

SUSTAINABILITY WITH RESPECT TO WATER AND ATMOSPHERE: THE WORLD AND THE INDIAN PERSPECTIVE

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Abstract

Sustainability has been one of the mainly spoken and most emphasised topics among the global political elites as it ensures the sustenance of the future generations be it clean air, fresh water or food sustainability. The steps taken towards sustenance now will be for the greater good of the future of mankind. Sustenance in itself is the ability of a producing factor to be able to use and re-use. Water management has been handled in Israel in an efficient and constructive way which can be followed by world countries for a water sustainable future. The environmentalists consider this to be a marvel of our times. Atmospheric pollution has been one of the main concerns of this era where industrialization has taken a fast phase where the economies race each other. It is necessary to gear up new policies and award the companies that follow those regulations. India has failed to create awareness on the sustainment development field. There is a need to sustain the resources that we have left. Hence, the government has to revise its present policies and regulations and make them neutral better policies which will have long-lasting effects. This paper deals with the current trends, necessary developments, government regulations and about the affirmative actions necessary to fix the previously done environmental damages.

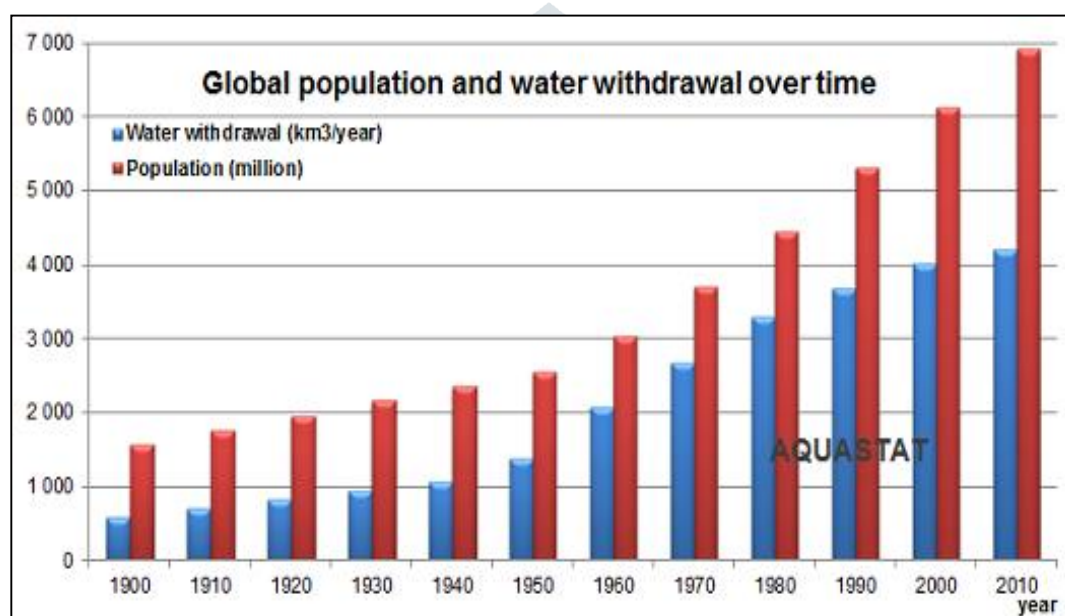
Key words: Sustainability, water management, environmental sustainability, food sustainability, etc.

1. Introduction

Mankind has started to suffer for their previous mistakes as we stand at this rendezvous point of the future and the past we have an opportunity to make amends for the mistakes of our predecessors and help the future generations and put them on the path to a sustained future. The water and the atmosphere are the first hit and most affected and the most valuable resource for the life on earth as they are the most needed elements for the life on earth. Water and atmosphere need to be conserved and sustained for the sustenance of the living organisms. While they are a necessary, the industries pollute them the most and combating this trespassing is important and inculcating a sense of sustainability to the corporate class and improving the regulations to these companies might look expensive at the point but will help the future to be sustainable. Working towards these goals will sustain the resources thereby sustaining ourselves.

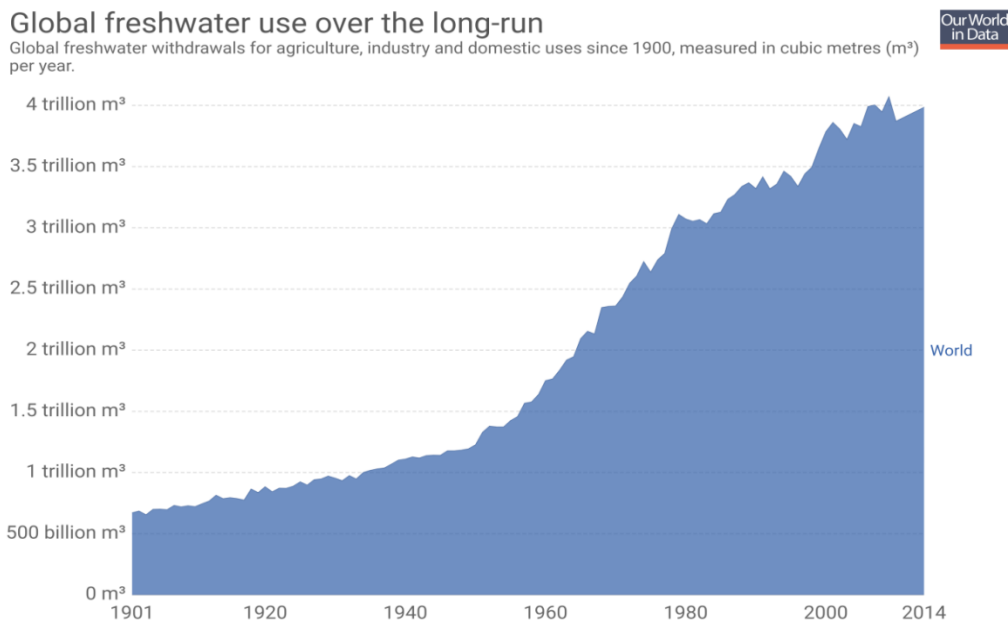
2. Water sustainability

Water sustainability came to light in the 20th century when the world population tripled itself and water consumption increased many folds which alarmed the nations to make and execute certain policies which proved fruitful in the recent years. United Nations World Development Report states that industries consume more than 20 per cent of the total water used that is why their contribution towards sustainable development is a major part the installing of wastewater recycling must be a norm to start manufacturing. The period of 1981-90 saw an increase in interests of countries towards the sustainable development which paved way for the affordable drinking water for 80 per cent of the world population and gave clean sanitation for 50 per cent of the world population. But not much has been done after that period in the developing countries.



Source: Food and Agriculture Organisation of the United Nations.

With the intercepted data from the United Nations World Development Report, agriculture related water withdrawals accounts to 50 per cent of the water consumption that is why implementing new methods of water transmission in farming hold the key to half the water management. According to UN, one in five of the world's total population doesn't have access for clean safe drinking water. Fragmented approach towards rainwater collection and ground water management is an obstacle for both, as one is dependent on the other. Setting up a single organisation to deal with the both will make a bigger change as a systematic approach is a better way to organise towards the sustainable development goal. According to the International Fund for Agriculture Development, withdrawal of water in the developing countries is predicted to increase more than 45 per cent and the withdrawal of water in the developed countries is predicted to increase by 17 per cent with the water sources drying up water conservation becomes the life line of the countries and contributing towards the sustainable development will provide for the population in the decades to come.



Source: Global International Geosphere-Biosphere Programme

As the information from the Global International Geosphere, Biosphere Programme, world water needs quadrupled itself in the recent years. It is a necessity to make plans and execute as the water needs will just grow along with the population growth. In recent years, the sanitary need of 50 per cent of the world has not yet been fulfilled. EPA United States says that the need to conserve groundwater is great as 30 per cent of the fresh water source is groundwater. With the lack of water accessibility, it is estimated over 780 million people lack access to improved water source in accordance with WHO/UNICEF Joint Monitoring Program. With the growing needs of water, it is expected that two-third of the world's population will face water scarcity by 2025 according to the United Nations Organisation. The state of the developing countries is serious and it requires the attention of the international community as it is recorded that an estimated 200 children die every hour because of unsafe water conditions and UN health data shows that 80 per cent of the sickness accounts to unclean water in the continent of Africa alone. 85 per cent of the people live on the driest parts with little to no access to safe and clean water sources. It is expected that conflicts between nations will arise in the near future which will attribute to the water needs and for the rights over river waters. It is wise to make preparations for such circumstances and invest in the sustainable water development.

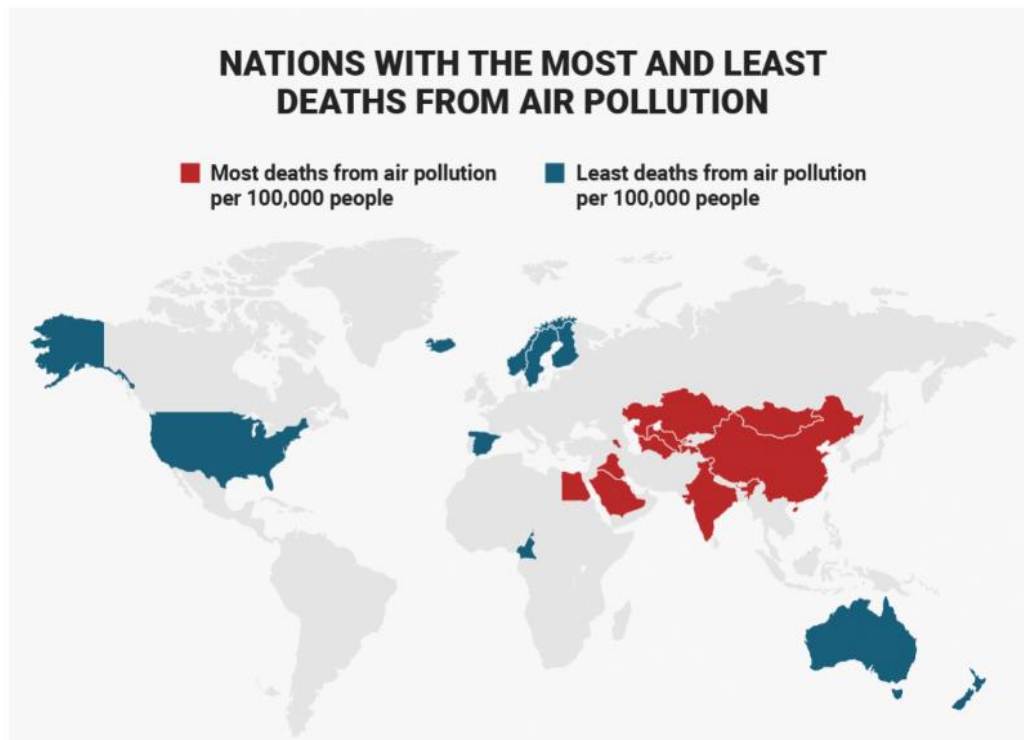
3. Israel - World leader in water management

Israel is the world's leader in water sustainability has a complicated water management system. The country's population quadrupled since its creation in 1948, much of the conventional water systems available at present for Israel were not available before 2009. Israel suffered long-term drought during 1998-2002 which alarmed the government to make initiatives towards the sea water desalination which reportedly supplies 35 per cent of drinking water to Israel and is expected to supply more than 60 per cent of drinking water to Israeli cities by 2050. A decade before the formation of the state of Israel the Mekorot was created which wanted to unite the rivers which were available within the borders of Israel. The many disputes that Israel had with its neighbours was an obstacle to realise that, so in 2009 after the

drought, Israel started water recycling which now accounts to about 90 per cent of the waste water being reused which made it the top country in terms of waste water recycled followed by Spain which recycles 20 per cent of its waste water. Waste water treated is mainly being used for agriculture with 10 per cent for environmental purposes and with 5 per cent being discharged in the sea. Israel now has a national water surplus which it supplies to its neighbours. With the nation construction its 6th desalination plant following Tel-Aviv and Jerusalem, scope of water sustainability is high and Israel has the potential to lead the nations towards a water sustainable world.

4. Atmospheric Pollution – 19th Century

The atmosphere contains air without which living organisms cannot survive. It contains green house gases which keep the planet warmer, sustaining life on earth by maintaining average global temperature above freezing point. It is imperative that we address the problem of air pollution and it is important to sustain it so as to prevent the extinction of mankind. Not working towards the sustainability of air will affect the people from local to global scale. The problems of air pollution and the effects related to it are not a new phenomenon. The first occurrence of air pollution and its related hazards were recorded in the early 13th century when coal was used as a daily fuel in London. During the 19th century for the first time air pollution at an alarming amount was recorded in all the major industrial cities which started to cause new medical problems for the people in those cities. The smoke discharged gave rise to a new problem called the smog in the winter as the temperature was warmer as the altitude increased during winter. Smog was a mixture of smoke which was due to coal burning and fog. Acid rain is also a by-product of air pollution as oxides of sulphur and nitrogen react with water in the atmosphere to form sulphuric and nitric acid which ascends as snow and rain which led to the term acid rain. This acid rain leaches the soil making it less efficient and more acidic making it unfit for cropping and affects vegetation directly. The pollution due to energy industries and road transportation which is the most important concern reduces the already deteriorating air quality air pollution is the focus sulphur dioxide and nitrogen oxidise.



Source: International Energy Agency and World Health Organization, via the Eco Experts.

The indicator for air pollution is PM particulate matter 2.5-microns. This is capable to create long-term lung problems like asthma and chronic lung disease. WHO recommends PM levels to be about 10 micrograms per cubic meter for safe living while China recently hit 500 micrograms with Saudi Arabia topping the list of most toxic atmosphere countries followed by Qatar while New Zealand is the least polluted with Brunei Darussalam taking the second place.

5. India and sustainability: Issues and actions needed

With India taking the 9th place in the most polluted countries list, it is important to act immediately before things get out of hand. With a number of good policies to improve the air quality, government recently raise the standards of National Ambient air quality standards to meet WHO's interim standards. National air quality policy, air prevention and control of pollution which seeks to keep the factories under the curfew of regulation. The government has made efforts to improve its existing air quality monitoring system. To reduce the emissions, the government has introduced tariff feeds in the recent years and seeks to improve it in the near future. The government has implemented a stricter vehicle transmission laws that seeks to reduce the pollution levels. With the improvements being done to control the industrial related pollutions, India had dropped from its rank in the World sustainable quality index from 141th place in 2014 dropping 30 places to 177th place in 2018 just above China- Sustainable development Index.

6. Conclusion

The world community with its globalization initiatives are important in that they consider the sustainable developments to be an integral and main idea of development and industrialisation and must be changed to more pollution-free approach towards meeting the energy needs there by changing its pace towards developing renewable resources paving way for cleaner and safer conditions for the future generations and it is the duty of the present generation to create awareness towards a more sustainable future. The corporate social responsibility must be handled and planned responsibly thereby securing the future of the corporations and of mankind itself.

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