



Water, Food and Population with a Focus on Developing World: A Sociological Appraisal

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Abstract

Sociologically speaking, the current demographic indicators show that the world will have a population of over 10 billion by the year 2050, and about 70% of whom will live in urban areas by then, which is a warning of the relationship between population and food and water resources. As a result, many high-growth countries today will or may face problems obtaining adequate food and safe water by that time. Therefore, social scientists especially in developing countries need to predict the future, and plan for it accordingly. The scenario is more serious and acute for Africa as a whole. Disciplines such as sociology and demography must pay attention to the appearing phenomenon. Asia also will be hardly hit by the approaching situation. The emerging scenario will lead to forced migration from high-growth countries to low-growth ones in the years to come, creating increasing social, economic and environmental issues for both types of countries. Developing countries comprising of about 80% of world population will be in a very inconvenient situation [1]. Nutritional scientists need to search and find alternative and new food items for the next generations. However, next generations will face increasing social, economic and even political tensions as far as water and food in developing world are concerned. Weakness of demographic planning in the past few decades has currently led to food insecurity for many developing countries.

Keywords: Food production; Water and food supply; Population growth; Developing world; Tensions

Introduction

Cases of imbalance in water and food resources, and declining security in the three variables of water, food and population are seriously observed in developing countries of the world. Population change/ increase started since 1950s. Development of medical sciences and pharmacology have played a determining role in this regard. Population growth has widely brought about sociological problems such as migration, urbanization, unemployment and many more in cities. Increasing such issues in cities resulted in the decline of food products in rural areas. Gradual global warming of the earth has led to the gradual water shortage and degradation of environment; a phenomenon which is still continuing. There has been a wastage of water in industrialized countries up to 1200 cubic meters per year by individuals [2]. Many people in developing countries receive a poor or very poor quality of water service [3].

As observed, some households in developing countries receive water on intermittent basis [4].

This area in the world, are emerging today, and the population factor has played an effective role in the emergence of this phenomenon. The population factor has caused many societies in the world to face food shortages as well as limited water resources. This flow has provided the basis for migration from rural areas and smaller cities to urban areas and larger cities; That is, a phenomenon that has had a negative impact on the quality of urban life. Therefore, harmonizing demographic indicators with water and food resources, while leading to stability and social order, also improves life in various dimensions. Today, this situation is such that many young groups are forced to migrate from their homeland to other places to achieve social and food security. Today,

this phenomenon has caused many environmental problems, rising prices, housing shortages, transportation problems and many other insecurities in large urban areas.

Today, the difference between nations and populations that have easy access to adequate food, and those that do not have easy access to these resources, is itself a global issue. These restrictions have led to malnutrition in poor countries, shortages of calories, rising food prices, and, consequently, many shortages and diseases. At the same time, developed societies are facing the problems of poor countries in order to have a decent population, and a balance between population and fewer resources. This has caused the quality of life in various forms to be satisfactory and desirable; That is, what positively and sequentially affects later generations. In contrast, communities with limited water and food resources will face more or less unusual and undesirable generations in the future. Quality of life, in addition to being affected by family relationships, real income, job security, housing conditions, etc., is also affected by water and food resources today [5].

Method of Research

Methodology used in the present article is of qualitative type. In that, various paradigms have been used to find out about the facts regarding pandemics during the history. Qualitative research usually studies people, events or areas in their natural settings. In finding facts for the research, the researcher engaged in careful data collection and thoughtful analysis of what was relevant. In the documentary research applied for the present research, printed and written materials were widely regarded. The research was performed as a qualitative library-type in which the researcher had to refer to the relevant and related sources. In the current research, various documents were thoroughly investigated, and the needful inferences were made. The data fed by the investigator in the present article is hopefully reliable. Though literature on pandemics is very limited, yet the author tried to investigate many different resources in order to elicit the necessary information to build up the text.

Population growth and water resources

High-growth areas face serious issues of poverty, and low adaptability. The growth of the population causes the number of consumer populations to always increase. Current demographic indicators show that the world will have a population of more than 9 billion by 2050, 70% of whom will live in urban areas [6], which is a warning of the relationship between population and water resources. On the other hand, promoting population culture, population literacy, changing the lifestyle of the population and the like, each in turn, leads to greater use of resources. However, different resources do not increase in proportion to the population. The gap between the two leads to poverty and maladaptation. As a result, many high-growth countries today face many challenges in obtaining adequate food, safe water, and other necessities. The only way to respond to such challenges is to look at population planning;

That is, conditions in which the number of population is planned in proportion to other resources. Only then can a better quality of life be expected. Developed societies during the twentieth century, by creating such a proportion, have always improved their quality of life in various dimensions. While less developed societies have used less population policies; They are faced with a complex situation due to lack of food and water resources, employment resources and the like.

Likewise, increasing climate change does not predict the future of a proper losing system; That is, a situation that has adverse consequences for water scarcity. Following the general warming of the earth and the resulting changes, access to sufficient water resources in the coming years, as well as in the conditions of increasing population, poses potential threats to human life, especially in urban areas. Therefore, and according to the mentioned conditions, the current societies should pay enough attention to the preservation, maintenance, repair and improvement of their water resources. Otherwise, many threats await communities with high population growth. It is also worth noting that the new human settlement system has led to more per capita water consumption. Today, per capita water consumption in Iran alone (which is about 180 liters per person per day) has increased unprecedentedly in other societies. Therefore, various social sciences such as sociology and demography should pay special attention to this phenomenon. At the same time, the growing demand for water, given its limited reserves, has raised many concerns in North America and most of Asia [7]. Therefore, placing this scenario on the sociological agenda is of considerable importance.

Therefore, one of the leading ways is population planning; The number of population in urban and rural areas is the appropriate and frequent use (repeatedly) of water resources and the like. In order to prevent the threats and potential dangers posed by water scarcity, while pursuing demographic policies and the proper use of water resources, frequent use of water resources is also recommended. This method is used in many developed countries today, in which disposable water is re-treated, and enters the consumption circuit. In this way, the shortcomings related to water resources can be compensated to some extent. At the same time, creating a balance between urban and rural population, or in other words, maintaining a larger population in rural areas, itself leads to the optimal use of water resources, and consequently the quality of life in urban and rural areas as much as possible. Maintain or, in other words, upgrade. While competition for water is becoming increasingly fierce, these changes are making food production, including fish farming, more risky and more uncertain. In the absence of water resources, many food products face serious risks, and this in turn can make human life very dangerous in various places. It is also worth noting that the problems caused by population growth on the one hand, and the scarcity of water resources on the other hand, in many cases put different countries face to face; That is, many possible future wars will be solely for the use of water resources,

rivers, and the like. Therefore, one of the tasks of demography is to create a balance between population resources on the one hand, and water resources on the other. Otherwise, many of the weaker sections of society will face unforeseen risks; That is, what will negatively affect their quality of life.

The prospect of this situation is increasing social, economic and even political tensions within and between nations. Lack of water resources causes the population to move uncontrollably from low-water areas to other areas, which in turn has many social, economic and even political effects. Population density in one area leads to unemployment and consequent insecurity in another, and the like; That is, a situation that leads to marginalization, living with minimal facilities and, consequently, low quality of life. This is the case in many parts of Africa and some parts of Latin America, as well as parts of Asia. Therefore, demographic planners and social policymakers need to be policy-oriented and forward-looking so that the current population, as well as the future population, may face shortages of water resources. It should also be noted that food production itself depends on water resources; Many social and economic disorders can be predicted if the population is unpredictable and disproportionate to resources (water and agriculture).

In recent years, following rapid population growth, the prices of agricultural items and materials, food inputs, energy and the like have increased and fluctuated increasingly, and instability has spread to these communities, which in turn has led to new challenges. Where it comes to food security. Therefore, the weakness of demographic planning and lack of appropriate policies for population, has led to food insecurity, food shortages, rising prices and the like. Some developing countries, which in recent decades have pursued demographic policies, and have somehow taken steps to make the population more desirable, have faced fewer of these shortages, resulting in a kind of social and economic stability within these societies.

In fact, the era of low prices is over; It is a trend that has positively and negatively affected producers and consumers themselves. In the past, consumption patterns were usually different, and different population groups consumed fewer materials and products according to their time, in which circumstances less economic and social crises and crises appeared. Today, however, following the change in consumption patterns on the one hand, and the scarcity of water resources and agricultural products on the other hand, has led to rising prices for many products; That is, the current that has caused the economic crisis in general and globally. In this movement, many societies have faced a decline in living standards.

Increasing effect of water on food production

Utilization and utilization of limited resources in demand and unreliable water resources is an undeniable necessity [8]. The use of appropriate methods in the exploitation of water resources, which in general in recent years, following the increase in population, its

limitation has become more obvious and felt, can itself provide more guarantees in food production. Since the consumption of food and agriculture is always increasing in urban and rural areas, it is important to monitor its water resources more and more. Given the growing population of the world; That means more than 9 billion people in 2050, this increase will put serious pressure on resources; That is, the pressure that is currently under pressure and the current roadmap is under pressure. This increase in population itself raises the issue of global access to water and food [9], which leads to the distribution of food in critical situations, and consequently many cases of shortages and poverty can be prevented. This problem affects many developing countries today, especially in different parts of Africa and Asia. The result is a mismatch between water resources and population, lower standard of living, lower quality of life and characteristics of this kind, which in addition to affecting the present generation, also negatively affects the next generation.

In many discussions, it has been concluded that any increase in water productivity is related to how the irrigation system is more efficient, and given the increasing population and increasing consumption, this must be taken into account. For optimal use of water resources, the use of scientific and effective methods can be met while maintaining water resources to meet the growing consumption of food, agricultural products and other needs of the population. Developing countries and societies face this great challenge to a large extent; In a way that due to poor management of water resources on the one hand, and the uncontrolled increase of population on the other hand, many sources of food production in rural areas have been stopped and suspended. As a result, many rural and agricultural populations have migrated to urban areas; In such a way that its urban sprawl has provided the ground for a low quality of life in these areas; Like what we see today in many urban areas in Asia, Africa and Latin America.

In order to make the best use of water resources and subsequently meet food needs, investing in the necessary infrastructure such as dams, irrigation systems and proper distribution of the population is of considerable importance. Water resources planning, as well as investment in this field, guarantees more food production in a given community; That is, a process that itself leads to greater community health. Therefore, the improvement of irrigation system, water storage and proper distribution of population in urban and rural areas each in their place in providing more food and water security have an effective role. The sum of these conditions leads to a higher quality of life within a society. Otherwise, some types of migration from rural to urban and from one region to another will be witnessed by a target community; That is, a situation that leads to disorder in the social, economic, environmental, and other sectors. The social effects of adverse water use are many and can be evaluated. At the same time, the challenges posed by water are now being felt and touched by many of the world's population. For example, according to the World Health Organization and the United Nations Children's Fund, in 2011 about 2.5 billion people in

the world lacked access to sanitation, and 780 million people did not have access to safe water [10].

Such investments should have a favorable return on society; That means more cases of employment for every drop of water. Therefore, the improvement of water resources and the necessary investments in this sector will lead to greater economic efficiency and social health. More employment opportunities, increased food production, easy access to needed materials, and so on, each depend in turn on sufficient water resources. Otherwise, and as stated earlier, population movements occur unintentionally and unplanned. Also, recycling water in appropriate ways can lead to more exploitation of agricultural land.

A large part of the world's food production depends on how groundwater is exploited, which is itself unsustainable. This means that groundwater is always exposed to the threat of chemical contamination. Therefore, having a proper population and proper distribution of the population can itself contribute to the optimal use of groundwater resources. Such an event will lead to an increase in the utilization of agricultural resources. Today, unfortunately, many populous countries are not familiar enough with how to properly exploit groundwater resources. In many cases, even inadequate industrial development has caused many groundwater resources to be threatened with pollution.

The relationship between food production and human health

In order to produce food, its quantity and quality must always be considered. The ratio of population growth and the growing needs of this population, water supply, management and positive planning for it, is itself of considerable importance. In other words, human health itself depends on the provision of safe and sufficient water resources. In this way, the required nutrients can be provided in a desired community. Many high-growth countries today face constraints on water resources and consequent shortages of food production; It is a process that also endangers human health. This means that the quality of life in such societies does not have the opportunity to improve and is replaced by poverty and recession. Population growth and widespread use of water resources compared to past times and reuse of previously used water is itself of considerable importance. Following the continuous increase in population, the optimal use of water resources, reuse of water, as well as recycling of previously used water, can itself help meet water needs. Therefore, governments should always have adequate oversight and study of how to use their water resources. Otherwise, unforeseen crises await such communities. The reuse of water resources, in turn, makes it possible to make more use of agricultural land, and as a result, the rise in food prices is prevented. As a result, a kind of economic, social and demographic balance is provided. At the same time, one of the great problems facing the people of the world is reflected in the fact that: While one billion people suffer from malnutrition and malnutrition, one billion people in 2011 suffered from overweight and obesity [11,12].

Therefore, the attention of socio-demographic researchers to water resources and their optimal use, in general, creates more guarantees in food production; It is a process that promotes better health for citizens. In this way, the quality of life can also be improved. One of the new tasks of sociologists and demographers is to address natural resources, how to access more food resources, and adequate water resources within communities; That is, what was less considered in the past. Today, following the unprecedented increase in population, especially in less developed countries, any shortcoming in this area will lead to a decrease in quality of life and the resulting problems.

While in 2012 it was estimated that the world had enough food resources, and could well feed all its inhabitants, today, according to statistics, about one billion people in the world suffer from food shortages. While some two billion people in the world consume too much food, and waste a significant portion of the world's food, such challenges and contradictions are always in front of the population. The scenario itself requires further study, more accurate predictions, and interdisciplinary studies with an emphasis on less developed countries; In such a way that it can provide a kind of adjustment in food supply for the population in different parts of the world. Following the supply of food, the quality of life of different groups can also be improved.

It should be noted that food alone does not alleviate hunger, but up to 50% of the food problems of many populations in poor countries due to unhealthy water and inadequate health. The increase in population in many parts of the world has caused these areas, while facing a shortage of water resources, do not have adequate sanitation facilities. This in itself leads to a kind of cycle of poverty for this population; Like what is commonly seen in African countries today. In this type of society, different areas of poverty are generally transmitted from one generation to another. Changes in consumption patterns and lifestyles in the present age, which has led to more demand and more turn to livestock products, has put more pressure on resources such as land, food and water [13].

Water and food supply in the world is becoming urban

Urban areas serve as drivers of economic growth, and rely heavily on water, energy, and food to keep them growing. While urbanization is more prevalent today than ever before, and economic growth is largely due to these areas, providing adequate energy, adequate and healthy water resources, as well as adequate food are among the top needs of such cities. Because many cities in developing societies have not grown in proportion to these resources, many of the shortcomings and limitations in these urban areas are seen among different population groups. The mentioned sources themselves have caused many weaknesses and diseases for the citizens living in such cities. At the same time, in rural areas, the lack of water, energy and food resources is less felt; Because the rural population itself, while playing a role in its food production, water resources are also scattered and naturally available in these areas.

Many cities in developing countries face problems of water scarcity and food insecurity, and its major effects can be seen mainly on urban poor, especially women and children. While the complex relationship between water, food, and urban areas today seems risky and frightening in many parts of the world, establishing a better relationship between water resources and urban areas turns many issues into resources. This means that if there is a suitable population, especially in urban areas, this population can easily use the available water resources, and therefore can contribute to the exploitation of resources. In this way, the problems themselves become sources of production, exploitation and the like. Otherwise, urban challenges and problems are always increasing.

Demographic factors and water consumption

The powerful impact of the number of humans on the environment is becoming increasingly apparent. Population growth in its appropriate conditions has endangered the environment in various ways; That is, a situation that endangers the health of citizens. Demographic factors today have led to environmental, biophysical, economic, political, social and cultural changes. Therefore, in order to achieve the desired quality of life, demographic factors must always be corrected as much as possible; That is, unwanted births are prevented, and that in itself is prevented in the long run from physical movements or, in other words, geographical movements of the population. In this way, a healthy environment can be created in an urban area. Similarly, the physical, social and cultural conditions created in urban areas in its healthy form, lead to the physical and mental health of citizens; That is, a situation that will positively affect the next generation. Under such circumstances, the living conditions of individuals in general and in a positive way are affected.

Concerns about the effects of population on the environment, following the growth of global population, following the expansion of urban spaces, etc. are always increasing. Also, the relationship between demographic trends and natural resources has attracted the attention of many social researchers today. On the other hand, the uninterrupted increase in population has led to the water crisis in many communities, and will become more serious in the future. To address or control this dilemma, policymakers and academics need to be more involved. Therefore, social research in general can evaluate the current problems and problems and prevent their spread in the coming years.

Demographic factors and water reuse

Following the constant changes in population on the one hand, and the increasing effects of climate change on the other, sociologists of the population emphasize the depletion of water resources, followed by drought and food shortages. In such circumstances, there is a lot of emphasis on reusing water resources and desalination. Because demographic factors such as births and migration, as well as changing lifestyles, have increased the use of water resources more than ever before, water recycling, reuse, and

even desalination of seawater so that They used them, and thereby met their food and other water needs, which has been widely emphasized by sociologists, environmentalists, demographers, and the like. Water recycling in the above-mentioned ways is considered as a guarantor of food production. Population planners can address many of the challenges of food shortages by addressing the relationship between population and water. The use of water is not only for domestic and personal use, but also for water consumption in agriculture, food production and industry. Therefore, following the increase in population, water shortages become more and more apparent, and consequently food shortages, decline in agricultural production, and consequently increase in the price of these materials appear in a given society; That is, what affects people's health and quality of life. At the same time, one of the main goals of addressing population, water and food is to create more awareness among social researchers and thereby gain ideas through which problems related to water resources can be solved. Although social researchers do not have accurate and effective expertise in the field of water resources, at the same time achieving new demographic and social ideas such as population settlement in rural areas, optimal use of water resources, population control in proportion to natural resources and the like. It is one of the measures that can only be taken by social researchers. In this way, the relationship between population and water resources can be kept proportionate.

Urban development and water / food resources

Following the uninterrupted growth of urbanization and the emergence of large cities, efforts to make optimal use of energy resources and water recycling seem necessary and inevitable. While today, especially in developing countries, the annual urban growth is between 1 and 4% (especially in Africa), the use of new and progressive plans in the exploitation of water resources is widely recommended by demographic and social experts. It turns out. Reusing and recycling your water can be recommended as an effective solution.

Monitoring the use of urban water, industrial water, water use in the urban environment and the like, is of great importance. Due to the population density in urban areas, the creation and maintenance of green spaces, parks and natural resources is very effective in the mental and physical health of young people. Therefore, today's cities, as far as the use of water resources is concerned, should always be monitored, and the necessary investments in various water-related dimensions should be applied to such cities. Finally, the increasing scarcity of water resources following demographic change, climate change and urbanization is possible through the optimal management of water resources and linking demographic indicators with water resources. Therefore, and based on what has been proposed, the first and simplest thing that can help preserve water resources is to control and regulate the urban population. In addition, despite restrictions on water and food resources, the amount of food lost is currently unprecedented; In some cases between 30-50% of annual food production is wasted [14].

Conclusion

High population-growth areas face serious issues of poverty, and low adaptability. The growth of population causes a number of problems including shortage of food and water. Increase of population also leads to migration especially to cities. This trend will even continue in the years to come. The given issue will largely happen to Africa where 40% of its population is under the age of 15 at present. The high population-growth not only affects those countries concerned, but other countries are affected too. Shortage of food and water pushes many people to industrial countries through which socio-economic tranquility is widely affected, environment is degraded and many more. To solve such emerging problems, the developing countries need to project and plan their population. Only then can a better quality of life be expected. Likewise, the increasing climate change must be kept in mind, and food planning be on the agenda accordingly, and if not, more hazards must be expected.

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Conflict of Interest

No conflict of interest.

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