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Basic Environmental Crises That Can Be Investigated In Iran

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Abstract

A person with the environment in the world goes back thousands of years, but the environmental environment is a very recent phenomenon that was the product of neglecting the environmental environment. In Iran, like in other parts of the world, some discourses have played a positive and negative role in creating this crisis.
Our country is considered to be in the dry region of the earth due to its geographical location, which has made water natural. Other basic environmental crises in the country include long-term drought crisis, pressure on natural resources, crisis of unstable and disproportionate agricultural management, agricultural risk, climate change, environmental pollution crisis, and in the crisis, the skyrocketing costs of living. Pointing environment.

Keywords: Crisis, Pollution, Environmen, natural resources

Introduction

In its definitions, the environmental organization has given this concept as "what surrounds the process of living, includes it and interacts with it... the environment includes everything." Man includes both nature and the relationship between the two" (Environmental Protection Organization 1398: 1)
In another definition, the environment is a complex set of physical, geographical, biological, social, cultural and political conditions that surrounds a person, in such a way that the existence of that person is dependent on that condition. (Steele, 2008:2)
This definition of the environment is Moses' definition of it, which refers to the natural and different environment of human society.
According to the definitions, any human activity in the surrounding environment, even the activity of producing and extracting fossil energy, is carried out with in the environment, and what modernity described as mastering nature was actually mastering the environment (Vartolomei L, et al., 2022; Müller-Fabian A, et al., 2018). In the large area of the environment, humans are incapable of exploiting the effects of activities to dominate nature, leading to its destruction, so that according to the report of the Organization for Economic Cooperation and Development in 2001, almost all the factors that make up the environment are affected by the activity. (Annual Report 2001, 2001: 49)

Merriam Webster encyclopedia defined the environment as follows: a set of physical, chemical, natural factors, such as weather, soil, living organisms, which act on living and non-living organisms and ultimately determine their form and survival. Also, the environment is a collection of natural, social and cultural conditions that affect the life of an individual or society. (Merriam-Webster Dictionary 2019:1)

From a historical perspective, in the first environmental crisis, there were basically issues that, although were repeated across the world, could be completely solved completely within the framework of one country. In this way, when environmental issues were basically related to issues related to polluted air or water, they were largely considered to be issues related to domestic politics (Goodwin 2017: 329).

Ever since mankind stepped on the earth, it has had a continuous and stable interaction with its environment, However the growth of the population and the achievement of new scientific inventions and discoveries and the movement towards a modern and industrial society have caused the human being today to be in a world of crisis. In recent decades, in addition to social, economic, political and value crises which are serious threats, environmental problems and crises should also be added to the list of global crises (Hahighatian et al, 2013).

The severity of the process of environmental destruction due to the ever-increasing human search to discover nature's assets, speed madness, thirst for communication, population growth, urbanization and the resulting increase in waste materials, forest destruction, acid rain, noise pollution, endless consumption culture, energy crisis and limiting the durability of reserves, waste and destruction of natural resources, etc., all have caused extreme human intervention in nature (Mohammadinia et al, 2012).

The issue of the environment and the effects of its destruction is not just a problem of the country or certain regions in the world. The reason for paying attention to this is mainly related to the adverse events that have occurred in the world environment such as the thinning of the ozone layer, global warming and melting the of ice 3 (Mohammadinia et al, 2012).

Distance education, especially education based on information and communication technology, can be considered as a suitable solution for dealing with environmental problems and achieving a healthier and cleaner environment for future generations, creating biological balance and helping to reduce environmental problems. (Meiboudi et al., 2013)

An overview of human history shows that human interaction as a part of nature with its surrounding environment includes three stages. These three stages are: the era of the domination of nature over man (which includes the era in which man is completely subjugated by nature and is unable to interfere in nature); the era of human domination over nature (which includes the era of the creation of industrial civilizations) and the era of interaction and convergence between man and nature (which includes the era of awareness, interaction and coexistence with nature) (Firoozi, 2005)

With the beginning of the Renaissance era from the end of the 15th century and the beginning of the 16th century in Europe, human attention to science led to control of famines, improvement of communication tools, medical advances and control of wars, leading to the world's population increasing at an unprecedented rate. The increase in population and its concentration in certain areas directly affects the quality of the environment. Population growth caused poverty and environmental erosion in developing countries. This issue also greatly affected the quality of life of the people and caused the failure of the efforts of third world countries to achieve sustainable development.

Population growth also led to the deforestation to meet consumption needs The World Health Organization (WHO) stated in a report in 1996 that population growth is the main destructive factor for the environment and living organisms. because human beings start to discover and extract natural resources in order to provide food, housing, work, etc., to the extent that it is as if they are the owner of the land and not its inhabitants.

(Firoozi, 2005) Undoubtedly, the root of the extensive destruction of the environment should be sought in the intellectual, political and social processes of recent centuries (Fahimi and Mashhadhi, 2013) The issue of the water crisis in the Middle East and the geopolitical region of the Persian Gulf, shows the important role of water resources in these countries.

Most of the Middle Eastern countries are very poor in terms of fresh water. In 1970 AD, Middle Eastern countries found a need for a water strategy (in terms of domestic, industrial, etc. consumption). The seriousness of the water crisis in the Middle East is such that in the next 20 years, many of its countries will not be able to provide the water needed for agriculture, industry, drinking ect. Today, more than 26 countries in the world have water shortages, of which 9 countries are located in the Middle East (Atafar et al., 1390:18).

The formation of environmental protection movements is articulated around signs such as the absence of responsible governments, destruction and environmental pollution, sense of responsibility, hope for the future and saving society. (Dolatabadi 1391:151)

As a strategic body of water, the Persian Gulf has not been spared from the environmental problems of development, and in the 21st century, the most important threats felt in the Persian Gulf are environmental threats. This article has also made a short investigation into solutions to handle the environmental crisis of the Persian Gulf and has come to the conclusion that in addition to the serious cooperation of governments, the role of the media and women's management in environmental issues is necessary. With the participation of the coastal countries, this issue will be solved to some extent.
(Omidi, 2013: 28-33) Sometimes it is not considered in the Persian Gulf due to its lack of economic efficiency. It is not fully implemented. (Taqvi 1398:1)
It seems that due to the amount of environmental destruction in the Persian Gulf and the Gulf of Oman as well as the emergence of new environmental issues and despite the addition of 2009 Kuwait Regional Convention in regards with the prevention of the spread of the Red Deadly virus, it has not been able to ensure the security of the environment of the Persian Gulf to a large extent, this logic has become a victim of the world's energy security. Zargar and Nowrozi Kalerami(261:1395-260)

Text

Environment is one of the hot topics of global politics. It is only the necessity of survival that forces man to emphasize on this word and take it seriously as a political-social discussion, so that he can be the savior of the earth and its creatures by preventing the disruption of the harmony of the natural system that governs the earth. Earth, water, air and man are the interconnected arms of life that must be kept in balance and harmony. The breaking of one of these arms disrupts the entire framework of the philosophy of life on earth.
The environmental crisis, which has become a serious and ponderable issue today, is the result of human interference and unreasonable exploitation of the surrounding nature. Today, there is a danger that humans will destroy their habitable and arable land. The extent and importance of this issue has aroused the attention of scientists to save it.
In order to avoid the absolute destruction of the environment, all human beings - decision makers and others - at the global, national and especially the local level must understand the important fact that progress and development must follow a sustainable process Not only the current generations, but also future generations will benefit. The development of the contemporary people should not be at the cost of the destruction of the lives of future generations who are not present to defend their rights. Because development is the right of all people, not only should everyone benefit from its fruits, they should also participate in the development process.

I it can be stated that: "sustainable development" is not a choice; rather, it is the only way that allows all humanity to participate in a dignified life on this planet.
According to the environmental performance index of 2012, which was conducted by Yale and Columbia universities and examined 22 environmental factors such as water resources, air pollution, biodiversity, and climate change, Iran is ranked 114th among the 132 countries studied. , It can be said that environmental crises in Iran are of special importance and it is necessary to investigate and analyze these problems.
With the exception of the northern and north-western areas of the country and the continuous water shortage crisis due to Iran's location in one of the arid and semi-arid regions of the planet, other regions are always facing water restrictions. The issue is more visible in the southeast and southwest of the country. The existence of two desert areas in the center of Iran has also added to the limitations of water supply to large areas of the country.
It is no longer possible to collect water and build new dams in Iran as it has been done in the last one or two decades to the extent possible. It is also not possible to transfer water from the water-rich areas of the country to dry and low-water areas more than the current amount, and there is no possibility of moving water between water basins. which has caused Iran to be considered one of the countries with water stress.

What has aggravated the effects of water resource restrictions in Iran are:

- Indiscriminate extraction of underground water resources, which has led to the irreversible loss of groundwater aquifers, indiscriminate consumption of water, especially in the agricultural and potable water sectors (40 to 70 liters more than the consumption pattern by citizens), The latest research conducted in the field of per capita water consumption in different countries shows that despite the limited water resources, Iran has one of the highest consumptions among different countries with 190 liters of domestic drinking water per day. The average household water consumption in the world is 150 liters per person per day.

- Entry of all kinds of pollutants into water sources and part of the water sources becoming unusable due to quality loss.
- Failure to allocate the necessary resources for operation and maintenance of facilities
- Local management of water resources without regard to the integrated requirements of water resources and sustainable development.

One of the important environmental challenges in the water shortage crisis is the unsustainable management of water resources. Traditional water extraction systems such as springs, canals, and traditional streams were designed in such a way that the exploitation of resources is done according to the power of the source; This is despite the fact that today the surface water exploitation program is regulated and implemented based on long-term plans. In this way, the exploitation of underground water has been carried out up to 80% of the supply, and in the special climate of the region, not paying attention to the amount of the received deficit each year and not applying a saving policy commensurate with the decrease in annual intake leads to the occurrence of a decrease in the level of underground water. There has been a decrease in the surface humidity of the earth, the loss of vegetation and the rapid growth of dust producing areas.

The average annual rainfall in Iran reached about 250 mm per year before the recent drought. Currently, the average amount of rainfall in Iran is reported at 236 mm, which is almost a third of the world average (860 mm) and 35% of the average rainfall in Asia (732 mm), Its evaporation potential is about three times the world average. Based on this, the total annual intake based on the long-term average, including the statistics of the last 20 years, has reached 430 billion cubic meters. A review of 45-year statistics shows that during an acute drought period in the 40s, the amount of rainfall in the country dropped to less than 200 billion cubic meters in a year, while in a drought in the 50s, the total rainfall was about 580. It can be seen that the periodicity of droughts in Iran is a completely natural phenomenon and one of the characteristics of the climate of this region. Unfortunately, in the last 23 years, the amount of annual rainfall in the country has decreased drastically, so that in the last fifteen years, the total rainfall has been almost at the "average level". Unfortunately, among the last fifteen rainy years, eight years for of the country received less than the long-term average rainfall, while in the other seven years, the amount of rainfall did not increase significantly above the average level. It is natural that this reduction during a long-term period has direct and indirect effects on the ground conditions, which will always be lurking threatening Iran in the form of an environmental crisis.
The crisis of increasing pressure on natural resources, as mentioned, is one of the specific effects of the decrease in rainfall and the lack of proper nutrition of water reserves, the gradual reduction of vegetation and the increase in the poverty of pastures. Unfortunately, in the conditions of lack of water and decrease in rainfall, not only the vegetation cover in the fields is decreasing, but also because of the lack of implementation of harvest reduction programs and the constant use of resources, especially water and pasture vegetation, due to the increase in demand due to the increase in population, the migration of villagers and the change in the consumption pattern, the pressure on natural resources increases sharply. This multiple pressure on natural resources, which unfortunately we are witnessing in most parts of the country today, causes the rapid loss of land vegetation, surface soil erosion, and the production of dust storms as well as environmental pollution.
Competition for access to limited water resources has already led to rising tensions and conflicts, both inside Iran and in the border areas and amongst its neighbors.

For example: in the Karkheh basin, the water resources management should decide what to do with the decrease in river water flow Can the water in the Karkheh dam be withheld for use to generate electricity or the water path to the downstream areas be opened so that the erea known as Irans food basket be irrigated. The continuation of droughts in the last two decades requires that the agriculture sector's planners pay attention to the topic of agricultural management in accordance with the events that have happened and the conditions ahead.

Unfortunately, over the years of facing water shortage crises and continuous droughts, not only have we not witnessed a change in the cultivation patterns or a change in water consumption policies in agriculture, but the statistics indicate a sharp increase in the cultivated area in some of the countrys critical basins In such a critical situation, the failure to pay attention to this vital matter, which has unfortunately been neglected, has caused the country to suffer a crisis of land abandonment due to the reduction of water resources in the reservoirs of dams, the drop in the underground water level and the drying up of many wells. irrigated agriculture and rainfed agriculture on a large scale.

Agricultural Risk

Iran's water problems are hurting the country's national economy. 10% of Iran's gross domestic product is from the agricultural sector, which employs nearly a quarter of Iran's workforce. In addition, the activity of this sector also supports national food security. In fact, with a dual strategy to promote self-sufficiency in the production of basic products and the simultaneous increase of supply and demand, an equal subsidy has been allocated to the producer and the consumer.

However, now that Iran's food security is in danger, because the agricultural sector, With 92% of the country's total water consumption, the sector only produces about 66% of the food needs of Iran's 79 million people. Escalating "water stress" threatens to further reduce the production capacity of the agricultural sector, which in turn will lead to higher import costs and exacerbate fiscal pressures.

Global Climate Change

Global climate change is one of the environmental challenges that can increase the depth of Iran's environmental problems and crises. According to the "Environmental Protection Organization" of Iran, changes in temperature and rainfall will reduce the possibility of having clean water, especially in rural areas, and this in turn will lead to the spread of water-borne diseases. . Higher temperatures and lower rainfall volumes could reduce grain yields by 30% by 2050. According to an analysis published by the Netherlands, climate change can reduce 15-19% of Iran's total renewable water resources by 2040-2050. And at that time, Iran's annual water demand will be more than 40% beyond the renewable water resources of this country.

Environmental Pollution Crisis

The problem of pollution is one of the most important and acute problems caused by human civilization in the world today, because it is from the depths of several thousand meters of mines, underground waters, biosphere, troposphere and even inside high-flying airplanes and the external atmosphere.. Pollution has different meanings for different people. Ordinary people may consider eye irritation caused by a contaminated gas or water as pollution. For agriculture, an agent that damages its plants or animals is considered pollution. But the comprehensive and complete definition of environmental pollution states the presence of one or more polluting substances in the environment in an amount and duration that changes the quality or natural cycle in such a way that it is harmful to human or animal, plant or works and buildings; In simpler terms, whenever foreign substances or substances with a certain concentration enter the environmental elements and disrupt their natural balance, it indicates pollution.

There are three important factors in nature that can create destructive effects on the environment: air pollution, water pollution and soil pollution; which recently caused Iran to face other important environmental risks. Air pollution is one of the environmental pollutions that have many visible and hidden effects on the body and mind of citizens. According to the World Health Organization in 1992, air pollution is a serious and priority environmental crisis that has attracted the attention of the government. According to the "World Health Organization", three of the first five cities in the list of the most polluted cities in the world - Ahvaz, Kermanshah and Sanandaj - are in Iran, and the level of air pollution in these cities is four to seven times the acceptable level Due to the unfavorable air quality throughout the country, Iran has been ranked 86th out of 91 countries. Air pollutants in Tehran alone lead to the death of more than 5,500 people annually resulting from to cardiovascular and respiratory diseases.

The crisis of environmental costs, the amount of damages (caused by water stress, desertification, and pollution) can lead to debilitating problems for the country's economy in the long run. According to the "World Bank" estimate, the annual cost of environmental destruction in Iran has reached a terrifying level of 5-10% of the GDP. In comparison, according to the US Government Audit Office, Washington and the international community's grueling sanctions in 2012 only reduced 1.4% of Iran's GDP. And over time, these valuable resources will be further depleted, fertility will further decline, and public health will suffer further.

Analysis of environmental crises in Iran showed that these crises are the root of another very important environmental challenge called "dust storms". The point to think about in the last decade is the sharp increase in the number of occurrences (dusty days) and the intensity of dust storms, the frequency of which has

increased sharply in the last 50 years, in a way that in Iran only in the last 3 years It has increased 10 fold. The loss of human biological resources in the affected areas, the migration of rural and urban communities, the increase damages and road accidents and the occurrence of disruptions in the transportation network, the increase in environmental pollution in cities and the spread of heart and respiratory diseases as well as disease eye diseases are only a part of the destructive consequences of this phenomenon,. On the other hand, soil degradation and loss of land fertility in harvesting areas affected by this phenomenon are the cause of land degradation, poor soil vegetation and as a result, desertification.

Conclusion

In order to overcome environmental challenges and advance sustainable development, it is necessary to create a single and integrated management system through the consensus of the government, welfare, natural resources organization, environment organization, municipality and all related bodies. As this synergy can be an effective by using United Nations regulation and the experiences of global cities, The following solutions are suggested for the management of the aforementioned environmental crises:

Management measures

- Development of new low-consumption irrigation methods,
- Promotion of crop varieties with low consumption and resistant to drought,
- Continuous monitoring of the amount of water that can be allocated to agriculture in each plain and formulation of online seasonal monitoring program and consumption management programs.
- Education and cultural building in order to increase people's awareness and direct participation of people in the management of water resources in the plain and sub-basins.
- Developing the implementation of watershed projects in the upstream watersheds in order to extract water and increase the water storage capacity in the ground and reduce the share of evaporation in the middle and downstream basins.
- Implementation of aquifer projects and underground dams to keep water in the soil profile and alluvium with special attention to the wetlands and catchments downstream.
- Using new methods of maintaining moisture in the surface soil profile and using it in creating rain gardens in order to stabilize the land and create a windbreak.
- Compilation of scientific methods of livestock management in pastures in terms of grazing capacity and soil sensitivity of each region.
- Determining the actual amount of air pollutants and describing the air quality compared to standard conditions and providing simple and correct information to the people
- Establishing precautionary and preventive measures in cases where the air quality is unfavorable and the pollution exceeds the standard.

Executive measures:

- Implementation plans for water management in rainy seasons to increase soil moisture and create vegetation,
- Regulating structural systems for the release of wetlands and monitoring its implementation.
- Setting up special grazing management according to the situation of each water year to maintain moisture and one-year covers created to maintain soil strength by preventing livestock from entering sensitive lands.
- The use of different mulches in the temporary stabilization of the land in wet seasons, planting and growing plants resistant to heat and wind using the power of local communities.
- Preparation of collaborative plans in the form of economic desertification to use the power and capital of the private sector and local communities in the implementation of plans to deal with desertification and desertification.
- replacing fossil fuels and using natural and clean fuels,
- Increasing urban green space, forest parks and green vegetation in the suburbs
- Increasing air pollution measurement stations to cover the urban area in order to measure air pollution in order to have the most up-to-date information for accurate pollution control planning.

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Thank God that the speakers remain in praising Him and the enumerators do not know how to count His blessings and the strivers are not able to convey His truth. And peace and blessings be upon Muhammad and his pure family, the pure ones, those who owe our existence to them; And a continuous curse on their enemies until the Day of Resurrection...

Conflict of interest:

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