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The Impression of Water Crisis in National Security

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Abstract: *Our country, Iran, is in the category of waterless and survived countries because of lack of climate downfalls to its unsuitable local to temporal transmittance. Environmental concerns mainly after 1960s that have boon seriously proposed in universal politics, created a variety of assessments. In the late decades, environmental change such as: climate change, has caused chief challenges for the human security that the most immediate on is the scarcity if biological resources. Although this crisis is not is not the immediate factor in war formation. It creates pressures which amplifies the emotions and stimulate ethnic clash, anxiety disturbance and rebellion. Tran, as one of the most powerful countries in the Middle East and Persian Gulf area is exposing to environmental threats. Factors like the pollution of air, rivers and seas, drought, climate change. Population increase, immigration and producing energy have considerable effects on casing insecurity disbanding public order to more important than all National security .In this article ,in addition to mentioning the factors involving in the water crisis same solution , will presented at the national level.*

Keywords: *Assessment, environmental threats, national security, Iran.*

Introduction

Nowadays security is influenced by great change in the international system, communication progress, technology development and unprecedented rapprochement of societies (Pishgahifard, 1390, P205).The relationship between security and environment is bilateral and they're supplement. Environment is the field and place to live and create, the possibility to growth and development to a tent to the environment we need people and the authority to plan .since industrialization in the middle of eighteenth century in Britain, human beings are rapidly extracting natural resources like coal, water and mineral materials .A great part of social problems is related to environment detraction which is the result of industrialization and urbanization. The rivers have been polluted by the effluent of factories and changed to sanitary threat. After 1945, industrialization and urbanization gently became universal fact and the pressure to the environment increased. (Kahil, 1387, P3).There are different attitudes about environmental exploitation /utilization. For instance we can point to the Green Party and the new movement in order to supporting the environment based on radical ideas such as intemperate ecology, Echo-anarchism and Ecofeminism .One group believes that the environment is inherently extractable and restorable, the other groups think that the human ability to destroy the environment is more than the ability to compensate the damages. (May, 1379, P457)Today considerable part of international communication is about saving environment context\axis. In the late decades environmental changes such as climate change has caused chief challenges for the human security that the most immediate one is the scarcity of biological resources. Although this crisis is not the immediate factor in war formation, it crates pressure which amplifies the emotions and stimulate ethic crash, anxiety, disturbance and rebellion. Today security and stability is necessary and urgent for people in all fields. Governments, elected by people's votes are always trying to make security for their citizens in all levels of local, regional national and universal. Yet distribution of environment is subsidiary of public attitude toward environment, geographical situation welfare level, assessment position of environment in codification of development oriented plans, to have up to dated rules.

Enthusiasm to law enforcement and so on. The domain of pollution and distraction of environment in Iran is as serious that can't be covered up any more. This article is going to study and assess the threat, and environmental factors in Iran Public security, trying to find an appropriate answer for this question: How impressive is the

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environmental threats to cause tension divergence and challenge in Iran's public security and How can it make challenge for the stable security of Iran? According to this question, the hypothesis is that environmental factors have always influence on national convergence, national security and threats and water issue caused challenge for Iran's national security and disrupt public order of the society. In Iran the process of water challenge has been increased unexampled and in many cases it was more serious than other countries. Most of these statistics are the output of geographical resultant and topography of Iran, sequential drought, public unawareness and less attention to optimum water use, population increase and joint coast borders of neighboring countries challenge. It seems that continuing to cost and time consuming environmental-based security challenges which are extremely firm and stable.

Problem Statement

Water crisis index in our country is more inappropriate than the world's average because of being in water less and semiarid area. While are percent of the earth's population as living in our country. Our share from the renewable fresh water is just 0.36 presents. Our country has just utilized about 60 presents of its fresh water source. It makes the lack of fresh water prominent. Volume of the fresh water sources almost hasn't changed and reduced since thousands of years ago when primary men lived in Iran plateau, therefore population increase in the late decades which has caused the growth in utilized-water capitation that is the result of live level promotion and variety water-needs plus water source pollution has created some limitations for the fresh water use and it caused approaching to the most fresh water use in a way that 90 billion square meter, from the whole 130 billion square extractable water is utilizing. Furthermore, more than 50 presents of fresh water sources are dependent on ground water sources. That although these sources should be used in the time of drought, now irregular removal and beyond the normal supply to the aquifer caused limitation for removal of the ground water and changed its quality. At the moment and according to the available statistics about 20 states have utilized the most capacity of their aquifers, that it caused 12 billion square meter water removal from groundwater, that it caused great slump in the groundwater level in all areas, progressing saltwater superficies in some moors and pollution increase.

Heterogeneous distribution of renewable freshwater doesn't fulfil the possibility for all inhabitants to use water the same. While the west half of country (Karkhe, Karoon, KhazarSea and Uremia) have about 70percents of renewable water sources, their population is less than 50percents of the whole .In many parts of the country especially in droughts lack of balance between sources and using water has changed this problem to crisis. Study of the statistics shows that annual capacity of water for every individual has reached to less than one third in the recent 40 years. Irregular and unplanned progress of crisis and town which has increased the population up to 6 time more in the last year have grown considerably, in a way that added 45 million people in the last 40 years and 30 million in the last 20 years. If the population increase continue in the same way we don't make a great change in water sources and managing fresh water sources will change in non-renewable ones.

Research Background

Although most of discussion about environmental issue are related to this age, it seems that concerns and awareness about environmental outcome are as old as history, Human beings in the Neolithic era were trying to inhabit the water and there are some inscription with the same on bred for five thousands year before Sumerians. All great civilizations have boon appeared beside great rivers. Water extraction has a long history in the countries like: Chine digging a 1500 meters deep well by cane stick. Egypt (Yoosef Well, almost 100meters is 3000 years old) and ancient Iran. Manoochehr, Iranian king, about 3400 years ago ordered digging to be taught to the grandees. The most aging aqueduct and Aryans arrival at aqueducts the same time. The depth of Gnabaad well, 300 meters Depp, has been estimated 2500 years. Mac Louis (1984) says that Iranian were the first one who moved the rivers to higher and lower farm lands by the use of water-wheels. The importance of water in the ancient Iran was as much that some of them were called Imperial Rivers and start to dewatering, there should be the surviving and people paid the water pricing to the treasury. Abubakr Mohammad Ibn Alhasan Alkaraji was an Iranian scientist who has written more than one thousand books about hidden water extraction and it's interesting that he describes the Hydrological cycle at that time. KHAJE NEZAM ALMOLK consider the water justly distribution vital and says that to deviate it will destroy the country. Ahead of the third World Water Forum, "Kyoto, Japan" is the most essential research which has been given to this meeting. To prepare this report, all brokers and commissions from the United Nations which have water problems are involved and for the first time had common goals in water content and progress in the areas such as health, mutations, ecology, cities, industry, energy, disaster, management, economic assessment and sharing of sources and government has been studied. Water crisis in the world says: "Water crisis is on the top of all social and natural crisis which human being to survive and the earth is facing.

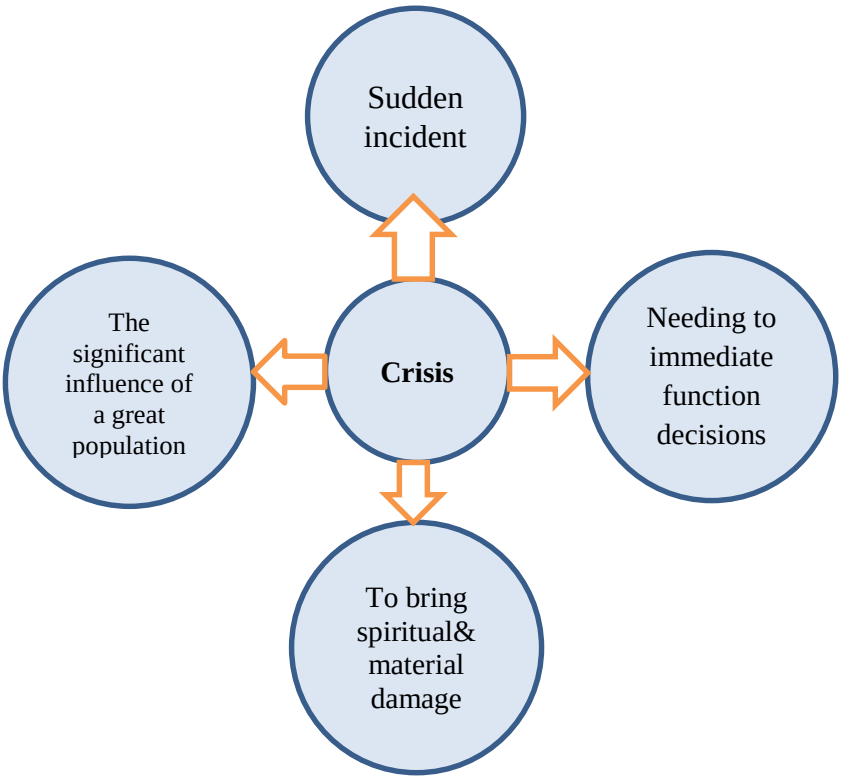
Theoretical Framework

1. Crisis

Crisis, an event that occurs, naturally or by human, sudden or growing imposes hardship to be removed. Crisis is word with many public as ages (such as: pressure, compulsion, anxiety disaster and…) which is studied and discussed by various range of scientist (political, social, economic, cultural and…) And consequently different meanings was presented for that perhaps we can evaluate the Jams Robinson's definition the most comprehensive and nominal definition of crisis, where he notices the crisis as congested periods a time to make decision that can make us understand the risks of many interests due to threats caused by decisions.

Crisis features

- Crisis is generally unpredictable (means we can't predict when and where it happens.)
- Crisis has destructive effects and people who didn't need help, will be immediately need help after that.
- Its nature and effects are long lasting and subnational.
- In critical situation, decision are usually made under dire situation and in limited time and the necessary information of decision makers /determiner is incomplete.
- Time of answering before transfer has the decision and wonder the member of decision unit.
- Limitation, time compaction, surprising, stress and data distortion.
- Herman (1963) defines crisis as an event that makes people confused and wondered. Forecloses power of logical and impressive reaction as an. Pro(1984) discerns between incident and crisis, he know the incident disorder in component or part of bigger system that doesn't threaten the function totally, but he defines crisis as a major disorder that stops the whole system's function and makes problems to that and endangers its survival. Crisis refers to every situation in which has these and basic dimensions. These dimensions are told in this diagram:



There are three different perspective related to crisis. It should be noted that the approach to decision making for crisis, plays an important role and to another words it's the most important factor." Traditional approach" to the crisis, considers it as basically negative phenomenon that should be kept away anyway. This approach makes the

crisis's completely destructive and deterrent essence and goes as far to deny crisis. Those managers who have such approach to crisis have kind of preparation and specific plan to face with and in the situation they confront with it act totally natural and believe that the best approach is not noticing to it. "Natural rule approach" the fans of this approach consider the crisis as part of human's natural life. If we want it or not, will happen, but their attitude is still opposite of the first group and they make a logic stand for it. "Interactive perspective" has a completely different look at crisis positively as much that believes not only it shouldn't be divvied, but we have to welcome it.

2. Water Crisis in Iran

Water is essential for life and a key source for human beings health. About 1.2 billion people in the world still don't access to the sure potable water. In the next decade one of the most critical challenges that human beings will be facing with is predicting sure potable water services for more than one billion people. It's predicated that in the 20^{th} century, more than 100 million suffer from lack of water and about 76 percent countries be under water tension. In the late decade, on third of developing countries will confront with insensitive lack of water and most of these countries are placed in dry and semiarid areas. Water is one of the greatest challenges in the present century that can be the resource of many positive and negative changes.

Today there's vacuity between water production capability and demanding intensity that makes crisis. Major part of lack traction in water sources is caused by hydrologic cycle and natural limitation of water resources and the other parts the innate limitation of water sources and, drought, population increase irregular exploitation of exciting resources and finally falling in groundwater and destructive effects of human activities on the environment all together cause great challenges in freshwater utilization. Nowadays seas and oceans which are vital sources are extremely tainting by ships, wastes of radioactive industry, chemical and petroleum materials. Majority of water sources trill as voluminous flowage in dry and semiarid areas, in most of these areas the situation of groundwater sources is in critical condition because of limited saving potential and over drafty. So we call the present century as water crisis and challenge.

According to the United Nation predication, Iran will be in the category of those countries that will face with chronic water shortage on 2025(Shstland and shene, 1380, P 164). 30years long-term statistics and information of the water sources evaluating network shows that the average of atmosphere downfalls is 250MM in the geographical width that 30 percent of its fall as snow and the annual atmosphere downfall is 412 billion square meters that 205 billion square meter of it is as infiltration and the soil moisture, 115 billion square meter evaporation (after downfall), and 92 billion square meter will current will be out of reach as surface water. From 412 billion square meter atmosphere downfalls, about 26 billion square meter will be directly utilized for ground aquifer feeding. In additional, about 12 billion square meter of subsurface flows goes into grown aquifer, too that by applying this figure, total amount downfalls. Also 2.9 billion square meter water earns from desalination. It should be noticed that the total use water in Iran is 97.8 billion square meter a year which 92.5 percent is being used in agricultural part, 1.5 percent in industry and 6 percent in cities (Rohani, 1390, p.248). We have to know that a great part of national economy is dependent on agricultural unit and water shortage and drought can be challenging for national security and Iran's security. In fact the share of agricultural part from internal impure production (GPD) produces 11.4 percent, 23 percent occupation, 23 percent the export of non-oil commodity, 80 percent the country's nutrition, and 90 percent of necessary ingredients for industry. Meanwhile 82 billion square meter of groundwater and surface water is being used for agricultural. Anyway for lack of appropriate structure, water shifting has reduced the country's water productivity, to 30 percent (Hoseyni, 1387, p.280).

3. National Security

Traditionally national security has been considered as protection of people - country against external invasion recourse to defensive – military gadgets. During the history, to have security was necessary and essential for each country. The security concept as it is in common use now is greatly the product of cold war. Using national security as a key concept was the invention of the U.S in the early 1940s, but it's institutional (national security bill. NSC) happened at the beginning of cold war that at first accelerated to the U.S' allies and then to the international system. One of the most important reasons of unprecedented promotions of national security was justification, coordination and a long-term mobilization that was contrast with doubt tradition of the U.S to political outcomes and having countless military forces (Bouzan and Weaver, 1388, p.153). To be sure about life, property and honor safety is called security and it is a deduction matter which needs special planning and actions to get come off this individual mandate is running about nations and countries and can be proposed easily in regional and universal dimensions. Security for every country is to have or to achieve assurance to existence and holding, to credit and occasion all

that is under protection of the national interests. While the security concept is contrast, geographical political concepts changes according to temporal and local situations (Mojtahedzade, 1381, p.124). In a general sense, security and safety have similar meaning. The only little difference is more emphasis on being protective against external risks. People or actions that influence on protection situations are responsible for undermining security. National security shares to two parts: internal and external. Internal in terms of resource, direction and threats is concerned with internal borders and totally includes social security, peace, unity and national reconciliation, political system and government survival and so on. In addition natural and biological security which is related to geographical, land and environmental variables such as natural events, publishing contagious disease, biological foundation like water, soil, vegetation, atmosphere and… that internal and social security of people is greatly dependent on these factors. External security is mainly related to external and trans boundary threats, especially from neighboring countries which target national interests of a country and is benefiting from different dimensions of political, cultural, military, economic and environmental. Internal and external securities are not separable and have mutual effect. Water issues in Iran is not direct threat against integrity and regime, but when they impress economic capabilities, natural sources and man power, they will be against the national security of countries; for example in November 1986, all aquatics in Rhine river from Balcony to Netherlands coast were killed because of downfall of some materials including mercury, toxicant organic materials like pesticides. This damage to citizens' health and overwhelming economic ability of neighboring countries were considered as a serious threat to national security of these countries. Therefore environmental security is observing preservation and protection of local, regional and universal environment. This security acts as supporting integrated and associated system and human life is undeniably dependent on it.

4. Water Geopolitics in the Middle East

About 60 percent of water resources in the Middle East and North of Africa is lotting by international borders and countries in that area to share these resources by perfect cooperation with directorship. Actually great part of water resources of Iraq, Egypt and Syria are in other countries. The noticeable point is loss of regional and international contracts and agreements about the water sources use. The available contracts and agreements about water use does not benefit from enough executive guaranty and does not include all the countries of an area. Loss of international contract is representative of lack of political decision for fair sharing of water sources. On the other hand, old and unreal policies about achieving nutrition sufficiency has caused unfair sharing of water sources in the region. The most important goals of water policies in the countries of this region are distribution and saving of water sources, avoiding freshet, and crop sufficiency. Noticing to the recent year's experiences, countries of this region have just achieved the first two goals and noticing to the population increase and outcome, achieving the third goal seems illogical and impossible. Middle East and North of Africa are the biggest importers of crops and nutrition. Lack of divergence, convergence and cooperation among countries of this region, causes destroying a great part of water sources in making coordinate decisions in agricultural part. The main part of agricultural policies of the region is designed and performed according to national interests of countries. For instance first dams on Fu rat were built by Iraq, but that was Turkey which performed CAP project in 1373. The purpose of this plan was reintegration of irrigation of one million seven thousand hectare of the lands of East of Turkey with the aim of recovering the situation of eight million inhabitants. Yet the aim which Turkey's government considered was integrating the Kurd population. The dams built by Turkey caused reduction in output water for downstream countries and created tension among them. The dependency ratio to boundary water sources in our country, Iran, is about 7 percent, but this ratio in Sistani is 100 percent to HirmandRiver, 80 percent to Aras River in Moqan and 90 percent to Boundary River in Sarakhs. Non-compliance with law and adherence to principals of boundary rivers by countries adjacent with the states which the most renewable freshwater sources of this prepared by boundary rivers.

The Research Results

1. Minatory Factors of Water in Iran

Geographical situation and continental conditions of Iran

Iran is a mountainous land placed between 44 to 66 east degree longitude and 25 to 40 north degree latitude. Two chain mountains, Alborz with east-west direction and Zagros with northwest – southeast direction are placed in Iran. These two chain mountains do not let pluvial clouds pass from north and west like a wall. Iran with 1640000 kilometers extend is placed in the dry belt of earth and high pressure subtropical zone. As geographical situation there are always too many fluctuations in the amount of downfall in Iran. Considering the point that the average of annual downfall in Iran is one third of its universal amount we can say water topic needs special attention. Downfall does not have same temporal and local distribution, either. Iran is in the category of dry and semiarid

countries. So that in 28 percent of country the average of annual downfall was 1100 mm and this amount in 90 percent of Iran was less than 200mm. overly continental is dominate in 15 states of country. Therefore issue of high evaporation and transpiration is considered as duplex limitation. Although about 1.1 percent of the world's lands are allocated to Iran, it has only 0.34 percent of the whole world's water. Seasonal downfall issue and disordered dispersal are separated issues. The statistics of Energy Ministry has estimated the volume of rainfall in Iran 412 billion square meters a year that 310 billion square meter of it is on the surface of 870 square kilometer of moor areas. In the mountainous areas as an average 200 billion square meter and in the moors 84 billion square meter water will get out of reach every year because of evaporation and transpiration including totally 71 percents of rainfall volume. From the remained volume 59 billion square meter infiltrate in mountainous areas and 2 billion square meters in moor areas. The remaining water appears as runoff (running water) in moor areas. The amount of groundwater has been estimated about 35 billion square meter that 30 billion square meter of it is for alluvium sources. Assuming that 60 percent of these resources are exploitable, there will be 80 billion square meters water.

Climate Change

Climate change points to fluctuations in the world's climate change or regional climate in a period of time. The climate change issue which is considered as one of the most current scientific or even political – social issues today, is not a new topic. Basically changing and movement is the existential part of natural system. Human beings are trying to discover the regulation of these changes by their tools and knowledge. The changes are often cyclic. These cycles swing between the least and the most thresholds which has a different amount in each system. According to the studies, average of the earth's temperature which is 15 centigrade now, was swinging between 5 centigrade warmer to 10 centigrade colder rather than current degree in period of time. With the beginning of industrial revolution, and increasing human requirements to energy and using all kinds of fossil fuels like coal, petrol and natural gas causes that some gas such as carbon dioxide, methane, nitrogen oxides, carbon mono oxide, and other destructives of ozone layer release in the atmosphere. Increasing the earth's population caused change in land use, jungle destruction, growing the amount of energy carrier requirement, increasing agricultural and line stock activities, increasing the average of earth's temperature and producing solid and liquid wastes. In fact climate change phenomenon is one of the outcomes that is been created because of greenhouse gas effect in the atmosphere (Hoveyda, Hasan 18, climate change and environment). Climate change outcomes for earth: melting polar ice and glaciers, rising sea and ocean levels, increasing rainfall intensity and overflow ratio and flooding, drought increase, desertification and lack of nutrition influence on biodiversity and endangered species, drinking water shortage and increasing contagious diseases, storm and cyclone multiplicity.

Global warming has influence on not only amount of available water sources, but quality of rivers and lakes. Degradation of water quality increases the cost of purification by increasing the number of phytoplanktons because of water temperature increase, we can expect increase in number of chlorophylls and it causes mildew smell for the cyan alga. When cyan alga increases, the water temperature will rather increase. This increase with temperature rise caused by greenhouse effect makes better situation for cyan alga and increases mildew smell. Qualitative changes of water especially decrease of dilution oxygen density is expected in surface flows in the rivers that are not influenced by climate change. Most rivers are being exploited because of their self - purification in excreting the drainage. Stream decreases with population increase leads to water quality fall. For this reason, estimating self – purification ability of the stream in which contaminants vacate is very important.

Lack of Freshet

The year 2003 was named the International Year of Freshwater which is the representative of freshwater importance for human life and other creatures and optimum and stable use of this valuable resource 97.5 percent of water is in sea and lake as saltwater. In this respect, we can say that freshwater is as a rare resource plays an important role in the world geopolitics. In some countries they are trying to use the most of the least available water that definitely some of it was not be really used. For this reason, the earth is called watery planet which 71 percent of it is covered by saltwater of sea and ocean and it is not drinkable and freshwater is just 2.6 percent which is rare and scarce. Actually 3 percent of river water, 3.08 percent of groundwater and 68.9 percent of freshwater are as natural glaciers on north and south poles and on high mountains and are not easy to access. (Shotar, 1386, p.58). Today the water use is 17times more than the early 20th century (Mokhtarihashi and Ghaderihojat, 1387, p.37) that is because of population growth, technological evolutions, growth and increase in urbanization, the rise of quantitative and qualitative life level. Although the surface water sources have been considered as a revival source for very long ago, these sources have been globally threatened. Rainfall shortage makes vacuum between water supply power and demanding intensity and causes crisis. When imbalance be inhibited with a set directional solutions, communicational language will change to conflict one, what in local, regional and national dimensions or global, the major part of imbalance in water sources due to hydrologic cycle and the other part, the influence of human actions and activities a unique God's gift, water, which appears as

pollution form. Irrelevant distribution of rainfall and non-concurrence between utilizing need an atmosphere downfall and extra need to investment in parts of saving, purifying and protecting water sources, will make water challenge dimensions more serious and more extended and they have the governments that can follow the direction more coherent, more continuous and more targeted.

Pinches and Challenges of Water Use in Iran

In the 60s and 70s, that the world's concern was energy shortage and searching a way to exit the crisis, is efficient management and appropriate energy use to figure out the crisis. In the late two decades that water shortage problem has become more serious because of resource limitation and extra use, has created new concern for the world. Meanwhile our country, Iran, for having little water, inharmonious population increase, industrial and agricultural pollution and ignoring consumption pattern has been faced with serious challenge for preparing water needs. While two fifth of people in the world die because of unhealthy water, in our country this amount is out of reach and wastes for ignoring consumption pattern and pollution. Although the standards has estimated the using water 150 liter for every person in a day, in most parts of our country it is beyond 300 liters per day and the reason is related to rising welfare level and consequently water needs. Predicting that our population will be 100 million in 1400, the capitation of renewable water for every individual will be 1000 to 3000 square meters which is known as crisis boundary according to the global criterions.

Year	Water Capitation for every person (square meter)
1325	7000
1375	2160
1400	1300

Water use in Tehran and other cities of country is more than water capitation use in the places that are same category with Tehran in terms of social and economic life. In agricultural field, irrigation hydromel for gravitational lands has higher level comparing with global average, in a way that in available 1.5 million hectare irrigation web and drainage more than 60 percent water will waste or get out of reach. Correcting the drip irrigation and sprinkler irrigation methods in the regions and situations that it is practical, the operation increase in hectare, irrigation water reduction to the real need and can reduce drought impressions and increase water efficiency.

Water use in 1375 was announced 86.8 billion square meter in a year that more than ninety percent was in agricultural part and set of utilization in the urban and industry part is about seven percent. This utilization in the year 1380 has become 2.1 billion square meters that shows the same process in urban, agriculture and industry parts. Amusing the current water use and amusing the stable capitation use and the fact that the population in 70 million and predicting 90.4 million population in the year 1400, the required water will be 120 billion square meters per year. Every kind of capitation use increase, including agricultural development for complete self – sufficiency or crop export or promoting hygiene quality by increasing urban and rural capitation use by saving current consumption pattern and or exiting some of water renewable sources from using cycle because of anomalistic pollution, balancing the requirement situation and water use in the year 1400 will be more complicated.

Year 1400	Year 1380	Year 1375	Uses
7.8	6	405	Urban
2.4	1.1	0.9	Industry and mining
102	86	81.4	Agriculture
112.2	93.1	86.8	sum

Breeding the generation that has the ability to foresight and think about water future, natural resources and environment, has to be placed in agendum seriously and consciously. Using is a behavioral phenomenon and because it is not dependent from a society culture, so incorrect cultural behaviors has to be corrected to avoid irregular water use and suitable culture for water use to be generalized.

Population growth Rate and Limited Water Resources

Population and use are the variables that always change to increase and lack of proportion between them. For example during the past 100 years the population has tripled, but the global water request has sextupled. The population in our country has increased from 6 million to 60 million during the past 45 years. This population increase caused that 71 percent of the country's water sources to be utilized. The forecasts show that at the beginning of year 1400 our population will reach to 97.5 million, the required water will be 130 billion square meters that it will not be possible to be prepared from renewable water sources. Population of regional countries are rapidly urbanizing. This issue will have great impression on managing the water sources of the region. Urban population increase will reduce the politicians' attention to rural areas. By cities development and changing agricultural fields to residential and commercial lands, the region agricultural structure will weaken. This problem is seen from Tunisia to San'aa, from Casablanca to Tehran. Changing population structure in cities and villages did have effect on water management policy during past two years. Change in population structure will cause alteration and variety in water services. The request for healthy and sanitary water is strongly increasing.

Water Resource Quality Reduction

In order to achieve permanent development which is a new concept in today world, it was not just economic growth relied on the process of goods production and services, but environment protection plays an important role in it. Among all pollutions water pollution is more important because the amount of this vital resource is almost stable and its pollution strongly influences human health. One of the main areas which is being widely used for waste disposal is water resources like rivers and seas. While protecting these resources and their hygiene is one of the most vital essentials of human beings. The water source exploiting problems are not just about water source, sometimes human beings change the water essence by incorrect methods that it is called pollution. Every year about 2 billion people in the world got water pollution related diseases that Iran can be involved. In addition to cause disease risk for human beings, water pollution can destroy the environment. Growing use in all courts including drinking, industry, services and agriculture is followed by quality reduction and alteration outcomes. The statistics shows that almost 90 percents of water is being used in agriculture part in our country, so agricultural effluents are considered as one of the most important polluting factors. Also about 5 percent of water is used in industry part. But opposite of little portion of this part, its pollution is so various and dangerous (unexpected event organization's report, 1386). During the recent years despite the increasing developments, technology can only improve sanitary dispensation of water, but it is not able to increase water sources, unless desalination technology develops that it was not affordable so far. Another problem is high durability pollution in water. It takes many years for this kind of pollution to be observed by the environment. The main effluents' mass (agricultural, urban and industrial effluents) was 29 billion square meters in the year 1380 that was an important potential for recycling and reuse, but noticing to its pollutions, it is considered as important challenges in future. In the present situation a huge part of agricultural effluent has entered water sources again and urban effluent has purified in a very limited extend and the else will pollute groundwater by extracting with absorbing pits. According to the global bank report, environmental damage of water pollution in Iran is 20 thousand billion Rials or on the other hand 1.7 percent of internal GPD. Reducing pollution of water sources by reducing the contaminants. Trash, drainage, effluent, detergent, pesticides and fertilizer are important contaminants.

Drought

Drought is one of the natural hazards and dangerous disaster which is the result of lack of rainfall lower than normal or expected amount. If this rainfall shortage continues in a long period of time like a season or more, the water requests related to human activities and environment would not be provided. Conceptual definition of drought: Drought is a long period of rainfall shortage and consequently damaging and reducing the crops (Glantz and Kentz, 1997). We can divide drought to different types: meteorological drought, hydrological drought, agricultural drought and economic drought. 31 cases of natural harms from 40 ones in underdeveloped countries happen in Iran. Alternative and long-term droughts and fluctuations in the weather are the main factors of water storage especially for surface water sources that cause extra pressure to groundwater sources. The relation between meteorological drought with temporal delay in a place leads to hydrological drought that this delay is more in groundwater hydrology. The recent temperature rise is one of the drought features which has been explained below and has negative influence on groundwater feed rate indirectly:

- Exportation intensification and potential transpiration
- At the time of land dryness, pressure on soil moisture and consequently to subsurface water for capillary effect
- In rainfall type that limits snow downfall in the mountains and moor surface in melting and gradual influx and surface flow feeding

- Increase evaporation high temperature from water surface is the factor of rapid dryness of rivers with direct effect of cool water

Decomposition and Analysis

Environmental concerns that was introduced as an important part of global policy in 1960s, caused a variety of comment expressing. Of course the environment destruction by human and threats caused by it for the life cycle is not related to yesterday, today and not exclusively to our city or country, but it is a global increasing problem that excited the proponents of environmental protection concern and critical approach of geopolitics users (Mirheydar, 1384, p20). The fiftieth principle of Islamic Republic of Iran has explicitly mentioned that environmental protection is a national duty, but opposite of this legal affirmation the environment's situation in Iran is so disturbing, in a way that according to the environment revenue index report in 2006, among 133 countries, Iran rank is 53by index number 70. In the next evaluation period in 2008, Iran rank got to 68 by 15 steps fall and in the last rating in 2010 by 10 steps fall again, it reduces to score 60. These formal statistics shows that the performers of environment field including masses, academic community, economic institutions and top of all government were unsuccessful to protect the environment and stop the destruction development and pollution. By little research it is understood that one of the most important problems and barriers in the field of environment protection in Iran is lack of knowledge and information in all social layers. For this purpose, in different economic, social and cultural development program the government is in charge to reinforce and empower necessary mechanisms to extend public and specialist education in the environment field (RamezaniGhavamabadi, 1391, p233).

Association and awareness are interactions and together make the main concept of environmental democracy. Also association of all beneficiary groups in the international groups will promote the efficiency of decisions and considering decentralized structure of international law, legitimation of international principles is vital for the efficient implementation of those groups which are influenced by these decisions. Lack of freshwater and drinkable water in Iran have always attracted international attention and the governments are struggling and planning for the appropriate use and more access to water resources. Iran is in the category of those countries that are facing with water sources threats and drought. Freshwater and groundwater reduction in Iran is hinted by the authorities. Iran's geographic scope has both pluvial areas and areas of low rainfall. In the north parts of country we have the most and in center, south and southwest the least rainfall. The study of downfall zoning in Iran shows that north states means Guilan and Mazandaran have the most atmosphere downfalls during a year. These areas attract more than 500mm downfall in year. So they are not facing with water shortage. But downfall in South Khorasan, SistanvaBaloochestan, Isfahan, Hormozgan and Booshehr is less than 300mm in a year and has temporary or permanent water shortage. Another important issue about Iran dependency on water sources is the common sources with the neighboring countries. Iran's dependency ratio on external sources between 7 to 8 percent. Although it is not impressive, it is so important in the regional dimension. For example Hirmand dependency ratio is somehow 100 percent, Moqan area nearby Aras River almost 80 percent and Sarakhs area almost 90 percent. These resources produce rather impressive facilities from the viewpoint of economic production and population settlement in national level that have important strategic influences on national security because of boundary being (Sari Saraf, 1384, p200). In addition, nearby 22 percent of Iran boundaries are surrounded by 26 small and big rivers, so we have river boundary with all neighboring countries. Reviewing the geopolitical situation and catchment areas' situation and our boundary rivers it is understood that most of industrial-agricultural regions, geostrategic ones specially are influenced by the exploitation quality of common water sources. The resources' importance unfolds the time that we know in 1373, 79 percent of our population were benefiting from common water sources and it will change to 37 percent in 1400 (Maleki, 1383, pp.66 & 67).

Consequences

We are living in a world in which water shortage is a basic issue. The shortage is increasing annually. Nowadays many people in developing countries are depriving from enough water to fulfill their basic needs like drinking, bathing and cooking. It is predicted that till 2050, about 563 million will be added to the India's population, 187 million to the China's population which is considered in the category of the poorest countries for their agricultural fields and it should be noticed that it has numerous problems for water source preparation. Countries such as Egypt, Mexico and Islamic Republic of Iran are facing with population increase and according to the United Nations their population will increase up to 50n percent in 2050. In these countries that are facing with water shortage for many citizens, and if they do not put basic action on the agenda for better water source use, will definitely confront with problems to gain permanent development. One of the most important signs of water shortage is river drying which has been observed in some important rivers of the world and for this reason people who live at the end of these

rivers' branch are facing with water shortage in a part or the whole year. On the other hand, because the effluence of many kinds of pollution and their entrance to the limited water sources, even this limited water is out of exploitation for too much pollution and sometimes it is impossible to be used . Also in the condition that important rivers of the world are getting dry continuously, underground aquifers are reducing in all continents because of increase in water request from permanent output of aquifers. Water pumping out from the earth's depth is a phenomenon that has been possible in the late half century and since the advent of powerful diesel engines and could cause water source reduction in a short time. More than 40 percent of countries in the world are facing with dehydration for population increase, agricultural irrigation developments, dam building, water pollution and water usage in industry. Water need increases 2.3 percent annually. By realizing this crisis the global bank has spent 600 billion dollars to increase freshwater sources before 2006 (Bradon and Shelly, 1383, p.256). Today the water shortage problem has led different countries to make distinct decisions, specially the dry ones. Using fossil water, saltwater desalination and changing consumption pattern are samples of these policies (Abdi and Mokhtari Hashi, 1384, p.195). 20 percent of water shortage increase has somehow resulted from climate change. Although humid regions probably will have more rainfall, it is expected that rainfall reduces in dry or semiarid regions and even in some tropical and subtropical areas and falls irregularly. If this process continues, the water quality will reduce by increasing pollution level and water temperature. Water threatening factors mentioned in this article showed that environmental challenges can always cause danger as a national security threat. Iran is in the category of the countries which have little water and is facing with water shortage problem. The average of 250mm downfall annually is not an appropriate statistics for groundwater sources and filling rivers and dams.

Solutions and Suggestions

Water is one of the most important decision making challenges in the world. According to international assemblies' declaration water sources issue will be the main problem discussed in the world till 2050. At that time the population will be increased from 6.3 to 9.4 billion and nutrition and water preparation and saving the environment will be the main concern of managers and leaders. In the past decades, in our country, Iran, the government had special attention to infrastructural programs of water field as urban development subtraction, public welfare, and basic services, but these actions are not enough and below points are necessary to be noticed:

1. Referring to the rainfall statistics in the past 40 years, we had 15 years too much rainfall, 5 years normal and 20 years drought. Accordingly drought is considered with more than 50 percent possibility, and that should not be known as unexpected event and necessary situation and headstock should be provided for compatibility with this climate and drought be managed.
2. Unfortunately the balance between water offer and demand (source and using water) is not based on logic and economy criteria, but it is based on technical-engineering criteria; offer and demand can be influenced by prices and economic policies and in this regard it is necessary for managers and politicians to change their attitudes towards water issue and there should be adequate commitment and impetus for the policies to be done and the economic compatibility existence.
3. In the land preparation plans and social-economic development, water is considered as the main subtraction and is considered by decision makers as pivotal factor by participation of profit owners in developing programs, management in the area, and infrastructural extend of cities, industrial centers and agricultural hubs.
4. The main goal of government should be empowering balance between subtractions, institutions and people's knowledge and also provides development subtractions and to create necessary institutions for public awareness and culture.
5. Conformity between water qualities with use, for example, using non-drinkable water resulted from drainage purification in the toilet siphons and for lawn irrigation.
6. Developing drip irrigation that can reduce water use from 30 to 70 percent and increases crop amount production at the same time.
7. Cultivating the plants that are consistent with climate in the regions which are dry or have little water and green space development by planting domestic plants that need a bit water.

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