+ goes beyond merely checking deforestation and forest degradation, and includes incentives for positive elements of conservation, sustainable management of forests and enhancement of forest carbon stocks.
  - REDD+ conceptualizes flow of positive incentives for demonstrated reduction in deforestation or for enhancing quality and expanse of forest cover.
  - It works on the basis of creating a financial value for the carbon stored and enhanced in biomass and soil of standing forests. Countries that reduce emissions and undertake sustainable management of forests will be entitled to receive funds and resources as incentives.
  - REDD+ approach incorporates important benefits of livelihoods improvement, biodiversity conservation and food security services.

Will India Benefit from REDD+?

India's sustained efforts for conserving and expanding its forest and tree resources have the possibility of being rewarded for providing carbon service to the international community in addition to providing traditional goods and services to the local communities.

- The incentives so received from REDD+ would be passed to the local communities involved in protection and management of the forests. This will ensure sustained protection of our forests against deforestation.
- It is estimated that a REDD+ programme for India could provide capture of more than 1 billion tonnes of additional CO_2 over the next 3 decades and provide more than USD 3 billion as carbon service incentives under REDD+.

India's Position on Redd And Redd+

- India believes REDD needs to be seen in the broader context of REDD+, not in isolation or in a truncated form since reduction of deforestation, and conservation and improvement of forests are two sides of the same coin, and so should be treated at par.
- India's stand was finally accepted in 13th Meeting of the Conference of the Parties (COP 13) at Bali when ele-

ments of conservation, sustainable management of forests and enhancement of forest carbon stocks were added to the then existing text of reducing deforestation and forest degradation as part of Bali Action Plan.

- It has presented an ambitious Green India Mission programme under its National Action Plan on Climate Change.

India initiatives related to REDD+

- India has made a submission to UNFCCC on "REDD, Sustainable Management of Forest(SMF) and Afforestation and Reforestation (A&R)" in December 2008
- A Technical Group has been set up to develop methodologies and procedures to assess and
- monitor contribution of REDD+ actions
- A National REDD+ Coordinating Agency is being established
- A National Forest Carbon Accounting Programme is being institutionalized
- India is hosting the Conference of Parties (COP-11) of the Convention on Biological Diversity (CBD) in 2012, to coincide with twenty years of Rio convention.
- Study on the impact of climate change on India's forests assigned to the Indian Network for Climate Change Assessment (INCCA), has been released in November 2010.
- There is likely to be an increase in Net Primary Productivity (NPP) ranging from 20 - 57 %.

India looks for Enhanced Implementation of the Unfccc

India looks forward to enhanced international cooperation under the UNFCCC. Overall, future international cooperation on climate change should address the following objectives:

- Minimizing the negative impacts of climate change through suitable adaptation measures in the countries and communities affected and mitigation at the global level
- Provide fairness and equity in the actions and measures
- Uphold the principle of common but differentiated responsibilities in actions to be taken, such as concessional financial flows from the developed countries, and access to technology on affordable terms
- India as a large democracy, with the major challenge of achieving economic and social development and eradicating poverty, will engage in negotiations and other actions at the international level in the coming months that would lead to efficient and equitable solutions at the global level.

23.15. THE GEF

- Article 11 of the UNFCCC creates a 'financial mechanism' for convention implementation, which is to function under the guidance of the UNFCCC COP and be accountable to the COP.
- Under Article 11(1), the COP is to decide on the financial mechanism's policies, programme priorities and eligibility criteria relating to the convention.
- Article 21 names the GEF to serve as the financial mechanism on an interim basis.
- The GEF was established in 1991 by the World Bank in consultation with the United Nations Development Programme (UNDP) and the United Nations Environment Programme (UNEP), to provide funding to protect the global environment.
- The GEF's governance, operational, financial and administrative oversight procedures are set out in the Instrument for the Establishment of the Restructured Global Environment Facility, which was adopted in 1994 and subsequently amended in 2002 (GEF Instrument).
- The GEF now has six focal areas:

1. biological diversity;
2. climate change;
3. international waters;
4. land degradation, primarily desertification and deforestation;
5. ozone layer depletion; and
6. persistent organic pollutants.

Do you know?

Nepal has a rhino population of 645 and there have been no cases of rhino poaching in 2014 and 2015. Nepal's zero poaching success is rooted in a coordinated national response.

23.16. CLIMATE-SMART AGRICULTURE

- While agriculture is the sector most vulnerable to climate change, it is also a major cause, directly accounting for about 14 percent of greenhouse gas emissions (IPCC 2007).

- And yet, agriculture can be a part of the solution: helping people to feed themselves and adapt to changing conditions while mitigating climate change.
- It is possible for agriculture to actually sequester or absorb carbon into the soil rather than emitting it. This can be done without the trade off with productivity and yields.
- It is possible to have higher yields, more carbon in the soil and greater resilience to droughts and heat.
- This is called the `triple win': interventions that would increase yields (poverty reduction and food security), make yields more resilient in the face of extremes (adaptation), and make the farm a solution to the climate change problem rather than part of the problem (mitigation).
- These triple wins are likely to require a package of interventions and be country- and locality specific in their application. This method of practicing agriculture is called `Climate Smart Agriculture'.

23.16.1 Climate-smart agriculture includes proven practical techniques.

For example,

- by increasing the organic content of the soil through conservation tillage, its water holding capacity increases, making yields more resilient and reducing erosion.
- Promoting soil carbon capture also helps mitigate climate change. Another example is integrated soil fertility management that can lower fertilizer costs, increase soil carbon and improve yields.
- Climate-smart agriculture gives attention to landscape approaches, for example, integrated planning of land, agriculture, forests, fisheries and water to ensure synergies are captured.
- These can be further strengthened by adding better weather forecasting, more resilient food crops and risk insurance to cover losses when the vagaries of weather strike.
- If yields increase through such practices and become more stable, it results in improved farm incomes. A more stable income helps enhance the adaptive capacity of farmers.
- A good number of countries are now showing that it can be done.
- China has been a leader in this, with programs such as the Loess Plateau now internationally famous.
- Brazil has also invested in good quality research and extension and is demonstrating these triple results.
- And small-holder farmers in Kenya are already receiving cash payments on a pilot basis for new farming techniques that will hold more carbon in the soil, even while increasing soil fertility.

Do you know?

Karnataka will soon use an immuno-contraception technique to control the elephant population in the state. The technique involves injecting the female elephant with a vaccine that triggers an immune system response to block sperm reception. The technique is reported to have been used successfully in South Africa. The Karnataka forest Department (FD) will first use this technique on captive female elephants, before using it on elephants in the wild.

23.17. INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE (IPCC)

- The UN General Assembly adopted a resolution, in December 1988, on the subject and endorsed the UNEP/WMO proposal for the setting up of the Inter-Governmental Panel on Climate Change (IPCC).
- It was established by the United Nations Environment Programme (UNEP) and the World Meteorological Organization (WMO) in 1988 to provide the governments of the world with a clear scientific view of what is happening to the world's climate.
- The Secretariat coordinates all the IPCC work and liaises with Governments. The secretariat is supported by WMO and UNEP and hosted at WMO headquarters in Geneva.
- It is open to all member countries of the United Nations (UN) and WMO. Currently 195 countries are members of the IPCC.
- The initial task for the IPCC as outlined in the UN General Assembly Resolution 1988 was to prepare a comprehensive review and recommendations with respect to the state of knowledge of the science of climate change; social and economic impact of climate change, and possible response strategies and elements for inclusion in a possible future international convention on climate.
- The IPCC is a scientific body. It reviews and assesses the most recent scientific, technical and socio-economic information produced worldwide relevant to the understanding of climate change.

- It does not conduct any research nor does it monitor climate related data or parameters.
- Thousands of scientists from all over the world contribute to the work of the IPCC on a voluntary basis.
- Review is an essential part of the IPCC process, to ensure an objective and complete assessment of current information.
- Governments participate in the review process and the plenary Sessions, where main decisions about the IPCC work programme are taken and reports are accepted, adopted and approved.
- By endorsing the IPCC reports, governments acknowledge the authority of their scientific content. The work of the organization is therefore policy-relevant and yet policy-neutral, never policy-prescriptive.
- The IPCC has delivered on a regular basis the most comprehensive scientific reports about climate change produced worldwide, the Assessment Reports.
- It has also responded to the need of the UNFCCC for information on scientific and technical matters through Special Reports, Technical Papers and Methodology Reports.
- It has also produced methodologies and guidelines to help Parties to the UNFCCC prepare their national greenhouse gas inventories.

23.17.1. Assessment Reports

- In accordance with its mandate and as reaffirmed in various decisions by the Panel, the IPCC prepares at regular intervals comprehensive Assessment Reports of scientific, technical and socio-economic information relevant for the understanding of human induced climate change, potential impacts of climate change and options for mitigation and adaptation.
- Assessment Reports are normally published in several volumes, one for each of the Working Groups of the IPCC and, subject to the decision by the Panel, a Synthesis Report.
- They are written in a non-technical style suitable for policymakers. They are composed of a longer report and a Summary for Policymakers.
- Five Assessment Reports have been completed in 1990, 1995, 2001 and 2007, 2014.

AR5 Contents

- Compared with previous reports, the AR5 has put greater emphasis on assessing the socio-economic aspects of climate change and implications for sustainable development, risk management and the framing of a response through both adaptation and mitigation.
- The AR5 comprise the full reports prepared by the Working Groups (I, II and III) as well as the Synthesis Report.
- Key AR5 cross-cutting themes are:
  - Water and the Earth System: Changes, Impacts and Responses;
  - Carbon Cycle including Ocean Acidification;
  - Ice Sheets and Sea-Level Rise;
  - Mitigation, Adaptation and Sustainable Development; and
  - Article 2 of the UNFCCC (see UNFCCC for definition).

Special Reports

- Special Reports have been prepared on topics such as aviation, regional impacts of climate change, technology transfer, emissions scenarios, land use, land use change and forestry, carbon dioxide capture and storage and on the relationship between safeguarding the ozone layer and the global climate system.

> **Do you know?**
> The Madhya Pradesh Forest Department (FD) has proposed to declare the Kathiwada forests as the first conservation reserve (CR) in the State.

23.18. NATIONAL GREEN HOUSE GAS INVENTORIES PROGRAMME (NGGIP)

- The IPCC established the national green house gas Inventories Programme (NGGIP) to provide methods for estimating national inventories of greenhouse gas emissions to, and removals from, the atmosphere.
- The guidance produced by the NGGIP is used by countries that are Parties to the UN Framework Convention on Climate Change (UNFCCC) to estimate the emissions and removals that they report to the UNFCCC.
- It may be used by others who want to produce estimates consistent with national totals. Internationally agreed guidance is needed so that emission and removal estimates can be compared between countries and over time.
- All the IPCC guidance has therefore been compiled by an international range of authors and with an extensive global review process.

Methodology

- The first methodologies were produced by the IPCC in early 1990s and have been revised since (Development of IPCC Guidelines and Good Practice Guidance).
- The Revised 1996 Guidelines for National Greenhouse Gas Inventories, the Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories (GPG2000) and the Good Practice Guidance for Land Use, Land-Use Change and Forestry (GPG-LULUCF) are used by developed countries to estimate emissions and removals, and are recommended by the UNFCCC for use by all countries.
- The 2006 IPCC Guidelines for National Greenhouse Gas Inventories (the 2006 Guidelines) are the IPCC's most recent guidance on methods and data for developing estimates of emissions and removals of greenhouse gases.
- They build on earlier guidance, over a decade of experience and a world-wide scientific and technical effort to produce guidelines, applicable to all countries notwithstanding widely varying levels of resources and expertise.

Mandate

- The current mandate of the National Greenhouse Gas Inventories Programme (NGGIP) was approved by IPCC16 (Montreal, May 2000). IPCC19 (Geneva, April 2002) decided to maintain its Task Force on Inventories, co-chaired by two members of the IPCC Bureau (one from an industrialized country and one from a developing country) with twelve additional members on the Task Force Bureau (two per IPCC/WMO region).
- The NGGIP is mandated to carry out the work, as approved by the Panel, on inventory-related methodologies and practices.

The Panel decided:

- That the IPCC is responsible for assessing and developing inventory methods and practices which are scientifically sound and relevant to all countries, noting particularly the lack of information in developing countries.

Do you know?

A study by the non-governmental organization, has found that the Suswa River which passes through the Rajaji National Park is highly contaminated with sewage and hence its water may no longer be safe to drink. Two other seasonal rivers of Dehradun, Rispana and Bindal, join Suswa in the Dudhi valley.

- This includes
  (a) developing methods for estimating emissions of greenhouse gases (GHGs) by sources and removals by sinks,
  (b) assessing and developing methods to quantify and to manage uncertainties in the estimates of GHGs,
  (c) assessing the scientific literature related to the development of GHG emission factors and management of inventories,
  (d) disseminating information related to inventory methods and practices,
  (e) identifying the implications of the different options in relation to inventory methods and practices and
  (f) assessing scientific issues related to independent verification.

23.19. GREEN ECONOMY

- The concept of green economy lacks an internationally agreed definition or universal principles. The Rio + 20 outcome document identifies green economy in the context of sustainable development and poverty eradication and it affirms that approach will be different in accordance with the national circumstances and priorities for each country.
- Accordingly, green economy in India is seen in the context of sustainable development and inclusive economic growth including poverty eradication. The Government endeavors to address all the three dimensions of sustainable development (social, economic and environmental) in a balanced manner.
- Green economy focuses specifically on the fundamental changes that are required to ensure that economic systems are made more sustainable. Green Economy focuses on the ways to overcome the deeply rooted causes of unsustainable economic development.
- A Green Economy is one whose growth in income and employment is driven by public and private investments that reduce carbon emissions and pollution, enhance

energy and resource efficiency, and prevent the loss of biodiversity and ecosystems.

- The Green Economy is about sustainable energy, green jobs, low carbon economies, green policies, green buildings, agriculture, fisheries, forestry, industry, energy efficiency, sustainable tourism, sustainable transport, waste management, water efficiency and all other resource efficiency.

Transition to green economy

Three priorities in transition of economy to green economy are

- decarbonizes the economy;
- commit the environmental community to justice and equity; and
- conserve the biosphere.

A key step forward consists in changing our conception of growth and prosperity – achieving more with less and creating real wealth and quality of life.

Measures to adapt green economy

- Energy audit can reduce your building's climate footprint and lead to significant savings in energy costs.
- Overfishing in many parts of the world threatens to deplete future fish stocks. We can avoid this by working to promote sustainable fishing practices.
- Deforestation accounts for close to 20% of the world's greenhouse gas emissions.
- Sustainably managed forests can continue to support communities and ecosystems without damaging environment and climate.
- Use electronic files to reduce your demand for paper products.
- When you support certified sustainable forest products, you support a healthy environment and sustainable livelihoods.
- Car-pooling or taking public transport reduces environmental impacts and economic costs while strengthening community.
- Walking or riding a bike for short trips is good for your health - and the environment.
- Taking small steps towards wise water use can help conserve this precious resource
- Resource efficiency is key to a Green Economy and water is one of our most important resources.
- The development of clean, renewable energy by using solar, wind, tidal,etc will contribute to green economy.
- Recycling appropriate materials and composting food waste reduces the demand on our natural resources.
- Moving towards a green economy has the potential to achieve sustainable development and eradicate poverty on an unprecedented scale, with speed and effectiveness.

Do you know?

The Uttarkhand Forest Department in collaboration with the Wildlife Institute of India is going to introduce a project in which female monkeys will be given the oral immuno-contraceptive drug, Porcine Zona Pellucida, in order to help curtail their population.

23.20 THE ECONOMICS OF ECOSYSTEMS AND BIODIVERSITY (TEEB)

The Economics of Ecosystems and Biodiversity (TEEB) was launched by Germany and the European Commission in 2007. It is a study led by Pavan Sukhdev.

It is an international initiative to draw attention to the global economic benefits of biodiversity.

Objective

Highlight the growing cost of biodiversity loss and ecosystem degradation and to draw together expertise from the fields of science, economics and policy to enable practical actions.

Aim

To assess, communicate and mainstream the urgency of actions through its five deliverables—

1. Science and economic foundations, policy costs and costs of inaction,
2. Policy opportunities for national and international policy-makers,
3. Decision support for local administrators,
4. Business risks, opportunities and metrics and
5. Citizen and consumer ownership

The Ministry has launched the Economics of Ecosystems and Biodiversity TEEB-India Initiative (TII) to highlight the economic consequences of the loss of biological diversity and the associated decline in ecosystem services.

23.21 ECOLOGICAL FOOTPRINT

The "ecological footprint" is a measure of human demand on the Earth's ecosystems. It is a standardized measure of demand for natural capital that may be contrasted with the planet's ecological capacity to regenerate and represents the amount of biologically productive land and sea area necessary to supply the resources a human population consumes, and to assimilate associated waste.

Currently, humanity's total ecological footprint is estimated at 1.5 planet Earths—in other words, humanity uses ecological services 1.5 times as fact as Earth can renew them.

The "carbon footprint" is the amount of carbon being emitted by an activity or organization. The carbon component of the ecological footprint converts the amount of carbon dioxide being released into the amount of productive land and sea area of carbon dioxide being released into the amount of productive land and sea area required to sequester it and tells the demand on the Earth that results from burning fossil fuels.

The carbon footprint is 54% of the ecological footprint and its most rapidly-growing component having increased 11-fold since 1961.

Global Footprint Network (GFN) every year presents a report on ecological footprint which maps consumption and requirement of natural resources to sustain it. Lifestyle adopted in developed countries is unsustainable and it will require five Earths to fulfil their lifestyle demands.

On the other hand, Indian lifestyle is sustainable where one earth is sufficient. The Earth Overshoot Report has indicated that the Ecological Footprint of developed countries ranges from 8 to 4 whereas India is at 0.9.

Do you know?

The Global Positioning System (GPS) will be used to count and map elephants in the elephant census to be held in April-May 2017. Forest officials will also use the line transect method as well as the dung decay rate assessment for the purpose.

23.22. GLOBAL CLIMATE FINANCE ARCHITECTURE

The global climate finance architecture is channeled through multilateral funds such as the Global Environment Facility and the Climate Investment Funds and as well as increasingly through bilateral channels.

Strategic Climate Fund

- Administered by the World Bank
- Area of focus - Adaptation, Mitigation - general, Mitigation - REDD
- Date operational - 2008
- The Strategic Climate Fund (SCF), one of two multi-donor Trust Funds within the Climate Investment Funds (CIFs), serves as an overarching framework for three targeted programs piloting new approaches and scaled-up, transformational action on climate change:

1. Forest Investment Program (FIP);
2. Pilot Program for Climate Resilience (PPCR); and
3. Scaling Up Renewable Energy in Low Income Countries Program (SREP).

Forest Investment Program

- Administered by The World Bank
- Area of focus - Mitigation - REDD
- Date operational - 2009

The Forest Investment Program (FIP) is a targeted program of the Strategic Climate Fund (SCF) within the Climate Investment Funds (CIF).

The FIP supports developing countries' efforts to reduce deforestation and forest degradation (REDD) and promotes sustainable forest management that leads to emission reductions and the protection of carbon reservoirs.

It achieves this by providing scaled-up financing to developing countries for readiness reforms and public and private investments, identified through national REDD readiness or equivalent strategies.

Pilot Program for Climate Resilience

- Administered by The World Bank
- Area of focus - Adaptation
- Date operational - 2008

The Pilot Program for Climate Resilience (PPCR) is a targeted program of the Strategic Climate Fund (SCF), which is one of two funds within the Climate Investment Funds (CIF) framework.

The PPCR aims to pilot and demonstrate ways in which climate risk and resilience may be integrated into core development planning and implementation by providing incentives for scaled-up action and initiating transformational change.

Scaling-Up Renewable Energy Program for Low Income Countries

- Administered by The World Bank

- Area of focus - Mitigation - general
- Date operational – 2009

The Scaling-Up Renewable Energy Program in Low Income Countries (SREP) is a targeted program of the Strategic Climate Fund (SCF), which is one of two funds within the Climate Investment Funds (CIF) framework.

The SREP was designed to demonstrate the economic, social and environmental viability of low carbon development pathways in the energy sector in low-income countries.

It aims to help low-income countries use new economic opportunities to increase energy access through renewable energy use.

Biocarbon Fund

- Administered by The World Bank
- Area of focus - Adaptation, Mitigation - general, Mitigation - REDD
- Date operational – 2004

The BioCarbon Fund Initiative for Sustainable Forest Landscapes supports developing countries' efforts to reduce emission through testing jurisdictional approaches that integrate reducing deforestation and degradation, sustainable forest management with the climate smart agricultural practices to green supply chains.

Clean Technology Fund

- Administered by The World Bank
- Area of focus - Mitigation - general
- Date operational - 2008

The Clean Technology Fund (CTF), one of two multi-donor Trust Funds within the Climate Investment Funds (CIFs), promotes scaled-up financing for demonstration, deployment and transfer of low-carbon technologies with significant potential for long-term greenhouse gas emissions savings.

Channelled through the African Development Bank, Asian Development Bank, European Bank for Reconstruction and Development, Inter-American Development Bank, and World Bank Group, the CTF finances 12 country programmes and one regional programme.

Forest Carbon Partnership Facility

- Administered by The World Bank
- Area of focus - Mitigation - REDD
- Date operational - 2008

The Forest Carbon Partnership Facility (FCPF) is a World Bank programme and consists of a Readiness Fund and a Carbon Fund.

The FCPF was created to assist developing countries to reduce emissions from deforestation and forest degradation, enhance and conserve forest carbon stocks, and sustainably manage forests (REDD+).

> **Do you know?**
> The city of Guwahati has declared the Gangetic dolphin as its official mascot. The move is aimed at generating awareness and highlighting conservation concerns for the urban biodiversity of Guwahati.

Partnership for Market Readiness

- Administered by The World Bank
- Area of focus - Mitigation - general
- Date operational – 2011

It is a partnership of developed and developing countries administered by the World Bank, established to use market instruments to scale up mitigation efforts in middle income countries.

Although initially geared towards promoting market readiness for the anticipated emergence of international carbon markets, this approach has become more flexible, providing grants and technical support for proposals for implementation of market tools that contribute to mitigation efforts.

Special Climate Change Fund

- Administered by The Global Environment Facility (GEF)
- Area of focus - Adaptation
- Date operational – 2002

The Special Climate Change Fund (SCCF) was created in 2001 to address the specific needs of developing countries under the UNFCCC. It covers the incremental costs of interventions to address climate change relative to a development baseline.

Adaptation to climate change is the top priority of the SCCF, although it can also support technology transfer and its associated capacity building activities.

The SCCF is intended to catalyse and leverage additional finance from bilateral and multilateral sources, and is administered by the Global Environment Facility.

Strategic Priority on Adaptation

- Administered by the Global Environment Facility (GEF)
- Area of focus - Adaptation
- Date operational – 2004

The Strategic Priority on Adaptation (SPA) was a 3-year pilot programme aimed to show how adaptation planning and assessment could be practically translated into full-scale projects.

The Fund is now closed.

The SPA overall objective was to address local adaptation needs and generate global environmental benefits in the focal areas in which the GEF works: biodiversity, climate change, international waters, land degradation, and persistent organic pollutants.

GEF Trust Fund - Climate Change focal area

- Administered by The Global Environment Facility (GEF)
- Area of focus - Adaptation, Mitigation - general
- Date operational – 1991 (tracked since 2010)

The Global Environment Facility Trust Fund supports the implementation of multilateral environmental agreements, and serves as a financial mechanism of the UN Framework Convention on Climate Change.

It is the longest standing dedicated public climate change fund. Climate Change is one of the six focal areas supported by the GEF Trust Fund.

The GEF also administers several funds established under the UNFCCC including the Least Developed Countries Trust Fund (LDCF), the Special Climate Change Trust Fund (SCCF) and is interim secretariat for the Adaptation Fund.

Least Developed Countries Fund

- Administered by The Global Environment Facility (GEF)
- Area of focus - Adaptation
- Date operational – 2002

The Least Developed Countries Fund (LDCF) was established to meet the adaptation needs of least developed countries (LDCs).

Specifically the LDCF has financed the preparation and implementation of National Adaptation Programs of Action (NAPAs) to identify priority adaptation actions for a country based on existing information.

Do you know?

The Gandak river in Bihar has established itself as the third breeding ground in the country for gharials. This is the third breeding population of gharials in the country after the Chambal and Girwa rivers.

Green Climate Fund

- Administered by - to be confirmed
- Area of focus - Adaptation, Mitigation - general, Mitigation - REDD
- Date operational – 2015

The Green Climate Fund (GCF) was adopted as a financial mechanism of the UN Framework Convention on Climate Change (UNFCCC) at the end of 2011.

It aims to make an ambitious contribution to attaining the mitigation and adaptation goals of the international community.

Over time it is expected to become the main multilateral financing mechanism to support climate action in developing countries.

Adaptation Fund

- Administered by Adaptation Fund Board
- Area of focus - Adaptation
- Date operational - 2009

The Adaptation Fund is a financial instrument under the UNFCCC and its Kyoto Protocol (KP) and has been established to finance concrete adaptation projects and programmes in developing country Parties to the KP, in an effort to reduce the adverse effects of climate change facing communities, countries and sectors.

The Fund is financed with a share of proceeds from Clean Development Mechanism (CDM) project activities as well as through voluntary pledges of donor governments.

The share of proceeds from the CDM amounts to 2% of Certified Emission Reductions (CERs) issued for a CDM project activity.

Global Climate Change Alliance

- Administered by The European Commission
- Area of focus - Adaptation, Mitigation - general, Mitigation - REDD
- Date operational – 2008

The Global Climate Change Alliance (GCCA) is an initiative of the European Union.

Its overall objective is to build a new alliance on climate change between the European Union and the poor developing countries that are most affected and that have the least capacity to deal with climate change.

The GCCA does not intend to set up a new fund or governance structure, but is working through the European Commission's established channels for political dialogue and cooperation at national and international level.

Global Energy Efficiency and Renewable Energy Fund

- Administered by The European Commission
- Area of focus - Mitigation - general
- Date operational – 2008

The Global Energy Efficiency and Renewable Energy Fund (GEEREF) is a Public-Private Partnership (PPP) designed to maximise the private finance leveraged through public funds funded by the European Commission and managed by the European Investment Bank.

GEEREF is structured as a fund of funds, and invests in private equity sub-funds that specialise in financing small and medium-sized project developers and enterprises (SMEs) to implement energy efficiency and renewable energy projects in developing countries and economies in transition.

MDG Achievement Fund – Environment and Climate Change thematic window

- Administered by UNDP
- Area of focus - Adaptation, Mitigation - general
- Date operational – 2007

The MDG Achievement Fund (MDG-F) was established by the Government of Spain and the United Nations Development Programme (UNDP) to accelerate efforts to reach the Millennium Development Goals.

Environment and Climate Change is one of eight thematic areas supported by the MDG-F.

The objective of this part of the fund is to help reduce poverty and vulnerability in eligible countries by supporting interventions that improve environmental management and service delivery at the national and local level, increase access to new financing mechanisms and enhance capacity to adapt to climate change.

This part of the fund is now closed, although finance for approved projects is still being disbursed and monitored by CFU.

Do you know?
The Greater Noida authority has decided to develop an eco park across 2,500 acres on the lines of forest reserves in Paris in France. Chief Minister of Uttar Pradesh, had announced the project of development of the eco park in Gautam Budh Nagar to combat rising pollution.

UN-REDD Programme

- Administered by UNDP
- Area of focus - Mitigation - REDD
- Date operational – 2008

Three UN Agencies – United Nations Environment Programme (UNEP), United Nations Development Programme (UNDP) and Food and Agriculture Organization of the United Nations (FAO) – have collaborated in the establishment of the UN-REDD programme, a multi-donor trust fund that allows donors to pool resources and provide funding with the aim of significantly reducing global emissions from deforestation and forest degradation in developing countries.

Through its nine initial country programme activities in Africa, Asia and Latin America, the UN-REDD Programme supports the capacity of national governments to prepare and implement national REDD strategies with the involvement of all stakeholders.

Adaptation for Smallholder Agriculture Program

- Administered by the International Fund for Agricultural Development
- Area of focus - Adaptation
- Date operational – 2012

To channel climate and environmental finance to smallholder farmers, scale up climate change adaptation in rural development programmes and mainstream climate adaptation into IFAD's work.

Amazon Fund (Fundo Amazônia)

- Administered by Brazilian Development Bank (BNDES)
- Area of focus - Mitigation - REDD
- Date operational – 2009

The Amazon Fund was created to raise donations so that investments can be made in efforts to prevent, monitor and combat deforestation, as well as to promote the conservation and sustainable use of forests in the Amazon Biome.

Although the Amazon Fund was created by the government and is managed by a public bank, it is a private fund.

Do you know?

A senior official of the Bangladesh Forest Department has said that the Farakka barrage constructed on the Indian part of the Ganga in 1975 has contributed in large measure to the decline of gharial population in the Padma river in Bangladesh. This was on account of the silting up of the river and the consequent destruction of gharial habitat. Fishing nets, riverbank erosion, sand mining from rivers, water pollution, scarcity of fish species and poor water flow in rivers are believed to be among the major threats to gharials.

Congo Basin Forest Fund

- Administered by African Development Bank
- Area of focus - Mitigation - REDD
- Date operational – 2008

The Congo Basin Forest Fund (CBFF) is a multi-donor fund set up in June 2008 to take early action to protect the forests in the Congo Basin region.

It aims to support transformative and innovative projects to be complemented to existing activities, which will develop the capacity of people and institutions of the Congo Basin to enable them to preserve and manage their forests.

It provides a source of accessible funding, and encourages governments, civil society, NGOs and the private sector to work together to share specific expertise.

Do you know?

Earth Overshoot Day is the Calendar date on which human resource consumption for that particular year exceeds Earth's capacity to regenerate those resources required for the human consumption for the entire year. It is calculated by Global Footprint Network, an independent think tank.

Indonesia Climate Change Trust Fund

- Administered by Indonesia's National Development Planning Agency
- Area of focus - Adaptation, Mitigation - general, Mitigation - REDD
- Date operational – 2010

The Indonesia Climate Change Trust Fund (ICCTF) is a national funding entity which aims to develop innovative ways to link international finance sources with national investment strategies.

Created by the Government of Indonesia (GOI), it acts as a catalyst to attract investment and to implement a range of alternative financing mechanisms for climate change mitigation and adaptation programmes.

The ICCTF receives non-refundable contributions from bilateral and multilateral donors.

The main funding mechanism of the ICCTF is the 'Innovation Fund', which provides grants to line ministries to support climate change related projects within the GOI.

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