

Solutions

1. List and briefly explain the different principles of environmental management.

- Polluter Pays Principle (PPP)
- The User Pays Principle (UPP)
- The Principle of Effectiveness and Efficiency
- Precautionary Principle (PP)
- The Principle of Responsibility
- The Principle of Participation
- The Principle of Proportionality

These are some guiding principles of environmental management. These principles are helpful in environmental decision making.

1. Polluter Pays Principle (PPP):

For the last two decades, many economists have suggested that firms discharging polluting effluents to the environment should somehow be made to pay a price for such discharges related to the amount of environmental damage caused.

OECD has suggested the Polluter Pays principles (PPP) as a general basis for the environmental policy. It states that if measures are adopted to reduce pollution, the costs should be borne by the polluters. According to the OECD Council, "The principle to be used for allocating costs of pollution prevention and control measures to encourage rational use of scarce environmental resources and to avoid distortions in international trade and investment is the so-called Polluter Pays Principle." The essential concern of this principle is that polluters should bear the costs of abatement without subsidy.

The Polluter Pays Principle, as interpreted by the Supreme Court of India, means that the absolute liability for harm to the environment extends not only to compensate the victims of pollution but also the cost of restoring the environmental degradation. Thus, it includes environmental costs as well as direct costs to people or property. Remediation of the damaged environment is part of the process of sustainable development and as such the polluter is liable to pay the cost to the individual sufferers as well as the costs of reversing the damaged ecology.

The application of this principle depends upon the interpretations, particular cases and situations. This principle has brought more controversial discussions during the Rio Earth Summit 1992. The South has demanded more financial assistance from the North in combating the environmental degradation in the South.

There are practical implications on the allocation of economic obligations in relation to environmentally damaging activities, particularly in relation to liability and the use of economic instruments.

2. The User Pays Principle (UPP):

It is considered as a part of the PPP. The principle states that all resource users should pay for the full long-run marginal cost of the use of a resource and related services, including any associated treatment costs. It is applied when resources are being used and consumed.

3. The Precautionary Principle (PP):

The main objective of the precautionary principle is to ensure that a substance or activity posing a threat to the environment is prevented from adversely affecting the environment, even if there is no conclusive scientific proof of linking that particular substance or activity to environmental damage. The words 'substance' and 'activity' are the result of human intervention.

The Rio Declaration in its Principle 15 emphasizes on this principle, wherein it is provided that where there are threats of serious or irreversible damage. Lack of full scientific certainty shall not be used as a reason for postponing cost effective measures to prevent environmental degradation. Therefore, the principle is essential for the protection of environment and human health by implementing in the field of production and distribution of energy resources.

4. Principle of Effectiveness and Efficiency:

It is essential that efficiency of resources use may also be accomplished by the use of policy instruments that create incentive to minimize wasteful use. It also applies to various issues of environmental governance by streamlining processes and procedures in order to minimize environmental costs.

5. The Principle of Responsibility:

It is the responsibility of all persons, corporations and states to maintain the ecological processes. Further, access to environmental resources carries attendant responsibilities to use them in an ecological sustainable economically efficient and socially fair manner.

6. The Principle of Participation:

It is the duty of all the persons to participate in collectively environmental decision making activities. Some participation areas are related to the use of trees and other plants, minerals, soils, fish and wildlife for purposes such as materials and food as well as for consumptive and non-consumptive recreation. The second issue concerns solid waste i.e. garbage, construction and demolition materials and chemically hazardous waste etc. The third issue of participation is related to pollution generating activities.

7. The Principle of Proportionality:

The principle of proportionality is based on the concept of balance. A balance is to maintain between the economic development on the one hand and environmental protection on the other hand. It cannot be disputed that no development is possible without some adverse effects on ecology. Therefore, it is essential to adjust the interest of the people as well as the necessity to maintain the environment. Moreover, comparative hardships have to be balanced and benefits to a larger section of the people have to be maintained.

2. Describe the drivers and barriers of the business charter for sustainable production and consumption

In general, the drivers for EMS adoption can be categorized as either internal or external. The main external drivers are regulations, customers, competitors, and the local community. The main internal drivers include improving corporate image, leadership commitment to environmental sustainability, lowering costs and risks and increasing process efficiency.

Compliance with local and international government regulations and industry standards is an important driver for implementing ISO 14001 certification. Regulations are often necessary to compel companies to improve their EM practices and reduce their environmental impact. Without enforced regulations, top managers will not enact costly EM practices that they perceive as weakening company competitiveness. Stringent, strictly-enforced regulations are particularly important in emerging and developing economies. Regulations in these countries are often weak or absent, and even if present they are poorly enforced, such that existing legislation has very little effect on organizations' environmental practices. Companies may only comply with regulations when they know they are being monitored. Certification is also important for companies with an international presence that have to adhere to regulations in several different jurisdictions.

Satisfying customers and market demands is another driver for companies to adopt a certified EMS. Some corporate customers require their suppliers to provide them with written certification of their compliance with all environmental regulations. Some clients require their vendors to improve their environmental performance and adopt proactive EM practices. Chinese manufacturers improve environmental performance if supply chain customers demand it. Manufacturing companies in India that fail to practice "green manufacturing" may lose core customers. The demand for green products has increased over the years, particularly in Western Europe. Several studies found that market demand was an important driver for improving EM practices in emerging markets as well. Small, private, entrepreneurial companies in Russia improved their manufacturing process and their finished products to profit from increased demand for green products. It is important to note, however, that consumer demand for green products can vary a lot by country. In countries where overall

environmental awareness is low, or where consumers cannot afford the added cost of “green” products, demand may be low.

Competitors are another driver for EMS certification. Some organizations adopt ISO 14001 early on, to differentiate themselves from their competitors and gain an advantage. Other organizations adopt ISO 14001 later, to mimic the practices of their competitors and gain legitimacy in their institutional environment. This mimetic isomorphism is particularly important in developing countries.

The community, including non-governmental organizations, environmental groups, neighbourhood organizations, the media and labour unions may also drive organizations to adopt EMSs by mobilizing public opinion. The community pressure could change Chinese firms’ environmental practices, because citizen complaints led to more government inspections, which in turn led to better company environmental performance. It was also found that community pressure was a significant driver for Chinese chemical manufacturing firms to improve their environmental performance. The government devised a color-coded rating system for companies, and the results were available to the public. The colors indicated whether the firms were exceeding government regulations, meeting them, or in violation. Public hearings were required for any project that negatively impacted the environment, and citizens were encouraged to lodge environmental complaints against companies to the government.

Improving corporate image is an important driver for ISO 14001 adoption and in several cases, this was identified as the most important driver. Certification sends a clear signal to customers and government agencies that the certified organization is committed to EM. It was found that early adopters of ISO 14001 in the USA became certified in order to improve company image and reinforce their existing environmental strategies rather than dramatically improve their environmental practices.

Leadership and top management’s commitment to improve environmental practices is another key driver for EMS certification. The internal desire to become more environmentally proactive was an important driver for ISO 14001 certification. Companies that were internally motivated perceived higher benefits and were more satisfied with the certification results. The main driver for Greek companies to obtain ISO 14001 certification was a commitment by top and middle managers to institute environmentally-friendly policies, and this commitment contributed to fewer difficulties in implementation.

Lowering cost and risk and increasing process efficiency are two economic drivers for EMS adoption and certification. EMSs can contribute to lowering costs by identifying ways companies can reduce material use and waste, recycle materials, implement energy and other resource conservation measures and avoid fines and penalties associated with non-compliance. Capital markets may react unfavorably to negative environmental news about a company, such as violations, accidents, lawsuits, etc. and may react positively to favorable news about environmental

practices. It was found that “improving internal efficiency” was the third most important driver for becoming ISO 14001 certified in Spanish companies.

Barriers for business strategy

The main challenges are high costs, lack of qualified human resources, lack of internal support and practical challenges.

High costs of certification include the time and costs associated with preparing documentation and training employees, but also include the costs of internal and external auditors. found that costs were the most important barrier to EMS implementation in organizations. The high costs were also barrier to implementation for small and medium sized enterprises in the UK, and that many of these companies were uncertain about the market benefits of becoming certified.

Lack of qualified human resources to implement and maintain the certification can be a serious challenge. Skills and knowledge development is important not only for the initial implementation and adoption of an EMS, but also for its maintenance and continued operation. The barriers to EMS adoption for small and medium sized enterprises, are found that a lack of human resources was a more important barrier for successful implementation and maintenance of the EMS than a lack of financial resources. An unfavourable company culture, including inconsistent support from top management, hindered successful implementation.

Practical, operational challenges can delay successful implementation. EMS implementation and maintenance is a complex process, that can present multiple practical challenges. Estonian companies struggled with practical challenges during the planning phase of ISO 14001, specifically with the environmental aspect assessment requirement (EAA). This assessment is the most fundamental part of the ISO 14001 planning phase, as companies must identify elements of the organization’s activities, products and services that impact the environment. ISO 14001 gives only general principles for EAA; the assessment criteria overall are ill-defined and inadequate, and therefore cannot be systematically adapted. The Greek companies experienced only low levels of difficulties implementing ISO 14001, in part because many of them had prior experience with ISO 9001 certification. Their greatest difficulty came during the planning phase in “determining environmental performance issues” which included setting objectives and measurable aims

3. Elucidate the unique characteristics of environmental problems with example.

Multi Sectoral links - Environmental problems reverberate across a range of sectors through many pathways, calling for coordinated policies and concerted efforts.

Regional and global implications - Many environmental impacts have broad cross boundary and global effects that require international frameworks and agreements to deal with them.

Need for government intervention - Environmental problems are often a consequence of market failures. Without government intervention to introduce regulations and create markets where they do not exist, the private sector alone cannot achieve optimal environmental outcomes

4. Explain the national policies for the abatement of pollution.

Pollution abatement refers to technology applied, or measure taken to reduce pollution and/or its impacts on the environment. The most used technologies are scrubbers, noise mufflers, filters, incinerators, waste—water treatment facilities and composting of wastes. In India, the various initiatives taken for pollution abatement are listed

- Control of Pollution
 - Development of Environmental Standards
 - Charter on Corporate Responsibility for Environment Protection (CREP)
 - Environment Pollution (Prevention Control) Authority for the National Capital Region
- National Environment Appellate Authority (NEAA)
- Loss of Ecology (Prevention and Payments of Compensation) Authority for the State of Tamil Nadu
- Recognition of Environmental Laboratory under Environment (Protection) Act, 1996
 - Noise Pollution/Water/Air/
 - Auto Fuel Policy
 - Industrial Pollution Complaints
- Capacity Building for Industrial Pollution Management Project (CBIPMP)
- Assistance for Abatement of Pollution
 - Common Effluent Treatment Plant
 - Eco-cities
 - Industrial Pollution Abatement through Preventive Strategies
 - Environmental Audit
 - Environmental Statistics & Mapping
- Development and Promotion of Cleaner Technology
- Central Pollution Control Board

5. Write a short note on Charter on corporate responsibility for Environmental Protection.

The Government of India, Ministry of Environment & Forest (MoEF) launched the Charter on "Corporate Responsibility for Environmental Protection (CREP)" in March 2003 with the purpose to go beyond the compliance of regulatory norms for prevention & control of pollution through various measures including waste minimization, in-plant process control & adoption of clean technologies. The Charter set targets concerning conservation of water, energy, recovery of chemicals, reduction in pollution, elimination of toxic pollutants, process & management of residues that are required to be disposed off in an environmentally sound manner. The Charter enlists the action points for pollution control for various categories of highly polluting

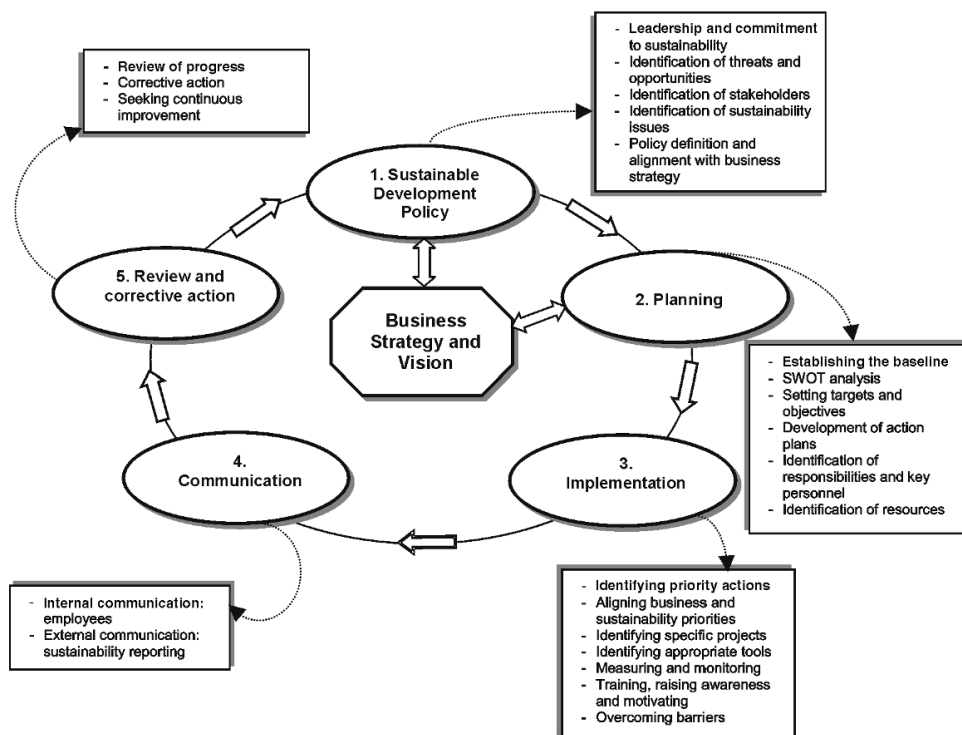
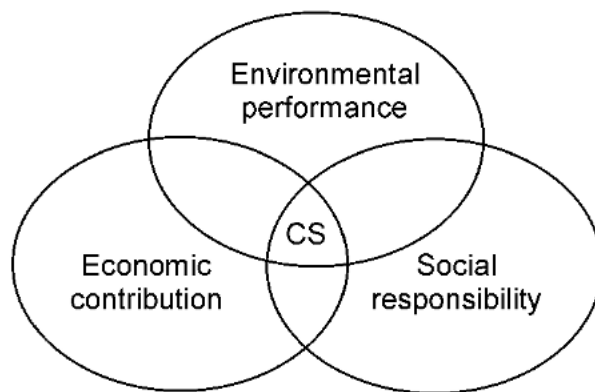
industries. The Task Forces were constituted for monitoring the progress of implementation of CREP recommendations/ action points.

6. Discuss about the different systems approach to corporate environment management.

Different systems approach to Corporate Environment Management.

The policy should encapsulate the set of core business values agreed by the company and should contain statements of principles or policies on social, economic, and environmental responsibilities and stakeholder relationships. However, before a sustainability policy can be formulated and put into practice, the following must be carried out:

1. demonstration of leadership and commitment to sustainability.
2. identification of threats and opportunities.
3. identification of stakeholders; and
4. identification of sustainability issues.



7. What is environment stewardship? What steps should government take to promote environmental stewardship?

Environmental stewardship refers to responsible use and protection of the natural environment through conservation and sustainable practices. Resilience-Based Ecosystem Stewardship emphasises resilience as a basic feature of the changing world as well as ecosystems that provide a suite of ecosystem services rather than a single resource, and stewardship that recognises resource managers as an integral part of the systems they manage. Resilience refers to the ability of a system to absorb disturbance and still maintain its basic function and structure. There are 3 types of environmental stewards: doers, donors, and practitioners. Doers go out and help the cause by taking action. For example, the doers in an oil spill would be the volunteers that go along the beach and help clean up the oil from the beaches. A donor is the person that financially helps the cause. They can do anything from donating their money, to hosting public events to raise funds. They are typically governmental agencies. Lastly there are practitioners. They work on a day-to-day basis to steer governmental agencies, scientists, stakeholder groups, or any other group toward a stewardship outcome. Together these 3 groups make up environmental stewards and with the help keep the ecosystem running healthily. Anybody can be an environmental steward by being aware and knowledgeable of the world around them and making sure they do as little as possible to negatively impact our world. Without these groups it would be hard to get any sort of sustainability in our increasingly industrially based world.