

Frequently Asked Questions (FAQs)

Clean Development Mechanism(CDM)

Frequently Asked Questions (FAQs) on Clean Development Mechanism (CDM)

1. What is CDM and CERs

Clean Development Mechanism [CDM] is one of the flexible mechanisms under Article 12 of the Kyoto Protocol which allows greenhouse gas emission-reduction projects in developing countries to earn certified emission reduction (CER) credits (Carbon Credits), each equivalent to one tonne of CO₂. These Carbon Credits can be traded and sold, and used by industrialized countries to meet a part of their emission reduction targets under the Kyoto Protocol. Carbon Credits is a new source of revenue for developing countries that can help improve the internal rate of return for project investments in various sectors for achieving sustainable development targets).

2. What is Kyoto Protocol?

There is worldwide consensus that emissions of greenhouse gases (GHGs) are causing global warming. Hence, in 1997 agreements were made at the United Nations Framework Climate Change Conference (UNFCCC) in Kyoto to make common efforts to reduce the emissions of greenhouse gases caused by various human activities. Kyoto protocol under the UNFCCC came in to force on 16th February 2005 after seven years of rigorous negotiations amongst the developed countries. The commitment was made collectively at Kyoto Japan to reduce global emissions of six different Green House Gases (GHG) by 5.2% of 1990 levels by the first commitment period of 2008 -2012. The Protocol suffered many years of delay and till date the United States, one of the major contributor to global GHG emissions has not ratified the treaty.

3. What are the six Green house Gases under the Kyoto Protocol

There are six green house gases identified under the Kyoto Protocol; all the GHGs have a Global Warming Potential (GWP) associated with them e.g. Carbon dioxide has a GWP of 1 and one ton of CO₂ is equivalent to 1 carbon credit, similarly Methane has GWP of 21, Nitrous Oxide has GWP of 310, Per fluorocarbons has 7000-9200, Hydro fluorocarbons has 140-11700 and Sulphur Hexafluoride has GWP of 23900.

4. How do developing countries benefit from CDM

The developing countries, through CDM projects, can have investment with new greener technologies in their respective countries and earn valuable foreign exchange through the sale of CERs. The Article 12 of the Kyoto protocol states, "The purpose of the Clean Development Mechanism shall be to assist Parties not included in Annex-I in achieving sustainable development and in contributing to the ultimate objective of the Convention, and to assist Parties included in Annex-I in achieving compliance of their quantified emission limitation and reduction commitments."

The Kyoto Protocol is thus beneficial for both the developed and developing countries and provides the developed countries an alternate method or mechanism which is flexible and helps them to reduce their emissions while simultaneously bringing in investment and technologies that reduce greenhouse gases in the developing countries.

5. How do developed countries benefit from CDM?

The developed countries have legal binding to reduce GHG emissions. It would cost them more to do the same level of GHG reductions in their own countries. The CDM offers industrialized countries the possibility to engage in economically and environmentally competitive greenhouse gases (GHG) emission reduction projects in developing countries. Through CDM, developed countries can implement GHG mitigation process in developing countries at reduced costs of approximately US\$15 per Ton of CO² equivalent compared to US\$50 per Ton for reducing one Ton of CO² equivalent in their own country. Developed countries (Annex-I) can also “buy” emissions reductions in developing countries (Non-Annex-I) country. When an Annex-I country buys these credits (called Certified Emission Reduction i.e CERs), it can count them against its commitment targets for reducing GHG emissions.

6. How do the developed countries (Annex I) invest in CDM projects?

Both governments and private companies may invest directly in CDM projects. However, experience shows that the parties in need for CERs prefer to buy CERs before their issuance via an Emission Reduction Purchase Agreement (ERPA) without taking on any risk in CDM project development. Under this situation financing for CDM projects have to come from within the host countries (unilateral projects) if they want to benefit from the opportunities the CDM offers. The CDM offers industrialized countries the possibility to engage in economically and environmentally competitive Greenhouse Gases (GHG) emission reduction projects in developing countries. Through the CDM, **certified emission reductions (CERs)** or carbon credits will be generated. The developed countries trade emission reductions with developing countries by purchasing these CERs.

7. What are the criteria's for a project to be eligible for CDM?

The Kyoto Protocol specifies several criteria that CDM projects must satisfy. The two important criteria's could be classified as additionality and sustainable development.

Additionality: Article 12 of the Protocol states that projects must result in “reductions in emissions that are additional to any that would occur in the absence of the project activity”. The CDM projects must lead to real, measurable, and long-term benefits related to the mitigation of climate change.

Sustainable development: The protocol specifies that the purpose of the CDM is to assist non-Annex I Parties in achieving sustainable development. There is no common guideline for the sustainable development criterion and it is up to the developing host countries to determine their own criteria and assessment process. The three criteria's identified are; social, economic, environmental and technological.

8. What is a Designated National Authority (DNA)?

All countries wishing to undertake CDM activities are required to appoint a Designated National Authority (DNA). DNA is responsible to establish an efficient and transparent national CDM project approval procedure for the evaluation of project ideas submitted to the authority and verify their conformity to the national sustainable development criteria. Upon approval the DNA is responsible for

issuing the host country letter of approval to the CDM project proponent, which is required before the project can be registered by the Executive Board. In Pakistan, the Ministry of Environment is the DNA.

9. What is a Designated Operational Entity (DOE)?

A Designated Operational Entity is a company accredited by the CDM Executive Board that checks whether projects are fulfilling CDM criteria. A CDM project must be checked by two processes: Validation and Verification. Validation is done once before initial project approval and verification is done periodically after the project has been approved or registered. A DOE is accredited provisionally by the CDM Executive Board until confirmed by the meeting of the parties to the Kyoto Protocol.

10. What is a CDM project baseline?

The baseline for a CDM project is the scenario used to show the trend of anthropogenic GHG emissions that would occur in the absence of the proposed CDM projects. The baseline basically shows what would be the future GHG emissions without the CDM project intervention. Each CDM projects has to develop its baseline. For small-scale projects, guidance is provided on standard baseline.

11. What is feasibility check?

The preliminary assessment aims at giving the project developer an idea, if basic requirements to be a CDM project are fulfilled. This is done in terms of regulative compliance and an economic feasibility check. The preliminary assessment will not be sufficient to find an investor. At least a Project Idea Note (PIN) has to be prepared for that.

12. What is Project Idea Note (PIN)?

The PIN is a few pages long document which provides useful information leading to the development of a complete CDM project and also facilitates the potential buyer/ investors to decide on purchase of CERs.

13. What is Project Design Document (PDD)?

This is the principal document used by project participants to get a CDM project approved. Its format is outlined in under the guidelines of the Executive Board (EB) of UNFCCC. Its contents are evolving, and may change over time as the Executive Board (EB) is continuously working on improving the modalities and procedures of the CDM.

14. What is Methodology?

All CDM Projects are evaluated against an UNFCC approved methodology of calculation of the green house gas reduction in a process. There are over 134 approved methodologies at this time. The project proponent could either use one of the existing approved methodologies by the CDM Executive Board or

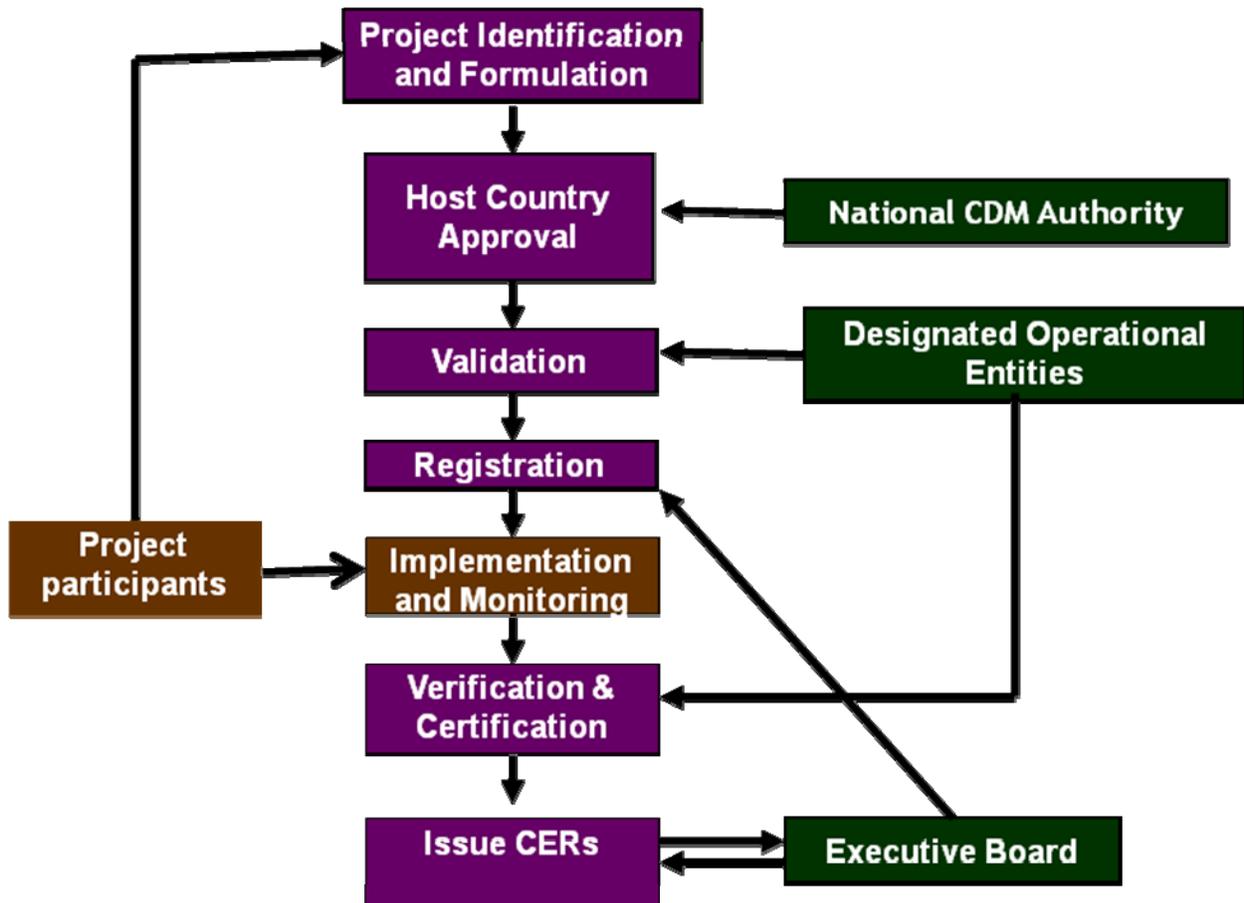
develop a new methodology for its project activity. For small scale CDM projects, the simplified procedures can be used by the project proponent.

15. What does "CDM project development" mean?

If there exists any emission reduction potential or an idea how to sequester carbon, any company or institution may implement such a project. To get it accredited as a CDM project several requirements must be fulfilled, such as following a pre-defined project cycle, preparation of certain documents (PIN, PDD, Monitoring plan etc.), highlighting certain characteristics like additionality criteria in terms of emission reductions, social and economic aspects, approval from certain institutions in the host country (DNA), validation and contacting buyer country DNA.

16. What is the CDM Project life Cycle?

A typical CDM project life cycle is as follows:



17. Do I need a project developer? Who can develop a CDM project?

Theoretically anyone can develop a CDM project. Since CDM Project development is a highly technical subject that requires good knowledge of not only the technical process, etc. but also knowledge of the ever changing rules and regulations of the UNFCCC, it is recommended to contract a consulting company that helps to develop all the required documents and may guide through this time consuming and technical project development process. A quick feasibility check can however be made by calculating the possible green house gas reduction that can be achieved through process changes, etc. If the preliminary results show that GHG reduction is less than say 10000 tons equivalent of CO2 then prima facie the project may not be a feasible CDM project.

18. How long does the Executive Board take to consider whether to register proposed project activities?

Once the DOE has submitted to the Executive Board a request for registration in the form of a validation report attaching the PDD, the Board initially has eight weeks in which to consider whether the project should be registered. At the conclusion of the eight week period, the registration is deemed final, unless a review is requested in accordance with the rules.

CDM IN PAKISTAN

19. Is Pakistan Eligible for CDM Projects?

Yes, Pakistan is eligible for CDM projects, being a signatory of the Kyoto Protocol and having huge potential for CDM development in various sectors. Pakistan is a Non-Annex I country and has no binding commitments to reduce emissions. However, the Government of Pakistan, on its part, wishes to apply CDM as a means for attracting foreign investments to GHG-mitigation projects and to support the sustainable development objectives of Pakistan.

20. What are the potential sectors in Pakistan where CDM Projects can be implemented?

Pakistan has huge potential for CDM development in energy (Renewable/Alternate Energy), energy efficiency, fossil fuel cogeneration, forestry (Afforestation/Reforestation), agricultural waste management (landfills and composting) and industrial/chemical processes. The industrial sectors include cement, sugar, textile, paper and pulp, and steel, etc.

Following is the list of the approved projects of CDM in Pakistan;

| | |
|----|--|
| 1. | <u>Catalytic Abatement of Nitrous Oxide at the Tail Gas End of the Nitric Acid Plant of the Pakarab Fertilizers Limited, Multan.</u> |
| 2. | <u>Landhi Cattle Waste Management Project.</u> |
| 3. | <u>84 MW New Bong Escape Hydropower Project.</u> |

| | |
|-----|---|
| 4. | <u>Pakarab Fertiliser Co-generation Power Project Version 02.</u> |
| 5. | <u>Maple Leaf Generator Change Project, Maple Leaf Cement Factory Limited, Iskanderabad, Daud Khel, Pakistan. version 01.</u> |
| 6. | <u>Fuel Switch and Energy Efficiency Project at Prosperity Weaving Mills.</u> |
| 7. | <u>Construction of additional cooling tower cells at AES Lal Pir (Pvt.) Ltd. Muzaffar Garh, Pakistan Version 01</u> |
| 8. | <u>Almoiz Bagasse Cogeneration Project.Version 01.</u> |
| 9. | <u>Fuel Switch to a less carbon intensive fuel at SFS Pvt. Ltd (SF SPL), Pakistan.” Version 01.</u> |
| 10. | <u>Community Based Renewable Energy Development in Northern Areas of Pakistan.</u> |
| 11. | <u>Gul Ahmed Combined Cycle Gas Turbine Project.Version 01.</u> |
| 12. | <u>Composting of Organic Content of Municipal Solid Waste in Lahore, Pakistan. Version 01.</u> |
| 13. | <u>Biogas-based Cogeneration Project at Shakarganj Mills Ltd., Jhang, Pakistan. Version. 01</u> |
| 14. | <u>Installation of natural gas based cogeneration system at Century Paper & Board Mills Ltd., Pakistan Version 01</u> |
| 15. | <u>Waste heat recovery and utilization project at Cherat Cement Factory Ltd., Pakistan. Version. 01.</u> |
| 16. | <u>DGKCC Waste Heat Recovery and Utilization for 10.4 MW Power Generation at Dera Ghazi Khan Plant Version 01.</u> |
| 17. | <u>ICI Polyester Co-generation Project, Version 01.</u> |
| 18. | <u>Waste Heat Recovery and Utilization for Power Generation at Maple Leaf Cement Factory Limited, Iskanderabad, Pakistan. Version. 01.</u> |
| 19. | <u>Reduction of Heavy Fuel Oil usage for Power Generation at Lucky Cement, Pezu, Pakistan, Version, 02.</u> |
| 20. | <u>Waste Heat Recovery based 15MW Power Generation project Bestway Cement Limited, Chakwal, Pakistan. Version 01.</u> |
| 21. | <u>Grid connected combined cycle power plant project in Qadirpur utilizing permeate gas previous flared.Version 01</u> |
| 22. | <u>Waste Heat Recovery and Utilization for Power Generation at Lucky Cement Limited Karachi Plant, Pakistan. Version 01.</u> |
| 23. | <u>Waste Heat Recovery and Utilization for Power Generation at Lucky Cement Limited Pezu Plant, Pakistan. Version 01.</u> |
| 24. | <u>Installation of Energy Efficient Products and Technologies for CO2 Emission Reduction in Gilgit and Ghizer Districts of Northern Pakistan.</u> |
| 25. | <u>Installation of Energy Efficient Products and Technologies for CO2 Emission Reduction in Chitral District of Northern Pakistan.</u> |

Source: www.cdmpakistan.gov.pk/

21. What are the sustainable development indicators for CDM projects specified by DNA in Pakistan?

The sustainable development indicators for the CDM projects specified by DNA in Pakistan are as follows:

Environmental: The project should demonstrate GHG emission reduction, conservation of local resources and improvement of local environment.

Social: The project should deal with poverty alleviation, creation of new jobs, creation of new economic activities, positive impacts on local communities, improve equity and takes gender concerns into consideration.

Economic: The project should be a sign of positive impact on balance of payment, no net increase in external debt burden and be cost effective.

Technological: The project should result in technology and know-how transfer and should not result in import of obsolete technology.

In Pakistan this criteria is mentioned in the National CDM strategy document which is accessible on www.cdmpakistan.gov.pk

22. What are the functions of CDM Cell Ministry of Environment?

CDM Cell is assisting in the responsibilities of DNA; following are the functions of the DNA in Pakistan:

- National focal point for the CDM program
- Issue host country approval letter of CDM project
- Drafting of policies and strategies related to CDM
- Assessment of projects under National Sustainable Development Criteria
- Support to stakeholders in identification, development, marketing and management of CDM projects;
- Secretariat to the National CDM Steering Committee and CDM Technical Committees;
- Development of a database to provide CDM related information to project developers and other national and international stakeholders
- Awareness raising on CDM
- Capacity enhancement of the local stakeholder organizations to effectively design and implement CDM projects

23. What is the necessary documentation required for host country approval by the DNA in Pakistan?

The necessary documentation required for host country approval process of CDM projects by the DNA/CDM Cell is as follows:-

- Cover letter signed by project proponent.
- Project Design Document (PDD) (10 copies)
- Environmental Impact Assessment Report of the Project (10 copies, if so required)

24. What is the procedure for host country approval of CDM projects by the DNA in Pakistan?

The procedure for host country approval of CDM projects by the DNA/CDM Cell is as follow:

- Submission of PDD and project related documents
- Primary screening of the PDD by the CDM Experts at CDM Cell
- Screening report within 15 days for acceptance/ reformulation of the PDD
- Clarifications by the Project Proponent regarding comments/queries from the DNA.
- Approval Letter by the DNA

25. What is the stipulated time frame for host country approval process by the DNA?

The stipulated timeframe is thirty days (30) for the host country approval process by the DNA.

CDM Cell acknowledges the support provided by the UNIDO supported CDM project in Pakistan for preparing FAQs