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Triangle of Environment, Water and Energy: A Sociological Appraisal

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ABSTRACT

Modern sociology has a special look at the three associated variables of environment, water and energy. The three variables are not in a harmonial state in many parts of the globe. Some have access to two, or not sufficient to one. Only a few countries are in an equilibrium state of the three. For example, many African countries are in short fall of water and energy. What sociologists suggest is to bring about resources enough as far as the three parts are concerned. In the past, the threefold relationship was less considered and measured, but currently with the heavy weight of population over 7.8 billion world over (WPDS, 2020), balance between the three is inevitable. While population all over the world has increased considerably, water resources have not increased in the same way. Moreover, in the past, population dependency on energy was not that much. But, in the industrial age of today, man is highly in need of energy of different types to maintain life. However, waste and wastewater have become problematic in current age and in most parts of the world. The emerging situation is polluting environment, seas and water streams. It is more observable in less developed world than the developed world. Therefore, the water and energy crisis is wide and ongoing. It is discussed elaborately in the present article. However, national security could be accessible only if water-energy policies are there (Bauer et el. 2014).

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Introduction

The threefold relationship of environment, water and energy is very important from a sociological point of view. Although in the past these three variables were less considered, and their relationship with each other has been less measured, at the same time, following the comprehensive development of modern societies, the tripartite relationship of these variables is inevitable today. To have a healthy environment, enough water resources and enough energy, you must always invest in it.

While energy is highly dependent on water, the supply and transfer of water, and the disposal and transfer of wastewater also require energy. Therefore, water and energy, while being necessary for each other, also ensure the health and safety of individuals. Existence of lakes, dams and other similar sources generate energy through and with the power of these elements. At the same time, energy itself transports water resources from one region to another. It also happens with the energy power of the waste disposal system or system. Otherwise, the health of individuals and the health of society in general will face irreparable risks. In the past, when such facilities were less available, many health problems arose that eventually led to an increase in mortality. Therefore, in order to have a healthy environment, providing water and energy resources is very vital and inevitable. Likewise, drinking water itself needs energy for purification and purification operations, and re-pumping to consumers. This means that any interaction regarding the sanitation of water, its purification, its displacement, etc., is itself highly dependent on energy. These conditions ultimately lead to greater well-being, health and security. While developed societies have more or less achieved these possibilities over the last century or so, non-industrial societies have recently been able to implement such schemes; That is, a strategy that leads to better health for them. Where there is a shortage of clean drinking water, and water has to be transported over long distances, having energy is extremely important. Countries generally do not have the same amount of water resources for different uses. As a result, in many cases they have to move water from long distances to other places. This kind of movement requires sufficient and sustainable energy, and this makes agricultural exploitation, agricultural prosperity, access to more resources and products, and the like, more practical and achievable. One of the most significant challenges in this regard is within African countries; That is, areas that are generally short of energy, and the aforementioned losses have made it

impossible for such communities to make good use of their potential resources (agricultural land); As a result, poverty and scarcity are widespread in such societies.

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.

Energy and water

Many of the problems of the society will be reduced if all the people of a society have adequate access to energy and water. It means the safety of water for drinking and sanitary consumption (UNDP: 2015). Access to water and energy also greatly contributes to improving the quality of life. At the same time, access to these resources greatly contributes to the health of the environment, its preservation and maintenance. Today, many less developed communities face increasing population, population density, and mass migration to urban areas. They face water and energy constraints. This has caused the environment to be directly and indirectly affected, and in a negative way. Overpopulation in urban areas, on the one hand, and water scarcity, on the other, put many green space resources at risk of extinction. Therefore, urban environmental planners must always adjust and consider the relocation and resettlement of the population in accordance with water and energy resources.

This statement can be applied to all human societies, and it means that energy and water are inseparable. For example, energy is inevitably needed to cool biofuels (hydropower) or water-based power plants, and so on, to access water sources or safe water. In other words, to transfer water from one area to another, or to pump water for change or desalination, we need sufficient and appropriate energy. Therefore, countries should always pay enough attention to these two sources in their planning path. However, many traditional water sources such as springs, aqueducts and the like are being destroyed in many communities. Likewise, following the general warming of the earth, water scarcity is felt more than ever in different communities. On the other hand, following the consumption of more and more population, the need for water directly and indirectly is always increasing. Given this scenario, environmental planners must always take new practical measures to meet the growing needs of their citizens.

From a sociological point of view, basic human needs cannot be met without energy and water. That is, it provided food for the growing population, and sustained economic growth. Many societies today need more food, even than in previous years. In other words, more per capita should be considered for them in terms of food, services, agricultural resources and the like. This means that as the quality of life improves, so does the expectation of consumption. In such circumstances, the community in question needs more water resources. While many societies are in such a situation. Future consumption needs are less predictable. Rising prices for food and consumables around the world in recent years are evidence of this claim. That is, many societies around the world over the past decades have not paid attention to the current years (decades) of the 21st century.

At the same time (today) (1.3 billion) 1.3 billion people in the world do not have access to electricity, and about 800 million people get their water from unhealthy sources. These conditions lead to many diseases, health problems, personal and social threats and other deprivations. Therefore, considering the natural trend of population growth, which is generally 2% per year or more in developing countries, the forecast and increase of water and energy resources is of crucial importance. As noted, nearly one-seventh of the world's population is now forced to use polluted water resources, which threatens the health of current and even future generations. Therefore, environmental sociologists must always measure and predict population growth index and water resources index together. Many African countries today are in such a situation. That is, a situation whose unhealthy conditions can be transferred to other communities.
It's about the same billion people suffering from poverty, hunger and deprivation, and over the next thirty years the demand for food and energy will increase at an unprecedented rate. However, a high proportion of the population, or in other words one-seventh of the world's population, faces food deprivation. While by 2050 the world population will increase from the current 7.2 billion (2013) to more than 9.2 billion, during this time the expectations of individuals, their way of life and the different needs of citizens in different societies will also increase. . These conditions will further exacerbate food and energy problems. Therefore, social planners should distribute their urban and rural population in proportion to their water and energy resources. If more population pressure is applied to urban areas, it will put additional pressure on water and energy resources.

However, many human societies today still rely on the same water resources to sustain their lives, economic growth and their environment. In a situation where the share of the population is increasing, effective and productive sources of agricultural and food production. That is, water and energy resources must also increase, otherwise many products. Food production, agricultural production and the like are more or less failing. Under such circumstances, more migration will inevitably occur, which in itself has a negative impact on the environment. This trend is

more related to less developed countries than industrialized and developed countries.

Improving communities and ecosystems

Putting water and energy on the agenda (from a systemic point of view). How it was developed and managed must be pursued at the local, national, regional and global levels. Water and energy as two influential and vital factors today should be regularly included in development plans, sufficient budgets should be allocated to them, and as mentioned, they should be pursued at different levels and in a participatory manner. In this way, water and energy supply can be achieved to some extent. Likewise, specialized departments, in partnership with other institutions, must make the necessary predictions in proportion to time and place.

Therefore, water, energy and food supply will play a central role in the importance and environmental health of communities. Due to increasing population, urban population density, population growth, and changing lifestyles, the need for water, energy and food is felt more than ever in the past. Today, however, a significant portion of the world's population cannot easily meet these needs. Therefore, countries, both independently and in partnership with other communities, must meet the growing needs for water, energy and food as much as possible. In this way, the quality of life in these communities also improves. Many Third World countries, and African countries in general, face severe restrictions in the water, energy and food sectors.

The issue of energy and water in general is important in two ways. That is, in terms of the opportunities and challenges of society, and the elimination of many of the growing needs in different societies. Water and energy, while creating opportunities, on the other hand, and in conditions of scarcity or scarcity, water inevitably brings challenges and limitations. Opportunities mean that in the conditions of having sufficient water and energy, economic-agricultural development takes place in its desired form. That is, a movement that itself provides more added value. With the opportunity in question, this situation will lead to more investment, more income, and ultimately more per capita GDP. That is, what leads to an improvement in the quality of life. Few countries have achieved this today. However, many developing societies today and in the years to come will face a water and energy crisis. The problem itself requires more studies, more investment and more international cooperation.

Population, economy and energy and water demand

The production and use of energy and water in its national form is a significant necessity in order to meet the basic needs and develop opportunities for the people. Energy supply means access to clean, reliable and revenue-generating energy services for cooking, heating, lighting, communications and productive uses (United Nations: 2010). The supply of water resources and the production of energy required due to the growing needs, today is the first level of importance in different countries. The provision of these resources in its national and global form must be considered, otherwise uncontrolled migration from places without water and energy to other places will inevitably take place. That is, the flow that ultimately leads to environmental problems in various forms. This process leads to housing constraints, transportation problems, and many socio-economic disadvantages. Therefore, social planners, environmental sociologists, and economists must always have adequate oversight and effective forecasting in the water and energy sectors. Water and energy themselves provide food security. It means providing and accessing adequate, healthy and nutritious food that meets the daily nutritional needs and nutritional preferences for a healthy and active life (FAO: 1996).

In any case, both energy and water cross national borders in some cases, thereby facilitating international cooperation. Today, following the need of countries for these two factors, new relations have emerged between countries. Whereas in the distant past, water currents flowed easily from one country to another, today for this movement. Contracts and treaties are concluded. Similarly, while countries today need more energy (for example, electricity), cooperation and areas of trade and transmission of electricity between countries are taking place. In this way, the fields of economic cooperation between countries have increased. That is, it provides conditions that improve agriculture, improve the environment, and provide more food, and so on. Cooperation between neighbors in this way provides benefits sharing, profitability, access to more food and water-related products. As the population of countries has increased in recent decades, and on the other hand, the need for food has increased, this has made the connection between countries more and more in terms of water and energy transmission. Is. Improved global water, energy and food supply conditions can be achieved through a cohesive policy. It means adopting a method in terms of management and administration, integrated in all sections and scales (WWF Retrieved).

At the international level, ongoing crises such as energy, food, financial issues, and the like indicate systemic interdependence. If the needs related to the mentioned indicators such as energy, water and food are not met in an adequate level, the society will face various crises. Under such circumstances, the standard of living declines. That is, comfort, access to the required material goods, income, employment, domestic products, and inflation are all affected by the declining trend in living standards (Retrieved: 2011). For example, in the absence of energy and water, many villagers migrate to urban areas. That is, a movement that itself leads to crises such as environmental pollution, transportation, population density, destruction of the urban environment and the like. Such crises also lead to greater challenges to personal and social health.

Therefore, the water and energy crisis poses many and ongoing challenges. Sociologists in general and environmental sociologists in particular evaluate and predict these conditions. Developing countries face serious challenges in achieving their Millennium Development Goals by 2015, and their close and intimate relationships with water, energy and food need to be re-

examined to achieve the Millennium Development Goals. Developing countries must always anticipate their coming years by turning to water and energy resources. That is, such facilities that lead to the provision of food. However, such countries face unforeseen challenges and problems due to their increasing population on the one hand, and their extensive migration to urban areas on the other hand. Sociologists have always advised that greater individual and social health be achieved through access to adequate sources of water and energy, otherwise there will be many challenges in the lives of different strata. Likewise, the emergence of new injuries endangers individual and social health in various forms.

Energy and water balance

Energy and water are two important factors in urban development. Any industrial development and access to more industrial products, and more processing itself requires more energy and water resources. In the absence of these two sources, urban communities are largely exposed to economic stagnation, unemployment, and consequently economic inflation. This also leads to a decline in quality of life. Therefore, in proportion to the capacities related to their water and energy resources, they should welcome urban development. Today, many developing communities are facing this problem (restrictions on water and energy resources) in urban areas due to the general increase in their population, and migration from rural to urban areas.

Fast-growing cities are heavily dependent on energy and water supply. But at the same time, they must reduce water demand, manage relevant trade, and make good use of their water resources. That is, through the reuse of water, the recycling of water and the production of energy from waste and the like. In a coherent and coordinated manner for industrial development, the use and reuse of energy and water is essential, in order to increase scarce resources and save costs. That is, during the production and management of waste, the motivation for social-environmental responsibility should be strengthened as much as possible through sustainable production. The relationship between energy and water is not only quantitative, but also water quality, water pollution, water pollution and the like must be considered. Different countries and societies, given their growing needs on the one hand, and the scarcity of water resources on the other hand, must always make multiple uses of the available water resources. It means recycling a lot of used water and reusing it in other fields and the like. Otherwise, the limitation and shortage of water resources will lead to food shortages. Therefore, continuous monitoring of its water resources to a large extent ensures the health and quality of life in urban and rural areas as much as possible. The connection between water and energy is inseparable, especially in urban areas. That is, city life depends on these two elements (Sustainca: 2015).

Disseminate information on water and energy

Access to information and dissemination of data in the field of energy and water resources, or in other words, management of water resources, etc., is itself a major challenge in most societies today. Many countries, especially in less developed societies, do not have enough information about their water resources, water needs, future water resources, and water management in general. Therefore, based on estimates, such communities will sooner or later face challenges and problems due to water shortages. Therefore, from the sociological point of view of the environment, these communities should prioritize studies and information gathering in this regard as part of their plans, given the increase in their population and water consumption. Green infrastructure facilities, and nature conservation, provide significant services in protecting communities from floods and overheating, dust control, etc. It means strengthening green infrastructure (Benedict: 1947). The complexity of energy and water development decisions often requires some kind of modeling (or hybrid model), based on which an integrated support system is developed and maintained. To meet their water needs, countries must use newer and more advanced methods and models. Likewise, the link between less developed and more developed countries, in order to benefit from their experiences, can itself help in making decisions about energy and water development in less developed societies. Otherwise, the scope of the crisis will expand further in the coming years. Such developments include water and energy economics, their ecological impacts, social criteria, and economic tools that can be measured through choices. In other words, calculating and measuring their water and energy resources as effective methods help these countries in providing water resources. In general, today water and energy resources in its scientific form should be evaluated, measured and predicted.

The bridge between science, politics and people

Dialogue or science, politics and people in the field of energy and water based on knowledge and education (literacy), indicates that energy and water need improvement and development. That is, effective efforts must be made in this regard. Innovations in technology, management and the like. In this way, a bridge between science, politics and people can be created. By creating such a tripartite relationship, energy and water resources can be fundamentally managed. At the same time, science and technology must be aligned with, and aligned with, energy and water policy.Otherwise, the challenges and shortcomings of energy and water constraints will become more and more widespread. In a situation where the global population has increased to more than 7.2 billion people today, and at the same time social, economic, service and similar needs have increased more than ever in the past, the use of science and technology to Providing as much energy and water as possible is inevitable. This connection can also be explained by the fact that human beings are inseparable from nature. As any damage to nature by man, man himself is subsequently harmed (Rights of Mother Earth: 2011).

As far as developing countries are concerned, such efforts should be made to expand capacities at all levels. By creating such connections or putting them on the agenda, the necessary coordination between the environment, water and energy is

achieved. Therefore, capacity building at different levels, including urban and rural areas, industrial and agricultural capacity, human capacity, both men and women, each play a role in providing resources related to water, energy and a healthy environment.

Conclusion

Sociologically speaking, basic human needs cannot be met without energy and water. Currently, over 1.3 billion people in the world do not have access to electricity, and over 800 million people get their water from unhealthy sources. Such conditions lead to many diseases, health problems, personal and social threats, and other deprivations. As noted earlier, one-seventh of world's population is currently forced to use polluted water resources which threatens the health of generations. Therefore, environmental sociologists must always measure and predict the population growth index and water resources index together. However, many human societies still rely on the same water resources to sustain their lives, their economic growth and their environment. Water and energy as two influential and vital factors should be regularly included in development plans, and sufficient budgets need to be allocated to them. Eventually, it must be noted that water, energy and food supply play a central role in the environmental health of communities.

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