

# Environmental tax to save taxed environment

By Kanon K Roy

Different tools and laws formulated in developed countries effective to combat degradation, reduce pollution and enforce restructuring industries are in action. A lot of work has been done in this regard, especially in Australia. Different economic instruments or market mechanisms including environmental taxes are increasingly used for environmental management. The term 'environmental tax' might cover an instrument of environmental fiscal policy, which should have environmental implications as well as normal revenue rising functions.

TO achieve rapid economic development, many less developed countries have adopted quick industrialisation as the major means. Bangladesh is no exception and diverse types of industrial establishment of various sizes are cropping up especially in and around Dhaka City. Uncontrolled migrations of village labour-force into the city and pollution generated from the industrial establishments and vehicles have resulted in a rapid degradation of the environment. Vehicles with two stroke engines and with very old engines without proper fitness, with the use of leaded fuel are responsible for dangerous heavy metal pollution. Thousands of garments and knitting industries undoubtedly contributing a lot to the national economy are causing air pollution by cotton waste at the same time, and unfortunately this category of pollution is still ill attended by the environmentalists. Air and ground water pollution by tanneries in Hazaribagh

area has been an important talk among environmentalists for long time but remedial action is absent. Unplanned and ill planned structuring and construction of buildings, poor sewage and improper waste management adding further degree to the dangerous situation. Human security especially in and around Dhaka City is under serious threat and from the viewpoint of environmental damage Dhaka takes its place in the list of seriously damaged cities of the world.

Fortunately the government and the civil society have recently become aware of the rapid degradation of environment and are planning for remedial action. Formulation of Environmental Protection Act (EPA) in 1995, Environmental Conservation Act in 1997, and lastly Environmental Code in 2000 have contributed very little to the protection of environment. This is mainly due to lack of consciousness among the common people, lack of application of laws by inadequate and

inactive implementing authorities, and also due to lack of efforts and co-ordination of different concerned authorities of the government.

Different tools and laws formulated in developed countries effective to combat degradation, reduce pollution and enforce restructuring industries are in action. A lot of work has been done in this regard, especially in Australia. Different economic instruments or market mechanisms including environmental taxes are increasingly used for environmental management. The term 'environmental tax' might cover an instrument of environmental fiscal policy, which should have environmental implications as well as normal revenue rising functions. It is, therefore, an area open to be considered for purposes of raising revenue for either general purposes or providing the finances needed to meet the increasing demand for better environmental management. As an offshoot, the

taxes may inherently provide a mechanism for environmental control. Of course, primarily environmental taxes could be introduced as means of controlling air pollution only under present situation in Bangladesh. Market mechanisms may include different instruments and approaches like tradable rights, environmental standard or command and control approach, pollution pricing, waste levies, emission charges, environmental protection charges, development charges, etc. Moreover, certain broad taxes such as income tax, sales tax, payroll tax and excise, customs and import duties can indirectly have the same effect. According to economists the market mechanism has "an inherent tendency to shift elements of social costs onto others, or into the future." In such viewpoint Bangladesh context is much interesting, as because there is a great tendency among the business community of making money any how and evasion of

taxes. Here in Bangladesh, as there is no organised social forum to conserve consumer's right, and price control in the market, manufacturers and businessmen have a bad intention to shift the burden of any taxes onto consumers. Bangladesh is a small country (only 144,000 sq. km) having an abnormally large population (140 million) where poor economy, illiteracy and political instability create a very complex and unpredictable economic and socio-cultural environment.

Huge scope is there to work and help introduce the appropriate market mechanisms as means of controlling pollution of the environment and combatting its degradation and before introducing any such measures this needs a vast study and research taking all those factors into consideration.

Market based mechanisms for reducing greenhouse gases in developed countries practically have evolved around three approaches: tradable permits (as

"allowances" and as "credits"), carbon taxes, and joint implementation. The last one is an attempt to expand the availability of cost-effective carbon dioxide reductions into the international sphere through a variety of different activities. In Bangladesh the overall situation is yet to be attached with this approach. But the other two have the potential to be explored, may be in modified forms suitable in Bangladesh context.

A model of tradable permits (allowances) may be based on two premises. Firstly, a net amount of carbon dioxide emitted by human activities can be assimilated by the ecological system without undue harm. Thus the aim of the program should be to determine a ceiling or cap, on the total emissions of carbon dioxide rather than limit ambient concentrations. Secondly, a market in pollution rights between polluters is the most cost-effective means of achieving a given reduc-

tion. This market in pollution rights should be well designed so that, owners of allowances can trade those with other emitters who need them or retain them for future use or sale. Tradable permits (Credits) is a different approach to use credits instead of allowances. In this program a credit is created when a facility actually emits a pollutant at less than its allowable limit as defined in by the program. The advantage of a credit program over an allowance program is that it does not discriminate against new source.

Carbon tax or carbon dioxide emission tax is an alternative market-based mechanism to the tradable permit system, generally known as a levy on natural gas, petroleum, and coal according to their carbon content. In the opinion of most economists, the most efficient approach to controlling carbon dioxide emissions would be a carbon tax. Different aspects of the mentioned mechanisms could be reviewed according to their relevance in the environment as a whole in Bangladesh. But the proper implementation and monitoring of the mechanisms after their introduction are very important, and this is probably the key factor to be considered in case of Bangladesh as far as success is desired.

Immediate steps should be taken from the government and private sectors by sponsoring

such research programs to identify the different components of market mechanisms and prospect of their application in Bangladesh as major tools to protect environment and combat its degradation. The objectives of the study should be i) to find out the scope of market mechanisms to protect environment and combat its degradation in Bangladesh; ii) to determine different market mechanisms including various taxes and prospect of their application in Bangladesh; iii) to assess the suitability of different economic instruments as tools that can fit with the socio-cultural and economic condition of Bangladesh and iv) to evaluate the effects of market mechanisms in some developed countries.

High-power committees of the government assigned for this purpose could then actively evaluate the resultant outputs in the form of recommendations regarding the ways and means to improve the overall environmental condition by introducing economic instruments as tools. This committee should consider also the findings of this study regarding the probable economic, socio-economic and cultural effects due to the introduction of different market mechanisms and thus finding the ways to promote the existing situation towards sustainable development in Bangladesh.

## An apology for jum cultivation

There is a widespread belief that environment degradation in the Chittagong Hill Tracts (CHT) is largely due to jum cultivation, but it is far from the truth, writes Rabi Shankar Chakma

LATELY, increased concern is being raised from various quarters about the environment in the Chittagong Hill Tracts. Almost all these concerns unanimously attribute the cause of environmental degradation to the system of jum cultivation. But nobody seems to care to ponder as to why once a viable and sustainable method of cultivation in the CHT, the jumming has nowadays turned out to be a cause for concern of the environmentalists. We must bear in mind that this state of things is not the result of a sudden change. Nor has it reached such a stage overnight. Rather, it is the result of a vicious process initiated long ago, and many factors have contributed to it. Thus only cursing the jum cultivation and overlooking other major factors will never help. This brief article attempts to focus on these factors and seeks to address the question why jumming has ceased to become environment-friendly.

There is a widespread belief that the jum system represents a primitive mode of agriculture. Both colonial and post-colonial rulers held this fallacious view and took measures to regulate and restrict shifting cultivation. But it is quite unfair to denounce a system, which has sustained for centuries and fed the people for generations without causing threat to environment. A comparative analysis between sifting and plough cultivation would reveal that both types of agriculture represent two different modes of adaptation to different natural environments. Both of them exist in a predominantly feudalistic society and have their own advantages as well as inherent limitations.

Some scholars and environ-

mentalists point to the non-existence of title deed in jum system in order to prove its primitiveness. This is also an erroneous view. The reason for the non-existence of individual private ownership in jum system is to be found not in its so-called primitiveness or backwardness, but in the peculiar characteristic of the system itself. In this system of agriculture the cultivators are required to abandon the jum field for a few years after cultivation and to move to other areas. This means that unlike plough cultivation, the jum cultivators are not

tied to any particular jum field. Hence, it is only natural that the concept of communal ownership, and not private ownership, should be compatible with the system of jum cultivation. In passing it should be mentioned here that in recent years the jum cultivation has undergone some changes in some areas of the Chittagong Hill Tract. The most notable change is the use of pesticide and chemical fertiliser to boost production. Besides, a few jum cultivators are more interested to produce cash crops like ginger and turmeric than to grow

paddy, which is the common feature throughout the Chittagong Hill Tracts.

The CHT was once called the Karpas Mahal as it used to produce Karpas or cotton abundantly. It was in Mughal and, to some extent, British colonial period. Life was very simple in those days. The jumias (jum cultivators) would produce almost everything necessary for subsistence in their jum field, such as rice, cotton, turmeric, cucumber etc. The forest would also provide them with a variety of produces ranging from house-

hold materials to herbal medicines. Only one or two articles would have to be bought from the market. But notwithstanding, jum cultivation has its own limitations. The understanding of this fact led to the adoption of plough cultivation during British period. Whether this new form of cultivation is more advanced than the jum system is open to discussion, but the adoption of plough cultivation gave the Hill people a settled life in the sense that it does not require the cultivators to leave their villages. (In the case of jum farming they have to live in the jum field away from the village until harvesting is complete. After that they come back to the village again. Thus one should not think that jum system is associated with nomadism). It was the beginning of a new era and its implications on the socio-political development of the Hill people had been far-reaching. It provided the basis for the rise of the educated middle class that was to play the central role in the nationalist movement in the sixties and seventies.

Anyway, by the time the Kaptai Hydroelectric project was built in the early sixties, about two-thirds of the total population of the Hill people had taken to plough cultivation. But this natural process of transformation was hampered by the construction of the Kaptai dam, which inundated 54 thousand acres of first class land of the Hill people. These were the lands where the Hill people had settled for plough cultivation. The impact of the dam on both the socio-economic and environmental aspects of the CHT society is colossal. Unlike the plain land of the country, the CHT has very limited cultivable land, and



Logging goes unabated but authorities still remain in slumber

-- Star Photo

following the Kaptai flooding the amount of such land reduced significantly forcing a large number of the evicted people to cross over to India. Of those who stayed back, very few families were rehabilitated and the rest were compelled to fall back on jum cultivation, as there were no options left for them. This backward moving aspect of the Hill people resulting from the Kaptai dam is often overlooked, and much less is ascertained as to the extent it created negative impact on environment.

Another issue responsible for the deterioration of the ecological balance in the CHT is logging business. But unfortunately, this issue is seldom discussed. The national newspapers often publish reports of timber being seized by the government authorities.

These reports of illegal logging however do not say about how many cfts of timber are transported to the plain land without being caught by the authorities, but no doubt these are indicative of the gravity of the situation. Logging business is the biggest sector in the CHT where private capital investment comes from the plain land, but its share of responsibility for the depletion of forest is often ignored. If proper investigation is carried out then it would be found that the unscrupulous businessmen and forest officials are doing more harms to the environment than jum cultivation. It should be remembered that it was not jum cultivation but afforestation programme of the ADB and logging business, which destroyed the vast Madhupur forest in Mymensingh.

So the conclusion of this article is that the shifting cultivation would not have been a cause for deterioration of environment in the Chittagong Hill Tracts if the above mentioned factors and had not existed. The threat to environment cannot be seen in isolation from the threat to the survival of the Hill people. The issue of the jumias and the environment are inextricably linked with each other, and thus the solution of one of them can never be found without touching the others. It therefore follows that if the environmental problem is to be addressed, resettlement of the jum cultivators becomes imperative. And to do this would entail settlements of the other issues mentioned above.



Land reclamation... smothering the natural flow of rivers, encroachers have destabilised the environmental harmony in CHT.

-- Star Photo

## How big is our footprint?

It is now some 20 years since the world seriously got down to the business of discussing sustainable development. But during those same two decades, we have seen the increasing domination of market forces and the headlong drive towards the globalisation of trade, with the result that it is beginning to look as if the noble aims of sustainable development are slipping further down the international list of priorities, writes Claude Martin from Gland, Switzerland.

SINCE the term sustainable development was introduced in 1980, with the publication of the World Conservation Strategy by the World Conservation Union (IUCN), the conservation organisation WWF, and the United Nations Environmental Programme (UNEP) the debate over it has spread to many quarters, including business and industry. Today, few people would question the need for sustainable development in order to conserve the earth's natural resources. Yet while much time has been wasted in discussing the definition and practical meaning of sustainable development, the consumption of natural resources has accelerated and many of the assumptions supporting the concept have been undermined.

It was thought, for instance, that there would be national and international bodies that would have the power to choose between the options available for economic and social development. Governments, it was believed, would have the capacity to establish deliberate policies, and that business, industry and civil society would become partners on a declared development path.

However, it is becoming clear that one of the effects of globalisation is to limit the powers of governments and their social partners to deal with the problems arising from an international tide of pressure on their natural resources. Sovereignty over

such resources is called into question by expanding market demand for timber, beef or palm oil from converted forests; or for cotton, grain, fruit and flowers produced by depleting freshwater ecosystems; or for fish harvested by over-capitalised and heavily subsidised fleets. In these circumstances, what hope is there for national commitment to sustainable development?

I cannot help feeling that different means are required to concentrate the minds of our existing and emerging consumer societies on the fundamental problems of sustainability, and to relate them to the manner in which those societies actually consume.

Let me give you an example. WWF's recently published *Living Planet Report* reveals that:

- If every human alive today consumed as much as the average inhabitant of the USA, Germany, or France (or, for that matter, of the UK, Switzerland, Australia, etc.), we would need at least another two earths.
- The area required to produce the natural resources consumed and assimilate the waste generated by mankind has doubled since 1961.
- The area needed to produce the natural resources and assimilate the waste generated by the average North American is almost twice the area required by the average Western European, and some five

times greater than required by the average Asian, Africa and Latin American.

- The area required to produce the natural resources consumed and assimilate the waste produced by mankind in 1996 was 40 per cent larger than the area actually available -- leading to a serious depletion of nature's 'capital stock'.
- The natural wealth of the earth's forests, freshwater ecosystems and oceans and coasts declined by 33 per cent between 1970 and 1999.

These sorts of statistics are related to what has become known as the 'ecological footprint' by which the impact of human beings on the planet can be measured. To put it in more technical terms, the footprint aggregates human impact on the biosphere in one number -- the bio-productive space occupied exclusively by a particular human activity. The figure is arrived at by means of a formula involving all the resources a nation consumes and the waste it generates, together with a classified assessment of various types of consumption.

The results of such calculations are instructive. The American footprint, to which I refer in the list above, equates to 12.2 hectares of space with average productive capacity, including a sea area of one tenth of a hectare. In other words, to live as he or she does now, an American requires a biologically productive area

equivalent in size to 30 soccer pitches.

In the world as a whole, the footprint of humanity works out at 2.85 hectares, which turns out to be greater than the planet's productive capacity. If all the earth's biologically productive space was divided equally among the world's human population, there would be about 2.2 hectares available per person. And that figure, it is worth remembering, takes no account of the needs of the 10 million or more other species that also inhabit the earth.

Looked at from this perspective, the idea of sustainability acquires new meaning and new urgency. Quite simply, the figures demonstrate that the human species is consuming more natural capital than the earth can replace, a fact that adds a chilling dimension to our future. If we do not reduce our consumption and exploit natural resources more sustainably, they will simply run out in the end.

So instead of paying lip-service to sustainable development, let us make people aware of the impact each one of us has on the limited capacity available -- the size of our footprint. Then, perhaps, we shall finally see precisely what must be done to protect the precious environment on which our survival depends.

The author is Director General of WWF International, based in Gland, Switzerland.



White rhinos... these endangered species have now found refuge in zoological parks.

-- AFP photo