Environmental education as a tool to activate the Contribution of the Economic institution to sustainable development and pollution reduction

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Abstract : Economic institutions of different nature seek to achieve economic growth that aims to maximize their profits. However, through their performance, a range of effects arise from the enterprise's economic activities that adversely affect the environment (such as pollution, waste of natural resources... etc). In order to to integrate the environmental and social dimension into the enterprise's economic strategy, Governments have taken a range of actions and measures in line with the enterprise's economic activity and sustainable development, which is based on three basic principles: economic growth, social justice and environmental protection.Environmental education is one of the most important factors contributing to sustainable development by activating the enterprise's activity to pay attention to its environment and reduce environmental pollution.The instition's assessment of its external environment contributes to achieving good efficiency in the management of the economic enterprise.which indicates the extent to which the institution achieves its objectives through the most appropriate harmony of its resources,this evaluation process allows to know about opportunities to exploit, threats or risks that can be encountered
or reduced .

Key words: Economic Institution, pollution, sustainable development, environmental education

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1. INTRODUCTION

Whatever the prevailing economic environment, economic institution plays an essential role in economic development This role, however, varies in size and importance from one economic setting to another because of the different objectives to be achieved by this institution, its tasks go beyond the contribution of the economic institution to the development process in the context of sustainable development and not only because it is a source of information. productive capacity and utilization level, and annual production achieved and suggestions for the purpose of developing production, but beyond that, by requiring them to use the necessary means for the success of this development process.

Therefore, many States have developed procedures to assess the environmental impact of projects, economic institutions and activities, given their specificity, complexity, interconnectedness and association with many other activities constituting the structure of industry in a State, with a view to developing and advancing their development programmes in a manner that allows them to achieve their economic objectives without adversely affecting the environment in which they live. by identifying the

negative and positive impacts of such projects and mitigating, and maximizing the positive impacts and avoiding or minimizing the negative impacts, which is the basis for achieving sustainable development.

Based on what has been mentioned above, the following main question is raised:

How much has environmental education contributed to the economic institution effectiveness in reducing pollution and achieving sustainable development?

2. External impacts of the economic institution activities:

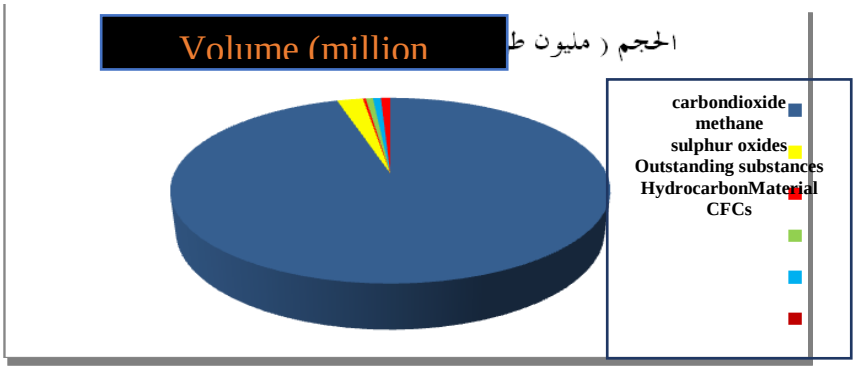
The process of assessing the external institution's environment is an important step for effective management of the economic institution's goals through the most appropriate harmony of its resources, this evaluation provides insight into opportunities for exploitation, threats or risks that can be encountered or reduced, in particular, the external effects of the institution's activities shall be as follows:

2.1 pollution

It is the introduction of pollutants into the environment that cause instability and disruption, or damage to the ecosystem i.e., physical systems of organisms and pollution can take the form of chemicals, energy, such as noise, heat or photovoltaic energy. Pollutants and pollution elements may be external materials or energy sources, or may occur naturally. When they occur naturally, they are considered pollutants when they exceed normal levels.

We also note the high proportion of industry contributing to environmental pollution. Statistics indicate that industry contributes significantly to environmental pollution and increases its levels compared to other pollutants. The following table shows the calculated estimates of industry contributions to air pollution emissions: (1) These ratios are shown graphically as follows:

Fig.1.: Estimates of major emissions from industry



Source : Achour Mrizek, IKaddour BEN NAFELA, Source previously mentioned, P5

Among the indications shown in the previous figure is that aerial pollution from chlorofluorocarbons/hanoidsIts only source is industry, as was the cause of 9/10 sulphur oxide, and industry has created fifty-half of carbon dioxide and hydrocarbon pollution for outstanding substances, reflecting the high proportion of industrial activities contributing to environmental pollution events.

Massive use of contaminated energy sources: vary in size due to the combustion of urban fuels and biomass depending on the fuel used. "The burning of urban fuels in the world makes up 90% of sulphur oxides, 85% of nitrogen oxides, 30% to 50% of carbon monoxide, 40% of micromaterials, 55% of volatile organic compounds, 15% to 40% of methane, and 55 to 80% of carbon dioxide.
The extraction and use of this type of fuel also contributes to an increase in the methane and nitron oxide emission "currently represents 78% of the total energy used, that is, the urban fuel of 33% of the oil, 27% of coal and 18% of natural gas (**Achour Mrizek,2011,P5**).

2.2. Depletion of natural resources:Natural sources:

The range of materials and energy found in the environment. Natural sources include geological sources, i.e., sources of geological origin and most geological sources are non-renewable sources (Non-renewable resources);
Their consumption rate exceeds that of their composition, with the exception of groundwater for possible rainwater regeneration, and metals for recycling, i.e., they can be recycled (industrial regeneration).
in addition to underground heat energy as a renewable source of energy. These sources are included in all kinds of industry you know, from tiles to medicine, the pencil you use, consisting of geological sources, electrical devices, computers, war industries, spacecraft...., all originating from geological sources, but we are not aware of the relationship between geological sources and the product that is from natural sources. Biological resources include

plant and animal wealth, and these sources are regenerative (renewable) for environmental availability as a result of natural regeneration. Natural sources on

renewable energy sources (Renewable 6^2 + (Energy Resources), for example, include solar, wind and water energy.
The world's non-renewable sources are depleted, and therefore the world's nations have resorted to solutions, such as the development of specific technologies capable of using available sources efficiently and reliance on renewable sources of energy.
Renewable sources are also depleted, particularly plant and animal wealth, soil and metals, resulting from consumption of these sources at a rate higher than natural or industrial regeneration.
2.3 Ozone hole: chlorine, fluorine and carbon are spread into the atmosphere until they reach the stratosphere, where ultraviolet radiation is analyzed and chlorine and bromine atoms are released, whose chemical activity is increased in the free state, are associated with ozone molecules to fragment ozone into chlorine oxide and oxygen, leading to ozone depletion
2.4 Pollution of the seas and oceans: Over the next 30 years, more than 6.3 billion people will reside in coastal corridors, increasing pressure on land-sea docking lines. Marine and ocean waters have undergone environmental changes as a result of two factors:

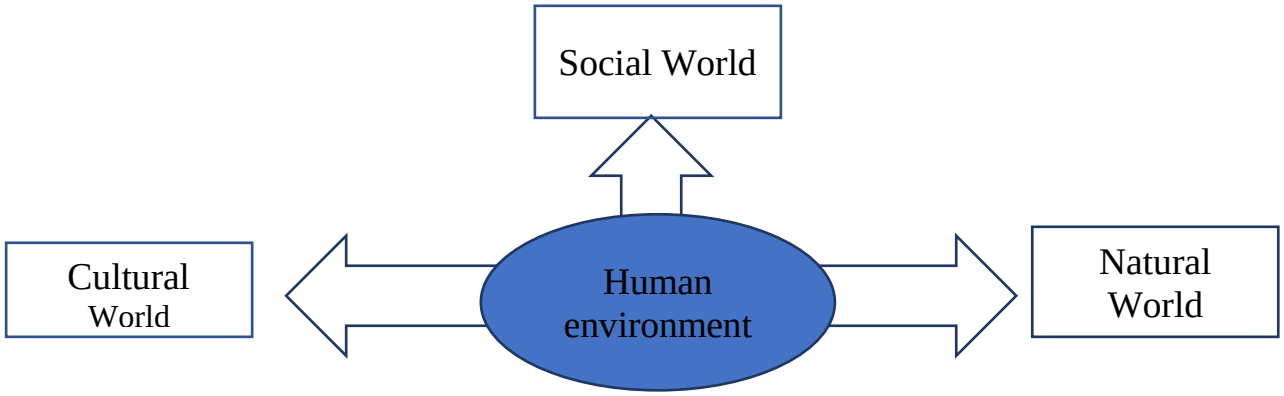
- Increased concentrations of a number of substances and elements in the marine environment from their original ratios, such as nitrogen
- Finding new materials that nature has never known, not even in the preceding stages of economic development such as plastics.

Marine and ocean pollutants are: wastewater, medical materials, nuclear radiation, pesticides and fertilizers, chemicals, oil and oil derivatives, dynamite, solids

2.5 General concepts of environmental education : The environment is the sum of the things that surround us and affect the presence of organisms on the Earth's surface. They include water, air, soil, minerals, minerals, minerals and organisms. They can also be described as a set of systems intertwined with each other to the degree of complexity that affect and determine our survival in this small world and that we deal with periodically. The environment is divided into two physical first types (air, water, land) and biological second) plants, animals, human beings (.The environment is also divided into natural environment, industrial environment, social environment. The social environment is concerned with the set of laws and regulations governing individuals' internal relations with institution
3. The environment consists of two segments:

3.1Natural incision: It consists of land and its periphery and its growing flora and fauna
3.2Construction: It consists of components created by residents of the natural environment, including schools, factories, roads and airports, as well as customs, traditions and beliefs governing the relationship between the population.
Components of the environment may otherwise be expressed under 3 systems or oceans as follows:
3.3Biosphere: The original life environment created by Creator Almighty
3.4Manufactured environment: They include all that man has created in the natural environment using science and technology, such as roads, schools, etc.
3.5The Social environment: the system in which humans manage their social, economic and political life. As a result of the continuous interaction between these three subsystems, many environmental problems that affect us and the beings that share our lives on this planet arise.

Figure 2: Relationship between the natural, social and cultural world with the human environment



Source: Prepared by the researcher based on what has been mentioned above

Education - is the process of building and developing trends, concepts, skills, abilities and values in individuals in a particular direction to achieve desired goals. Education thus serves as an investment in human resources that gives a dynamic return in people's lives and the development of societies.

Concept of environmental education

is the process of forming the values, directions, skills and perceptions necessary to understand and appreciate the complex relationships between man and his civilization with the environment in which he lives, and to clarify the imperative of preserving the resources of the environment and to make good use of them for the benefit of man, to preserve his dignified life and to raise his living standards **(Meadows,D ,1989)**

Environmental education is, in short, the aspect of breeding, which helps people to live successfully on the planet, which is known as the environmental aspect of breeding. Environmental education is also defined as learning how to manage and improve people's relations with their environment comprehensively and strengthened. Environmental education also means learning how to use modern technologies, increasing their productivity, avoiding environmental risks, removing existing environmental damage, and making rational environmental decisions.

The features of Environmental education are characterized as follows **: (Rashid Hamad and Mohammed Said Sabarini, 1979 ,P9)**

-Environmental education tends to solve specific problems of the human environment by helping people realize these problems

-Environmental education seeks to clarify complex environmental problems and ensures synergies of the kinds of knowledge needed to explain them

-Environmental education takes an inclusive curriculum for several scientific branches in addressing environmental problems.

-Environmental education ensures that it opens up to the community in the belief that individuals do not pay attention to the quality of the environment and do not move to maintain or seriously improve it and insist on the day-to-day life of their society.

-Environmental education seeks to guide the various sectors of society by making efforts with the means to understand and rationalize the management and improvement of the environment, thereby embracing the idea of inclusive and sustainable education for all groups of people

-Environmental education is continuous and forward-looking .

4. **Environmental education has three objectives:**

1/Enabling individuals to understand the complex nature of the environment, and that it is the product of interaction between vital (biological), physical, social, economic and cultural elements. Environmental education should allow the individual and society to recognize the interdependence of these different elements, whose spatial and temporal boundaries vary.

2/Develop an individual's ability to recognize the importance of the environment in economic and cultural development, strengthen a sense of personal responsibility towards the environment, and maintain the integrity and prosperity of the natural, social and cultural environment. In this area, environmental education disseminates knowledge about means of development that are not harmful to the environment and motivates people to explore approaches to their lives that are harmonious and compatible with the environment.

3/Raise people's awareness of the interdependence of the world's States and territories in the areas of economy, politics and the environment, and that the actions of a group of people (in a country) may have environmental implications at the regional or global level where these effects may arise after some time, and in areas that may be far from where their causes are produced. In this regard, environmental education plays an important role in strengthening the sense of responsibility and the importance of cooperation and coordination among the countries of the world. This is the aim of international cooperation in the development of environmental education**.:**

(حسن أبو بكر،2017)

The charters of the world's environmental education organizations have referred to six environmental education functions:

•The learner should recognize the dimensions of the environment and the interventions of its components, and feel that the environment has its issues that deserve attention for their impact on human beings and society.

• The learner should know the elements of the environment, the issues related to these elements and their interactions and the role and responsibility of man in these interactions.

• Environmental education develops in the learner social attitudes and values and a strong sense of concern for the environment, combining incentives to participate in environmental protection and improvement efforts.

• environmental education learner should develop skills that enable him or her to contribute positively to environmental protection and improvement efforts.

• environmental education learner should develop the ability to evaluate the environment in the context of its awareness of the environmental, political, economic, social and aesthetic dimensions of the environment.

• Environmental education will develop in the learner the ability to work, perform usefully and participate positively in environmental protection projects, and advocate attention to their conservation.

• As the field of environmental education has evolved, these principles have been researched, criticized, reviewed and expanded. However, it remains the strong foundation for a shared vision of the basic concepts and skills that an environmentally conscious citizen need**.(Ali (Hassan Ali), Nasrallah (Hanna)1999, p7)**

5. Ways and methods of environmental education can be summarized in the following elements:

5.1 Use of anecdotal style: It can address the stories and works of scientists, especially those dealing with the relationship of love and respect for nature, leading to the growth of environmental awareness and the development of appropriate environmental creation.

5.2 Use of play, simulation and role representation: This can depict the nature of environmental problems and the interests of individuals that affect and are influenced by them.

5.3Problem solving method: The problem is the state of dissatisfaction or tension, the reason why the problem often exists is to realize that there are obstacles to reaching the target. The steps of the scientific method are to solve problems in: identifying the problem - collecting data and information on the problem - classifying information and data - evaluation of information - selecting one of the solutions - evaluation of the solution.

5.4Case study: Starting from the student's surveillance of an organism in his natural environment, energy transformations in a pasture, or the study of environmental impacts, it provides individuals with opportunities to deepen a subject.

5.5Teamwork: A method that develops awareness and environmental creativity where the student participates in social work directly, resulting in the student's self-esteem as well as personal responsibility such as participating in the removal of dust or the backfilling of drilling and swamps.

5.6Excursions and environmental visits: Trip or visit to an environmental site is a meaningful planned activity that takes place outside the classroom. It provides the student with expertise that is difficult for traditional teaching methods to provide.

Environmental education methods are as follows:

Presentation: A typical provision of information by a facilitator so that the receiver can hear, watch, understand and be influenced by the dimensions of environmental problems.

Reading: An individual approach to providing information through printed materials with environmental ideas and information.

Samples and models: samples are part of the overall truth, and models are a complete incarnation of the shape of the truth

Group discussion: a verbal exchange of ideas and views between individuals and experts

Educational drawings: maps, paintings, drawings, posters and transparencies.

Practice: By participating in a theatrical or singing performance, allowing the individual to possess skills and assert new concepts by participating in the communication process.

Seeking to strengthen the relationship between science and technology: the entrance to science and technology and society, where the student is personally involved to influence the surrounding environment positively. The main issues of this relationship are hunger and food sources, population growth, air quality and atmosphere,

Water sources, human health and disease, energy shortages, land use, hazardous materials,

Mineral sources, extinction of plants and animals, war technology.

Project Portal: The project is a targeted set of activities undertaken by the learner, through which he/she acquires information, skills, directions, values and planning capacity.
Field studies: The student deals directly with the environment and is the basis for the tecahing of environmental education.
Teaching team: Teaching is carried out by a group or a team of teachers specializing in different subjects of study. The interest in training on one of the environmental subjects in each of its fields of specialization contributes to discussing and solving the problem under study.
Environmental survey: identifies an environmental problem associated with some of their lessons' topics and seeks to solve them, then proposes solutions and tests them to obtain of certain evidence.
Conceptual maps: the concept is two concepts associated with the word association to form a case and may be more intrusive
Brainstorming: Brainstorming is an innovative conference to produce a list of ideas that can be used as keys to crystallizing the problem and forming a solution to that problem. **(صلاح عبد المحسن عجاج، 2015)**

6. Principles of environmental education :

Through the foregoing the importance of environmental education and its role in confronting this deteriorating environmental situation in the world, we need to talk about the principles of environmental education that call for a peace initiative with the environment. And it builds an environmental ethic aimed at sympathizing with and respecting the environment and appreciating its living organisms living in constant interaction in the light of the laws created by the Creator Almighty. The main principles of environmental education are: **(Rabi Adil Hadi and Meshaan hadi، 2006)**
6.1Economics: There is no doubt that every human being has the right to use environmental resources in order to achieve economic development and well-being in living, but this does not mean that such exploitation is indiscriminate but must be parallel to environmental aspects. In the sense that environmental protection must go hand in hand with development, rationality, affirmative action, good behaviour and proper handling of environmental resources must be deteriorated, because any imbalance will lead to environmental imbalance, resulting in an imbalance in the continuity of life on the Earth's surface. Protecting and caring about the environment was not and will not be a barrier to man's technological advancement, but rather an incentive to care for it and to do no dysfunction. Staying healthy means sustaining life and continuing scientific and technological progress.
6.2Scientific: The adoption of the scientific aspect in dealing with the environment whether scientific planning based on scientific foundations and current and future projections , or with guidance and recommendations, it will reduce environmental risks so that there is no adverse effect on the process of interaction of elements of the environment that proceed according to a continuous subjective movement aimed at maintaining an environmental balance in order to sustain life, while indiscriminate exploitation and lack of scientific style with nature will certainly lead to environmental imbalance.
Threatens human survival. And this is what happened with the beginning of the industrial revolution, because human beings had the first interest in material gain and the right scientific approach was not shown in this exploitation, which led to environmental disasters, ozone depletion, global warming, and other disasters.

6.3Moral aspect: This aspect belongs to man himself and his willingness to be a useful member of his society, keen on his own interest, aware of the dangers that surround him and his community, the environment he lives in and the world around him. In order to be morally human, the topic of environmental protection must be regarded as an individual's duty. It is also essential that the educational system accelerate the realization of environmental education principles.

7.The effectiveness of environmental education in improving the performance of the economic institution

The emergence of some modern concepts in the economy and management such as sustainable development and environmental education has been linked to a range of challenges that have emerged in different business sectors including the industrial sector

7.1 Environmental education methods in economic institutions: The most important are the following: (وهيبة مقدم ، 2012)

7.1.1 Observance of environmental protection and non-harm: Industry is the main user of natural resources Therefore, they directly or indirectly contribute to the spread of the phenomenon of pollution, This phenomenon is greatly exacerbated whenever industrial companies neglect to bear the consequences of their activities that pollute the environment And whenever the environmental awareness of these companies is absent, the economic reality is full of living examples of many industrial companies that have polluted the environment. oil spill in the Gulf of Mexico in 2010, issued by BP's global oil activities.

There is no doubt that the environmental protection, conservation agenda and the adoption of environmental management policies in industrial companies would not have been possible without the increasing pressure of NGOs in this context, and the imposition of financial and international laws that preserve the environment's integrity.

7.1.2 The emergence of quality standards related to industrial products: the industrial sector is witnessing a real revolution in the development, design, production and use of modern technologies This revolution is an inevitable consequence of increased competition among industrial companies for consumer satisfaction, Consumer satisfaction is the only way to sustain these companies. Therefore, taking into account the quality of products in these companies has become a priority rather than an option, they have become required to adopt the right directions in order to achieve this quality, which is done with different liquids, including: Follow total quality management, international quality specifications such as ISO specifications or adopt local standards and specifications

7.1.3.Responding to the requirements of sustainable development and integrating the concept of green industry into States' manufacturing policies: Sustainable development needs efficient and ethical management of natural resources and wealth and the use of environmentally clean and economically and socially acceptable techniques while rationalizing energy consumption and improving energy efficiency, all modify the industrial development path and enhance its sustainability Today, many countries are working to incorporate these requirements into industrial strategies and plans. and integrating green industry and cleaner production issues into industrial policies.

7.1.4Commitment to social responsibility and social development: The concept of social responsibility is firmly rooted in its beginning in the major industrialized countries that

embrace the major industrial giants that employ tens of thousands of workers, consume vast quantities of raw materials and directly affect the environment and the lives of the societies in which they operate.

Attention to the environmental and social performance of these industrial companies has increased after some environmental and human destructive incidents. It is fair that these companies contribute part of their profits to the development of the lives of workers and their families, and even the development of the societies in which they operate, through the adoption of social responsibility programmes.

These industrial companies derive their duties towards society from the economic strength they enjoy, and their considerable material, human and financial potential that enables them to play their social and economic role to the fullest.

7.2 Stages of development of the institution's mineral ecosystem

Establishment of an ecological management system, a step through 04 stages: Ali **(Hassan Ali, Nasrallah Hanna,1999)**

Phase 1:

At this stage, the situation is analyzed in order to know the reality of the institution with regard to the environment. This is by gathering as much information as available about the institution. This stage is important because at the end of it, the institution will arrive at the initial environmental policy that it will adopt.

Phase 2: The target setting phase is organized as follows:

- Liberalization of environmental policy that sets priorities and stimulus to be achieved by the institution.
- Prioritization of aspects to be developed.
- Identifying the desired objectives as well as the time needed to implement them.

Phase 3: The implementation phase of the ecological management system, the implementation phase of pre-planned operations to achieve the established objectives (purchase of equipment, composition of workers....) There is also a need for periodic monitoring of the results and comparison of them with the objectives outlined in order to line other objectives.

Phase 4: Preparation for certification. At this stage, the ecological management system exists and practically, and the institution is properly functioning, and is aware of the modifications to be made in order to develop its steps and obtain certification depends on: the quality of the ecological management system and the efficiency of workers and interveners in this field.

Environmental policy reflects the Institution's intentions and principles associated with its overall environmental performance, which provides a framework for action and the development of its environmental objectives and objectives. The Institution prepares this policy to emphasize: **(Mohamed Abdulwahab Al-Azawi, 2002)**

- Their relevance to the nature and volume of environmental impacts arising from the enterprise's own activities, goods and services;
- Commitment to continuous improvement and prevention of pollution;
- Compliance with the laws, regulations and legislation relating to the institution's operations;
- Provide a framework for the development and revision of environmental goals and targets;
- Ensure documentation, implementation, preservation and delivery of environmental policy to all workers;
- Ensure that the policy is made public.

8.METHODS AND MATERIALS:

The methods we used in this study relied on the collection and analysis of statistical data and the use of those results in the study. We also discussed some statistics on the external effects of the economic institution, we have analyzed these percentages and reached the results above mentioned

We relied on the study of environmental education variables on the one hand and the external effects of the economic institution on the other, then we linked the variables by working on environmental education methods and ways, and their role in improving the economic institution's performance and reducing pollution.

9. RESULTS AND DISCUSSION :

Through this study we have reached the following findings:

- The economic enterprise integrates environmental responsibility as a voluntary aspect which originally must be compulsory
- The environment is the resource repository and overarching reservoir of renewable and non-renewable elements of natural wealth, consisting of aquatic, aerial, soil, organisms and ecosystems that support life on the planet, where they must be preserved
- The economic enterprise has external effects related to air quality, water pollution, seas, land degradation, waste management, biodiversity loss, ozone depletion and global warming
- Environmental education is one of the most important factors contributing to sustainable development by activating the institution's activity on the attention of its environment and reducing environmental pollution
- The environmental management in the conduct of the institution's activity contributes to environmental protection and pollution prevention
- Environmental education is not about industrial institutions but includes all enterprises (agricultural, service, transport, etc.)

10. CONCLUSION

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Economic institutions have externalities that have often caused environmental problems and imbalances, such as ozone holes, global warming and the straining of natural resources, so attention must be paid to the concept of economic development, which takes into account environmental and social constraints and sustainable development. In order to achieve sustainable development, Governments have expanded their national development plans and policymaking to protect the environment, through which they seek to compel the polluter to pay for the damage it has caused to the environment and to include external impacts in the activity's costs to reduce environmental problems and move towards sustainable development. At the end, Governments have expanded their national development schemes and policymaking to protect the environment (environmental policy) through which they seek to compel the polluter to pay for the damage it has caused to the environment and society by

including external impacts in the activity's costs to reduce environmental problems and move towards sustainable development.

As previously mentioned, we could make some suggestions to serve the study's objectives:
First, institutions in society, especially large ones affecting the environment, should be obliged to determine their attitude to social responsibility according to certain criteria and indicators when preparing economic and technical feasibility studies.

Second: To increase expenditure on damage prevention costs rather than on damage treatment costs, as this is important in eliminating the effects of activities whose spread causes damage to the health of individuals, the environment and society in general;
Third: The Foundation's spending of funds on social and environmental activities is an important aspect of its fulfilment of its social and environmental obligations but more importantly, that expenditure is commensurate with the magnitude of the damage or cost generated by the institution to the community or caused, This requires taking into account the relationship between social costs and social damage, which allows us to expand the study and research on the topic of corporate social responsibility.
Fourth: Governments seeking sustainable development should establish the concept of environmental and social responsibility by codifying it into the economic institution's internal regulations to become an effective and alternative instrument of environmental policy.

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