

B.A. (Prog.), Semester VI, GE

Unit 5

Sustainable Development Policies and Programmes

Subtopic: Clean Development Mechanism (CDM)

- Background of CDM
- Concept of CDM
- Process of CDM
- Significance of CDM
- Indian Scenario towards CDM

Background of CDM

As we know that in 1980s, increasing the scientific evidence of human interference in the global climate system which raised public concern. Climate change was mounted as a political agenda in and around the globe. As an effort by the United Nation (UN) to provide the governments and policymakers with a clear scientific view of what is happening to world climate.

Further in 1989 the Intergovernmental Panel on Climate Change (IPCC) was set up by the World Metrological Organisation (WMO) and the United Nation Environment Programme (UNEP). The IPCC in its first report in 1990, concluded that the growing accumulation of GHGs in the atmosphere would 'enhance the greenhouse effect, resulting in an additional warming of the earth's surface' by the next century, unless measures were taken to limit emissions. Responding to this report the UN General Assembly in December 1990 launched negotiations to formulate an international treaty on global climate protection, which later became the United Nation Framework Convention on Climate Change (UNFCCC). The negotiations started on February 1991, lasted for 15 months and the convention was adopted on May 1992

The Clean Development Mechanism (CDM) is one of the Flexible Mechanisms to help countries meet their emission targets, and to encourage the private sector and developing countries to contribute to emission reduction efforts, negotiators of the Protocol included three market-based mechanisms - emissions trading, the clean development mechanism (CDM) and Joint Implementation (JI).

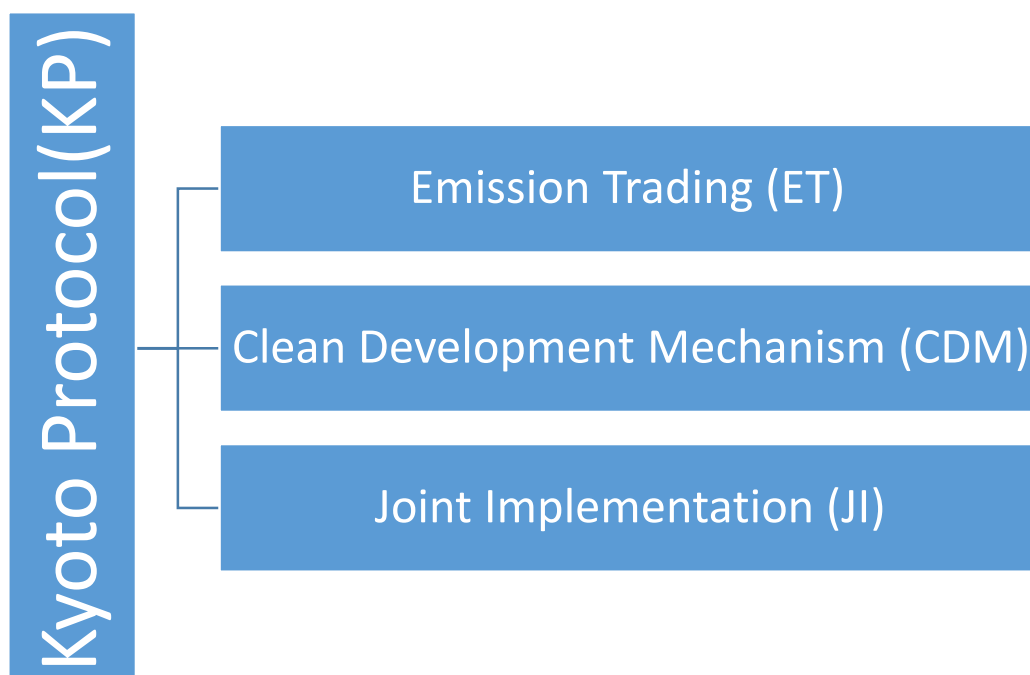
The CDM allows emission-reduction projects in developing countries to earn certified emission reduction (CER) credits, each equivalent to one tonne of CO₂. These CERs can be traded and sold, and used by industrialized countries to meet a part of their emission reduction targets under the Kyoto Protocol.

The CDM is the main source of income for the UNFCCC Adaptation Fund, which was established to finance 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 by a 2% levy on CERs issued by the CDM.

The mechanism stimulates sustainable development and emission reductions, while giving industrialized countries some flexibility in how they meet their emission reduction limitation targets.

Concept of CDM

The Kyoto Protocol to the UNFCCC was adopted in 1997 and requires developed countries and economies in transition listed in Annex B of the Protocol, to reduce their overall GHG emissions by 5.2% below 1990 levels. The Kyoto Protocol (KP) provided for three flexible market based mechanisms that enables the developed countries to meet their emission limitation and reduction commitments. These are as such



1. *Emission Trading (ET): Emissions trading, as set out in Article 17 of the Kyoto Protocol, allows countries that have emission units to spare - emissions permitted*

them but not "used" - to sell this excess capacity to countries that are over their targets. Thus, a new commodity was created in the form of emission reductions or removals.

- 2. Clean Development Mechanism (CDM): The Clean Development Mechanism (CDM) is one of the Flexible Mechanisms defined in the Kyoto Protocol (IPCC, 2007) that provides for emissions reduction projects which generate Certified Emission Reduction units (CERs) which may be traded in emissions trading schemes.*
- 3. Joint Implementation (JI): is one of three flexibility mechanisms set out in the Kyoto Protocol (KP) to help countries with binding greenhouse gas emissions targets (the Annex I countries) meet their treaty obligations.*

At the Seventh Conference of Parties (COP-7) held at Marrakesh, Morocco in October to November 2001, the final elements of the KP were worked out, particularly the rules and procedures by which the flexible mechanism will work. The Marrakesh Accord establishes the basic rules and procedures for operating these flexible mechanisms including CDM, as well as details on reporting and methodologies.

As per article 12 of the Kyoto Protocol, any kind of voluntary emission reduction activity carried out in a Non Annex I country can be used by an Annex I country to meet its compliance with the emission targets set under the Protocol. This has given rise to an innovative market mechanism called Clean Development Mechanism. Every energy efficiency improvement activities will result into onsite as well as offsite GHG emission reductions and these GHG emission reductions generally qualify for the CDM.”

The clean development mechanism (CDM) was designed to meet two objectives:

- a. To help developed countries fulfil their commitments to reduce GHG emissions; and
- b. To assist developing countries in achieving sustainable development and to contribute to the ‘Ultimate Objective’ of UNFCCC.

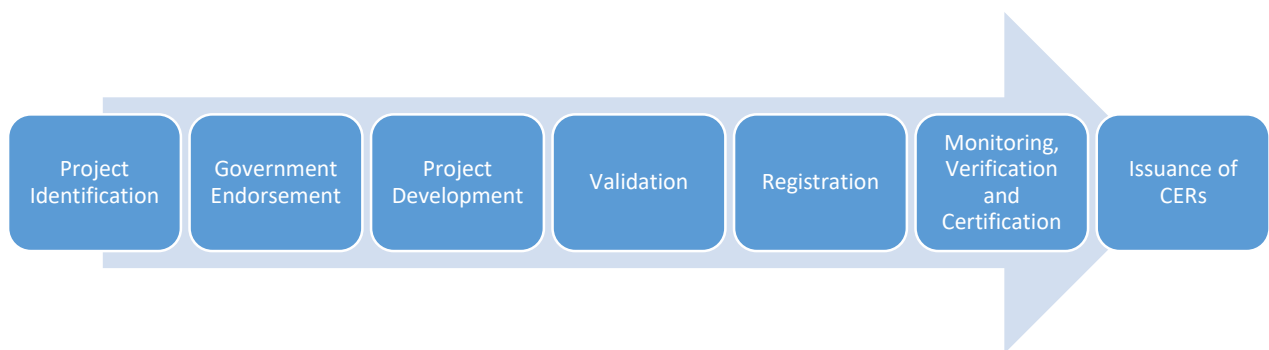
In order to qualify for CDM a project must deliver multiple benefits: such as credits for reducing GHG emissions to the investors and sustainable development to the developing country, which hosts the project and contributes to stabilising GHG concentrations in the atmosphere below dangerous levels.

Process of CDM

Important Bodies and Steps Involved in the CDM Project Cycle

From the inception of a CDM project activity till the delivery of Certified Emission Reductions (CER), a CDM project undergoes various steps and there are some bodies which play an important role in the entire project cycle of a CDM project. Broadly speaking, the project cycle involves the following steps and bodies:

Fig.2. Project Cycle of CDM



- **Project Identification**

A CDM project starts by identifying an idea that will reduce GHG emissions. The very initial steps require the Project Proponent or Project Participant (PP) to examine the level of emission reduction resulting from the project and to ascertain the development priorities of the host country.

- **Government Endorsement**

After being satisfied that the project is relevant under CDM, the project proponent prepares a Project Idea Note (PIN) and submits it to the Designated National Authority¹⁴ (DNA) for endorsement.

- **Project Development**

The proposed project must undergo a project design phase. In this phase the PP develops a Project Design Document (PDD), in a standard format, including a description of the project, proposed baseline methodology, methodology for calculation of emissions by source and monitoring plan. Parties may submit new baseline and monitoring methodology or that which has been previously approved for use by the Executive Board¹⁵ (EB).

- **Validation**

The PDD is submitted for validation by a Designated Operational Entity (DOE). Validation is the process of independent evaluation of a project by the DOE as per CDM modalities and procedures and decisions of COP and EB. The DOE is an EB accredited independent verifying agency. It examines whether the proposed project activity fulfils all the requirements of the CDM and submit its validation report to the EB.

- **Registration**

Once the PDD is validated, the validation is forwarded to the EB with a request for registration. Registration is the formal acceptance by the EB of a validated project as a CDM project activity. The registration is deemed final eight weeks after the date of the receipt of the report unless a request for review is made by at least three members of the EB.

- **Monitoring, Verification and Certification**

When the registration is done, the PP is responsible for monitoring the actual GHG emissions reduced by the project. Verification is the independent review and ex post determination by the designated operational entity of the monitored reductions in anthropogenic emissions by sources of greenhouse gases that have occurred as a result of a registered CDM project activity during the verification period. The PP may approach a DOE periodically to verify the actual GHG emission and certify the reduction in GHG emission. Thus Certification is the written assurance by the DOE that during a specified period the project activity has achieved the emission reduction as verified.

- **Issuance of CERs**

The certification report by the DOE shall contain a request for issuance of Certified Emission Reductions to the EB, equal to the verified amount of reductions of anthropogenic emissions by sources of GHGs.

To be registered and approved for implementation, the project documentation must satisfy the independent verifier and the EB that the project will result in reductions in emissions which are additional to any that would otherwise occur in the absence of the registered CDM project. The host country must also provide written confirmation that the project assists the nation to achieve sustainable development as per its development priorities.

Significance of CDM

In August 2018, on the occasion of its 100th meeting, the CDM Executive Board published a report on the achievements of the Clean Development Mechanism. The CDM is harnessing the entrepreneurial power of markets and the private sector to meet goals on sustainable development and climate change. Today, the CDM toolbox is an unparalleled resource, accessible to all, and considered in the design of new regional and domestic market-based approaches and mitigation actions around the world, said then Board Chair Arthur Rolle to mark the launch of the report.

Indian Scenario towards CDM

India was one among the first countries to respond quickly towards Kyoto Protocol's (KP) flexibility mechanism and constituted NCDMA to comply with the Kyoto Protocol procedures for CDM. India's renewable energy sector has been developing since the early 1980s and provided a favourable ground for CDM to grow further. It was a blessing in disguise as under the institutional framework and policy regime for renewable sector, CDM projects received significant priority.

Although India achieved remarkable success in hosting Clean Development Mechanism, question started rising around the world regarding additionality of the country's CDM projects. The country must take serious attempt to overcome the crisis; otherwise the very object of the UNFCCC will be frustrated. It is not a race to host maximum clean development projects; rather the race is for minimising GHG emissions.