

Chapter 5

Delineating Policy and Execution Framework

5.1 Policy Framework

A suitable policy framework would be required to institutionalize the carbon market as conceptualized in the previous chapter. The policy will not only provide the force of Government intent in creating a new institution of carbon market but it will give direction to every aspect of its functioning including relationship with other institutions and bodies, regulation and safeguard to the interests of farmers and sustainability. Under the overall policy guidance, an execution framework to operationalise the market can be created to achieve the intended objectives of the carbon market.

The Policy framework would include intent and guidance on the following

5.1.1 Objectives of the Carbon Market

The policy will enunciate the objectives of creating a carbon market. Motive behind setting up a domestic carbon market in the country flows primarily from two needs

- (i) to address the serious problem of climate change which is a global externality and every country has to share the global commitment in mitigating the problem and identify its own role and efforts
- (ii) Addressing this problem opens up many opportunities also, for the countries to follow the sustainable development path and derive nationally appropriate economic benefits.

Objectives of the carbon market may include

- a. Institutionalize 'polluters to bear the social cost principle' in the country
- b. Operationalise the emission trading and carbon offsetting in the domestic carbon market with low transaction cost
- c. Create a market in harmony with the national circumstances and exercise flexibility of market design in addressing the domestic issues and environmental concerns.
- d. Introduce system of payment of ecosystem services (PES) and strengthen the same.
- e. Build capacity in the country in the areas of emission trading, carbon credits, environmental markets, payment of ecosystem services

5.1.2 Sectors and Industries to be covered for Emission Allowances

Demand in the carbon markets is mainly created in two ways i.e. voluntary and compliance. There are motives by which individuals and firms buy carbon credits voluntarily. In the compliance segment demand is created because of regulatory cap on emissions for the industries. Industries are issued emission allowances which are followed from the principle of 'property right' of Coase Theorem (already discussed in the previous chapter). The policy would issue principles and specific guidance about the sector and industries to be selected for issuing emission allowances, period over which the issued allowances will be valid and the quantum of allowance. The policy may also mention whether the industries are to be selected in the phased manner and if so, then which will be sectors and industries in different phases.

5.1.3 Creation of Market Regulator

Success of proposed carbon market to a great extent would depend on the Market Regulating Authority. The policy would lay down the roles and responsibilities of this institution and also details about the appointment, organisation and other service conditions etc.

5.1.4 Legal Framework

Legal framework for an initiative like carbon market in the country is necessary. In India, the Environmental Protection Act of 1986 and accompanying rules have provisions to limit adverse effects of industrial activity. Under the embedded provisions of the Act, it may be possible to limit pollution control by emission trading but the proposed domestic carbon market's roles and objectives are much wider than limiting the pollution only. Provisions under the Environmental Protection Act of 1986 and other Acts will require a relook to know their sufficiency for providing legal framework of the domestic carbon market.

5.1.5 Minimising transaction cost

Analysis of transaction cost in the section 4.8.1 of the previous chapter has revealed that transaction cost is an important determinant for the wider participation of individuals and firms in the market for supplying the carbon credits through mitigation activities such as agroforestry. This was one major barrier for not many individuals and firms to have participated in the existing international carbon markets, though relatively India

has been the major beneficiary in CDM³⁹. The analysis of transaction cost with demand supply curve in section 4.3 and economics of agroforestry activity in section 4.8 shows that a small holder farmer can be seller of carbon credit by raising agroforestry plantation on his field only if transaction cost is very low.

Lowering of transaction cost is one of the strong arguments for creating a domestic carbon market. Policy, therefore would lay down principles and measures to keep the transaction cost low without compromising the essential requirements of measurement, monitoring and verification processes.

5.1.6 Sectors and activities allowed for generating carbon credits and their apportioning

The policy would provide the principles and long term goal for GHG emission reduction and associated opportunities and benefits in the strategy of mitigation. Though supply of carbon credit will always be associated with additional carbon abatement, which is desirable. The sources of carbon credits may be varied e.g. energy efficiency by installing better machines, switching over to less polluting fuels, generating power by renewable energy sources etc. It would be required in the policy to list the mitigation activities that are eligible for participating in the carbon market. It will mean that carbon credits arising from these eligible activities only will be qualified for offsetting against the excess of emission allowance by the industries. Supply side of the carbon credit may also need regulation so as to avoid a situation where carbon credits from a particular mitigation activity are over represented in the market. This kind of situation will result in

³⁹ Climate Change Mitigation In India, UNEP/GRID Arendal & Development Alternatives(2013)

imbalance in the growth of certain activities of mitigation which offer larger social, economic and environmental benefits. The policy may prescribe apportioning of carbon credits for offsetting to such abatement activities which offer larger social, ecological and economic co-benefits.

5.1.7 Capacity Building

Greenhouse gas emission abatement activities generate carbon credits in terms of number of tonnes of GHG (in tCO₂e) abated. Conversion of abatement into carbon credits follows certain broad internationally accepted methodological steps. Similarly emission trading, monitoring, verification, project document preparation etc involve technicalities and expertise in which capacity needs to be built within the country. So far, for many carbon projects of the country in various sectors, consultants, verifiers and other experts from foreign countries were engaged. This also resulted in very high transaction cost. Capacity building in all the areas of GHG abatement, carbon credits, emission trading, monitoring, verification and running of carbon markets would be crucial for the success of the initiative and therefore will have to be adequately addressed in the policy.

5.1.8 Linking the concept of Payment of Ecosystem Service to the carbon market

On the supply side, the policy may prescribe prioritization of certain mitigation activities which offer wider ecological co-benefits beside carbon sequestration by allocating minimum quota in the offsetting by each industry to such activities like agro forestry.

5.1.9 Coordination and Linkages with Other Institutions

There are two aspects of carbon market, one is the technical part related to abatement activity and the other one is the market aspect. In both of these areas there are institutions that can provide assistance in operationalisation of the market. Some of these institutions can also be involved in the activities such as verification, monitoring etc. Linkages with exchanges like stock exchange, commodity exchange and other financial institutions will also be of critical help. Policy enunciation in this regard will pave way for coordination with all related institutions.

Policy framework in schematic diagram is shown in the figure 5.1

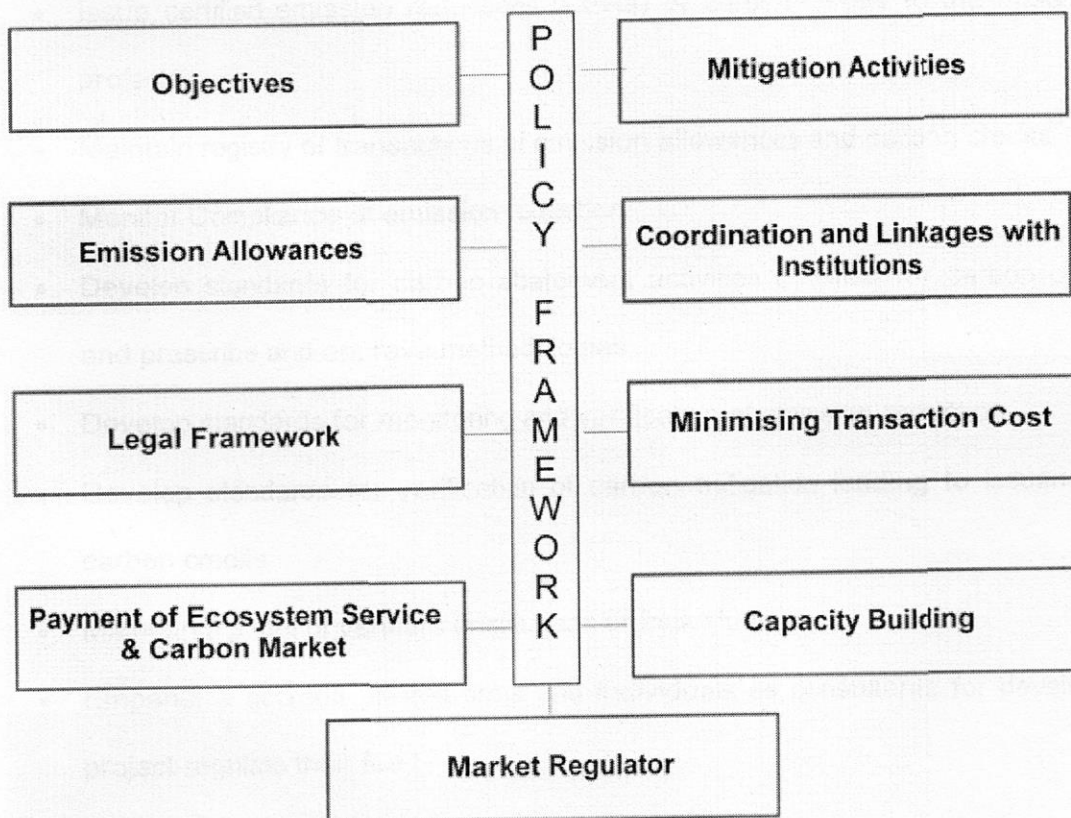


Fig 5.1 Schematic diagram showing elements of Policy Framework

5.2 Execution Framework

Under the overall direction of policy, a framework would provide details for making the proposed carbon market functional. The following will broadly define the execution framework of the carbon market

5.2.1 Market Regulating Authority

A regulatory authority constituted for the carbon market will be central to the functioning of the market. The authority's role and responsibility would include

- Issue emission allowances to the industries
- Issue certified emission reductions (CERs) or carbon credits to the abatement projects
- Maintain registry of transactions of emission allowances and carbon credits
- Monitor Compliance of emission reduction
- Develop standards for carbon abatement activities qualified for carbon credits and prescribe and approve methodologies
- Develop standards for monitoring and verification of emission reduction
- Develop standards for verification of carbon mitigation leading to issuance of carbon credits
- Maintain a panel of verifiers (institutions or individuals)
- Empanel & accredit private firms and individuals as consultants for developing project-regulate their fee
- Undertake capacity building initiatives

5.2.2 Assignment of Emission Allowances

In accordance with the Policy or rules made as a follow-up to the policy, emission allowances will have to be assigned to the industries from the identified sectors. Assignment of the emission allowance to the industries will be as per the criteria laid down in the rules. The factors such as capacity of production, actual production, technology used etc would form basis for determining the actual emission from the industry and accordingly emission allowance which would be in terms of percentage of the current level would determine the emission reduction target to be achieved in specified period of time for the firm.

5.2.3 Issuing Certified Emission Reduction (CER) or Carbon Credits

The policy will spell out the carbon mitigation activities which are eligible for carbon offsetting (i.e. emission reduction by purchasing carbon credits). The Market Regulating Authority will issue the carbon credits to the projects from such eligible activities e.g. agroforestry, after duly verifying the methodology, field validation and compliance of the laid down rules and procedures.

5.2.4 Maintaining Registry

The market regulator will maintain registry of all transactions of emission trading and carbon credit trading. Any transaction of emission allowances (balance with some industry) or carbon credit will take place through the registry only. It will be similar to commodity exchange.

5.2.5 Develop monitoring and verification standards of Emission Reduction –

Industries which have been issued emission allowances are required to reduce their emissions to the permitted limit. The emission reduction of the industries will have to be periodically verified according to the standards and protocol set by the market regulator. Verification and audit of the emission reduction is very important for the very existence of the carbon market.

5.2.6 Develop Standards for Verification of Carbon Mitigation Activities

Like above, it is important that the CERs or carbon credits issued by the market regulator actually stand for equal amount of carbon dioxide sequestered or abated (in tonnes). Standards for verification and audit are therefore very important to maintain integrity of the carbon credits.

5.2.7 Develop Methodologies and Approve New Methodologies

Carbon mitigation activities are implemented as project, which after verification result in the certified emission reduction or carbon credits. The projects are prepared following approved methodologies which include various steps like preparing baseline, determining additionality, assessing leakage, showing permanence and standardising measurement. Keeping the essence of the principles involved, methodologies may differ for projects according to the activities, site characteristics etc. The project proponent may also propose a new methodology. Market regulator is therefore required to develop methodologies. To meet this technical requirement, market regulator will require support from technical institutions.

5.2.8 Accreditation of Verifiers for Emission Reduction and Mitigation Projects

Carbon market is expected to deal with large number of industries and mitigation project proponents spread all over the country. For verification of the emission reduction and mitigation projects, number of qualified verifiers separately for the two activities would be required. This can be done by accrediting qualified institutions and individuals.

5.2.9 Accreditation of Consultants for Developing Projects

As mentioned in section 5.2.7, developing mitigation projects involves several technical steps. For this, engaging consultants or consulting firms becomes necessary, more so when developing agroforestry project on behalf of a farmer is involved. For this also, accreditation of qualified experts and firms would be necessary. Fees of the consultants will have to be regulated so that transaction cost does not exceed beyond a point.

5.2.10 Simplification in Methodologies and Low Transaction Cost

To ensure wider participation in the carbon market, it is necessary that methodologies are simplified to the extent it is possible and transaction costs are kept low. Both are interrelated also. Innovative approach and use of information & communication technology have to play important role in addressing these important factors in determining the overall success of the carbon market.

5.2.11 Awareness and Extension

Carbon market is relatively a new concept, very few people are aware about emission trading, carbon credits etc. Awareness about these terms is almost nonexistent in the rural areas. Therefore if the agro forestry is to be considered as main mitigation activity,

widespread awareness and extension activities will have to be undertaken on a sustained basis

5.2.12 Necessary Infrastructure for the Market

There would be specific infrastructure requirement for the market to function which would include manpower, physical infrastructure and more importantly, information and communication technology (ICT) infrastructure to allow on-line functions like trade, verification, accounting etc. Specific software development would also be part of the requirement in this regard.