4.2 CLEAN DEVELOPMENT MECHANISM

To combat climate change, the Kyoto Protocol has brought about a clean development mechanism. This agreement between developed and developing countries seeks to reduce emissions to preserve the ozone layer and strive for a cleaner environment.

Under this program, financially-reliant nations offer incentives towards developing countries to put into place projects which reduce greenhouse gases such as carbon dioxide, while at their own expense, they earn what are called CER credits or Emission Reduction Units that are equivalent to 1 tonne of CO_2.

The CDM allows emission-reduction projects in developing countries to earn certified emission reduction (CER) credits, each equivalent to one tonne of CO2 .

OBJECTIVES OF CLEAN DEVELOPMENT MECHANISM

A clean development mechanism project must produce measurable improvements related to climate change mitigation. The project should provide real, long-term benefits, and they should be able to reduce greenhouse emissions in a material way. The objectives of a clean development mechanism are:

- Contribute to the halting and prevention of climate change.
- Assist developing countries in strategy development that is long-lasting.
- Assist industrialized countries in reducing emissions and transitioning to greener energy sources.
- Assist countries in implementing creative strategies for reducing emissions.
- Diminishing the reliance on fossil fuels.
- Employing animal excrement to create energy and actively managing it.
- Decreasing the amount of pollution produced during the manufacturing process.

The Clean Development Mechanism (CDM) plays a significant role in addressing climate change by promoting sustainable development and facilitating emissions reductions. Here's how it contributes within the context of climate change:

1. **Emissions Reductions:**

The CDM enables developed countries to meet their emission reduction targets under the Kyoto Protocol by investing in emission reduction projects in developing countries. This helps reduce global greenhouse gas emissions.

2. **Technology Transfer:**

By encouraging the deployment of clean and sustainable technologies in developing countries, the CDM facilitates the transfer of environmentally sound technologies. This helps address the technological gap between developed and developing countries in combating climate change.

3. **Sustainable Development:**

CDM projects are required to contribute to the sustainable development of host countries. This can include benefits such as improved access to clean energy, job creation, enhanced energy security, and reduced local pollution.

4. **Financial Flows:**

The CDM channels financial resources from developed to developing countries for climate change mitigation projects. This helps mobilize additional investment in clean energy, energy efficiency, and other sustainable development initiatives.

5. **Capacity Building:**

The CDM promotes capacity building and knowledge transfer in developing countries by involving local stakeholders in project development, implementation, and monitoring. This enhances local expertise and institutional capabilities to address climate change challenges effectively.

6. **Market Mechanism:**

As a market-based instrument, the CDM creates economic incentives for emission reductions by allowing the sale of Certified Emission Reductions (CERs) generated from projects. This stimulates private sector involvement and innovation in climate change mitigation efforts.

Despite its contributions, the CDM has faced challenges and criticisms, including issues related to additionality, environmental integrity, governance, and the equitable

distribution of benefits. As the international community transitions to new climate change frameworks post-Kyoto Protocol, such as the Paris Agreement, the role and effectiveness of mechanisms like the CDM continue to evolve in the global effort to combat climate change.

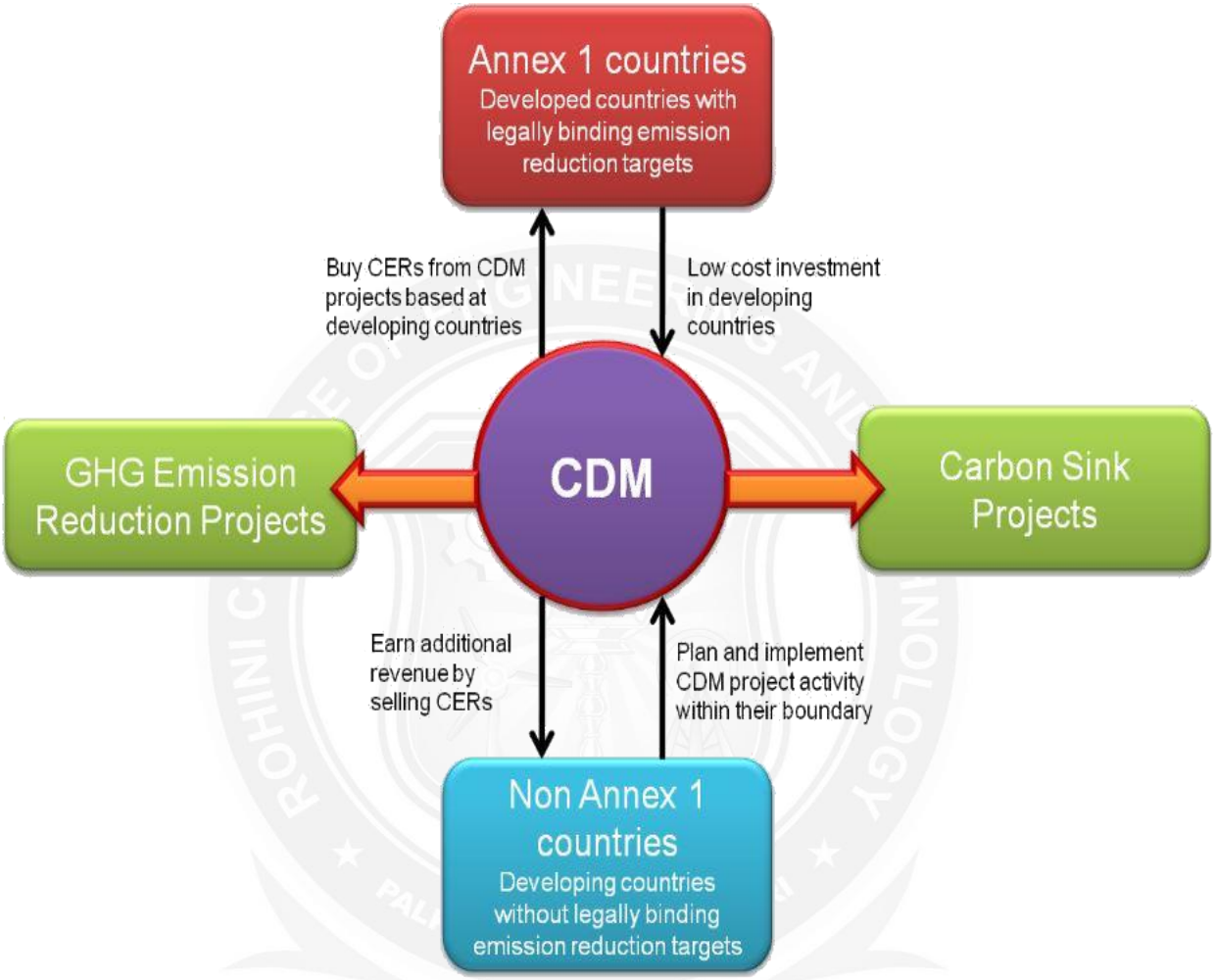

FIG.4.2 *CLEAN DEVELOPMENT MECHANISM*

Intergovernmental Panel on Climate Change (IPCC) concluded that rapidly increasing green house gas concentration raising atmospheric temperature significantly. IPCC further demonstrated that, if the actions were not taken to limit these emissions, considerable changes would occur till the end of this century such as additional warming of the planet, changing climatic patterns, increasing natural disasters like floods, epidemic diseases, etc. Growing concern about the climate change among world leaders resulted in an international treaty-United Nations Framework Convention on Climate Change (UNFCCC). Kyoto protocol is an international agreement connected to the UNFCCC featured with legally binding targets for 37 industrialized countries to reduce and limit their GHG emissions by 5.2

% below of their emissions on 1990 level. KP was adopted in 1997 and till date there are 193 countries committed to limit their greenhouse gas emissions by working together.

OPERATING DETAILS OF CLEAN DEVELOPMENT MECHANISM IN INDIA

- **Identification of the Project**

This is the initial phase, and it entails conducting research to find a notion that has the capability to cut greenhouse gas emissions.

- **Approval From the Government**

After the notion has been recognized, it is proposed to the Ministry of Environment, Forest, and Climate Change for approval by the Indian government.

- **Development of the Project**

Research is being conducted to establish a baseline against which the shift in emissions will be monitored in accordance with the Kyoto Protocol.

- **Authentication**

The CDM Administrative Entity appoints an impartial body to verify the results of the preliminary identification survey.

- **Registration Process**

Formal approval by the governing council transforms the selected project into a CDM project, granting it all the financial and legal amenities provided by the Kyoto Protocol.

- **Tracking**

Following registration, variations in greenhouse gas emissions are tracked over time, and appropriate improvements to the project's execution are made.

- **Verification**

A team of specialists verifies all of the data and results before sending them to be certified.

- **Certification**

After thorough verification, the supervising authority acknowledges that the project has effectively decreased emissions in accordance with the plan.