Sustainable Development goals in host countries

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Introduction

The concept of sustainable development is quite distinct from economic growth and accepts limitations of the economic indicators like gross national product (GNP) to measure the well-being of nations. Instead sustainable development accepts wider perspectives as a measure of the quality of life of people, society and nations such as alleviation of poverty, provision of basic facilities of life (basic health care, safe drinking water), education to all particularly to children and women, job and work opportunities to people for their sustainable livelihoods, better purchase power, removal of hunger and food for all, in short, an equitable world; a development which would ensure a social structure where every individual will have freedom of religions faith and belief, social security and safeguard to their personal life and property and finally a development that would not endanger the environment and the flora & fauna of the earth. Mere economic growth without satisfying these attributes to life and society, cannot guarantee a development which would be sustainable.

Conceptually these are very powerful indicators of sustainable development but how we ensure that activities leading to economic growth for development satisfy these measures of well beings of people, society and nations.

Definition of Sustainable Development

World Commission on Environment and Development (WCED) in their report Our Common Future (1987) first defined sustainable development as “meeting the needs of the present without compromising the ability of future generations to meet their own needs”.

The word ‘sustainable’ has acquired tremendous currency in recent years, particularly after the UNCED ’92 in rio. Sustainable Development is a critique of the concurrent growth-oriented, top-down development paradigm. It emphasises a development framework which is based on an appreciation of the finite human and natural resources available on planet earth.

While the concept and the definition of sustainable development was first introduced by the WCED in 1987, but this concept has not yet been fully integrated to the operational aspect of development strategies of the industrialised and developing countries.

2. Can Climate Change Mitigation activities contribute to Sustainable Development in host countries ?

2.1 Before we discuss the issue, it may be necessary to discuss briefly the human dimensions of climate change. The human activities that interact with the Earth’s natural systems are driven by three fundamental factors : the number of human beings and their distribution around the world; their needs and desires - as conditioned by psychological, cultural, economic and historical factors - which provide their motivations to act; and the cultural social, economic and political structures and institutions, a norms and laws that shape and moderate their behaviour.

These human activities are :

- Energy production from fossil fuels
- Industrial activities
- Transportation
- Construction of buildings and infrastructure
- Agricultural activities
- Land use change and forestry

Emissions resulting from these human activities are substantially increasing the atmospheric concentrations of green house gases (GHGs) : carbondioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), chlorflurocarbons (CFCs), Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs) and sulphur hexaflouride (SF_6). CFCs are being phased out under the Montreal Protocol. Under the climate change mitigation activities of the UNFCCC and the Kyoto Protocol,

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emissions CO_2, CH_4, N_2O, HFCs, PFCs and SF_6 from human activities are to be stabilised at a level that would prevent any dangerous anthropogenic interference with the earth's climate system. The second assessment report of the inter-governmental panel on climate change (SAR, IPCC-1995) has projected average global warming due to the increased emission of GHGs resulting in an increase in the global mean temperature by 1^0 to 3.5^0C with a mid range value of 2^0C relative to 1990 and with a rate increase of 0.2^0 C per decade or 0.02^0C per year by 2100; in all cases the average rate of warming would probably be greater than any seen in the last 10,000 years, predicted sea level rise due to climate change will lie between 15cm and 95cm with the best estimate of 50cm from the present to 2100. Human induced climate change represents an important additional stress, particularly to many ecological and socio-economic systems already stressed by pollution, increased resource demands and unsustainable management practices. The most vulnerable systems are those with the greatest sensitivity to climate change and the least adaptability. Such a climate change will have considerable adverse impacts on :

- Forest and landuse
- Water resources
- Coastal zones, coastal economy and fisheries
- Energy and electricity generation
- Transportation and industry
- Human habitat, population and their health

Although our knowledge on human induced climate change and its impacts has increased significantly during the last decade, and qualitative estimates can be developed, quantitative projections of the impacts of climate change on any particular system at any particular location are difficult because regional scale climate change predictions are uncertain.

Projected climate change impacts can be minimised by suitably planning adaptation strategies. Capacity of a nation or a region to adapt to projected or actual changes of climate requires appropriate technologies and economic circumstances. This implies two things :

(1) to take appropriate measures by the industrialised countries who are mainly responsible for the largest share of historical and current global emissions of green house gases, in response to their commitments in the UNFCC and Kyoto Protocol on the quantified limitation and reduction of greenhouse gases and (2) by transferring environmentally sound technologies and additional funds, to developing countries.

2.2 Activities Implemented Jointly (AIJ) of the Convention and Kyoto Protocol

As per Article 4.2 (a) of the Convention each of the developed country Parties and other Parties included in annex I shall adopt **national policies** and take corresponding measures on the mitigation of climate change..... . These Parties may implement such policies and measures jointly with such other Parties (a concept of joint implementation) with the aim of returning individually or jointly to their 1990 levels. The developing country Parties (non-annex I) do not have any such commitments. The concept of joint implementation as provided in the Article 4.2(a) of the Convention was viewed by the developing countries with apprehensions and doubt. They rather proposed a pilot phase of Activities Implemented Jointly (AIJ) for learning lessons and capacity building and integrating such lessons in the operational phase. They proposed for more stringent domestic action by the annex I countries for mitigation of climate change and that mechanisms like AIJ should only supplemental and treated as a subsidiary means of achieving the objective of the Convention. The pilot phase AIJ was established during the first conference of the Parties (COP-1) in 1995 in Berlin, among annex 1 Parties and on a voluntary basis with non-Annex 1 Parties that so request. India took a lead in introducing the concept of 'Activities Implemented Jointly' (AIJ). There was no specific mention however that AIJ between Annex 1 and non-Annex 1 country Parties should bring about sustainable development in the host countries, but one of the criteria for AIJ states "that activities implemented jointly **should be compatible with and supportive of national environmental and development priorities and strategies, contribute to cost-effectiveness in achieving global benefits and could be conducted in a comprehensive manner covering all relevant sources, sinks and reservoirs of greenhouse gases".** This criteria when applied to AIJ project design and development is bound to assist developing countries in achieving sustainable development.

That climate change mitigation activities can contribute to sustainable development in host countries is further demonstrated in the Kyoto Protocol flexible mechanisms. In particular, the Clean Development Mechanism that was a part of the flexible mechanisms, outlined a system through which climate change mitigation activities could lead to sustainable development specifically in the developing countries.

As per Article 3 of the Protocol, the Parties included in annex I shall, individually or jointly, ensure that their aggregate anthropogenic carbon dioxide equivalent emissions of the greenhouse gases listed in Annex A viz., CO_2, CH_4, N_2O, HFCs, PFCs and SF_6 do not exceed their assigned amounts ... with a view to reducing their overall emissions of

such gases by at least 5.2 percent below 1990 levels in the commitment period 2008 to 2012. In addition to their domestic actions to reduce emission of greenhouse gases, the industrialised country parties can supplement their actions in fulfilling their commitments in the Protocol through the flexible mechanisms viz. Joint Implementation (JI), Clean Development Mechanism (CDM) and Emission Trading (ET).

Each of these activities if designed properly can contribute to sustainable development in host countries, and more so through CDM project activities for sustainable development in developing host countries. The purpose of the CDM is to :

i) assist development country parties in achieving sustainable development
ii) assist industrialised countries (Annex 1) in achieving compliance with their quantified emission limitation and reduction commitments under Article 3, and
iii) contribute to the rational objective of the Convention.

For successful implementation of AIJ and/or CDM projects in achieving sustainable development in the developing countries few basic requirements have to be met. They are :

- Building institutional capacity for sustainable development
- People's participation in identifying priority development issues in and around a project site. Human concerns are often ignored as obstacles in order to achieve targets and deadlines.
- However, in deciding sustainable development priorities a two tier approach may be helpful - one will be country's sustainable development priorities - and the other pertaining to people around a project area or site and their priorities for sustainable development. This approach will be further discussed later in this chapter. To integrate such sustainable development requires a major shift towards self-defined, self-reliant decision making by people and society within the context of a global vision - 'Thinking globally, Acting locally'.
- In addition, each AIJ and /or CDM project must be designed carefully, integrating the AIJ experiences globally for achieving sustainable development in developing countries. AIJ literature survey tells us of lessons learnt which may be relevant to CDM projects as well as both the processes have many similarities.

2.3 Experiences world wide can help in designing appropriate projects in host countries for achieving sustainable development

Worldwide AIJ experiences, even as they have hardly made an impact and drawn considerable criticism from the developing world (for an example see Samuel Ferrer : Some Disturbing Thoughts About AIJ) have nevertheless taught policy makers and project developers all over the globe some valuable lessons in the design and implementation of climate change mitigation projects in general and AIJ/CDM type of projects in particular. The main issues where attention needs to be paid have been touched in passing as under :

(1) On baselines

AIJs can be successful if baseline determination rests on a clear set of rules. The baseline study assumes utmost importance in the case of AIJ/CDM projects, where any inflation of the baseline scenario may lead to certification of 'paper tons' (spurious emission reductions). These paper tons imply eventual increases in the global emission levels.

(2) Projects should be simple

It is important that projects are simple involving few decision makers. An attempt at making procedures too rigorous may end up raising transaction costs significantly.

(3) Incentives

3.1 The action involved should have clear economic incentives and a sincere interest in the project to ensure speedy and proper implementation.

3.2 For the success of AIJ projects the private sector of the industrialised countries need to provided with some fiscal or other incentives, by both the host and investor countries' Governments.

(4) A clear guideline for selection of AIJs

There should be clear guidelines and criteria for selection of projects developed, and applied with rigour as far as practicable for project design and formulation.

(5) Projects should be host driven

For the success of AIJ and /or CDM projects, the projects should be host country driven with a national development agenda as target and strong political support.

(6) Development of routines of monitoring and verification of AIJ projects

There is a need for development of routines for monitoring and verifying projects to simplify the procedures.

(7) A community approach is vital

A community approach to GHG benefits is of vital importance. Sustainable development as a priority is not achievable without a thorough understanding of the sustainable development needs of the local community in and around the project area.

(8) Transaction costs

A continuous effort to reduce the cost of identification of project partners, planning implementation, monitoring and verification and constructing baselines in short transaction costs should be made.

(9) Capacity building

Human and technical capacity are necessary but not sufficient conditions for successful AIJ in developing countries. The lukewarm global response to the AIJ pilot phase has largely been due to inadequate capacity building and poor understanding of the isues governing such climate change mitigation projects. Considerable capacity building has to go in upcoming AIJ/CDM projects globally.

3. What Sustainable Development Means to Developing Countries and what is their expectations from AIJ with particular reference to India

3.1 Introduction

Sustainable development though has the same goal of meeting the needs of the present without compromising the ability of the future generations to meet their own needs, but has different meaning to different nations and countries. The excessive luxury emissions by the affluent society of the North is unsustainable. Their present wasteful life style from over consumption of resources have created considerable local as well as global problems. To cite a few are : the depletion of the ozone layer from excessive consumption and release of chlorofluorocarbons, halons etc. to the atmosphere by the North. They are overwhelmingly responsible for increase in the chlorine loading of the upper atmosphere resulting in rapid destruction of the ozone layer. Similarly the largest share of historical and current global emissions of greenhouse gases has originated in the North (developed countries). In fact, the North with about 20 per cent of the global population is emitting more than 70 per cent of global emissions of green house gases. If we consider CO_2 emission per capita as the proxy indicator for sustainable development, then surely the life style of North is unsustainable and needs to be drastically changed. The Climate Change Convention and Protocol are therefore very useful vehicles for the North to change their present fossil fuel based economy and over consumption to sustainable life style.

On the other hand in the same analogy, the greenhome emission from South (developing countries) are their survival emissions and their per capita emissions is still very low. They have very few alternatives, in view; at present their main agenda is development and rapid economic growth for poverty alleviation and providing the basic facilities of life to their poor millions.

3.2 Expectations from AIJ [1]

Out of the 500 million people in absolute poverty in South Asia (about half the world's poor) India alone have as many as 360 million people living below the poverty line. Developing countries such as India do not have any commitments to reduce their emissions of GHG under the FCCC, nor are they likely to have any in the near future. Their expectations from AIJ, therefore, are quite different from those of industrialized countries who see it as a way to reduce the cost of fulfilling future commitments. Developing countries expect AIJ to help them meet their national development priorities — otherwise they have no reason to devote scarce resources to develop AIJ programmes.

AIJ could help developing countries in their economic, social and institutional development, while improving the local environment. Areas where India and other developing countries expect some tangible benefits from AIJ are as follows

·1. Kalipada Chatterjee and Randall Fecher : Activities Implemented Jointly - India's Expectations, Opportunities and Strategies in " Activities Implemented Jointly to Mitigate Climate Change - Developing Country Perspectives" (Kalipada Chatterjee, Ed; 1997; pp. 79 - 107)

- Economic
- Increased investment in priority sectors of the economy
- Additional investment without adding to external debt
- Transfer of clean and cost-effective technologies
- Reduced imports of fossil fuels
- Job creation from projects and industries they catalyze
- Social and Infrastructure
- Improved access to power, fuel and fodder
- Community based livelihoods supported by AIJ power and agroforestry projects
- Institutional
- Capacity-building at local, state, and national levels
- Environmental
- Reduced air pollution caused by 'dirty' power generation technologies
- Reduced water pollution and erosion caused by deforestation and unsustainable agriculture

These benefits in turn can provide the basis and the funding for better health care, education and human development in less developed countries — but only if the AIJ system is structured to make these potential benefits a reality. The benefits could apply to any developing country, but each country's priorities and capabilities will differ somewhat, as will the appropriate strategies for harnessing AIJ for sustainable development. Before looking at the specific opportunities for India in each of these areas, we should clarify India's development and environment priorities.

India's Development and Environmental Priorities

Important as the global environment is , for this and future generations, India's role in international efforts to avert climate change must be based on domestic development priorities. The pressing issues of alleviating poverty, providing for basic needs, and economic development are the starting point for assessing the potential for AIJ. Only by addressing these needs and critical environmental problems will the concept of AIJ flourish in India.

Officially more than 85 per cent of the urban population had access to safe water and 50 per cent had access to sanitation by 1993. Both of these are up dramatically since 1985, when the share was 73 per cent and 28 per cent, respectively. Not surprisingly, however, people in India's 550,000 villages often do not have these services. Almost 80 per cent, as against 50 per cent 20 years ago, have safe drinking water, but only 3 per cent have access to sanitation. The percentage of people without access to safe water may be small, but that still means 170 million people are constantly vulnerable to water-borne diseases which claim countless lives each year.

Where can these people go when they are sick? The number of doctors and nurses in India has increased six-fold in the past 30 years to be at par with countries like Thailand, Malaysia, and China. But with only 10 hospital beds per 10,000 people and a shortage of rural clinics, many of the poor are not reached. Moreover, infant mortality, at 80 per 1000 live births, is still high compared to middle and upper income countries.

Unfortunately, many of India's poor live not only without water, sanitary facilities, and medical care, but also without homes. The housing gap in India is staggering. The Government estimated that in 1991, 24 million housing units were needed to provide homes for those who had none and to replace structurally unsound houses and buildings. That gap is expected to grow to 30 million units by 2001.

Sustainable Economic Development

How is India to pay for these basic services and social welfare programmes for the poor without economic growth ? At $ 300 per capita GDP, India is one of the thirty-five poorest countries in the world, even adjusting for the low cost of living. Many inside and outside India agree that economic growth must and should accelerate as a result of the landmark economic reforms of 1991 which opened the economy up to private investment. The requirements for development, however, are staggering. The infrastructure development for the country will cost the exchequer a whopping $ 200 billion over the next five years at a minimum, or 6 per cent of total GDP.

Yet this growth cannot come at the expense of the local environment, as it has so often in the past. Issues such as industrial pollution, declining air quality and polluted waterways are tied directly to economic growth and must be addressed.

In the international environmental arena, India's GHG emissions are intimately linked to the process of economic growth. Energy intensive sectors such as transport and construction are expanding and the power sector is struggling

to close the gap between supply and demand for electricity. Agriculture is vital to provide the basic nutritional needs of the people. A closer look at the power and agriculture sectors reveals the critical need for investment and technology upgradation to provide for basic needs in India as well as to tackle climate change.

Power generation

Outdated and inefficient technology, poor maintenance, and some of the highest transmission and distribution losses in the world have caused huge electricity deficits in India. The peak deficit for power reached 17 per cent in 1994, with an overall energy deficit of 7 per cent. One economist estimated conservatively that power shortages cost Indian industry $2.7 billion a year, or 1.5 per cent of GDP.19 Moreover, to insure themselves against costly power failures, companies purchase expensive and highly polluting diesel back-up generators.

Agriculture

Providing sufficient food for all is one of the most basic requirements of development. Yet, on an average, Indians are only receiving 90 per cent of the basic dietary requirement recommended by the World Health Organization (WHO). The Green Revolution transformed much of the prime farming area in Northern India, but now grain yield increases are slowing down and food grain output per capita has actually fallen slightly since 1991. Investments in irrigation, efficient use of power for irrigation, and a shift towards sustainable agricultural practices are all priorities for India.

Environmental Priorities

Population growth, rapid urbanization, the development of heavy industry and unsustainable agricultural practices have severely degraded the environment in India. Moreover, in India and throughout the developing world, it is the poor who suffer the most from air and water pollution, erosion, and other environmental problems — the poor who have no option but to rely on their immediate environment for survival. In many cases, Government policy may exacerbate problems rather than solve them. International regimes such as AIJ, therefore, should provide both local environmental benefits and promote the development of sustainable livelihoods which do not degrade the environment.

Air Pollution

Ineffficient heavy industry and the ubiquitous use of coal severely degrades air quality in India. As a result, India has two of the five cities in Asia with the worst overall air pollution. In Delhi, for instance, average concentrations of sulphur dioxide (SO_2) in the air are 50 per cent higher than WHO guidelines, while suspended particulate matter is almost six times the recommended limit.

Water management and pollution

Although annual rainfall is ample in many parts of India, wide seasonal and geographic variations often lead to local scarcity. Groundwater depletion is a serious problem in many of the state most affected by the Green Revolution such as Punjab. Ironically, in the midst of this scarcity, almost a fourth of India is subject to periodic flooding from monsoon rains. Water management, therefore, is a major issue.

Industrial effluents are an increasing problem in India, but the majority of water pollution is still untreated municipal waste. The Central Pollution Control Board estimates that 90 per cent of the water supplied to small towns is polluted, because virtually none of the waste water from these areas is treated. The sacred river Yamuna receives 200 million litres of untreated sewage every day as it passes New Delhi.

Land degradation and soil erosion

In recent decades, land degradation has reached alarming proportions due, in large part, to mismanagement and short-sighted policies in irrigation, agriculture and the use of forests. Almost half of the land in India , or 150 million hectares, is considered degraded, non-arable, or highly susceptible to erosion. In agriculture, up to 50 million tonnes of produce has been lost due to eroded soil which no longer contains necessary plant nutrients. 0ver-irrigation and poor drainage has caused water logging and salinization over millions of hectares. Degradation and erosion destroy the resiliency of the ecosystem, leading to increased flooding during the monsoons and more severe droughts during the dry season. Degraded soils also give up carbon to the atmosphere, destroying natural sinks.

Deforestation

India has only approximately 20 per cent forest cover left. Although the rate of deforestation is less than one per cent per year, this is still a major threat. Most of this deforestation is from the gathering of fuel wood and the conversion of forest land to agriculture. Shifting cultivation affects 3 million hectares in India, as migrants with nowhere else to turn look to open access forests for subsistence. Moreover, as in the rest of Asia, the vast majority of wood harvested in India is for fuelwood. The resulting deforestation contributes to erosion, destroys valuable carbon sinks, and puts further pressure on the dwindling biodiversity.

Biodiversity and critical habitats

Few areas of the world have such a rich diversity of species and ecosystems as India does. India has over 45,000 plant and 75,000 animal species, large numbers of which are endemic. Yet this biodiversity is increasingly threatened and species are rapidly moving the IUCN Red List of threatened species, largely because of habitat destruction. In the near future, more plant and animal species will be lost in a single human lifetime than in the past two to three million years.

Poverty-Environment Links

India's development and environmental priorities are inseparable. Problems such as unsafe water and encroachment on marginal agricultural lands are due in fact to lack of development, especially in rural areas. These sectors need investment and technologies to bring the growing number of poor above subsistence levels and reduce the pressure on their immediate environment. On the other hand, industrial air and water pollution are the direct result of poorly managed development, and have the greatest impact on the vulnerable urban poor.

Current Government Policy Priorities

Following the Rio Summit in 1992, the Government of India laid out its overarching environmental policy in the 1993 Environmental Action Plan (EAP). The priority areas of the EAP are : (a) conservation and sustainable utilization of biodiversity in selected ecosystems; (b) afforestation, wasteland development and conservation of soil moisture; (c) control of industrial and related pollution with an accent on reduction and management of wastes; (d) improving access to clean technologies; (e) tackling urban environmental issues; (f) strengthening scientific understanding, training and awareness of environmental issues; and (g) developing an alternative energy plan.

All these call for a rapid yet sustainable economic growth. The developing countries need additional funds and technology transfer so that they can gradually replace their present industrial activities including generation of electricity with efficient technologies and systems that would, raise productivity, conserve valuable resources, and improve air quality, water quality and soils. The Activities Implemented Jointly (AIJ) and /or Clean Development Mechanism (CDM) if designed with great care and driven by the needs of the developing countries may substantially contribute sustainable development in India. But sustainability indicators for monitoring success of such sustainability projects should be decided at two levels - one at the national level, and the other at the project level; and these indicators must be arrived at by a transparent participatory process by all the stakeholders. Therefore it is not easy to prepare a general menu for sustainability indicators. However some of the indicators which are likely to be common for most of the developing countries are :

- Economic
  - additional financial flows
  - increase in purchasing power of the people
  - increase in per capita incomes
  - employment opportunities
  - poverty alleviation
  - transfer of clean technologies
- Social
  - clean water supply
  - basic health facilities
  - education to children and women
  - sanitation facilities
  - social economic impacts of the projects
- Environmental improvement in
  - air quality
  - water quality
  - soil fertility
  - local environment
  - bio-diversity

3.3 How sustainability achieved through a AIJ and/or CDM project can be verified ?

For the purpose of verification of sustainability achieved through a AIJ/CDM project the following methodologies may be adopted :

Bharat Tamug. Dechen Tsering, Winfried Rijssenbeek and Frank vander Vleuten: AIJ Pilot Project Kilung- Chuu Micro - Hydel in Bhutan, in "Activities Implemented Jointly to Mitigate Climate Change". Developing Countries Perspectives"; (Kalipada Chatterjee Ed ; 1997, pp. 166 - 178).

Step 1 : Preparation of a 'menu' of sustainability indicators initially as a part of project design exercise decided primarily by the project participants, after a preliminary consultation with the people in and around the project site.

Step 2 : Prioritisation of the sustainability indicators by taking up a socio-economic survey preferably by some grassroot NGOs who are quite familiar with the people's need in and around the project area. NGOs are preferred because they communicate better with the people and people expresses freely with such NGOs, resulting in a transparent, free and frank exchanges.

A case study

A similar approach was adopted in the pilot phase AIJ project - Kilung - Chuu Micro - Hydel in Bhutan[2]. The project was jointly undertaken by the Dutch Ministry of VROM (Housing, Spatial Planning and Environment) and the Government of Bhutan (see box).

Box

AIJ Pilot Project Kilung - Chuu Micro-Hydel in Bhutan

The AIJ Pilot project concerns a micro-hydel system of 100 kw in a previously not electrified area to reduce deforestation through reduced fuelwood consumption, leading to reduced GHG emissions from the area. The project region has a moderate climate at an altitude ranging from about 1,230 metres (Kilung- Chuu river) to 2,130 metres (Samling village).

Development Priorities : an Exante Field Assessment

To assess the development relevance of the micro-hydro installation, the population was asked to indicate their development priorities through individual household interviews and village meetings. The number of households in the surveyed villages in the project are 108, with an estimated population of 700-800 people. The people in the villages earn their livelihood basically from growing crops (especially rice, maize, barley, millet, wheat) and raising animals (cattle, pigs, chicken). Cottage industries were virtually absent in the project area. Most households produce mainly for their own consumption. Only 10 per cent of the survey respondents had actually received education (mainly monastic education).

In the interpretation of development priorities, the stratification of the community and that within the households was considered by taking into account whether the household was rich or poor, whether the respondent was male or female, child or adult.

The development priorities was plotted against the land ownership (figure). Although a broad range of development criteria was mentioned, apparently drinking water, electricity, education and road are clearly the main priorities. Village meetings confirmed this general image with the following main observations :

- The main priorities are drinking water, irrigation, road and electricity
- Women find drinking water most important; men, a road and youth add the priority of finding some means to drive monkeys off the fields
- Notably on the South bank, on which the hydel is planned, irrigation is a main development priority.
- Electricity is not mentioned at the top priority of the population.

Step 3 : Integration of a set of prioritised sustainablity indicators in the design of the project. Initially a 'menu' may contain a number of sustainability indicators. Finally a set of not more that half a dozen of sustainability indicators according to their priority may be integrated in the project design.

Step 4 : Monitoring to examine if the project activities domonstrate achieving the sustainability goals agreed upon. Monitoring should be done at short regular intervals to enable the project participants to ensure that the project activities are in the right direction, as well as, if necessary to apply mid term corrections before the project drifts too far from the sustainability goals and objectives, initially agreed upon by the stake holders.

Step 5 : Verification of sustainability achieved through the project. This step is very important and should be taken up by experts who are well versed in socio-economic survey particularly economist and NGOs with good background of such surveys. At this stage the team for verification may comprise of economists, NGOs both national as well as grassroot and some members from the community on whom survey is to conducted. Based on the verification report, the project activities (AIJ/CDM) and emission reductions must be certified for credit and credit sharing, (Credits may be allowed for AIJ projects beyond 2000).

4. A CONSTRUCTIVE CRITIQUE OF THE AIJ

The AIJ Pilot Phase was ushered in with a lot of expectation both in the minds of the proponents and the annex 1 countries. Even among the developing countries, it was hoped that this phase will be an ideal launching pad for undertaking future GHG mitigation programmes. However, with less than a year to go before the Pilot Phase comes to an end, the net result is plainly disappointing as far as the performance of the AIJ is concerned. The response from the developing world has been very depressing, with the possible exception of the Latin American countries. Now that the CDM is about to be born, it is in the scheme of things that the issues that hindered the success of the AIJ Pilot Phase be analysed constructively.

The one caveat to be announced beforehand is that the fabric of the developing countries differs significantly from that of the developed nations as far as the homogeneity of their composition is concerned. That is, the developing countries vary a lot between themselves. For example, the OPEC are in no way similar to the AOSIS. Again, the South East Asian nations have little in common with the African countries. So, it is essential that a fair bit of analysis be done before something as lucrative as the CDM is introduced.

The AIJ Pilot Phase to start with laid a lot of stress on the GHG emission abatement and enhancement of sinks and reservoirs. However, a comparatively lesser amount of emphasis was put on the different sources of these emissions. Even lesser attention has gone into the appropriate methodologies for adaptation to impacts as part of AIJ activity. Added to this issue, the possibilities of developing alternatives and cost-effective sources of energy has hardly been explored under AIJ. Moreover, the cost of the impact of the AIJ project on the socio-economic set-ups in the different developing countries, taking into fair consideration the secondary impacts, is an issue that has not been investigated in great detail as well. A simple survey of the AIJ projects immediately reveal that the more technical issues of additionality, adaptation/incremental costs and compliance have hardly been given the sort of importance that these issues deserve. The most central element of the AIJ/CDM projects, without which they would lose all significance — the baseline issue, have been treated shabbily as well.

The proponents of AIJ have hardly given the adaptation issue any focus to speak of, compared to the issue of GHG mitigation. The Second Assessment Report of the IPCC has explicitly stated that developing countries will have less adaptation options. The urgency in many developing nations to initiate adaptation activities on a reasonable scale is a concern not expressed in the operational structure of the AIJ. The message that AIJs seem to give to the Third World (the host Parties) is that the developed countries are passing on the burden of their own higher emissions into the poorer countries, and that too without actually compensating them enough. Stemming from this discontent, the main opposition to the AIJs can be enumerated as under :-

1. The developing countries should not be subjected to mitigation measures until and unless the Annex 1 countries make firm and concrete commitments regarding emission reduction in their territories.
2. These mechanisms provide Annex 1 countries with a bargaining chip for credits and way to renege on their responsibilities in emission reduction stipulated in the UNFCCC.

As regards the first point, the Kyoto Protocol has been able to elicit some sort of commitment from the developed world. However, if the GHG trend from Rio to Kyoto is to be observed, the First World emission have in fact increased. Therefor the Third World is somewhat justified in its claim that the First World come out with firm commitments. In addition, criticism around AIJ points out that although it may be cost effective to promote AIJ's in certain developing countries, high-cost options in countries that are particularly vulnerable to climate change have not been explored. This lends a view that developed countries were more commercially than ecologically oriented as far as the AIJ Pilot Phase was concerned. In this perspective it is very doubly that AIJ can stand scrutiny in the light of sustainable development principles and its demands on the priorities of a country committed to it. The basic objective to AIJs as

indeed any of the Kyoto “flex mes’s, is to facilitated GHG abatement options worldwide in a sustainable manner. The economics of the issue are at best secondary.

The issues of GHG emissions from the agro sector in the developing countries have also been a major drawback of the AIJ process. Giving equal weight to the GHG emissions in these sectors (which are purely ‘survival’ emissions) and the emissions from overconsumption of fossil fuels (largely ‘luxury’ emissions) in the developed countries has been unfair, to say the least. This aspect has been crucial in weaning away much of the SAARC support away from the AIJ.

Another area where AIJs seem to have cut virtually no ice, specially in the Asia-Pacific and African countries is private sector participation. There seemed to be little interest generated in the private sector in these nations to take the initiative and invest in the AIJ Pilot Phase. Their lukewarm attitude could in part be attributed to the lack of infrastructural facilities, if not its complete absence, to compensate the private sector for its risk-taking activities in this field, which is comparatively new and not fool-proof as yet. While it is generally noted that the major thrust in order to make the Pilot Phase a success had to come from the private sector, there were hardly any economic incentives extended to them by the Governments of the host nations to encourage their participation. Strangely enough, the same is also largely true of the developed country Governments, at least as far as the AIJ Pilot Phase is concerned. Added to this indifference shown by them, the bureaucracies, again mostly in the Asia-Pacific and African nations, dilly-dallied with the AIJ project proposals, not sure of what is to be done, thereby raising transaction costs to such an extent that it equalled the actual project expenditures in some extreme cases. For the about-to-be-launched CDM to make any real impact, it is imperative that sufficient capacity building is undertaken at the Government levels and incentives to attract the private/corporate sector, even through legislation if need be, announced.

One of the few other criteria that needs more attention is the additionality issue. Additionaility is one of the key criteria that has to be satisfied for a project to qualify as AIJ. In the AIJ Pilot Phase, very few projects, whether at the conceptualisation or implementation stages, actually ensured that additionality was strictly met. In fact, project developers did not consider additionality seriously at all. As an example, the case of a bilateral AIJ investment in Pyrzyce, Poland sponsoring the replacement of 68 coal-fired boilers with a central geo-thermal heating plant (Nordic Council of Ministers, 1996) may be considered. The baseline scenario of the project assumed the continued and indefinite use of the individual coal-fired boilers. It was subsequently found that the local authorities had two back up plans in case the AIJ funding did not materialise : one was the installation of a central coal-fired plant and the other was the geothermal plant to the installed with a lag of two years.

The above is a prime example of how a project that would never have passed any additionality test could pass as an AIJ. The AIJ Pilot Phase is peppered with similar experiences where no additionality test was conducted. In the CDM era, additionality has to be satisfied at a reasonable level of detail.

A final shortcoming of the AIJ flow from its reporting format. The COP-1 enumerated that the COP should annually review the progress of the Pilot Phase. In this regard, the COP-1 also ensured the establishment of a framework for reporting in a transparent and well-defined fashion, on the various aspects of AIJ. Now, as far as the participation of the developing countries is concerned, the primary experience that would be gained or difficulties encountered during project design/implementation is also vital. Under these circumstances, finding an appropriate balance between these different types of concerns, in determining the optimum level of detail necessary, often becomes a great obstacle for adopting a uniform reporting format. The reason is, again, the wide difference in the structure and interests therefore of the developing nations that come in the way of any uniform reporting format.

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