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Water Deficiency and International Relations: A Geographical Study

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ABSTRACT

This paper attempts to assess the position of several countries in water-stressed areas. It also assesses the population and water relationship on a global scale, as well as water management techniques. Hundreds of millions of people around the world lack appropriate access to one of life's most basic necessities: clean water. Despite the fact that governments and humanitarian organizations have assisted people living water-stressed places in recent years in gaining access, the situation is expected to worsen as a result of the detrimental consequences of global warming and population expansion.

Water stress varies greatly from place to location, and in some situations, it can have far-reaching consequences for public health, economic development, and global trade. It has the potential to cause widespread migration and violence. Pressure is rising on governments to adopt more sustainable and creative practices, as well as to increase international water management cooperation.

Keywords:- Water Deficiency, Water Stress, Water management, Sustainable Development etc.

Introduction:-

Water is essential for life and livelihoods, as well as for long-term development. Many of the 17 Sustainable Development Goals will be achieved with the help of effective management. Water is a renewable resource, yet its supply is finite and unpredictable. Water shortages affect nearly every country in the world at different periods of the year (Gleick 1993a), and more than 80 countries presently have severe water constraints (Falkenmark & Lindh 1993). Furthermore, pollution, erosion and run-off, as well as salinization linked with migration, as well as general wasteful water usage, all contribute to the depletion of water resources. Water supplies are plentiful globally, but they are highly unequally allocated among and within countries. Water withdrawals in some locations are so high in comparison to supply that surface water resources are literally diminishing, and groundwater reserves are being exhausted faster than precipitation can restore them. Deforestation on a large scale in the subtropics, particularly in monsoon areas, and overgrazing in semi-arid areas have made them extremely vulnerable to droughts and floods. The bigger areas of Gujrat, Rajasthan, Madhyapradesh, Andhrapradesh, Orrisa, Haryana, and Maharashtra in India experienced a severe drought from April to June in the year 2000. Every two years, a drought grips the Sahel region of Africa, as well as the majority of the world's semi-arid regions.

According to a 1977 UNO survey, about 33% of the world's population lives in nations with moderate to severe water scarcity. Agriculture's use of water is expected to rise as global food demand rises. Agriculture now uses nearly 70% of the world's water, and the United Nations predicts a 50 percent to 100 percent rise in irrigation water use by 2025. Water scarcity can thus be mitigated by better management of water resources. Water is a scarce resource on the planet, but it is thankfully renewable and recyclable. The primary goal of water resource management is to maintain a balanced water budget, assuring adequate quality and quantity at a given time and location. Because natural climatic processes do not always achieve the necessary balance locally, several approaches for controlling one or more phases of hydrological systems have been developed or proposed. Because groundwater is recharged from surface water supplies, when surface water is polluted, groundwater becomes contaminated as well.

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Supply and usage of water:-

Humanity has access to around 11 trillion cubic meters of freshwater. Over 95% of this water lies in underground aquifers, with the remaining 5% coming from rain, rivers, and lakes. For every person on the earth, there is approximately 1700 m3 of water, which is an alarmingly low quantity. A region with fewer than 1700 m3 per inhabitant is considered "water strained" according to the water stress index. The world's water supply is not distributed uniformly across the globe, nor is water available at all times of the year. Many parts of the world lack adequate water supplies, and many locations with high annual averages undergo alternating drought and monsoon seasons. Water consumption varies greatly between developing and industrialized countries; developing countries use 90% of their water for agricultural, 5% for industry, and 5% for urban areas. Agriculture receives 45 percent, industry receives 45 percent, and urban regions receive 10 percent in developed countries.

Increasing Demand:-

Agriculture is the world's largest consumer of freshwater resources, accounting for 70% of worldwide consumption. Because of access to groundwater aquifers, irrigation uses the majority of water in the agriculture sector and has become a vital aspect of modern civilisation. Highly effective commercial farming became more common as farmers were no longer reliant on rain to water their crops. The green revolution was also based on this concept. In the 1960s, this greatly expanded crop production throughout the Third World. Unfortunately, many of these aquifers are being depleted faster than they are replenished**.**

Industrialization and Water Pollution:-

Pollution has always accompanied modernity. Water contamination is a severe concern in emerging countries that are just entering the industrial age. "In developing nations, waterways down streams from major towns are scarcely cleaner than open sewers," according to the UNEP.
According to the UNEP, 1.2 billion people are afflicted by filthy water, and dirty water is responsible for 15 million infant deaths per year. In recent years, experts have become more aware of the issues associated with groundwater contamination**.**

Objectives of The Research:

Main objectives of the study are as follows:

- To study water level changes that have occurred in the national as well as international ,
- To establish the causes of these changes in these area,
- To analyze the socio- economic impact on water use ,
- To find out available water deficiency and improve water sustainability in study area,
- To verify the water conservation programs and policies of government and NGO's ,
- To find out problems and its solutions with their problems.

Methodology: -

A collection of ideas and practices through which aims and objectives are recognized is referred to as methodology. It's a technique for proving theories. The various countries have been used in this analysis.
The volume of change over the study period was noted and analyzed using a table. Pie, bar, and line graphs are examples of graphs. The statistical data and its fluctuation during the study period were represented by divided circles. With the use of cartographic software, maps were created to depict the distribution of various units. Wherever possible, GIS and remote sensing techniques are utilised. Field activities will be conducted in order to acquire the represented samples for the intended study.

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Global Warming and Climate Change:-

Global Warming and Climate Change: Increasing atmospheric pollution is causing an ever-increasing rise in the earth's temperature. This pollution is caused by rising gasoline and diesel usage, as well as soil erosion caused by forest and mountain removal. It is feared that it would result in climate change, polar ice melting, and a rise in sea level as a result.

Agriculture:-

The major argument here is that farmers may be more concerned with survival and hence opt to produce or pay more attention to food crops than the scheme or program's income crops. The government is concerned with marketable excess and, possibly, the smooth operation of the system. In this "social arena," other considerations come into play. Harris (Harris, 1976)**.**

Causes of Conflicts:-

Conflicts can emerge when communal water resources are used. It would be useful to distinguish between conflict resulting from use and conflict arising from pollution in order to better comprehend such conflicts. The development of a power station on the river's upper channel, for example, could cause a utilization dispute. When this construction has negative repercussions for lower-lying states, such as polluted waste water, the likelihood of conflict grows.
When lower-lying states refuse to allow such construction because of concerns about, say, water shortages, the problem becomes even worse. This may include a situation where a dam is built on the upper course of a river to serve not just energy demands but also massive irrigational projects in lower-lying states, threatening to stop the flow of water. There are contentious costs in the first two scenarios that can be modified to reach an agreement. In the case of a distributional conflict, we have a different scenario in which a settlement is only conceivable if the privileged state decides to give up some of its benefits**.**

Conflicts over Water:-

Conflict is viewed as a form of social interaction, a battle over claims to scarce resources, according to traditional conflict theory (Coser 1966, Boulding 1962, Simmel 1955). Conflict is commonly thought of as being distinct from competition, and it has numerous cognitive layers.
A constant condition of competition, such as when all creatures rely on water, is not always conscious, and is thus referred to as meta-conflict or indirect conflict. Direct conflict, often known as "actual conflict," is a conscious process in which parties believe they are at odds with one another over a resource. Conflict can be foreseen, and some of the information below relates to probable conflict locations. Conflict can be viewed from a variety of perspectives. We have chosen a hierarchical organization of the types of conflicts we will address for our purposes, ranging from international conflicts to local conflicts**.**

Conflicts Over International Rivers:-

According to the United Nations Environment Programme (UNEP), there are 263 rivers in the globe that cross or designate international borders. The basins fed by these rivers contribute for 60% of the world's freshwater above ground. There is no international legislation on 158 of these 263 rivers, and many of them are a cause of dispute. Water has been a major issue in the Arab-Israeli conflict. The six-day war, according to Ariel Sharon, began the day Israel prevented Syria from diverting the Jordan River in 1964. Egypt's military came dangerously close to mounting a coup against Egyptian president Anwar Sadat, who had suggested diverting some of the Nile's water to Israel as part of a peace proposal.
The Nile River, which flows through Ethiopia, Sudan, and Egypt, is a prime example of future water conflicts. The Nile River's banks are home to one of the world's most densely populated locations. The number of people who rely on the Nile could treble in the next fifty years, causing a significant water crisis in the region. The Nile is not governed by international treaties, and Egypt would not hesitate to use military force to ensure its continued access to water. The Mekong River is the lifeblood of South East Asia, but it begins in one of the most water impoverished countries on Earth: China. The Indus River separates Pakistan and India, and Indian farmers have one of the highest rates of aquifer depletion in the world. Water consumption on their shared border has already strained relations between the United States and Mexico. The Niger River basin spans five countries in West Central Africa. Increasing population and declining rainfall in the region pose a severe threat to millions of people's water security.
If Canada and the United States, for example, had obeyed the 1909 boundary waters treaty, which stated in article IV that boundary waters (waters flowing across a border) shall not be contaminated on either side to the detriment of the other's health or property. In these waters, today's water pollution problem would have been non-existent (Utton 1978)

Need of International Code of Conduct:-

Adequate means of persuading governments to act in accordance with the equitable sharing concept must be found. Even if the message is mostly delivered by river basin commissions. They must be backed up by some kind of international assistance. As a result, a global advisory body is clearly required. To assume worldwide leadership by providing counsel, constructing a code of behavior that would persuade nations to follow the principle of equitable sharing in the long run, and assisting in the clarification of its consequences in various situations. Research is desperately needed in the realm of shared water resources. Considering the basic attitudes represented in today's society in the realm of shared water resources, persuasion might be expected to be a lengthy process. As a result, the government's possible viewpoints must be examined. In order to create new types of incentives and disincentives, a lot of creativity is required. It is necessary to find strategies for governments to take a more open-minded approach to their decisions**.**

Conclusions :-

Conclusions made after doing such research. Facts and issues set out with take in consideration collected data and suggestions also made on the problems which found while doing research to overcome it as solution. The notion that water is plentiful-it covers 70% of the planet- is false, as only 2.5% of all water is freshwater. This limited resource will need to support a projected population of 9.7 billion in 2050.The world population is predicted to grow from 6.9 billion in 2010 to 8.3 billion in 2030 and to 9.1 billion in 2050 by 2030. food demand is predicted to increase by 50 %. it is not just population that is pressuring water resources. Excessive use is also evident; the global population tripled in the 21st century, but the use of water increased six-fold. Between now and 2050, water demands are expected to increase by 400% by manufacturing, and by 130% from household use. The main challenge facing the agriculture sector is not so much growing 70% more food in 40 years, but making 70% more food available on the plate. The way that water is managed in agriculture has caused wide scale changes in ecosystems and undermined the provision of a wide range of ecosystem services. The external cost of he damage to people and ecosystems and clean up processes, from the agriculture sector is significant. In the united States of America, for instance the estimated cost is US $ 9-20 billion per year.

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