

Human Values & Professional Ethics(BHCQ 205)
[B.SC\(H\)CS Sem II](#)

Lectures:20&21

Unit V

Date:30/4/2020

Topic:(27)

Case studies of typical
Holistic Technologies, management models &
production systems :

The ability & criteria to develop Holistic systems comes through understanding of harmony at various levels along with the appreciation of comprehensive human goal.

Following criteria need to be considered

Renewability

Preservation of natural balance

Utilising local resources and expertise

Decentralized and conducive to meaningful mass employment

Catering to real needs

Matching of production, distribution and consumption etc

Case studies can be done on models like

Biomass based Energy Technologies

Animal driven gadgets

Micro Hydel and wind power Prime movers

Solar energy devices

Eco-sanitation Technologies

Green building materials and techniques

Watershed management

Eco-friendly agriculture

Management models

Gramin Bank

Lizzat cooperatives

Auroville

Ralegaon sidhi

Brahma Kumaris

Emerging Technologies

Every day, the world produces carbon dioxide that is released to the earth's atmosphere and which will still be there in one hundred years' time. This increased

content of Carbon Dioxide increases the warmth of our planet and is the main cause of the so called “Global Warming Effect”. One answer to global warming is to replace and retrofit current technologies with Holistic alternatives that have comparable or better performance, but do not emit carbon dioxide. We call this Alternate or holistic energy.

By 2050, one-third of the world's energy will need to come from solar, water, bio-mass, wind, geothermal and other renewable resources. Climate change, population growth, and fossil fuel depletion mean that renewables will need to play a bigger role in the future than they do today. The use of clean alternative energies such as the home use of solar power systems will help ensure man's survival into the 21st century and beyond.

II. ENERGY NEEDS AND FUTURE

According to Index Mundi , the energy needs of individuals in terms of electricity consumption per capita (kWh per person) the highest is in Iceland and lowest is in Afghanistan. India ranks 153rd

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Iceland 52620 kWh/person (Highest)
Norway 24558 kWh/person (2nd Highest)
Kuwait 16091 kWh/person (3rd Highest)
United States 11920 kWh/person (9th)
China 3494 kWh/person (70th)
India 498 kWh/person (153rd)
Pakistan 390kWh/person (159th){as per June 2012 data}

III. HOLISTIC APPROACH TO LIFE

What if the major problems now humanity is facing like poverty, emerging diseases, resources crunch, overpopulation and global warming, to name a few were so intertwined that we couldn't hope to address one without addressing the others? And what if we really couldn't expect to address many at once without changing our approach entirely?

Earlier methods to solve the crisis no longer suffice for the task at hand. Only more holistic approach is required like:
-Life cycle thinking

- Global collaboration
- Market based incentives to Holistic production
- Integrated interdisciplinary solutions
- Investments in sustainable systems

IV. POPULATION AND RESOURCES SCENARIO

Also we must have a close look at the population scenario of the Globe. Global population growth will create a perfect storm of food, water and energy shortages by 2030, according to the UK government's chief scientist. By 2030, world population is expected to hit 8.3 billion, causing a 50 percent increase in the global demand for food and energy and a 30 percent increase in the demand for fresh drinking water a resource that is already in short supply for about a third of the world's people. Researchers found a six-fold increase in water and energy use for only a two-fold increase in population size. The World Health Organization has reported that environmental degradation due to excessive dependence on Fossil Fuels, combined with the growth in world population, is a major cause of the rapid increase in human diseases.