

# An overview of the environmental policies to ensure safe environment

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## Abstract:

As a human being, the environment-the Earth-is our home. We live, breathe, eat, and raise our children etc in the surrounding of environment. Undoubtedly, it is very crucial issue to protect the environment having a negative impact on human values such as good health or the 'clean, safe' environment. The protection of species and habitat, and the sustainability of the natural resources needed for human survival and economic growth. As a result we need to know the issues that have negative impact on environment and the policies to be taken to address the issues to control.

Environmental policy is a commitment to the laws, regulations and other policy mechanisms concerning environmental issues and sustainability. Wide range of issues is not limited but includes the effects of pollution on our water, air, and land.

The study of environmental policy and environmental issues are rich and diverse field. It includes the vast description, analysis and explanation on processes, tools, and institutional arrangements shape human interactions with and influence on the natural world. The environmental policy is quite complex as diverse type of actors i.e. government, non-government, industry, courts, scientists and local citizens must be considered to take and operate any kind of decision regardless individual, organizational and governmental. So the research basically focused on the environmental policies to be considered to address the environmental issues that have negative impact on human values.

## Chapter-1: Introduction

We live on environment. Basically our entire life support system is dependent on the well-being of all of the species living on earth what is commonly referred to as the biosphere; a term created by Vladimir Vernadsky in 1920s( <http://greenliving.lovetoknow.com>, 2014).The biosphere refers to one global ecological system.

Bühns, Ton; Bartlett, Robert V (1991) argued that though environment refers to the physical ecosystems, it also need to take into consideration the social dimension (quality of life, health) and an economic dimension (resource management, biodiversity). Environment plays an important role in our food chain, ecosystem, defending the treat of environmental degradation and natural beauty etc. There is no doubt that without the support of environment we can't live. But the present scenario of environmental issues is alarming concerning degradation, climate change, sea level rise, imbalanced ecosystem, air, water, soil pollution etc. Most of the problem is created directly or indirectly by the activities of human being. That's why we need proper environmental policy.

## Objectives:

1. To identify the environmental issues affecting human wellbeing
2. To analyze the available environmental policies and to take new policy to deal with the identified environmental issues

## Methodology

This is a descriptive and analytical research based on reviewing the published papers, journals, articles and books retrieved from internet and hard copy. Here the researcher follows the niche objectives and only to describe the environmental issues affecting human wellbeing and analyze the environmental policies available and to take new action policy to deal with the issues.

The researcher has used his intuition and practical experiences from day to day life in identifying the environmental issues affecting life. Data is unstructured and surveying on the basis of objectives is quite difficult with small capacity as a result researcher mostly depended on secondary sources to work on.

As the research area is vast that's why the researcher only focused on those two matters of environmental issues and policies which could help the other researcher for further research.

## **Chapter-2: Analysis and discussion**

### **The top environmental issues:**

Eccleston(2010) identifies and describe 5 of the most critical environmental policy issues facing humanity: water scarcity, food scarcity, climate change, Peak Oil, and the Population Paradox.

We must identify the problems to the solutions. On the basis of reviewing the sources of information the researcher found the following issues to be concerned:

- Air-related environmental issues
- Water-related Environmental issues
- Land-related Environmental issues
- Other Environmental issues

### **Air-related Environmental issues:**

Air is most essential element of the nature on which we are depending to live to breathe. Air pollution is the crucial facts effecting the environment. The effects of air pollution are as follows:

#### 1. Greenhouse Effect

Greenhouse effect works through the absorption of thermal radiation from a planetary surface by atmospheric greenhouse gases and re-radiated in all directions. This process going to repeat again and again and the radiation of the atmosphere trapped. Greenhouse causes snow cover, glaciers are melting, sea level is rising and resulting the extinction of a lot of floral and faunal species.

#### 2. Ozone Depletion

The ozone envelope around the earth. This is depleting largely since the 1980s due to the effects of halocarbon refrigerants. Halocarbon is lighter than other gases, rising much higher in the atmosphere. This halocarbon assist atomic halogens to catalyze the destruction of ozone gas. Depletion of ozone layer causes threat to life through different kind of skin disease and climate change.

#### 3. Air Quality

We breathe air to live. When the quality of air getting worse, it results feeling tired, causes fatigue, hampering diet and sleep and causes different kind of inner diseases.

### **Water-related Environmental issues:**

Water pollution is also a critical issues as this resource is limited and all the livelihood is somehow depended on water to live. The water pollution is affecting in the following ways:

#### Contamination of Drinking Water

The drinking water is very limited but most precious. Contamination of drinking water happened through polluting the fresh water using in household needs, industrial work and polluting the oceans, rivers, lakes and reservoirs.

The other water related environmental issues are as;

- Acid Rain
- Wastewater
- Urban Run-off
- Eutrophication
- Water Crisis
- Marine Pollution and Acidification

#### Land-related Environmental issues:

We live on land and our food comes from land. Land is polluting in different way and affecting in the following ways:

1. Desertification
2. Soil Pollution
3. Inefficient Land Use

#### Other Environmental Issues:

There are few other environmental concerning issues not limited but as follows:

1. Climate Change
2. Population Explosion
3. Inefficient Use of Resources and Energy Crisis
4. Lack of conservation
5. Non-Recyclable waste
6. Genetic Engineering
7. Food Safely

## 8. Biological Pollutants

The researcher found some possible reasons for environmental pollution:

- Unlimited absorption and over-consumption of natural resources
- Blocking nature by creating dams and the impacts of dams changing the natural habitat
- Natural disasters and its impact on environment from different aspects
- Improper fishing and its effect on marine and fresh water ecosystems.
- Different kind of toxins including chlorofluorocarbons , heavy metals, pesticides, herbicides, toxic waste, bioaccumulation, PCB, endocrine disruptors, asbestos and improper and inefficient management of hazardous waste.
- Mining impacts on global warming and acid mine drainage
- Soil and air pollution is created from toxic emissions and heavy metals.
- Intensive farming, deforestation, improper irrigation, overgrazing and methane emissions
- Destruction of Ecosystem.

### **Environmental Policies:**

McCormick, John (2001), defined Environmental policy as a commitment to the laws, regulations, and other policy mechanisms concerning environmental issues and sustainability. He further depicted that this policy can be deliberately taken to direct and oversee human activities and thereby prevent harmful effects on the environment surrounding us including biophysical environment and natural resources which make sure that changes in the environment do not have harmful effects on humans.

Oxford Dictionary, 1995 defined policy as a "course of action or principle adopted or proposed by a government, party, business or individual". Environmental policy focuses on problems arising from human impact on the environment having a negative impact on human values such as good health or the 'clean and green' environment.

The issues of environment generally addressed by environmental policy is vast area including but not limited to air and water pollution, waste management, ecosystem management, biodiversity protection, the protection of natural resources, wildlife and endangered species, and the preservation of these natural resources for future generations.

Rushefsky, Mark E. (2002) argued for the governmental involvement in the form of forces beyond the control of one person including the **free rider problem** and the **tragedy of the commons**.

He defined the free rider problem is when the private marginal cost of taking action to protect the environment is greater than the private marginal benefit, but the social marginal cost is less than the social marginal benefit.

Water pollution in river by the factory could be a good example of free rider problem where the society must clean the water before drinking it what costing them as a whole and it is external cost for the factory that are the liable for this pollution.

The tragedy of the commons is meant when no one person owns the commons; each individual has an incentive to utilize common resources as much as possible. Mr. Mark claimed that without governmental involvement, the commons is overused as an example of tragedies of the common are overfishing and overgrazing.

The 1960s as marked the beginning of modern environmental policy making when the books, articles, literature and environmental movement named **hippie** which aimed for the ideal of harmony with Nature, dematerialization and alternative lifestyles (from self-sufficiency to communes) (Clive L. Spash, 2009). The ravages of the 1969 massive oil spill in Santa Barbara, California is an affective issue to turn the human concern to the environmental policy. Environmental Policy was a bipartisan issue and the efforts of the United States of America helped spark countries around the world to create environmental policies. At this time legislation was passed to regulate pollutants that go into the air, water tables, and solid waste disposal. Clean Air Act was signed by President Nixon in 1970 which set the United States of America (epa.gov, 2010 ) as one of the world leaders in environmental conservation.

According to Knill, C. and Liefferink, D. (2012) the very first Environmental Action Programme was adopted by national government representatives in July 1973 during the first meeting of the Council of Environmental Ministers in the European Union. After that council meeting an increasingly dense network of legislation has developed, which now extends to all areas of environmental protection including air pollution control, water protection and waste policy but also nature conservation and the control of chemicals, biotechnology and other industrial risks. Now a days environmental issues given so importance that EU environmental policy has become a core area of European politics.

Every organizations are becoming more aware of their environmental risks and performance requirements. The ISO-14001 standard has set up which develops the environmental policies suitable for the individual organization and outlines environmental performance of the organization as well as its environmental objectives.

To get the ISO-14001 standard certificate top management of the organization have to document that they are already complying with legal and other requirements, such as the environmental policy objectives set by their governments.

The new environmental policy instruments was used significantly in Britain in the 1990, British Prime Minister David Lloyd-George introduced the first market-based instrument of environmental policy in the UK when a Fuel tax was levied in 1909.(Jordan, et.al, 2003).

There are different types of tools what are called by environmental policy instruments used by governments to implement their environmental policies.

The environmental policy instrument can be as follows:

1. Economic Incentives and Market-based Instruments:
2. Voluntary Agreements
3. Regulatory Instruments
4. Mixed Instruments
5. International Framework

### **Market-based Instruments:**

Market-based Instruments also known as economic instruments, price-based instruments, new environmental policy instruments (NEPIs) or 'new instruments of environmental policy.

For example, economic incentives and market-based instruments which are including but not limited to taxes and tax exemptions, tradable permits, and fees can be very effective to encourage compliance with environmental policy.

The implementation of MBI also commonly requires some form of regulation. MBI can be implemented systematically across an economy or region, across economic sectors, or by environmental medium.

Kete (1994), claimed that policymaking appears to be in transition towards more market-oriented instruments, but it remains an open-ended experiment whether we shall successfully execute a long-term *social* transition that involves the private sector and the state in new relationships implied by the pollution prevention and economic instruments rhetoric.

Some market based instruments are as follows:

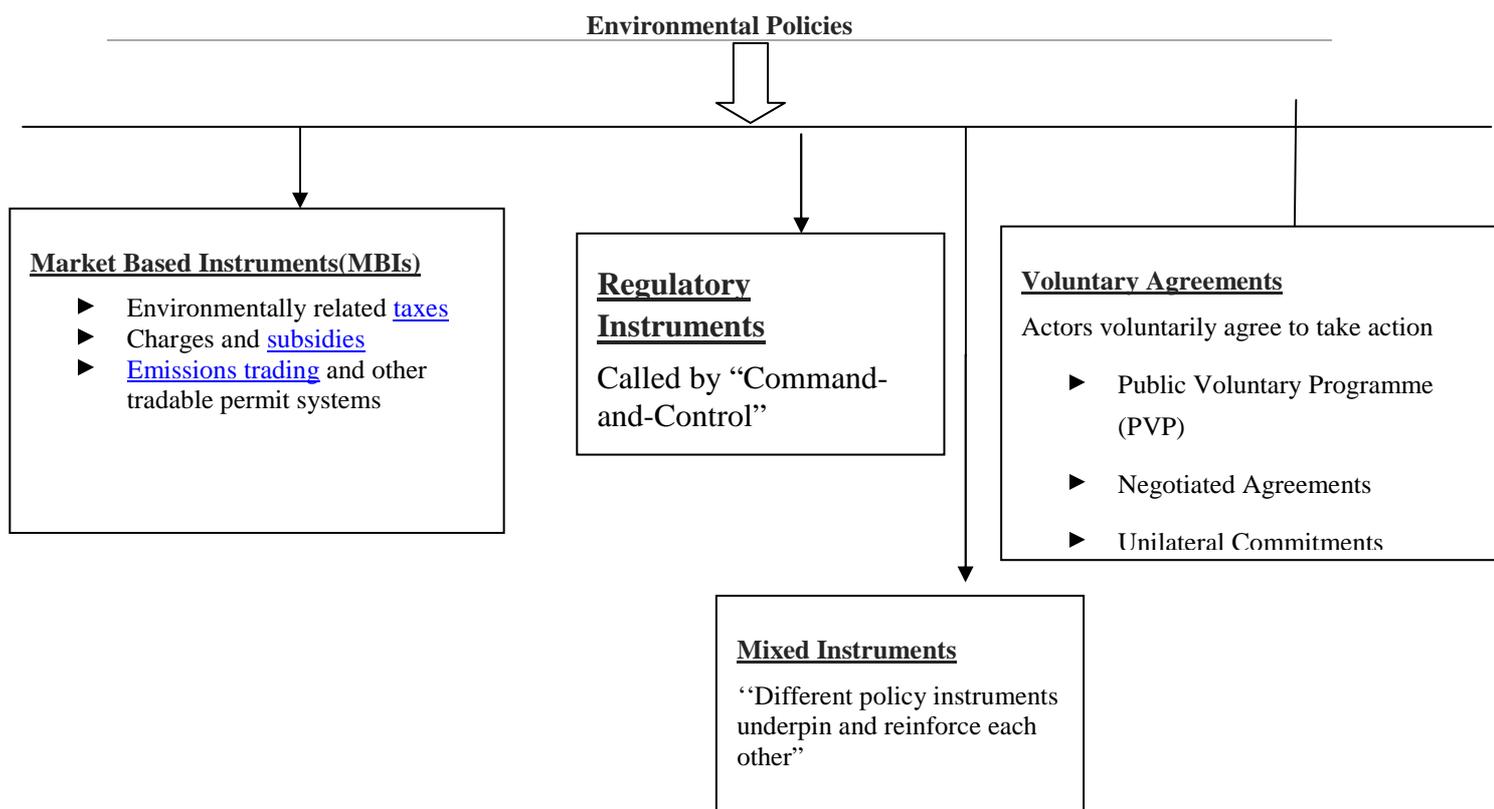
#### Transferable permits

Transferable permit basically sets a maximum level of pollution or a cap. It implies the actor to keep the pollution lower to a level to lower the cost. In the other hand, exceeding the cap cause maximize the cost. It is extremely important for the policy maker to measure accurately the initial problem and how it changes before transferable-permit system. The effectiveness of the permits can be affected by various thing including market liquidity, the quality of the property right and existing market power.

There are some criticism against the permits as it is seems to be the license of emission. Although there's some adverse environmental impacts, the acceptable cost of preventing these impacts is implicit in all regulatory decisions.

#### Taxes

Another market based instrument is taxes to control the environmental pollution. In this approach, polluters granted an incentive to reduce pollution at a lower cost than the tax rate. There is no cap in this approach but the quantity of pollution reduced depends on the chosen tax rate. This approach is flexible as the **tax rate** can be adjusted until it creates the most effective incentive. There are lower compliance costs in taxes rather than permits. However, as taxes instrument is flexible, it is less effective at achieving reductions in target quantities than permits.



**Voluntary Agreements:**

It is a growing belief in the favor of industrialism and economic growth that the firms should have the flexibility in terms of environmental protection. This consideration makes voluntary agreement more popularity.

Voluntary agreement is a bilateral agreements negotiated between the government and private firms and commitments made by firms to meet objectives related to environmental impact.

Goodwin, 1986 argued that voluntary agreement should be not under governmental pressure or abide and monitored by the regulatory body.

But it is very difficult to keep the voluntary agreement is voluntary as the it is obvious guided by the ground of government and environmental agency.

Considering all the above factors OECD, 2003 define voluntary agreement as, “Environmental voluntary agreements are arrangements between firms and regulators in which firms voluntarily commit to actions that improve the natural environment. The regulator encourages and/or supervises these actions”.

Borkey and Leveque, 2000 subdivided the voluntary environmental policy are as follows:

1. Public Voluntary Programme(PVP)

Public Voluntary Programme is optional regulations for the firms and industry devised by the environmental agency. In this programme individual firms are invited to participate. This agreement is truly voluntary. Example of PVP is US programme 33/50 or the EcoManagement and Auditing Scheme(EMAS) implemented in the European Union since 1993, Voluntary Challenge and Registry (VCR) Programme and Accelerated Reduction and Elimination of Toxics Initiative (ARET) in Canadian

As the PVP is initiated by the environmental authority, it is clear and the regulations are clarified.

2. Negotiated Agreements

This agreement involves commitment of the firms through bargain. It is a bilateral agreement between environmental government agency with individual sector or individual firm. Negotiated Agreement is formal but not legally bounded that’s why the agreement considered as “Grey Zone” whether the authorities have involvement in the actual design but in implementation of the agreement is low. The actual method of fulfillment of the agreement is depend of the negotiated firms or sector. Example of Negotiated Agreements is Danish Agreement on Recycling of Transport Packaging and the Finish SOILI Program.

3. Unilateral Commitments

Unilateral Commitments is an independent action by the industry for environmental protection without the involvement of public authority. Though in this no regulatory bodies are involved sometimes third party may act to monitor and validate to create credibility.

Borkey, Glachant and Leveque, 1999 also subdivided voluntary agreements on parameters such as:

1. Individual/Collective
2. Local/Global
3. Binding/Non-binding
4. Open/Closed access to third parties
5. Target based or implementation based

### **Regulatory Instruments**

Regulatory instruments are also known as command and control approach.

This is much more prescriptive and formal approach than market-based instruments. Command and control regulatory instruments could be emission standards, process or equipment specifications, limits on input and output or discharges, requirements to disclose information, and audits. Command and control approaches sometimes seem to be rigid and strict and have been criticized for restricting technology, as there is no incentive for firms to innovate.

### **Mixed Instruments**

While there are several situations where different policy instruments underpin and reinforce each other then it is called by mixed instruments. There are number of situation where few policies in taking action is less expensive rather than taking one policy in action.

Mixed Instrument is also known as Policy Mix. This is an intended or unintended covers the situation where several policies or regulatory instruments are used to address the same problem.

Lehmann P., 2008 argued that policy mix employed in order to multiple reinforcing failures of private governance structure or if the implementation of single first best policies brings about high transaction costs.

The policy mix can be described the situation where two policy instruments reinforce one another or cover the case where multiple measures inhibit the intended effects of one another.

Environmental Impact Assessments (EIA) are often prepared to assess and compare the impacts of various policy alternatives. Moreover, it is often assumed that if policymakers will make rational decisions based on the merits of the project. Eccleston and March report that even though policymakers often have access to reasonable accurate information political and economic factors often lead to long-term environmentally destructive decisions. Yet Eccleston C. and Doub P.,(2012) decision-making theory casts doubt on this premise. Irrational decisions are often reached based on unconsciousness biases, illogical assumptions and premises, and the desire to avoid ambiguity and uncertainty.

International Framework:

International framework refers to the law and regulations regarding environmental issues. It is though started due to political unity and support from the humanity, now a day environmental problems become the critical issue in worldwide. The worse effect of environment is alarming. So, it became international concern to protect the environment. International environment protection framework is working through the following categories.

- Environmental treaties
- Organizing principles
- *Treaties, protocols, conventions, etc.*
- *Organizations, institutions, bodies, etc.*
- *Customary international law(seem to be implied)*
- *International judicial decisions*
- Administration and enforcement through different kind of program
- Education and training executing by different international organization

Conclusions:

Though there are some controversy on environmental policy framework regarding its necessity, fairness, cost and effectiveness, it is accepted as critical issue all over the world to work on. The researcher claimed that all the controversy will be resolved if the environmental issues could be properly measured and deal with a best environmental policy framework. For that there is no alternative of mass awareness and all over co-operation.

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