Unsustainable Development Policies: Environmental Degradation and Threat to Human Security in Iran

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Abstract

Environmental security is one of the most important aspects of human security, which puts emphasis on sustainability of the developmental policies and that they should adjust with the environment as well as rights of future generations. Since threats to the human security mainly occur within environmental issues, this research- highlighting the relationship between human security and environmental security and pointing out the threatening causes and factors to the human security - has replied to the question that how has the environmental degradation endangered human security in Iran? This study shows adoption of policies like 1- Expansion of urbanization, 2- Population growth, 3- Consumerism and stressing the production increase, disregarding its consequences, and 4- Development of environmentally incompatible technologies have led to further utilization of fossil fuels as well as uncontrollable use of various environmental resources, increased pollution, and extensively damaged the environment which consequently endangered human security due to the severe dependence of human being to the environment.

Keywords: Security, Human Security, Environmental Security, Sustainable Development, Unsustainable Development, Iran.

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Introduction

Environmental security, as one of the most important aspects of human security, refers to threats and hazards resulting from unsustainable development and environmental degradation. Although, human security is more important and acceptable than traditional national security, development policies are associated with the state and its centeredness. Therefore, considering recent fundamental developments in the function and position of states, they are expected to compile and execute development policies with emphasis on environmental sustainability as well as environmental security. However, taking a look at the world's environmental status and human as well as environmental consequences of states' development policies such as population growth, industrial developments, urban expansion, emphasis on growth-oriented policies, encouragement of the consumerism culture, and increase of destructive technologies indicates that states are more interested in the mere growth and development rather than sustainable development.

Increased human mortality due to air, soil and water pollution, soil erosion, increased deforestation, reduced farmlands, increased consumption of resources, expanded desertification, increased conflict over resources, climate change, increased risk of sandstorms, haze phenomenon, destructive ranches, disturbance of food's production cycle caused through the removal of animal and plant species, global warming, acid rain, depleted Ozone layer, temperature inversion, and dozens of other outcomes, which- directly or indirectly- threaten human security through threatening environmental security, have led the researchers and scholars to crucial

consideration of unsustainable development policies. Therefore, they are trying to firstly recognize policies and programs with destructive outcomes on the environment and secondly identify the mechanisms of such degradation and threat.

In its recent release, the World Health Organization (WHO) reported that over 2.5 million people die every year due to various types of contaminants. As per the WHO report in 2012, the mortality rate resulted from environmental pollution and nonfulfillment of environmental indicators goes further than caused by war and other events. According to the report, 597,679 out of 2,512,873 deaths were associated with environmental issues (especially pollutant types), including heart disease, 574,743 of cancer, 138,080 of respiratory diseases, 129,476 of brain stroke, etc. This detailed report, also examines the correlation between such diseases and environmental condition; according to which the correlation between vascular and heart disease, brain stroke, and respiratory disease with pollution and environmental conditions exceeds 0.65 (from one), considering the fact that correlation above 0.5 verifies the cause of disease. Furthermore, there is a meaningful relationship between some cancerous diseases and such approved factors (Hoyert, 2012: 4).

Iran, as a developing country, which puts emphasis on its 20-years vision, is very much interested in completing its growth and development in a shorter span of time. This country owns important environmental resources. Having such developmental potentials, Iran has become more determined to look forward to development. Iran's efforts to follow development, particularly during past years,

have led to serious environmental and human consequences. Hence, the main purpose of this paper is to study the destructive factors endangering Iran's environmental security, and learn the mechanism of such degradation that ultimately threatens human security. In other words, increased environmental destruction and, therefore, the rise of human losses has pushed us to study the mechanism of such degradation and threat while investigating causes and factors which devastate the environment and threaten human security.

Iran's developmental policies: 1- expansion of urbanization, 2- population growth, 3- consumerism culture and stressing on the production increase while disregarding its consequences, and 4- development of environmentally incompatible technologies have led to further utilization of fossil fuels as well as uncontrollable use of various environmental resources which on the other hand caused pollution and extensively damaged the environment and consequently endangered human security, considering the severe dependence of human beings to the environment.

Intensification or control of such policies may leave significant effects on the environment. These policies are in fact the most important ones aggravation of which will lead to the environmental degradation and human security threat. For example, the growth-oriented policies such as development of heavy industry, emphasis on expansion of industries as well as pollutant infrastructures are just among some few examples of such policies. We are, in this article, focusing merely on the above-mentioned four areas with the emphasis on destructive environmental parameters and

features. Therefore, we will begin with a short definition of the most important concepts including human security, environmental security, and developmental policies, then, providing a brief report on the status of environmental security in Iran; we will also examine each of the four destructive factors and explain their mechanism, relying on existing indicators. Eventually, some suggestions will be presented in order to deal with the bad effects of such factors.

Human Security

Security, in Persian, means becoming safe, being safe and aweless (Moeen, 1992: 354) safety, comfort and ease (Amid, 2005: 275). Based on above definitions, security consists of two different definitions: positive and negative. Security in the negative concept means absence of any local, regional, and international threats and in positive concept means being immune from threat, death risk, disease, poverty, and any incident that may violate peace and tranquility. Oxford defines security as "a series of supportive and protective activities set for protecting a country, structure, and individual against attacks and threats" (Oxford, 2008: 1372). Encyclopedia of International Relations defines security in one simple sentence: "protection against injuries" (Griffith, 2009: 101). Unlike above short and rather general definitions, Encyclopedia of International Relations has provided a worth mentioning description, based on which security refers to absence of threat against scarce values i.e. security can be an absolute concept. Therefore, complete security means freedom and release of all threats. Security is a relative concept in empirical terms and in International Relations can be analyzed as all-or-non based on its least or most

presence (Evans and Nonam, 2002: 742). In this study, security will be considered through both positive and negative concepts.

Over time, security has encountered revolutionary changes in terms of its scopes and themes in a way that searching through the security transformation familiarized us with the concepts of human security, which later lead to the definition of environmental security. Practical and theoretical studies of security include some important points. Firstly, security is a variable concept, which can be altered according to place, time, requirements, governing conditions, and more importantly corresponding to peoples' attitudes and understandings. Secondly, within the history of security, it has been moving on a course that has resulted in importance of human- centeredness in both theoretical and practical aspects. In other words, human security has turned to be the ultimate purpose of policies and programs rather than a tool to support the security of other units (states). Thirdly, security has developed into an extremely broad and complicated concept, which can be interpreted in different complicated and wide ways, corresponding to different situations and understanding.

Consistent with schools of comprehensive and traditional scopes regarding human security, several definitions have been presented; some of which will be mentioned as follows:

It was Professor Mahbub-ul-Haq, late Pakistani diplomat, who first mentioned and defined this concept in the UNDP[1] report (1994). He meant to provide a definition with capability of post-indexing for comparing among countries. The reason for

such comparison, using above indicators, was related to the existing changes and needs at that time (Ghassemi, 2006: 260; Poorsaeid, 2008: 546). As per this definition, the human security can have two main dimensions. The first refers to the security against chronic threats such as hunger, disease, and oppression, and the other refers to security against sudden disturbances in the routine cycle of life (HDR, 1994). According to Pauline Kerr, the UNDP report defines the human security in terms of situations and conditions in which people are free from the restraints as well as mental and emotional pressures that surround the human development (Kerr, 2008: 601).

According to Kofi Annan, former Secretary-General of the United Nations, following recent conflicts and challenges, a new conceptual understanding of security is shaping. Security was once defined as maintaining the land integrity against external attack; however, new security requirements consist of efforts to protect the individual and society against local violence. Currently, a human-centric approach is needed to protect people against internal hazards and international threats (Kofi Annan, 2001: Millennium Report). We have to broaden our vision regarding peace and security. Peace is not simply limited to lack of war, but it is far beyond it. The human security cannot be raised in military conditions, but it needs economic development, social justice, environmental protection, system democratization, demilitarization, and rule of law (Kofi Annan, 2001: Towards a Culture of Peace).

Considering the history and definitions of human security in two schools of comprehensive and traditional, in this study, we discuss the human security in comprehensive scope per which human

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[1] United Nations Development Program

security goes beyond peoples' concerns for threat and violence. The human security is not limited to feeling free from fear and panic, but it also calls for feeling free of need, which is the focal point of the UNDP report. Besides, as some believe, in the condition of when underdevelopment, the human security goes beyond the "need-free" feeling and encompasses some different kinds of liberties and values. For example, according to Thakur Institute in the United Nations University in Tokyo, "human security refers to the protection of people from serious threats. No matter if such threats rooted through the natural phenomenon or human activities, hidden inside or outside the government, shaped directly and immediately or structurally."

Human security is human-centered and mainly focused on people as individuals, groups or communities. Such concept is largely emphasizing on freedom of fear, danger and threat (Kerr, 2008: 607).

Among different definitions of human security, two of which have more in consensus. In the first definition, which can be attributed to the authors of Copenhagen School: "human security means emancipation of threat and needs" (Buzan, 2009: 51-74; Ghassemi, 2005: 818). The second definition reads, "human security describes such circumstances in which both material and spiritual needs of human are permanently met" (King and Murray, 2004: 2).

Table 1 Some of the most important indicators of human security in different dimensions.

Dimensions of Human Security	Useful Indicators/ Data- Productive Parameters
Economic Dimension	Income resources for ordinary people, GDP (per capita) against purchasing power parity, income parity, protection against financial disaster, foreign currency reserves, foreign debts as a percentage of domestic production, current account balance as a percentage of gross domestic product, development in health care and financing, national savings rate.
Environmental Dimension	Environmental vulnerability index, environmental performance index, greenhouse gas emissions (per capita), population growth rate, environmental protection index, and index of individual protection from environmental disasters.
Training, Information and Communication Capabilities	Literacy rate, online records index, fixed lines/ mobile phones/ and Internet users (per capita), index of press freedom, and index of press effectiveness of.
Diversity (Social Aspect)	Indices related to religious, ethnic, gender gaps, age, and disability-related issues.
Peace (Social Aspect)	World peace index, prisoners' statistics, scale and range of political assassinations.
Food Security	Malnourished people (%), people at minimum local poverty line (%), food import in comparison with food export percentage as well as GDP, people with the urge for food help (%), productive lands' rate (per capita), and change percentage in productive lands.
Health and Hygiene	Life expectancy at birth, physical health, life expectancy in sick people (%), access to pure water, equality in health services.
Governance	Political stability, absence of violence, control of corruption.

Source: Hastings, David A. (2009) *The Human Security Index: An Update and a New Release.*

Environmental Security

Oxford Dictionary defines environment as "a set of circumstances that influence the behavior and development of everything and everyone" (Oxford Advanced Learner's, 2008: 511). In fact, it is a comprehensive definition of environment that can be divided into two parts of the natural and human environment. The natural environment is the part in creation of which human was not involved. This part consists of forests, grasslands, seas, rivers and generally all natural landscapes (Safari, 2000:6). Human or human-made environment is the part that has been created by human such as; villages or cities plus all fundamental infrastructures that have been made to organize the economic, social, and cultural life of people in such environments. It is also called as technical sphere (Bahram Soltani, 1996: 15).

Throughout history, human and environment have been interacting either consistently or inconsistently hence; four different interaction periods can be identified considering the consistency degree. The first stage refers to the primitive man and hunting communities, second stage refers to the semi-modern man and agricultural communities, the third stage relates to industrial societies, and finally the fourth period corresponds to the present modern societies. In each stage, human has been associating differently with the nature (Butkin & Keller, 2012).

Environmental security is also defined in proportion to the extent of existing threats as well as security source. According to above definitions, environment is facing with quite extensive challenging threats which can be divided into two general categories; natural threats such as earthquakes, floods, drought and so on in which human activities are ineffective, versus threats such as climate change, global warming, water/land/air/noise pollutions, nature degradation, overconsumption of resources, and so on which have been occurred mainly due to man's developmental policies- in the form of nation-states, organizations and companies as well as individuals (Kavianirad, 2013: 29).

Environmental security is considered as one of the dimensions of human security. However, from the perspective of some scholars of Copenhagen School, it can be also categorized in National Security classification. It is also considered as one of the most important aspects of international security. That in fact confirms the necessity and importance of this aspect of security among security issues (Sheehan, 2009: 127-140). The definition of environmental security is influenced by the definition of security as well as environment. Some of the most important definitions of environmental security are provided as below.

1- The condition in which, a country or region takes effective steps in pursuing economic, social and political stability and ensuring the nation's welfare through good governance, capable management, as well as sustainable use of environment and natural resources (FESS, 2004).

2- Protection of natural environment, citizens' vital interests, society, and government from internal and external influences as well as negative threats within the development process, which put human health, biodiversity, sustainable ecosystem functioning, and humankind survival in danger.

On this basis, environmental security is an inseparable part of the national security (SCRF, 1995).

Consistent with above definitions regarding security and human security - for definition of which comprehensive scope was largely considered- we will again use a comprehensive scope at threats' level and environmental issues in order to define the environmental security. Therefore, our definition of the environmental security includes "the most recognized natural and human hazards which may directly or indirectly threaten humans in short or long-term by destroying the environment.

Environmental Security in Iran

Iran, with over 80 million people, is the world's 17th densely populated country. Tehran, the capital city, has more than nine million inhabitants. Preserving 130 billion barrels of oil, equivalent to 11% of the world's total oil reserves, Iran ranks as the third in oil reserves. Similarly, possessing more than 26 trillion cubic meters of natural gas, equivalent to 18% of the world's proven gas reserves, it has been ranked as the second country in this respect. In terms of climate, Iran is one of the unique countries. The northern and northwestern parts of the country are widely covered with forest, which would be rarely found in the south and southeastern parts. Despite wide-ranging deserts, semi-arid lands as well as broad plateau, decreased rainfall- especially during the past few years– and lastly severe natural and human threats, the country enjoys diversity of the natural environment and some richest resources can be found in Iran. For instance, Iran is one of the most famous places in terms of animal and plant species (http://www.ngdir.ir/aboutiran/pnaturalspe

cialties.asp, 1392). Despite all aforementioned advantages, Iran is presently facing with numerous environmental problems; the most important ones are as follows:

- Population; whose excessive activities go beyond the tolerance of some fields of aquifer and ecosystem.
- Unsustainable exploitation of natural resources, rooted in production and consumption patterns, which are incompatible with environmental balance.
- Increase of contamination in rivers and ponds so that their bearing and self-cleaning capacity decreased and in some cases faced demolition.
- Increased pollution on northern and southern coasts that damaged worthwhile marine habitat resources.
- Reduced biodiversity and loss of many rare plant and animal species.
- Increased air pollution, discharge of wastewater of cities and industries to the environment which imbalance the ecology of large and small cities as well as villages.
- Reduction of ecosystem services with very high annual values (Rezaei and Dehkordi, 2007: 540).

Unsustainable Development Policies and Environmental Degradation

Iran is facing with different environmental issues and difficulties each of which has caused significant financial costs as well as human and environmental consequences. Increased mortality rate per annum, destruction of historical buildings, rising costs of healthcare, increase of production costs- especially agricultural products- due to soil degradation and erosion, deforestation and spread of desert and

uncultivable lands, besides changes in atmospheric patterns as well as decrease rainfall are included as such expenses and consequences. For example, according to reports by the World Bank in 2006, the annual damage due to air pollution in Iran estimated to $640 million, equivalent to 0.57 percent of the country's total gross domestic product. Based on the report, illnesses resulting from urban air pollution cost annually up to $260 million for the Iranian economy (Asadi-Kia, 2010, 94).

It is true that in this study, individual is considered as an inseparable component of security as his performance and behavior impacts on the environment; but a great body such as the nation-state and its programs and policies constrain individuals from considerable role-playing and influencing the environment. Accordingly, nation-states' programs and policies carry the power and capability to influence the environment on a large scale. In fact, nation-states take measures in the form of macro and micro programs and policies reliant on their needs, their understandings of the domestic and international environment, which is influenced by global and domestic developments (Butkin & Keller, 2012: 518-555). Hence, nation-states' performance in the framework of development-oriented (growth-oriented) plans has left terrible consequences and effects on both the environment and human security.

Unsustainable development policies in all four economic, social, political, and cultural fields comprise policies implementation or support of which by governments causes environmental degradation. Therefore, governments play a significant role in intensifying or managing such policies. Unsustainable development policies in socio-cultural areas include

expansion of urbanization, population growth, and consumerism trend. In field of economics: emphasis on development, uncontrolled production and consumerism growth, and in technological policies: supported incompatible and destructive technologies with the environment are among such policies. According to the findings of this research: 1- population growth, 2- expansion of urbanization, 3- promoting production and consumerism disregarding consequences of which, and 4- expansion of environmentally incompatible technologies have devastatingly increased consumption of energy as well as environmental resources. As for the extreme interdependency between the human life and environment, environmental degradation has threatened the human security. Below, four basic factors influencing the Iranian environmental degradation as well as mechanism of which for threatening environmental and consequently human security will be discussed.

1- Population Growth and Environmental Degradation

Iran's policymakers believe that the population growth is a strategic need for the country's future. Their prospects for increasing population over the next 10 years are noteworthy. They consider the young force as a fundamental need of the country for economic growth and development. In comparison with other government policies and programs, most of environmental specialists believe however that population growth has carried the most pressure on the environment considering the limited environmental resources. They believe that the rapid growth of human population is the basis of all environmental problems. In

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other words, environmental problems cannot be resolved unless the human population problem is solved. For this, we need to learn to limit the population growth on the earth to the bearable digit. In the late 20th century, we witnessed the most noticeable population growth in history; within 35 years only; human population all over the world rose to more than double, increasing to 5.5 billion from 2.5 billion, and climbed incredibly to 7.1 billion within 15 years (Butkin & Keller, 2012: 9). Following mechanism can define how population growth affects the environment and pose threats.

- Human being needs the nature to meet its essentials needs.
- The nature is limited to meet all human needs.
- A human being can easily collect its needs from the nature and nature can easily bear human nourishment consequences.
- Population growth leads to the division of natural resources and will continue as long as the nature's limitations is not visible.
- Continuation of population growth makes the limitations of nature visible.
- Consequences of population growth lead to the destruction of the environment and consequently threat of human security (Butkin & Keller, 2012: 74-94).

Currently, the world's average population growth rate is 1.14% and up to 5% in some developing countries and does not move beyond 2% percent in some developed countries. About 210 years ago, British economist, Thomas Malthus, defined population problems fluently. He based his discussion on three a-priori assumptions;

firstly, food is essential for people's survival, secondly, sexual feelings between men and women remain in force, therefore, the birth of children will continue, and thirdly, the population growth power is so highly unlimited that earth is not able to afford it (Butkin & Keller, 2012: 9).

We all know that the population growth will increase the need to biological resources; i.e. soil, water, air, and various products. People need several natural resources to meet their needs. The population growth leads to more utilization of resources. More utilization along with its consequences cause the environmental degradation and threaten the human security. Obvious example of which is overexploitation of fossil energy during the past 100 years. The population growth has accelerated the exploitation procedure of such resources, thus more pollution allowed into the air, water, and soil (Dabiri, 2010: 13-19).

According to statistics, over the past half century, the world's population has grown up to seven from three billion people that shows 2.5 times more increase in world population, while no positive change has been seen in the amount of resources and environmental features. During the past 63 years, Iranian population rose up to 80 from 21 million. There are a lot of discussions around the extent to which the planet and consequently countries like Iran have the capacity to bear the population pressures and supply population's needs; some believe that at best condition, the world's capacity can afford the needs of 40 billion people, some other estimate this capacity as below 20 billion people (Butkin & Keller, 2012: 74-94). Predictions estimate Iran's capacity as about 200 million people. The rate of population growth is 1.4 in Iran compared

to 1.14 in the world. In Iran, the average rate of population growth has been 3.3 during the past half century. Iran's population doubled within almost 25 years; this figure estimated as approximately 38 years in the world (World Bank Data, 2013).

The risk of population explosion was pointed out after World War II and noted as a severe environmental issue after its serious effects was specified. The population control policy has resulted positively in some countries. By such policy, we mean stopping its growing trend and in many cases keeping the population growth at zero. This rate is kept at zero in some countries such as Germany and Japan. Growth rate means the difference between newborns and deaths divided by the country's population multiplied by 100.

Graph 1 Sharp rise of Iranian population over the past half century (million people)
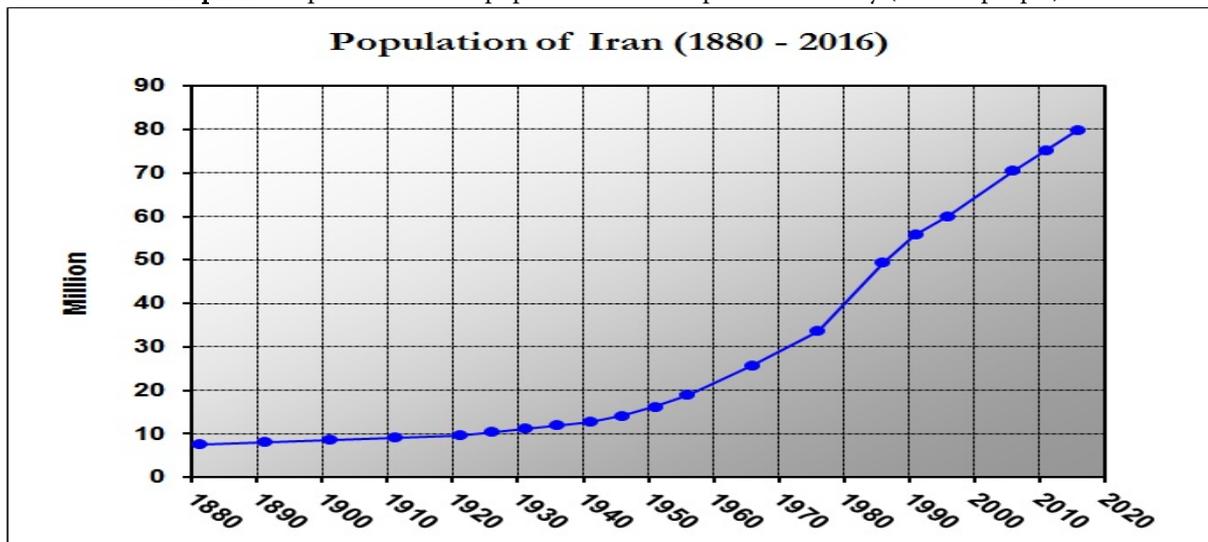
Graph 2 The per capita energy consumption in Iran vs. in the world (kg. equivalent of oil -per capita)
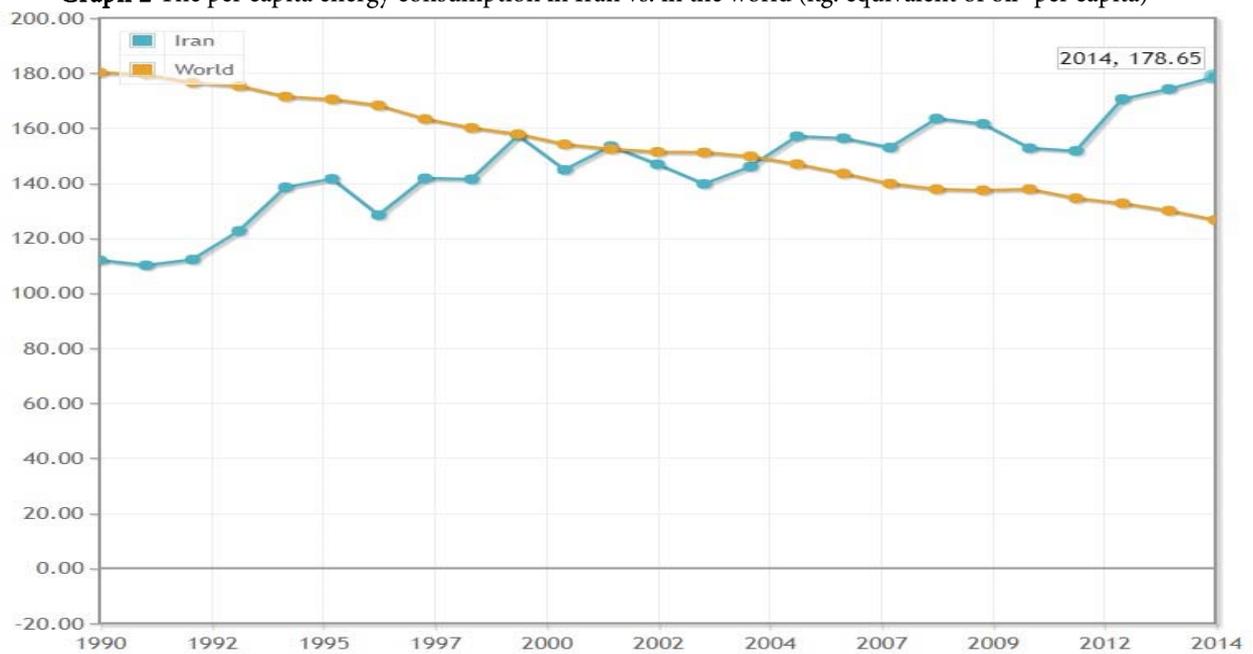
Source: World Bank, World Development Indicators - Last updated June 30, 2016

Population growth can lead to destructive environmental consequences, eventually threatening human security in different forms such as 1- increasing energy consumption (per capita), and 2- increasing food production (per capita) and thus taking more of planet and its resources.

The increase of the energy consumption can be caused by several factors; including population growth, expanded urbanization and industrialization (development of heavy industries and technologies) as well as changes in the energy consumption culture. In fact, researchers' findings confirm a meaningful correlation between all the above four items and increase in energy consumption, which leaves damaging consequences on the environment. According to the theoretical consensus between the experts regarding the influencing strength of each of these variables on energy consumption, population growth influences extremely

energy consumption as well as its intensity of use (Fetros, et al, 2011: 13-22). In other words, the effect of population growth on the production as well as consumption of energy (often fossil fuels) is far more than change in the energy consumption culture or expansion of urbanization and industrialization.

Not only has the population growth increased the per capita energy consumption, but lead the countries to spend all of their facilities inevitably to produce food needed by their population. Taking forests under cultivation and utilizing much more water in order to cultivate more as well as production of millions of tons of chemical fertilizers and soil additives not only have they contaminated soil and water but also reduced strictly the level of resources and allowed many contaminants into the environment in various stages within the food processing.

Graph 3 The per capita food production in Iran and in the world (kg.)
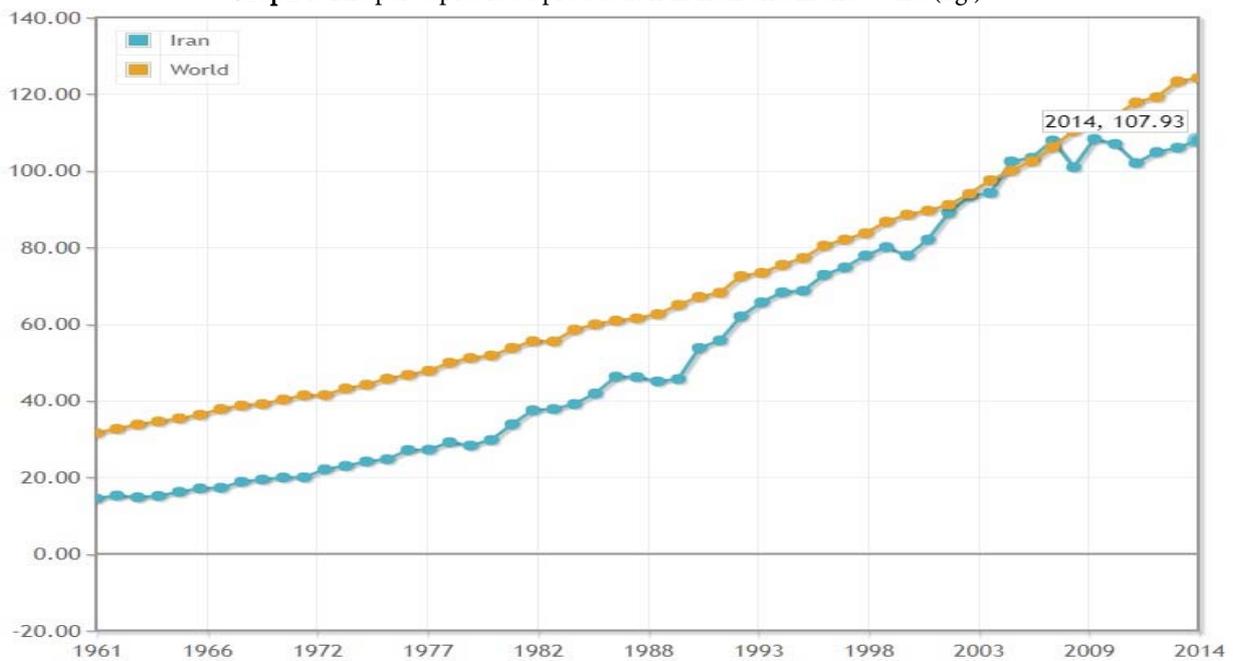
Source: World Bank, World Development Indicators - Last updated June 30, 2016

According to the above chart, the production rate of food has gone over the world's needs over the past few years. The food production influences the environmental degradation and threaten human health in two ways. First, the primary and fundamental condition for producing more food is laying a large part of the intact and usually green and forestry land under cultivation, which brings more water consumption hence, deforestation. Second, energy is essential for any kind of production. Factories and heavy industries are producing citizens' required food by spending more energy. This will result in expansion of different kinds of pollutant in the environment.

The progressive population growth has severely increased the need for food. Although food production rate in the world and especially in Iran can be influenced by factors such as consumer culture as well, the findings highlight the population growth and its increasing impact on the food production, which is understandable from different ways. Firstly, the high price of food in the world prevents the extreme growth. Secondly, the growth rate of food production does not follow the rate of change in consumption culture in Iran and the world, i.e. changes to the food production shows far fewer relationship with changes to the consumption culture (which is much slower) (Miller, 2010: 203-296).

2- Expansion of Urbanization and Environmental Degradation

The development of metropolises in Iran has been out of control of the state. The environment is at the forefront of metropolitan areas. Iranians tend to live in big cities. The second sponsored policy by nation-states, which significantly affects environmental degradation, is encouraging and preparing the grounds for the urbanization. Man is gradually becoming an urban species who is increasingly influencing the environment through his urban life. Economic growth brings the urbanization along. People first travel from farms to cities and then move to the suburbs, possibly. Cities and towns develop in size. Since cities are usually located at the coastline or riverbank, the growth of urbanization often devours perfect agricultural lands; river's alluvial plain and coastal wetlands which are important habitats for many rare and endangered species. By growth of cities, wetlands filled, forests cut, and soil buried or kept aside from productive activity by any means (Butkin & Keller, 2012: 7).

Urbanization phenomenon dates back to 3500 years; it is now remembered as traditional cities; Greek city-state is an example of it. The modern urbanization means the immense gathering of human beings who enjoy certain social relations, facilities and infrastructures using a different order at one point of the earth. Urban life is defined versus village life, which is far smaller and simpler (Giddens, 2002: 600-630). Extensive researches has been done on the consequences of urban life and urban expansion, results of some of which shows that urbanization generates overconsumption, especially energy consumption (with emphasis on fossil fuels), which is followed by the increase in contaminations and centralization of the pollutants in a particular area (Fetros, et al, 2011: 13-22).

The huge procedure of urban development is taking place in third world countries. In such societies, cities are already

formed with a great speed compared to industrialized countries. Currently, 90 percent of the developed countries are already urbanized. This figure has reached to more than 50 percent in developing countries. Iran has now more than 60 million urban populations, which is equal to 75% of its total population. During the past half century, Iranian urban population rose to 60 from 7 million people, proportionally, the rural population has fallen down.

**Graph 4** Drastic increase in Iranian urban population over the past half century (million people)
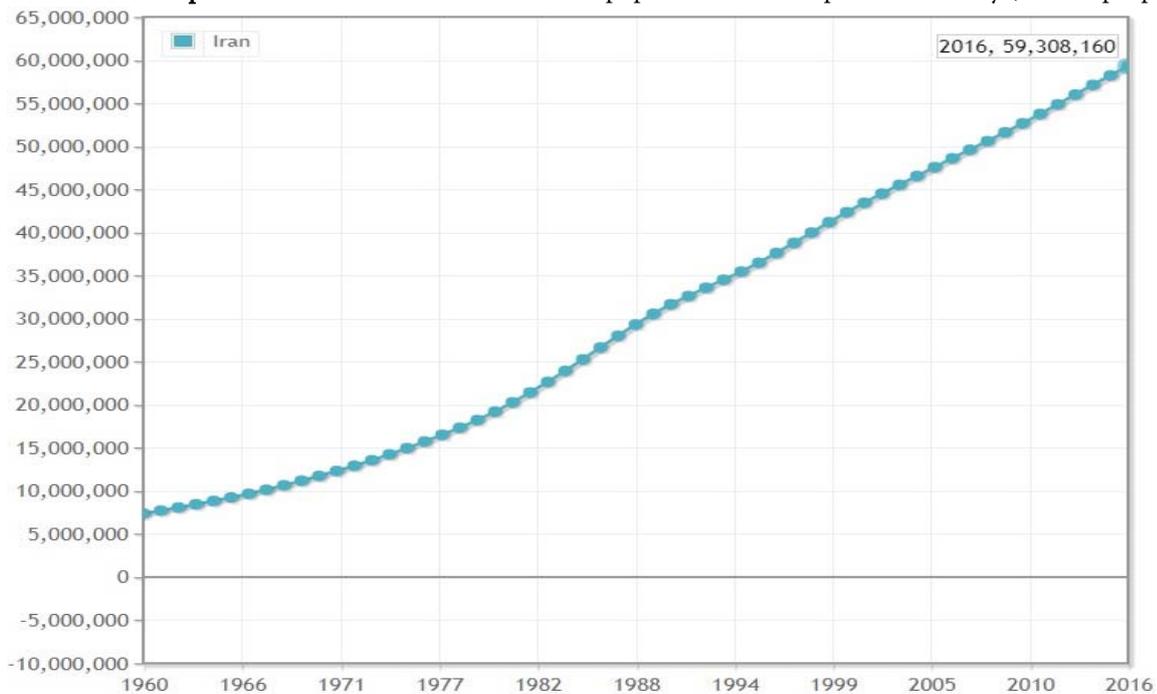
Source: World Bank, World Development Indicators - Last updated June 30, 2016

Expansion of urbanization includes both increase in number of inhabitants of the city environment and expansion of spaces belonging to urban environment. In other words, both elements of number and planet are regarded in the discussion of urbanization. Given that the population growth will lead to the further damage and destruction on the environment, this increase will leave rather more destructive and severe effects if it takes place in urban environments. However, this claim should specify a meaningful relationship between the expansion of urbanization and environmental degradation. Accordingly, in response to this question that why and how expansion of urbanization lead to further environmental degradation and threats, researchers try to present a helpful mechanism while mentioning features and consequences of urbanization. They argue that the phenomenon of modern urbanization is specified with features such as increased energy consumption, increased takeover and destruction of the best fertile agricultural lands, increased water consumption, increased deforestation in order to build new cities and finally concentrated pollutants at one point. They show the meaningful relationship between each of these figures and urbanization phenomenon (Fetros, et al, 2011: 13-22).

Graph 5 Increased greenhouse gas emissions (per capita), particularly carbon dioxide in urban spaces in Iran and the world (GDP percentage)
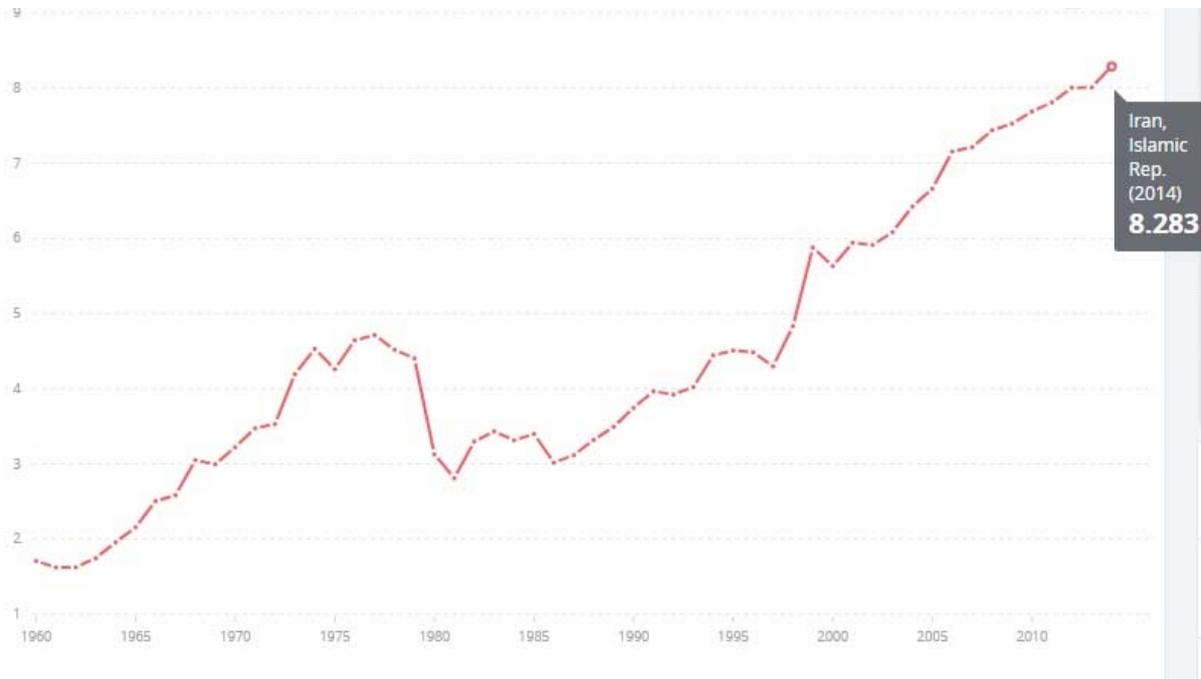
Source: World Bank, World Development Indicators - Last updated June 30, 2016

Graph 6 Reduced cultivable and green forestry lands in Iranian urban areas(hectares per person).
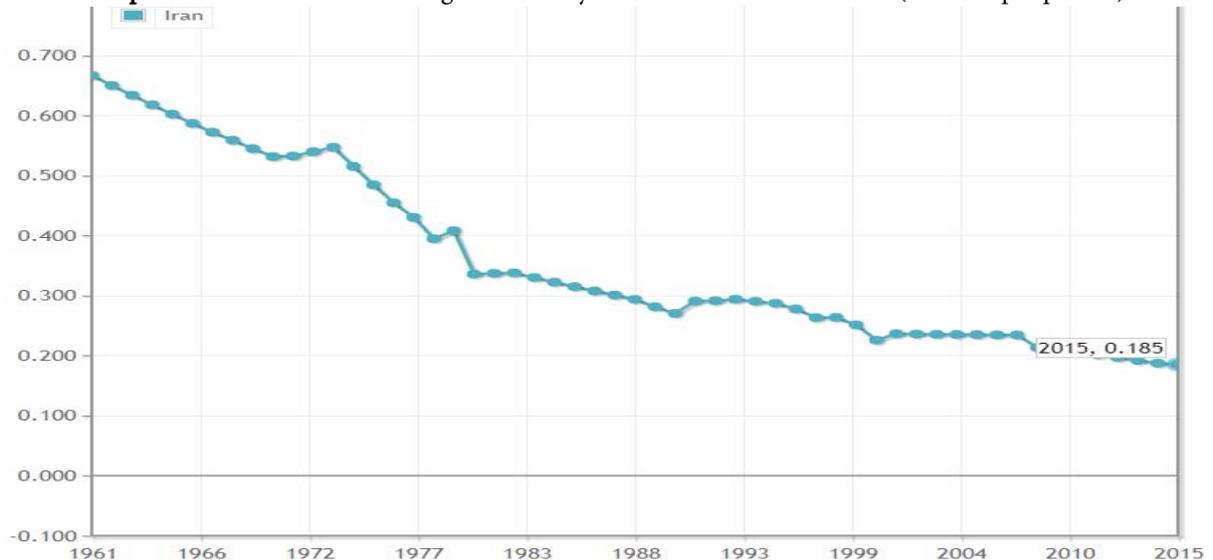
Source: World Bank, World Development Indicators - Last updated June 30, 2016

Similar charts also confirm the increase in methane, nitrogen oxides, chlorofluorocarbons, and other greenhouse gas emissions in urban spaces. In many researches, the relationship between urbanization phenomenon and increase in

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the production of pollutants and thus increase of earth temperature as well as pollution was investigated. In above studies, variables include number of vehicles, workshops, industries, and factories as well as expansion of such places in urban environments. Proving the meaningful relationship between those variables and the expansion of urbanization, researchers regard urbanization increase as an intensifying activity helping the environmental threat and destruction.

Industrialized and urbanized exploitation of green lands and forests are some of the destructive consequences of urbanization in the world and Iran accordingly. Findings show meaningful correlation between the population growth and reducing cultivable and farmlands. These findings emphasize that expansion of urbanization has increased the intensity of the degradation of agricultural land, forests and green spaces. Since most cities are built nearby fertile agricultural lands, forests and green spaces and ,especially, close to massive water resources, expansion of urbanization will rather increase the intensity of destruction and pollution (Fetros, et al, 2011: 13-22). Expansion of urbanization is associated with energy consumption, increase in food production as well as deforestation each of which involve a lot of anti-environmental outcomes.

3- Encouragement of Growth-oriented Policies, Consumerism and Degradation of Environment

The more production is practiced in a country, the more pollution is released in the environment– due to the need for more energy, presently focused on fossil type. In case of lack of economic justification against environmental and human damage, the encouragement of domestic production is a sensible example of unsustainable development policy. Even if it is economically justified, it still will not decrease the severity of its destruction. However, costs for environmental reconstruction can be partly earned from production point. This is in fact a developmental principle that can be also included in the field of sustainable development considering a little tolerance (Miller, 2011: 51).

Here is the summarized equation of how human activity influences the environment: human impact on the environment is equal to each individual's activity multiplied by number of individuals. Therefore, not only do consequences include population- the more population, the more ecological outcomes- but consumption pattern and amount as well as extra human influences connected with living and lifestyle is involved in the consequences as well. Mainly three factors of what we eat and drink and how much traffic we make; whether vegetarian or non-vegetarian, whether we mostly travel on foot and traffic is limited to essential travels or we are dependent on vehicles for each unnecessary activity. These are all related to the consumption pattern and culture of each society. According to Ivan Ilyich, today's consumer society has created such an urban position and vision that is not compatible with the human unless he can daily swallow metal and fuel equivalent to his weight (Butkin and Keller, 2012: 3).

"Consumer-oriented life is a good life", is the notion owners of large companies and their governmental sponsors support. We are not willing to object such policies, though. Some may believe that such way of consumerism is the characteristics of

industrialization and the age of machining and urbanization, but we believe that an important part of such policies are in line with nation-states' programs in order for further growth and hence, more power and multiple competency in the international system. The per capita amount of produced and consumed goods in the world, especially over the past half century, represents the expansion of the culture of consumerism to the extent that the consequences of which lead to self-alienation in people and, more importantly, extreme environmental degradation in form of over-consumption of resources (especially fossil fuels) and intensified air, water, and soil pollution. Barber, calling such condition as the Mac Donald's world, supports the concept through a wise saying. Using Marx's theory, he says, "Gather together World consumers, we have all you need at our shops." In his famous book, "Jihads and Mc World" criticizes the expansion of global culture of materialism based on consumerism (Barber, 1995: 978).

The history of the culture of production and consumption in the world indicates the immense desire of governments to maximized production and immense desire of individuals to maximized consumption in order to increase public welfare. Increased consumption is under the influence of population growth, industrialization as well as the culture and policy, which is followed by government and people (Giddens, 2002: 600-630). On this basis, comparing goods consumption in different countries and cultures indicate a variety of values. The government's policy in production is also proportional to their independency of political- economy as well as comparative advantage in the produced goods (Larson and Moore, 2008: 229-249).

Governments consider a lot more variables in the production issue including population, required technology, and comparative advantage in production, as well as political arrangements and international relations. The amount and variety of the needs in each society forms the political-economic orientation of government in the issue of production. Governments' tendency to maximize their external independency in order to prevent external pressure, leads them to initially follow self-dependency in production and supply their needs within the country, as much as possible (Linkliter, 2009: 355-393). This condition is much harder for a country like Iran, which enjoys a very low level of relations due to international disputes with some world powers. Because of intense international sanctions, Iran needs to be much more dependent on expansion of domestic production in comparison with other countries.

Expansion of production demands development of technology and more utilization of resources and energy in order to provide raw materials needed for production. For example, sanctions against export of petroleum products, such as gasoline, to Iran, not only rose the cost of gas production in the country up to five times, but also increased emission of carcinogenesis pollutants, such as gasoline, into the air due to lack of required technologies. Pollutants released through incomplete burning of benzene in locally produced automobiles (with very low quality) has directly threatened Iranians life so that in recent reports, human fatalities caused by the environmental degradation (air pollution) have been partly associated with the above mentioned issue (Araghi et al., 2011: 93-104).

Production is an energy- consuming activity with enormous human and environmental effects. At present, more than 86 percent of the world's required energy is supplied through burning of fossil resources especially oil supply, therefore, any kind of productivity, particularly if it is directly involved with fossil fuels, will be harmful to the environment (BP Report 2012). The production of millions of tons of cement, steel, chemical fertilizers and organic compounds, huge automotive industries as well as several producing manufactories and factories claim massive amount of energy while leaving devastating effects on the environment through release of pollutants resulted from their production. Production in such conditions should be economically justified. Otherwise, it cannot even partially cover the necessary expenses to compensate environmental damages. The developing countries consider the increase in gross domestic product as a key part of their economic policies.

Graph 7 Significant increase in Iran's gross domestic product during the past 30 years (in dollars)
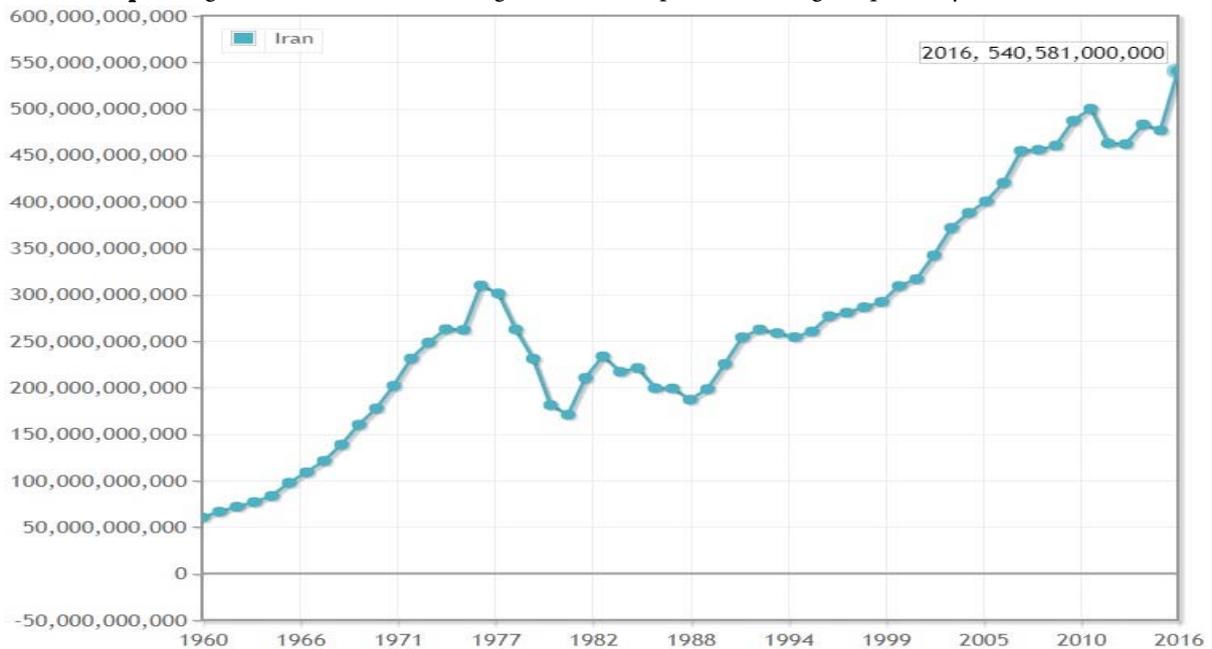
Source: World Bank, World Development Indicators - Last updated June, 30, 2016

Increase in GDP is an index to increase and encourage production. Similar charts represent the increasing amount of production in polluting industries and in various economic sectors of the country, each of which are significantly contributing to the air, soil, and water pollution.

Consumer culture is under the influence of the culture of a country as well as the interests of the producers. It is determined in proportion to the personal characteristics, tribal traditions, urban customs, country's patterns, and in a broader level in proportion to global condition and status. Therefore, not only can two people follow different consumption patterns, but influenced by such variables, two cities, two provinces, and two countries can also pick different pattern of consumption, which is consistent or non-consistent with their specific environment and economic status. More consumption needs more production, and demands more energy. In addition, more consumption leads to producing more

pollutants and disposals, which are often not recyclable and drastically increase the water and soil pollution (Butkin & Keller, 2012: 536-576).

Advertisements that encourage consumption are already claiming more than 0.9% of the world's total GDP. In 2013, advertisement statistics in different countries and international companies was estimated at $800 billion. This figure considered as approximately one billion dollars in Iran (World Bank, 2013). This, in fact, suggests the increasing influence of

consumerism culture in Iran and the world as a whole. Obviously, the consumption intensity in industrial countries is far more than that in semi-industrial and developing countries. The findings suggest that there is a direct relationship between the consumption and level of social welfare. In other words, the higher is the social welfare, the higher is the consumption of various goods, which encourages the development of consumerism culture (Giddens, 2002: 528-563).

Graph 8 Increased consumption of fossil fuels in Iran in comparison with the world
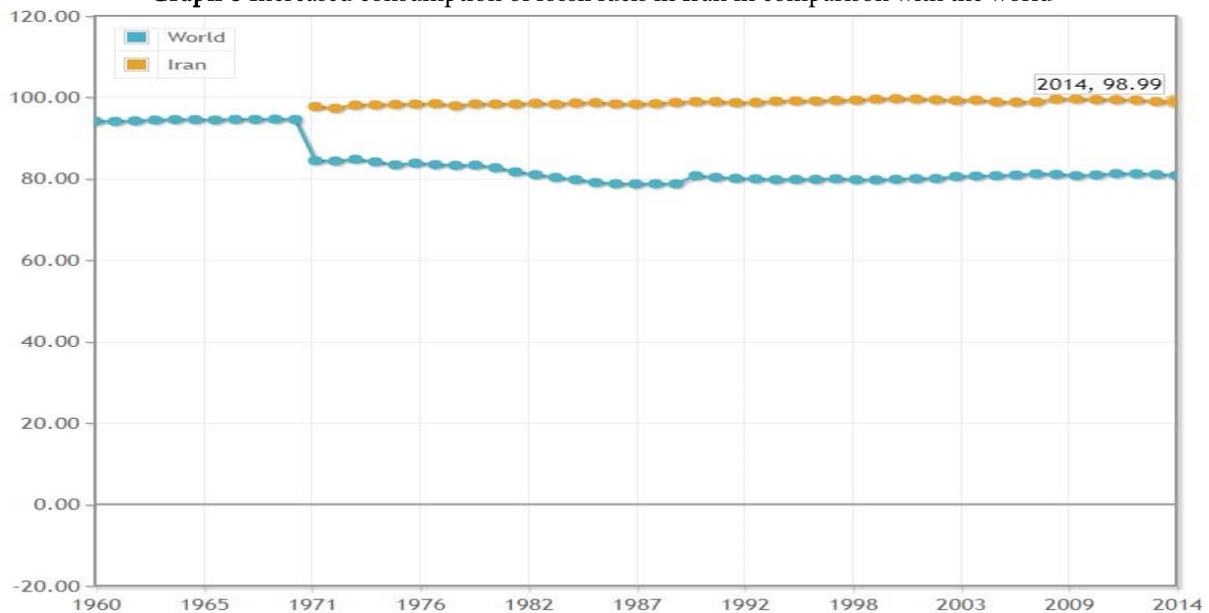
Source: World Bank, World Development Indicators - Last updated June 30, 2016

In 2009, when some international organizations criticized the growth of culture of consumerism and unnecessary costs in the world, noticing the famine and deprivation in African countries, Iran also titled the same year as Reform of Consumption Patterns. Experts' purpose of such naming was to deal with over-consumption of water, electricity, gas and many other commodities in the country. Comparing the consumption rate of certain commodities in against other parts of the

world confirms the above idea. As far as the environment is concerned, we put emphasis on energy consumption again.

4- Development of Incompatible Technologies and Environmental Degradation

Technologies can be a strong point in protecting the environment. Likewise, they can destroy the environment. Extending technological incompatibility with the environment such as, polluting industries

and equipment in such factories as Iran Khodro, Isfahan Cement, Kerman machinery, aluminum industry, etc. Some ecologists believe that environment consists of two major components: the number of persons and impact of each on the environment. When the planet population was less and technology was limited, human's impact on the environment was nothing more than a local effect as well. The long-term effects of over-consumption of local resources in such condition were few or nothing. Today's fundamental problem is that world is highly populated and human technology is so vigorous that the impact of human can be no longer and by no means considered as unimportant or local (Kent & Crews, 1990).

According to the famed biologist and coach, Paul Ehrlich, the human impact on the environment can be entirely indicated in a simple relationship: the total environmental impacts are equal to the impact of each person multiplied by total number of individuals. This means that any increase in the number of individuals or the impact of each of them can lead to an increase in the impact of human on the environment. A major difference between our current situation and Malthus's anticipation is the development of technological power. Although technology has probably delayed the population crisis, it has eventually increased our impact on the nature (Kessler, 1992: 124).

Combination of the rapid growth of population and technology has increased the human impact on the environment in a trend of geometric progressions. The technology not only has increased the consumption of resources, but helped the modern man, comparing to hunter gatherer, affect the environment in new ways. For example, human would not deplete the Ozone layer before the invention of CFC gases (chlorofluorocarbons) for the purpose of sprays or coolant part of chillers and refrigerators. Similarly, the demand for steel and fuel was far limited and air pollution was not as considerable as now, before we had started driving the car (Butkin & Keller, 2012: 76).

When we speak of technology, we are actually considering a package of basic changes in the methods, techniques, tools and skills through which goods or services are made or provided. Four dimensions of technology are human ware, technology ware, information ware and organization ware (Rezaei Mirqaed and Dehkordi, 2006: 500). Technologies or in other words, modern technologies leave such a widespread range of influence that changes the whole life. Information and communication technologies are two apparent examples of technologies with unlimited range of influence. In terms of environment, technologies are used in production of super-heavy industrial and agricultural tools to injection genes to produce more food and more gene diversity (Miller, 2011: 241-296).

Unlike three previously mentioned variables, development of technologies include positive as well as negative environmental effects. Some researchers believe that all factors of the industrial world including population growth, expansion of urbanization, and development of policies of production and consumption culture joined altogether to make the environment insecure; but thanks to the technologies, we have been able to lessen the rising pressure of these factors and keep the environment rather secure for living so far. Some other environmental scientists believe that urban

people with consumer culture are able to capture and control the environment after thousands of years and perform devastating changes in it due to the acquisition of modern technologies (Butkin & Keller, 2012: 77-95).

Complying with the second group, we also believe that technology has stunningly upgraded the level of human welfare, but its development has had damaging effects on environment from different aspects rather

than improving its foundations. Although, comparing with the past half century, the technologies have slightly helped reduction of pollutants released from vehicles and heavy manufacturing industries into the water, air and soil; we should not forget that they have caused development of tools and equipment, which are, unlimitedly, able to destroy the environment more powerfully and quickly.

Graph 9 Development of technologies in the form of increased agricultural machinery in Iran.
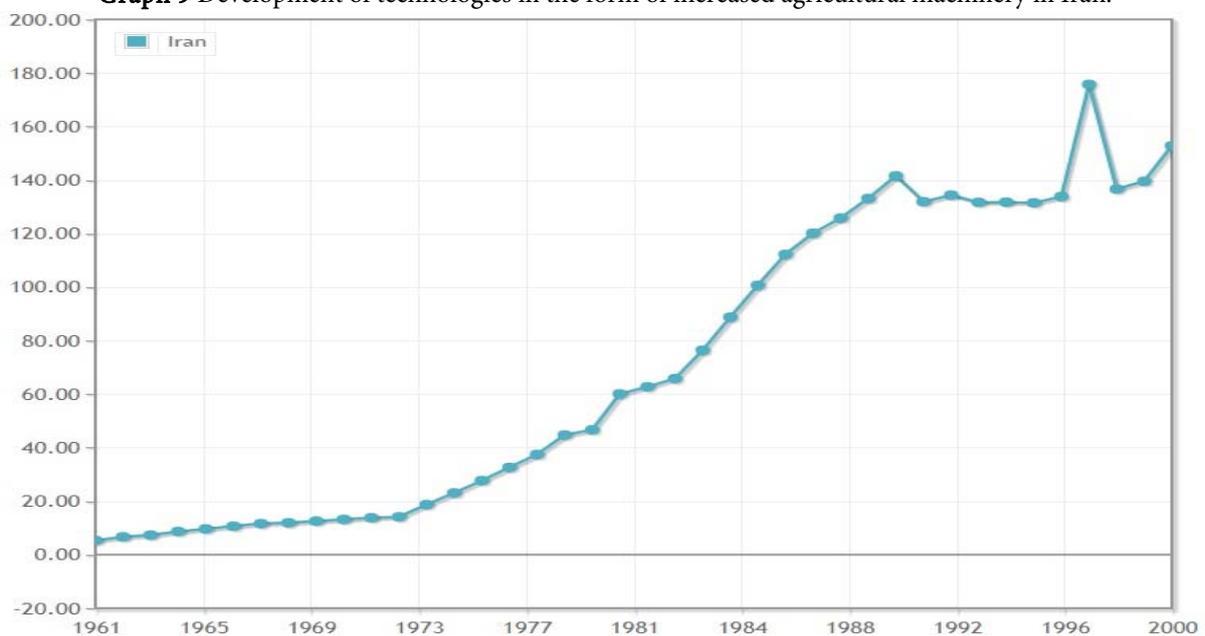
Source: World Bank, World Development Indicators - Last updated June 30, 2016

The negative aspect of technology's effect on the environment can be discussed from different viewpoints. At first, they effect on the increase of human power or control on the environment. For example, during the past half century, more than two-thirds of grasslands and natural areas in Iran were immediately cultivated by virtue of the emergence and development of certain technologies and more than 14 percent of the forests destroyed, while such environmental control has been impossible throughout 1000 years in the past.

The number of agricultural vehicles rose to 228,000 in 2000 and 560,000 in 2011. The second negative effect of technology refers to the pollutants that pass into the environment together with new compounds, e.g. different kinds of nitrogen oxides are simply released into the soil and water through producing and burning some fertilizers – which are the produce of new technologies. Burning organic and carbon compounds, cars and vehicles disposals that are extremely damaging the environment. Carbon dioxide on its existing heavy volume, originated due to current

technology that is intended to serve human welfare.

Conclusion

Considering human security and its ever-increasing importance, comprehensive and traditional schools made their efforts to cover many issues in the ambit of security, expanding its range and scope. As such, the attempt of theorists from the school of comprehensive security has been more noteworthy. According to their approach, humans - as a new reference of security- feel insecure not only due to internal or external military threats, but also due to non-military issues, which can threaten them in the same way. As a result, in its comprehensive definition, human security includes both military and non- military threats associated with human's physical and mental being. Theorists of comprehensive human security put emphasis on non-military issues and phenomena versus military issues. According to them, the consequences and range of influences of such threats are much more lasting than direct military threats. Consequently, they pay more attention to issues such as environmental security, food security, personal security, healthcare security, economic security, and political security than military security.

To the theorists of the comprehensive human security, environmental security is far more important than other aspects of it, for the reason that, human security is, more than anything else, associated with the environment and its various components. People need the environment and its resources severely in order to save life and enjoy it. Any kind of pollution or damage to the environment will threaten the human security directly or indirectly. Since the influencing range of environmental threats is wider and more stable, it will easily challenge the human security on a larger scale. Therefore, unsustainable development policies can be considered as the main threatening factor to the environmental security. According to many researchers of human security, sustainable development puts emphasis on the importance of this aspect of security. They believe that attention to the sustainability of policies and programs are the only way to prevent existing complex and widespread threats against human environment.

Unsustainable development policies in Iran, implemented by the government, comprises a series of programs, which lead to the environmental degradation and threat. Some of the most important themes of economic, political, cultural and social policies include the population growth or encouraging reproduction, expansion of urbanization through the centralization of resources and facilities in cities, growth-oriented policies and encouraging the production regardless of its economic competitiveness, encouraging the consumerism culture, as well as supporting the development of new industries and technologies that cause pollution and easier degradation of the environment. Implementation of any of these policies is impossible without resorting to environmental resources and facilities. For example, the expansion of urbanization would be accomplished through reduction of cultivable agricultural lands and destruction of forests. Population growth leads to higher energy consumption and thus increases the risk of dangerous pollutants. Population growth, also, includes production of more pollutants due to more consumption. It can increase the competition and struggle to have more

environmental resources in possession. Formulating and encouraging growth-oriented policies, with an emphasis on the production of commodities and expansion of energy-consuming as well as pollutant industries, have faced Iran's environment with consequences of increased pollution and resource consumption disregarding rights of the future generation and environmental security. Encouragement of consumerism culture has caused more energy consumption in order to produce more which have eventually lead to more pollutants in water, soil and air. Supporting the technology incompatible with the environment, and in general supporting all technologies have also caused increasing level of pollutants in the environment in Iran.

Some of the most important consequences of unsustainable development policies include increased human mortality due to air, soil and water pollution, soil erosion, increased deforestation, reduced farmlands, increased consumption of resources, expanded desertification, increased conflict over resources, climate changes increased risk of sandstorms, haze phenomenon, destructive ranches, disturbance in food production cycle caused through the removal of animal and plant species, global warming, acid rain, depleted Ozone layer, temperature inversion, and dozens of other outcomes that threaten human security directly or indirectly through threatening environmental security. These are some of the most important consequences that are annually taking hundreds of thousands of lives in silence, in addition to imposing hundreds of billions of dollars on the world's economy and tens of billions of dollars on the Iranian economy.

In order to deal with the negative consequences of unsustainable development policies, some suggestions are briefly provided below hoping that they attract the attention of decision-makers and politicians to prevent irrecoverable disasters in our treasured country, Iran.

1. Adoption of population control policies.
2. Prevention of population growth in cities, especially metropolitan cities, as well as prevention of extraordinarily expansion of urbanization.
3. Adoption of growth- oriented policies aimed at bringing economic advantage for the country.
4. Consumption control and adoption of an environment- friendly consumption pattern.
5. Supporting the production and expansion of environment- friendly technologies.
6. Supplying an important part of energy needs from renewable fuel resources.
7. Compilation of supportive laws in order to control pollutants' emission.
8. Compilation of supportive laws to protect the environment.
9. Establishment and encouragement of public environmental associations and organization (Good Governance).
10. Revision of Economic Policy.
11. Investing in solar energy and wind energy.
12. Development of international relations in the field of non-fossil fuels.
13. Modification of production processes and consumption.

14. Strengthening industrial and agricultural capabilities considering the environmental conditions of the area.

15. Carbon taxes for manufacturing industries.

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سیاست‌های توسعه‌ای ناپایدار؛ تخریب محیط زیست و تهدید امنیت انسانی در ایران

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چکیده

امنیت زیست‌محیطی یکی از ابعاد مهم امنیت انسانی است. دغدغۀ اصلی امنیت زیست محیطی، تاکید بر پایداری سیاست‌های توسعه‌ای به معنای سازگاری این سیاست‌ها با محیط‌زیست و حقوق نسل‌های آینده است. از آنجایی که بخش مهمی از تهدیدها علیه امنیت انسانی در حوزه مسائل زیست‌محیطی رخ می‌دهد، پژوهش حاضر ضمن تاکید بر رابطه امنیت زیست‌محیطی با امنیت انسانی، و پرداختن به علل و عوامل تهدید امنیت انسانی، به این پرسش پاسخ داده است که چگونه تخریب محیط‌زیست در ایران باعث تهدید امنیت انسانی شده است؟ پژوهش حاضر با فرض ناپایداری سیاست‌های توسعه‌ای در حوزه‌های مختلف اقتصادی، اجتماعی، سیاسی و فرهنگی نشان می‌دهد که، اتخاذ سیاست‌های توسعه‌ای ناپایداری همچون: ۱. گسترش شهرنشینی ۲. افزایش جمعیت ۳. فرهنگ مصرف‌گرایی و تاکید بر رشد تولید بدون توجه به پیامدهای آن و ۴. سرمایه‌گذاری در گسترش فن‌آوری‌های ناسازگار با محیط‌زیست، باعث شده است تا با مصرف سوخت‌های فسیلی بیشتر و استفاده بی‌رویه از منابع مختلف زیست‌محیطی، آلودگی فزاینده و تخریب گسترده‌تری در محیط‌زیست به وجود آید که نتیجه آن با توجه به وابستگی شدید انسان به محیط زیست، تهدید امنیت انسانی بوده است.

واژه‌های کلیدی: امنیت انسانی، امنیت زیست‌محیطی، توسعه پایدار، سیاست‌های توسعه‌ای ناپایدار، ایران.

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