

## Environmental Management Principle

There are five guiding principles for incorporating environmental concerns in to decision making. These principles can be used to design environmental instruments and to raise funds to finance environmental public investments plans in the sectoral and overall budget. They are,

1. Polluter pays principle (PPP)
2. User pays principle (UPP) (or resource pricing principle).
3. Precautionary principle (PP).
4. Subsidiary principle (SP)
5. Intergenerational equity principle (IEP)

### Polluter pays principle

The Polluter Pays Principle was first widely discussed in the United Nations Conference on Environment and Development held in Rio de Janeiro of Brazil in June 1992. This principle was endorsed by all the attending representatives of the countries.

The PPP required that the polluter has to bear the cost of complying with environmental standards, which are predetermined by public authorities. If the polluters have to pay for the cost of any pollution they cause, market forces will then encourage them to change their activities either by introducing new pollution control technologies or by switching to more efficient production process. For instance every day, individual households, firms and industries turn over million tons of tap water into wastewater, which requires proper treatment before disposal. Prior to the introduction of sewage charges (example of polluter pay principle), the cost of sewage collection and treatment came entirely from the public revenue. The disadvantages of such an arrangement are that the public is unaware of the cost of the sewage services and therefore has no incentive to reduce water pollution.

There are two objectives with PPP towards encouraging to more efficient production process, they are:

- i. To promote economic efficiency in the implementation of pollution control policies.
  - ii. To minimize potential trade distortions arising from environmental policies.
- (Source: Anil Markandaya)

PPP was partly based on equity considerations (the polluter should pay the cost of any mitigation measures), and partly ensure that countries do not provide competitive advantage for their producers by subsidizing the pollution abatement measures.

One more important point is that PPP is not necessary to achieve an efficient solution to an environmental problem and it does not require pollution to recede to zero levels, nor does it require reduction to optimal level even though it is not excluded. PP required only that the environment is in an acceptable state, which will evolve from a political process requiring inputs from local, national and international level.

Source: [http://www.dsd.gov.hk/sewage\\_charges/polluter\\_pays\\_principle/index.htm](http://www.dsd.gov.hk/sewage_charges/polluter_pays_principle/index.htm)

There are two versions of PPP evolved. First one is equal to the price changes for the use of resources with the cost of damage over society by using them. The changes linked directed on the process that generates pollution. Difficulty with this procedure is the deciding right price to change, when the damage to the society cannot be assed in monetary terms. Later the PPP asserts the full cost of controlling pollution by an adequate measures shall be undertaken by the polluter, preferably without public subsidy or tax concession.

### **User pays principle**

The UPP states that the beneficiaries should pay for the full cost of using the resources and its related service; the full cost included the cost of losses for future generations. Both PPP and UPP principle considered as equitable and both offer the prospect of achieving efficiency.

However, UPP concept has conflict with certain social objections, example all the home should connected to electricity supply, telephone service, sewage and be closed to public transport. The provision of universal services to all or most location with high marginal costs beyond the reach of most consumers is conflict with this principle. The resolution of these conflicting principles is a matter of public policy. However, this principle is more easily applied to the consumer of public services involving the collection and treatment of effluents.

### **Precautionary principle**

The Precautionary Principle was adopted by the UN Conference on Environment and Development (the Earth Summit) in 1992. According to Rio Declaration on Environment and Development Precautionary Principle as meaning that where there are threats of serious or irreversible damage to environment, lack of scientific certainty should not be used as a reason to postpone cost effective measures to prevent environmental degradation.

This principle is seeking present and ease environmental stress before conclusive evidence of damage exists and adopts policy when raw evidence is available.

### **Subsidiary principle**

Subsidiary principle (SP), was not designed for as an environmental principle, but it provides useful guidance when applying the PPP and UPP and the PP. SP states that political decisions should be taken by lowest possible level of public authority dependence with effective action. So that setting standards and interpreting risk are politically involved process. The SP recommend that these decisions are made by the authorities that are closed to the population concerned.

### **Intergenerational equity principle**

The IEP is the central principle in the definition of sustainable development. According to the Brundtland Report sustainability states that 'meeting needs of present generations without compromising the needs of future generations'. Generally this principle is considered with the trilogy of economic, environmental and social objectives underlying sustainable development. This principle is the basis of the environmental accounting measures of sustainable income.

All the above five environmental management principles will be used to guide the sectoral policies and budgeting process.