INTRODUCTION TO ENVIRONMENTAL POLICIES

Environmental policies may be either enacted as laws by governing bodies or created and enforced by government agencies. They may originate from local, national or foreign governments, and address an array of issues including (but not limited to) air or water quality, fossil fuel extraction, energy conservation, habitat protection or restoration, pesticide use, storage/disposal of hazardous materials, recycling and trafficking in endangered species.

An environmental policy being interdisciplinary in nature draws together technology, economics, and natural and social sciences. In order to develop sustainable policies, therefore, it is necessary to have sound knowledge of the actual and potential environmental impacts of certain activities and some knowledge of the technical characteristics, economic costs, social acceptability and possible side effects of alternative policy options.

The quality of the environment has both a direct and an indirect effect on the standard of living. This does not mean that environmental degradation is simply a by-product of economic activities, it is also the consequence of the priorities set by States in their economic policies. These policies generally aim at stimulating production and, as a consequence, tend to ignore their implications for the environment. Past experience, however, shows that economic policies may actually have more impact on the quality of the environment than those policies explicitly designed to protect the environment. We will discuss this, next.

Economics and environmental policies

One sign of a sustainable economy is when the costs of environment and health caused by economic growth have been added to consumer prices and when economic policy instruments support sustainable development. Environmental policies should supplement economic instruments.

Environmental policies involve certain measures aimed at achieving a sound environment. They are usually developed in the context of public policy, based on economic theory, which focuses more on the level of costs and benefits associated with the implementation of environmental policies than on the quality of the environment. When governments propose and subsequently implement strict standards, sectors that pollute the environment will have to take measures, and this cannot be achieved without incurring extra costs. Polluting industries are, therefore, often keen to highlight the likely costs they have to incur due to the proposed environmental measures.

In other words, the immediate benefits resulting from environmental policies are extremely difficult to assess. As a consequence, the costs of environmental measures are often paid more attention than the benefits resulting from the implementation of the policy.

The definition of the property rights of natural resources plays a vital role in the distributional effects of environmental policies. The implementation of strict standards and regulations will effect a change in the definition of property rights. For example, industries polluting the rivers will be confronted with regulations that prevent them from, or reduce their opportunities for, using the rivers.

However, throughout the process of formulating the regulations, polluting industries will try to influence and stifle the policies. (Note that we will discuss some of the industrial policies as they pertain to the environment in Subsection 2.1.2.)

Let us now consider below a few examples of sectoral economic policies that influence the environmental policies directly or indirectly:

- **Agricultural sector:** Virtually the entire food cycle attracts huge direct or indirect subsidies, at a cost to taxpayers and consumers. These subsidies, more often than not, send farmers far more powerful signals than do the small grants, usually provided for soil and water conservation. They encourage farmers to occupy marginal land and to clear forests and woodlands, make excessive use of pesticides and fertilisers, and use underground and surface waters in irrigation indiscriminately. We will discuss the policies of the agricultural sector in detail in Subsection 2.1.3.
- **Forestry sector:** The pressures on forests throughout the world vary greatly in both developed and developing countries, which are reinforced by government policies. The logging and

forestry industry attracts a variety of direct and indirect subsidies. The perverse incentives that encourage the over harvesting of temperate as well as tropical forests also mark world-trade in forest products.

- **Transport sector:** This sector, especially motor vehicles, also benefits from economic policies that are ecologically perverse. Fuel taxes in many jurisdictions, for example, still fail to distinguish between the environmental effects of different types of fuel (e.g., petrol or diesel, leaded or unleaded). The tax and tariff structure, and direct and indirect subsidies, encourage heavier and more energy-intensive vehicles and road freight, as opposed to rail transport in many countries. In addition, in some countries, private vehicle expenses can be deducted from taxable income.
- **Energy sector:** The major obstacle to energy efficiency is the existing framework of incentives for energy exploration, development and consumption. These incentives underwrite coal, oil and gas, ignore the costs of air, land and water pollution and seem to favour inefficiency and waste. While industrialised countries have been spending billions to distort the market and consumer prices in ways that actively promote acid rain and global warming, they have been spending only a few million on measures to promote energy efficiency. As long as pollution problems are mainly national, there is a need for a strong national authority. However, environmental problems are becoming increasingly international or global. This complicates the environmental policies considerably. On the one hand, international co-operation in the fighting of environmental problems is absolutely necessary. On the other hand, different countries have different economic interests. Furthermore, polluting sectors are not evenly distributed among countries.

Economic based environment policies have been designed to facilitate economic growth and allow business while ensuring the sustainability of the environment and achieve economic efficiency.

2.1.2 Industries and environmental policies

Industries are a measure of a country's economic growth. Consequently, countries have a tendency to protect their polluting industries, in particular when they are relatively important economically. However, the growing interest in environmental management has fuelled certain industries to adopt policies that are economically feasible and which helps curb environmental degradation.

Various factors drive the development of a managed approach to environmental performance. These include the following:

- The need to meet increasingly stricter environmental regulations.
- Stakeholder pressure (e.g., pressure from shareholders, insurers and investors).
- Supply-chain pressure from customers.
- Historically poor relations with regulatory bodies and local communities.

Many industries have established environmental management systems (EMS) to tackle activities, which either pose a serious threat to ecosystems in the event of accidents or involve significant expenditure because of the costs associated with raw material use and/or waste disposal. An EMS is "the part of an overall management system that includes organisational structure, planning activities, responsibilities, practices, procedures,

processes and resources for developing, implementing, achieving reviewing and maintaining the environmental policy" (BSI, 1996 – see http://www.env.hie.co.uk/welcome.asp.LocID_envdev.htm for details). A EMS aims to help organisations achieve sound environmental performance by identifying key activities which impact, already or potentially, on the environment and by putting in place management controls to ensure that the organisation continues to meet its legal and policy requirements to deal with these impacts.

Traditionally, most of the work on EMS has been done by those industrial sectors with the greatest potential to affect the environment, e.g., the chemical, waste management and oil refining sectors. In addition to this basic need to control pollution, some companies have identified EMS as an effective way of improving productivity through waste and resource minimisation initiatives and a mechanism for increasing sales as customers turn on to environmentally safer products.

Arguably, implementing effective EMS can be a useful de-regulatory tool for business. For example, by reducing the use of certain hazardous substances, some organisations in India have achieved major improvements in their air emissions and, as a result, they came out of the strict controls imposed on them by the Environmental Protection Act (EPA) 1990. In addition, they have gained a better working environment for their employees and eliminated a difficult raw material storage hazard.

Close on the heel of industrial policy is the agricultural policy that can be adopted to prevent the deleterious effect of agricultural activities on the environment. Let us discuss this issue in Subsection 2.1.3.