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CDM has remained the principal instrument for catalysing mitigation in developing countries and thereby helped in global mitigation. It has even grown beyond initial expectations, demonstrating the ability of markets to stimulate emission reduction. However, it even contains some inherent inefficiency.

- a) **Environmental integrity:** The long-term success of the CDM can be best assessed by its contribution to measurably reduced GHGs emissions. One of the important principle of CDM is additionality where the CDM emission reductions must be additional to the reduction that would have occurred otherwise. And many a times the additionality is difficult to prove because the point of reference is by definition a counter factual reality. It cannot be conclusively proved and it very often loses the credibility.
- b) **Insufficient contribution to sustainable development:** CDM was created with the two objectives: the global mitigation and climate change and the sustainable development of developing countries. But the CDM has been more effective in reducing the mitigation costs than in sustaining development.
- c) **Weak governance and inefficient operation:** The CDM is unique in regulating a market dominated by private players through an executive board – essentially a United Nations Committee – that approves the calculation methods and projects that create the market’s underlying asset. CDM has been widely criticised for lack of transparency and predictability of funds.
- d) **Weakness of the incentive:** The CDM has not moved developing countries onto low-carbon development paths. The incentive of the CDM has been too weak to foster the necessary transformation in the economy without which carbon intensities in developing countries will continue to increase.

#### Check Your Progress 1

- Note:** i) Use the space given below for your answers.  
ii) Check your answers with those given at the end of the unit.

1. What is a Clean Development Mechanism (CDM)?

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2. What are the benefits of CDM?

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3. What are the inefficiencies of CDM?

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## 5.4 EMISSION TRADING

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Global trading mechanism opened up a new trade opportunities with prospect for gradual reduction of emissions particularly by the developed nations under Annexure I categories. Various national and international programmes undertaken by the government and voluntarily by the non-government agencies have positively impacted on progressive reduction of emissions in many parts of the world. It is possible for a country to reduce emissions using a regulatory framework like the direct and indirect taxes but the main advantage of emission trading is that the cost of abatement of mitigation varies with the countries. The addition cost that would be needed to reduce the GHG is technically referred to as the *marginal abatement cost (MAC)*. Emission trading is ingenious method of exchanging carbon between sectors or economies for gradual reduction of emissions. This is an administrative approach to control emission by providing economic incentives for achieving reduction. The term emission trading refers to a market where for specified pollutants, parties can buy or sell allowances or permits for emissions, or credits for reduction in emissions. It is very often touted as an example of effective free market environmentalism. This helps create a potential market for reducing GHG by giving a monetary value to emission. They are normally exchanged as metric tonnes of carbon dioxide equivalent and used to offset emissions from any process that emits GHG whether its industry, transportation or household. Emission trading is of three types of emission trading: “cap and trade programme”, “project-based or credit programmes” and “rate based or averaging programmes”.

### 5.4.1 Carbon Markets

The development of emission trading has introduced a new trading system specifically for CO<sub>2</sub> which is calculated in tonnes of CO<sub>2</sub> or its equivalent and currently makes up the bulk of emission trading. And the exchange market which deals with the transaction of carbon is popularly called the carbon market. It is one of the ways countries makes up the bulk of emission trading. The carbon market is steadily increasing in recent years. The carbon market plays an important role in helping to achieve the deep GHG emission reduction. Decision makers will need to consider how best to broaden and deepen the reach of the market. The broader the reach of the carbon market – through greater participation of countries and or coverage of key sources and sectors and /or companies – the more efficient and effective it will be in minimizing costs and mobilizing investment. Broad coverage can also address concerns about leakage of emissions-intensive economic activity between countries as well as competitiveness more generally. Broadening and deepening the market will likely require a more flexible range of options to meet widely differing national circumstances and needs.

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## 5.5 RENEWABLE ENERGY CERTIFICATES

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Renewable Energy Certificates or ‘Green tags’ are transferable rights of renewable energy within American states. A renewable energy provider gets issued one green tag for each 1000 kwh of energy it produces. The energy is sold into the electrical grid and the certificates can be sold on the open market for profit. They are purchased by firms or individuals in order to identify a portion of their renewable sources and are voluntary.

They are typically used like an offsetting scheme or to show corporate responsibility although their issuance is unregulated with no national registry to ensure there is











Sarkar, A.N. (2010) "Global Climate Change: beyond Copenhagen" Pentagon Earth, New Delhi. Pp.432.

World Bank (2010), "Development and Climate Change". World Bank Report.

### **Web Links**

<http://www.ipcc.ch/report/ar5/wg1/>

<http://www.ipcc.ch/report/ar5/wg2/>

<http://www.ipcc.ch/report/ar5/wg3/>

<http://www.ipcc.ch/report/ar5/syr/>

<https://www.ipcc.ch/sr15/>

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## **5.10 ANSWERS TO CHECK YOUR PROGRESS**

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### **Check Your Progress 1**

1. The Clean Development Mechanism is a flexible mechanism of the protocol that allows a country with an emission-reduction or emission limitation commitment under the Kyoto protocol to implement an emission-reduction project in developing countries.
2. The CDM produces three broad categories of potential host country co-benefits apart from financial flows from carbon credit sales. They are i) transfer and dissemination of technologies ii) contribution to employment and economic growth iii) contribution to environmental and social sustainable development.
3. Clean Development Mechanism has certain disadvantages. They are insufficient contribution to sustainable development; lack of environmental integrity, weak governance and inefficient operation, etc.

### **Check Your Progress 2**

1. The Voluntary Carbon Market (VCM) has developed independently of government targets and policies and is a place where anybody, from business, to NGOs to individuals can participate in the business of offsetting. Offsetting is process of compensation of emission by simultaneously counter balancing in carbon sinking projects elsewhere.