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India, Factor 17: Good Governance

Introduction

A typical Indian family has about 4 to 5 members per household (indiatimes). A family living in rural areas face the most problems which many of us cannot even imagine. “Of the **121 crore** Indians, **83.3 crore** live in rural areas” (The Hindu) that is out of 1210 million people 833 million people live in rural areas. “About 50% of the workforce is formed by agriculture” (Wikipedia). “The average farm household makes 6,426 rupees per month in India” (The Hindu) that is approximately less than a \$100 still thinking it to be a \$100 dollars and taking the family to be of 4 we see that a person has approximately \$25 per month which is less than \$1 a day and so that is not adequate to fulfill all the daily requirements. This degrades the standard of living of people. The farm sizes in India are usually small as a large farm keeps on dividing to smaller parts during the family inheritance. In this piece of land, he can only grow 1 type of crop. And because the amount of income he gets is very low, the choice that he is left with is that he can only produce cash crops, like sugarcane and tobacco (Agriculture in India). Due to poverty these farmers don't have scientific equipments and lack with scientific approach and plus there is no point of using and buying scientific and modern equipments for the small piece of land owned by them. These factors hinder the agricultural productivity of India. Over population is the main factor hindering employment and so unemployment is a barrier in providing opportunities for earning wages. And due to the farmer earning less they eat mostly don't get the required amount of calories required by them as a result can give less outcome.

Water scarcity in India

It's Causes

“Agriculture is by far the largest consumer of the Earth's available freshwater” (global agriculture). And water is getting scarce. “Water scarcity has a huge impact on food production. Without water people do not have a means of watering their crops and, therefore, to provide food for the fast growing population. According to the International Water Management Institute , agriculture, which accounts for about 70% of global water withdrawals, is constantly competing with domestic, industrial and environmental uses for a scarce water supply.” (The Water Project).

India is not a water poor country. India receives “Average annual rainfall is 300–650 millimeters (11.8–25.6 in)”(Wikipedia)” and though that is enough of rainfall it is often uncertain .It has places like Cherrapunji which is considered as one of the wettest places in the world while it also has places like thar desert . The people of the country face many problems because at many laces they receive water only ones in a week they have to walk several miles to fill water in villages. “Indian irrigation infrastructure includes a network of major and minor canals from rivers, groundwater well-based systems, tanks, and other rainwater harvesting projects for agricultural activities. Of these, the groundwater system is the largest. Of the 160 million hectares of cultivated land in India, about 39 million hectares can be irrigated by groundwater wells and an additional 22 million hectares by irrigation canals. In 2010, only about 35% of agricultural land in India was reliably irrigated. About 2/3rd cultivated land in India is dependent on monsoons.”(Wikipedia)Plus in addition to irregular rainfall there are no plans for conservation of rain water in India so we are able to use very less quantity of rain water and the rest flows into the seas.

“Water is all around us but only 2.5% of water is fresh water. A main problem that we face all over the world is to meet daily needs of water- 1 in 3 people around the world suffer as water isn't as accessible to

them for their needs. We struggle to get water directly to communities far and near, and this problem gets worse due to climate change, deforestation, increased population and urbanization.”(HOFSTRA CENTER FOR CIVIC ENGAGEMENT) “Today in India, shifts in climate and increases in population are drastically depleting water supplies. 90% of water consumed is used for agricultural purposes. From 1990-2012, groundwater supplies have decreased up to 1 Meter and will continue to do so. As the population will keep on growing (1,270,272,105 today) and water keeps depleting, by the year 2080 India could have smaller harvest to feed its population which will act as a domino effect leading to other problems.”(HOFSTRA CENTER FOR CIVIC ENGAGEMENT)

As the population in India keeps on increasing the water usage increases and along with use wastage increases which results into scarcity. In addition to usage pollution acts as an additional problem and also results into water wastage.

It's Effects and It's present situation

“The biggest problem that happens when you have water scarcity is that people are not able to get fresh, clean drinking water. The human body can only go so long without water, and a lack of drinking water can result in a number of other problems.”(CCF) .This has caused many more consequences like “Freshwater resources are often shared by two or more countries which may lead to more international conflicts as freshwater becomes more scarce.”(seametrics) “If there is no water that can be used in order to help water the crops, then you are going to have people that are going hungry. Animals will also die, which will result in a lack of meat as well. Water scarcity, in short, causes starvation to occur mass for both people and animals that are located in the area.” (CCF) This results to food scarcity and that means the crops fail which in turn lead to poverty and in turn poverty leads to illiteracy. and illiteracy is considered to be one of the most hindering factor in a country's development.

Plus, due to lack of water the sanitation problems arise and it in turn leads to diseases. “If you don't have clean water access, then you will be more likely to get diseases from the water that you do have. Whether you're drinking the water or using it for bathing, those diseases will get into the body and, in a number of cases, the people carrying those diseases will pass away.” (CCF)

The present situation of water scarcity is very pathetic. “The United Nations Committee on Economic, Social and Cultural Rights established a foundation of five core attributes for water security. They declare that the human right to water entitles everyone to sufficient, safe, acceptable, physically accessible, and affordable water for personal and domestic use.”(Wikipedia)

“All four of the world's top irrigators – China, India, Pakistan and the United States – are pumping groundwater faster than it is being replenished in crucial crop-producing areas. But the problem is most serious in India, where 60 percent of irrigated farming depends on groundwater. Scientists have estimated that northern India, which includes the nation's breadbasket of wheat and rice production, is depleting groundwater at a rate of 54 billion cubic meters per year, a volume that could support a subsistence-level diet for some 180 million people. In addition to the breadbasket states of Punjab and Haryana in the northwest, groundwater levels are falling extensively in Andhra Pradesh, Gujarat, Maharashtra, Rajasthan and Tamil Nadu. More than 15 percent of India's food is being produced by mining groundwater.” (National Geographic)

Many of the rivers under water pollution is are being destroyed by pollution. “Large stretches of key rivers have become so polluted that they are not even safe to bathe in. More than half the length of the Ganga is now considered unfit by the Central Pollution Control Board (CPCB). It's the same story with the Mahanadi, with a little over 500 km of its stretch rotting. For the Godavari, it is 1,700 km, for the Narmada 480 km, and the Tapi 400 km.” (The Times of India)

What we can do

India is a nation with large human population and one of the major reasons for water scarcity is population explosion as the population increase tends to lead to large water demand. So the first step should be towards population control. Now that we have taken population into consideration we should even notice that before population control we should try saving water at personal level. Like use water in buckets while bathing instead of long showers. The water which is used for washing utensils can be used again for giving it to small gardens. If we start on the personal level we can contribute whole as a community. If we waste as little water as possible it will be helpful in giving water to one other person or a plant. In that case it is a community service starting on your personal level. As it is said "Charity begins at home." These small personal steps towards saving water make a huge difference when it is performed globally.

The thing about industrial waste is that it can be treated so it will not harm the water bodies. Also, find another solution for dumping the waste like reusing the waste so it becomes a useful product instead of a pollutant. The government should comply with strict rules which they are now doing on the industries. The rules are that not even a single drop of contaminated water goes out to the water body without the treatment. They should issue some industrial warrants to the people who are not following rules. If this system gets followed then there would be a very huge deduction in the water scarcity.

Farmers should use some of the modern implements like drip irrigation method and sprinkler irrigation method instead of traditional methods. Also farmers should rotate crops to prevent infertility because even that causes the imbalance in water needs of soil.

And lastly but the most important implementation should be to save rain water not only at the small personal level but also by government at national level as most of the rain water flows away into the sea if we store the rainwater by constructing dams and we saved even few percent water than what we save now then that would make a major reduction in the water scarcity.

If these plans are brought into implementation now they will get functional within a few years and they may or may not be used by us but will be a great gift to our future generation. After about half a century the image will look so different than what it is now. And it isn't about India it is about betterment of the whole community and the world.

Conclusion

In conclusion I would like to add a few points. As already mentioned India is not a water poor country, but due to severe neglect, irregular rainfall and lack of monitoring of water resources development projects, several regions in the country experience water shortage from time to time. Further negligence towards this topic will lead to water shortage in next 10 to 20 years. Hence, it is necessary to avoid this crisis by making the best use of the available technologies and resources to save the existing water resources, transfigure them into usable form and make effective use of them for agriculture, industrial manufacturing and human consumption. Imposing strict rules to prevent the misuse of water and introducing rewards to encourage the proper use of water, will be helpful to save water. Awareness and training of all the people to change their lifestyle to conserve water can help the country to improve over the water problems in the future. The challenge is not impossible provided this plan is implemented well.

One of the major initiatives taken to save water was Save Water Save Earth which started in 2012 and is still going on. One initiative that was started is swachh bharaat abhiyan "Clean India mission" by the Indian Prime Minister Mr. Narendra Modi. There are many initiatives that take place in small numbers but help in collective growing.

In my opinion, the government along with initiatives to save water wastage should focus on water storage and for that international organizations like World Bank should provide financial support.

These efforts would not be fruitful instantly but with time our future generations will see a bright future and for that the international organizations and government demands personal support because finally even the government is based on public support.

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