

2.8 FUTURE CHALLENGES

Food security for a large population:

- Meat production is particularly demanding in terms of energy, cereal and water. Today, nearly half of the world's cereals are being used for animal feed.
- The largest population increase is projected to occur in Asia, particularly in China, India and Southeast Asia, accounting for about 60% and more to world's population.

Fresh water scarcity:

- Water covers 70% of our planet, and it is easy to think that it will always be plentiful.
- Only 3% of the world's water is fresh water, and two-thirds of that is tucked away in frozen glaciers or otherwise unavailable for our use.
- Inadequate sanitation is also a problem for 2.4 billion people—they are exposed to diseases, such as cholera and typhoid fever, and other water-borne illnesses.
- Two million people, mostly children, die each year from diarrheal diseases alone.
- Many of the water systems that keep ecosystems thriving and feed a growing human population have become stressed.
- Rivers, lakes and aquifers are drying up or becoming too polluted to use. More than half the world's wetlands have disappeared.
- Agriculture consumes more water than any other source and wastes much of that through inefficiencies.
- Climate change is altering patterns of weather and water around the world, causing shortages and droughts in some areas and floods in others.

Renewable energy resource development:

- its eco-friendly nature.
- In developing nations, RE projects are adopted to decrease the demand supply-gap and to boost rural electrification and off-grid electrification.
- But for countries like India, an optimal energy mix of both kinds of energy sources is essential to have a sustainable energy system.
- A comprehensive policy framework is necessary for accelerated growth of renewable energy in India.
- Most RE systems are weather dependent; thus, factors like number of sunny days, wind condition, monsoon, tide level, supply of biomass, etc play an important role in feasibility of the system.
- Social acceptance of renewable-based energy system is still not very encouraging in urban India.
- Climate change is the most serious concern being discussed around the world.
- Development of renewables is arguably one of the most effective options to mitigate climate changes.
- Renewable development contributes to overall development of the nation.

Urbanization:

- The pace of urbanization is now set to accelerate as the country sets to a more rapid growth.
- Economic reform has already unleashed investment and growth offering its citizens rich opportunities. Surging growth and employment in cities will prove a powerful magnet.
- This urban expansion will happen at a speed quite unlike anything that India has seen before.