

ASIA LEAST-COST GREENHOUSE GAS ABATEMENT STRATEGY (ALGAS)

Regulatory, Legal and Institutional Needs Assessment to Implement Least-Cost Abatement Initiatives

Task - C.5

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C.5 Regulatory, Legal and Institutional Needs Assessment to Implement Least-Cost GHG Abatement Initiatives

C.5.1 Introduction

National Perspective

While environmental concerns now constitute a major agenda for the government and there is also now some awareness regarding the possible adverse impact of climate change, this is hardly reflected in its policy statements and actions. Bangladesh is a signatory to the UNFCCC and as a non-Annex country is not internationally obligated to take measures for restricting the emission of green house gases. Yet, given that globally the emission of carbon di-oxide is caused by the use of fossil fuels and that in Bangladesh energy is used rather inefficiently, one would have liked to see that the policy makers emphasise a win-win strategy by which emission reduction and energy efficiency are both achieved at the same time. This awareness is completely lacking in the Fifth Plan as in the recently promulgated guidelines for environmental preservation. On the other hand although the National Energy Policy of the government notes the emission of CO₂ as a consequence of fossil fuel use and also the present low level of energy use and thus low level of emission, little awareness has been shown that these levels may increase fast in the future. The possible limits to emission has also been expressed in the vaguest manner. On the other hand, the Energy Policy has clearly advocated energy use efficiency and the need for an Energy Conservation Act. Thus, despite the lack of emphasis on GHG abatement, the basis is there for developing a policy framework for GHG abatement.¹

There is as yet no explicitly stated policy on GHG abatement. On the other hand, a lot of awareness raising activities have been going on sensitising the people regarding the dangers ahead and advising them on economy of energy use. Furthermore, of late there has been certain fiscal measures for raising the relative price of two stroke engines compared to the four-stroke ones which emit comparatively much less CO₂. Then again, several projects on a pilot basis are being developed as a pre-feasibility exercise. Thus, one may hope that a coherent set of policies will emerge over time.

Note that the benefits of GHG abatement in some cases are not simply environmental or are related to global emission issues. Industries in Bangladesh, if they implement the suggested energy conservation measures would save money and thus their output would be more competitive giving a boost to their production consequently benefiting the country in terms of additional GDP, employment and income. Where poverty alleviation is the overriding objective, any addition to income and employment within the economy is most welcome.

Yet, one can not be too hopeful because the imperatives of quickening the process of development may make the policy-makers oblivious to other issues. Thus, while the National Energy Policy preaches energy efficiency, the PSMP demonstrates how one can arrive at a technological package that needs to be adopted for a least-cost but efficient power generation plan and the present exercise shows where the

¹ There are, however, several problems with the Energy Policy. For a brief critique see Bangladesh Unnayan

inefficiencies lie in power generation, the Government in the name of a quick fix to the power shortage problem has accepted the erection of barge-mounted plants which generally are costly to run, inefficient, and as a result spews out more CO₂ than is absolutely necessary for generation of the same amount of power with more efficient technology.

In sum we find that while there are various policies, programmes and projects particularly in the context of economic development, there has been a major gap in understanding their import for the environment in general and for GHG abatement in particular. Be that as it may, the table C5.1 shows in summary forms the various economic development, environmental and GHG abatement objectives, their implementation plans/targets and the present status of these plans/programmes or targets.

International Perspective

Bangladesh is a signatory to 22 international treaties, conventions and protocols. These include the Agenda 21 (on development and environment), Framework Convention on Climate Change (FCCC), the Biodiversity Convention (on preservation of bio-diversity), the Basel Convention on import and transport of hazardous waste, The Montreal protocol on measures for preventing ozone depletion and the Ramsar Convention on the preservation of the wetlands and their ecology. Among these, in the present context the FCCC is the most pertinent.

Bangladesh being a non-annex-1 country is in no way obligated to commit herself to any action to reduce/abate GHG emissions under FCCC. Yet, Bangladesh is not only a signatory to FCCC she ratified the Convention even before it came into force. She, therefore, has a moral obligation to try to reduce GHG emissions, thereby reducing potential adverse impacts of climate change looming over many developing countries including herself. Furthermore, many of these actions, as demonstrated through the modeling exercise, have net negative costs that is the benefits outweigh the costs. As shown earlier the net benefits in some cases are very substantial. Since such actions would benefit the country, irrespective of global benefits, Bangladesh should try to implement these without further delay. This is how the national and the international objectives could be met simultaneously.

In addition to the cost effective mitigation measures nationally, other measures should also be considered using the window of *Actions Implemented Jointly* (AIJ). AIJ is in its Pilot Phase now. While one may question the basic intention behind it in the context of international debate between the southern and northern countries, the fact remains that unless one tries it in practice it may not be possible to understand its strengths and weaknesses fully. It was decided in the first COP in Berlin in 1995 that no credit shall accrue to any Party as a result of reduction in GHG emission or sequestered during its Pilot Phase. Given the realities about Bangladesh's precarious energy supply situation and major inefficiencies in energy use and production, the country should try its best to secure funds through the AIJ mechanism for energy development projects. Major candidates for fruitful AIJ projects

may include energy production in the power sector, development of gas sector through exploration activities and increased end-use energy efficiency in industry and domestic sectors. COP III held in December 1997 at Kyoto has made important decisions about the AIJ. It offers new opportunities as a funding mechanism. Till now Bangladesh has not taken any policy stand on the issue. It is high time that she does so.

C.5.2 Policy and Regulatory Needs

The policy and regulatory needs should now be obvious. The needs may be expressed as follows:

- a) There is a serious gap in terms of coordination among economic and environmental objectives. The gap is more serious in case of the understanding and coordination of the linkages between GHG abatement activities and measures which are economically highly profitable. As a result, environmental measures are thought of more as an addendum rather than an inter-linked one. Areas where such a lack of understanding is actually hampering the cause of economic development include raising efficiency in industrial energy use and increasing the efficiency of the power generation system in the country.
- b) Various regulatory policies and measures in force in the country are often too vague to be of much use in actual practice and leave wide scopes for interpretation and therefore their abuse through legal loopholes. These policies, rules and regulations should therefore be examined closely for such loopholes, enough explanatory clarifications be provided and guidelines more clearly laid down. A case in point is the National Energy Policy and the newly promulgated regulations for putting the Energy Conservation Act, 1995 into effect. The former needs to take the issue of GHG mitigation more seriously and the scope of the latter should be broadened to include emission of GHGs.
- c) There appears to be two major reasons for the lack of understanding and lack of action. First and foremost little awareness exists among the policy makers about the importance of the issue of environment in general and that of GHG abatement in particular as these impinge upon economic development and vice versa. This is caused mainly by the lack of institutional capability arising out of inadequacy or absence of requisite trained manpower and institutional mandate. There should therefore be a major awareness-raising campaign among the policy-makers and the people at large. Adequate and proper training should be provided to the officials in charge of operationalising various policies and regulations.

C.5.3 Specific Measures and Institutional Needs

Given the above general policy and regulatory needs, there are likely to arise in the near future specific needs for putting into effect various policy recommendations, particularly those which have been discussed earlier in this report. Some of these are discussed below.

Awareness campaign

With the help of the Ministry of Environment, the Department of Environment and the Ministry of

Science and Technology, the Ministry of Information should launch a major awareness-raising campaign regarding the necessity of environmental conservation and GHG abatement and their links with the process of economic development in the country. There should be a separate targeted campaigns for senior policy-makers. A major topic of information should be the commercial availability of technology which are efficient and at the same time cheap to acquire and operate. Indeed one should be aware of also the new technologies which with donor help may be tried on a pilot basis. An example is the fuel cell technology which may be available on a pilot basis for power generation with donor assistance (particularly from Canada).

Industrial energy use efficiency

This is possibly the most important sectoral measure from the view point of GHG abatement. Yet, industrialists hardly notice the need for raising such efficiency. As discussed in an earlier section, improvement of boiler efficiency is a must. Private entrepreneurs may also therefore need to be made aware of the benefits they may reap and the way this may be done. If necessary, tax breaks, credit or some such measures may be adopted. The Directorate of Industry should be involved in putting such measures into effect and if necessary the Directorate's institutional capacity and human resource may be upgraded through training and other means.

To implement gas based power generation

There are government institutions involved in gas based power generation. The regulatory framework should be altered in such a manner that the private sector entrepreneurs including the foreign investment companies can invest for such development and generate power. However, one has to be careful regarding the technology that are proposed to be brought in. The implications of such technologies if these are based on less efficient processes should not be accepted. It should be kept in mind that a power plant operates for many years. So in the name of quick solutions, one should not accept apparently cheap technologies which are costlier in the long-run due to their inefficiency. The relevant government institutions need some human resource development and upgradation in dealing with the entire operation and monitoring of such investment activities by the private entrepreneurs.

To disseminate improved cooking stoves

There is an opportunity for a GO-NGO collaborative activity. At present the BCSIR is involved in disseminating the cooking stoves; but, their success so far has been rather limited. The role of information ministry and electronic media should be emphasized here.

Conversion of petrol-driven vehicles into CNG-driven vehicles

There is an ongoing project under the relevant government institution. The capacities of both the plants involved in CNG production and installation of conversion units along with the size and quality of the manpower of those institutions/agencies need to be enhanced. The Information Ministry has a role in taking up an awareness campaign in popularising the CNG driven vehicles.

Replacement of incandescent bulbs with CFL

Regulatory framework is to be established first. The existing tariff structure should be evaluated and the cost-benefit of offering some rebate on tariff up to a certain period should be analysed. The “building code” for large government and industrial sectors should be changed to accelerate the use of CFLs. If an entrepreneur comes forward to manufacture such items inside the country, he/she the company may be offered some tax exemptions in some form or other.

Solar electricity with PV system

Since the Rural Electrification Board (REB) is already involved with a pilot phase of such a project, the proposed activity might be considered as an extension of the pilot work. The tariff structure, however, should be reevaluated and import tax rationalised to make PV panels more cost effective.

Two-stroke to four-stroke engines for auto-tricycles

The import duty for four-stroke engines may be lowered or waived for a certain period. On the other hand the import tariff on two-stroke engines could be more stiff to discourage their imports. The Roads Division may consider a phasing out plan for the existing two-stroke engines.

Generation of electricity by using urban solid wastes

The existing legal framework for private investment in power sector need to be restructured to pave the way for participation of private investors in collection and utilization of urban refuse to develop land and at the same time generate electricity for the neighborhood.

Table C5.1 Summary of National and Sectoral Objectives and Implementation Status

Indicators	Economic Development	Environment	GHG Mitigation
Objectives	<p>Poverty alleviation</p> <p>Employment generation</p> <p>Food production beyond self-sufficiency;</p> <p>Human resource development ;</p> <p>Infrastructure development,</p> <p>Limit population growth rate</p> <p>Strengthen scientific and technological base with emphasis on R & D;</p> <p>Protection of environment ;</p> <p>Balanced gender-based development</p>	<p>Promotion of sustainable livelihood by alleviation of poverty;</p> <p>Promotion of environment-friendly activities in development interventions; Preservation and development of the natural resource base;</p> <p>Control and prevention of pollution and degradation related to soil, water and air;</p> <p>Creation of public awareness and institutional capabilities for managing environmental change;</p> <p>Conserve bio-diversity.</p>	<p>No explicit objectives</p>
Implementation plan/targets	<p>GDP growth rate of 7.3% over Fifth Plan</p> <p>Investment-GDP ratio 22.5%</p> <p>Raise employment by 27%</p> <p>Raise foodgrain output by 24%</p> <p>Raise literacy rate by 59%</p> <p>Raise power generation by 91%</p> <p>Lower population growth rate to 1.32%</p> <p>Raise industry growth rate to 15%</p> <p>Raise foodgrains output by 4% p.a.</p> <p>Raise power generation by 50%</p> <p>Raise other sectors' GDP by 7% p.a.</p>	<p>Several initiatives taken which include</p> <p>NEMAP</p> <p>Sustainable Environment Management Plan (SEMP)</p> <p>Forestry Master Plan</p> <p>Draft Power Sector Master Plan</p> <p>Draft Gas Sector Development Plan</p> <p>Energy Audit in various industries</p> <p>Set up various oversight committees</p>	<p>Awareness raising</p> <p>Project pre-feasibilities</p> <p>Studies</p>
Status	<p>Targets under debate and likely to be finalised soon;</p> <p>MOUs signed with several foreign firms for setting up of new power plants</p> <p>Production-sharing contracts with foreign firms for gas field development</p>	<p>For SEMP signed</p> <p>NEMAP implementation in various phases under active consideration with UNDP and WB funding;</p> <p>National Environment Policy in place</p> <p>National Energy Policy in place</p> <p>Environment Conservation Act passed</p> <p>Environment regulations promulgated for controlling mainly industrial pollution</p> <p>Others are also under active consideration</p>	<p>Radio-TV coverage on-going</p> <p>Project profiles just done</p> <p>Proposal for National Action Plan for national communication under preparation</p>