

# Chapter–8

## Conclusion

## **Conclusion**

The water crisis is not only for the 1.35 billion Indians but this is an imminent crisis for the entire globe. The demand of water is growing day by day, even though, the water supply is stretching. The infrastructures used for the processing & supply of the water are collapsing day by day and this stops the management to supply the drinking water in an efficient & proper way to its universal public. At present the pollution becomes a major problem and it's become very extensive as there is an unregulated growth in economy and very poor laws of waste management & the practices. By 2020, the water demand will surpass the supply as believed by many analysts.<sup>[48]</sup> The water scarcity in India is mainly a manmade problem and that is why, it needs to think to make significant changes about the water and its assets management system. India has achieved a success with water infrastructure development, which allows the country to take advantage of its water resources to achieve food security. This enables the expansion and development of urban and industrial sectors and to increase the availability of safe drinking water, but then they were allowed to decay. As in past, India has made the food security & economic growth as national priority, it's now again necessary to make water supply as a national priority. It's now very necessary for a comprehensive management program because of its rapid deplete of water supply, ecological problems, and population growth. If we continue with a business of as usual approach the consequences will be very severe. The country will face a great decrease in agricultural growth, which will cancel out all of the previous efforts for the food security. This results that; India may become a big importer of food grains, which will have a great effect over food prices globally. The price rise in food will intensify the already well-known poverty when people have to spend larger portions of their income on food. In addition to disturbing the economy of agricultural sector of India, even the industrial sectors of India will be greatly affected by the water crisis. Finally, India could become the stage for major international water wars because so many rivers that originate in India supply water to other countries.

Our country, India is not a water shortfall country, but due to severe negligence & lack of monitoring of different projects for water resources, several regions in the country has experienced water stress from time to time. The annual rainfall received by India is unevenly distributed across the different parts of allover the India, throughout the year. And as a result even after good annual rainfall, some river basins are still fall in the category of *WATER SCARCE & WATER STRESSED* regions, India faces a critical water shortage due to government mismanagement, pollution, ground water depletion. A major challenge for India is its rising water demand coupled with economic development. India's increasing population and economic growth has put tremendous pressure on India's water resources. Water demand is gradually increasing across all the markets, and will continue accordingly. Balancing water demand with available supply will be crucial for future economic growth and development For India to meet its growing water demands, it needs to clean its existing water supply and create new water supplies without increasing energy requirements.

In recent years water resources management has be-come one of the most important part of sustainable steel. This paper discussed the water scarcity of iron and steel technologies. This work was the first to ac-count water scarcity for the entire steel production in integrates steelmaking route in India.

Water Scarcity of steel production in a national integrated steel plant was performed based on inventory data obtained from steel production results. It was found that the Water Scarcity were related direct with the tap water use, while the indirect water scarcity were related mainly to iron ores, iron pellets, iron scrap, refractory, electricity and lubricating oils.

In the entire steel production system, the largest water scarcity occurred is in the basic oxygen furnace system, and the major source of water scarcity is the consumption of tap water and in the iron ores. As a result, this study discusses a water scarcity in steel production and could be used as the first step in performing a holistic water footprint of steel that includes all the stages of the

steel life cycle. This paper can be provided to practitioners and decision makers in the steel industry to understand their water sources impacts and to formulate and for developing a comprehensive water management strategy to decrease water footprint.

### **Suggested Action Plan:**

Lots of strategies and plans have been made and out of those many are disputed and ultimately went a into the cold boxes. Now, today's requirement is not making another plan but the proper implementation of the existing plans. Our government has shown great effort and interest in undertaking the formation of different committees for making reports and for publishing the same. Many guidelines have been issued, ordinances have been passed. And to solve this alarming danger we need to take a proper action.

If we really want the problem of this critical danger to be solved, we need to take action and for this a total reliance and dependency on government will not help, we all have to take matters in our hands and start contributing in our own way. The reason is that UN guidelines have been mentioned is not that we ape the west and follow their way of fighting the problem, but they recognize the problem at a more comprehensive level and have engaged in a superior level of research work than us. We should have our own research works and then should come to the standards, which our kind of country requires and then we should take action accordingly. And that will appear in a more suitable way, since each country has different relief, availability of resources, and harmony of development, priorities and then consequent plan. It makes logic, if we wish to follow our own way, our own graph for the solution. The basic requirement is an imminent action and its implementation. It will only deteriorate matters if we keep sitting on the already irritating problem.

## **Suggested Guidelines for the Millennium Development Goals.**

### **The suggested actions are:**

- 1: The sanitation crisis on the top and it should be the top agenda for the present government & their stockholders.
- 2: The policies and institutions for water supply and sanitation service delivery must be ensured.
- 3: There should be a common effort by the Government & the supporting agencies for the development of proper water supply administration & sanitation management..
- 4: Alongwith the construction facilities alone, the sustainable service delivery should also be in focus.
5. The government and underneath agencies must authorize the local authorities & different professional to manage the water supply & sanitation service delivery.
- 6: The government & the supporting agency must make sure that the users must pay for the sevicees they are using for the generation of funds required for the maintenance & the further extension.
- 7: Also the related authorities and their civil society andthe private sector partners must support a wide range of water and sanitation technologies.
- 8: Institutional, financial and technological innovation must be promoted in strategic areas.
- 9: The United Nations system organizations and their Member States must ensure that the UN system and its international partners provide strong and effective support for the achievement of the water supply and sanitation target and for water resources management and development.

Another factor in addition to the plans mentioned is that we need better equipment and

continuous up gradation of the existing ones. These measures taken not only help the mankind in general by giving better health but also provide better water management techniques to prevent a water shortage.

### **Future Scopes:**

An immediate solution to India's water crisis is to change water management practices by regulating usage with effective legislation.

India has the power to avoid this dark future if people take action immediately:

- start conserving water,
- begin to harvest rainwater,
- Treat human, agricultural, and industrial waste effectively,
- And regulate how much water can be drawn out of the ground.

Most economic management practices in steel industry of developing countries for minimizing the generation of solid wastes and maximizing the recycle of collected wastes can be opted as follows:

- A waste audit should be done to define sources, quantities and types of solid waste generated from different sub processes including hazardous wastes.
- Reasons of generating these solid wastes to be found out.
- An advanced technology with economical feasibility options for minimizing wastages of resources to be evaluated.
- Should make every effort to make improvements in yield losses.
- To treat the waste as raw material of related industry on the base secondary pollution.
- To build up series of integrated utilization programs, from the industry system technologies and products systems.
- To develop technology focused competitive products based on deep processing of wastes and by-products.

A zero waste approach should be considered viewing water and solid wastes as potential raw materials to be conserved or reused instead of wasted. The water & solid waste reduction reuse, recycling and restoration to make a zero waste generation is really a challenge to the steel industry today.

We can consider membrane technology as an effective tool for reaching more sustainable and rational management of water.

Best technologies for the WWTPs and the Optimum recycle and reuse of the treated waste water and sludge should be introduced and implemented.

Wherever it is possible, industrial wastes should be combined with the several different ETPs within the industry and may also combined with the domestic wastes for treatment if no toxicity. Economy of scale, better treatability of industrial waste water and better arrangements for disposal of treated effluents are some of the advantage of the joint treatment of industrial and domestic effluents.

Contribution from industries to capital expenditure of laying sewers and construction of treatment plant would render finance to sewerage and treatment schemes.

Joint treatment is attractive for cities and towns and industrial areas surrounded by residential areas. Baroda and Ahmadabad cities have such joint treatment schemes under a notified charging formula. As in Jharkhand, Jamshedpur, The Tata Steel Plant is surrounded by the urban township; we can go for the CETPs for the joint treatment of industrial and domestic wastes. By making **one large CETPs** for all such four process it will be nearly halve or less that of the separate systems. And again the **man power required will be one fourth (1/4) only.**