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FACULTY OF ENGINEERING AND
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Lecture- 26

Urban problems related to energy and Environmental Ethics



**Dr. Swati Sachdev,
Assistant Professor,
Dept. of Applied Sciences and Humanities**

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Urban problems related to energy

Energy

Energy can be defined as power which is derived from physical or chemical resources. Energy can either be in light or heat form and provide potential to do work.

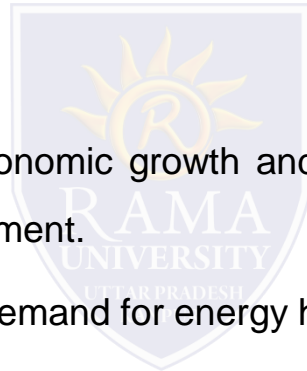
Growing energy needs

Energy has always been linked with economic growth and development. However, excess use of energy has severely affected our environment.

With increase in world's population, the demand for energy has been increasing continuously.

Between 1950 and 1990, the world's energy demand was recorded to be hiked by four times.

The energy demand has always been recorded high for developed countries. Per capita energy consumption in developed countries is high than developing nations due to Hi-tech living standards and use of technology for daily activities.



Problems related to energy use

- Most of the energy is produced from non-renewable energy resources such as coal, oil and petroleum.
- These resources once depleted cannot be replenished, hence extensive exploitation may result in resources exhaustion and create energy crises in near future.
- Non-renewable energy resources are major sources of air pollution. Burning of coal or consumption of petrol in vehicles produce noxious gases which affect environment and human health. In addition to air pollution, these resources also cause water, soil and thermal pollution.
- Production of nuclear energy is another major threat for environment. The radiation emitted from accidental exposure of radioactive materials can cause cancer, mutation and even death in severe cases.
- Apart from non-renewable resources, certain renewable energy resources may also have negative environmental effects. For instance, construction of dams for hydroelectricity generation, result in displacement of local communities, deforestation, increase chances of seismic activities and affect biodiversity.

Environmental ethics

There is an urgent need to generate sensitivity towards environmental degradation that is occurring due to human activities, by cultivating environmental ethical values among people.

Environmental ethics is a study that focuses on the relation of human beings with their environment and describe the role of ethics to play in this relation.

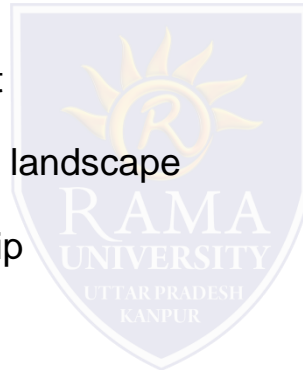
Basically environmental ethics concentrate on defining what is right and what is wrong regardless of cultural differences.

All human beings have a fundamental duty towards our nature. We need to learn to respect and care our Earth and its services i.e., should protect life-support systems, biodiversity and ensure sustainable development.

Environmental ethics also aims to fosters awareness about ecological inter-dependence on economics, social and political ranges.

The following environmental ethical values are need to be encouraged or generated among individual:

- Environmental consciousness
- Humility and reverence
- Responsibility and commitment
- Respect for all forms of life and landscape
- Global environmental citizenship
- Self-reliance
- Adoption of eco-friendly culture
- Preservation of diversity on the planet
- Sharing a common environment



The environmental activities that are a part of environmental ethical values are as follow:

- Encouraging use of products generated from recycled materials such as paper and other metallic objects.
- Diverting kitchen wastes into useful products such as production of compost and/or using water after washing vegetables in gardening
- Turning off vehicles in high traffic or red light signal areas. Switch off lights when not in use. Avoid using unnecessary electricity consumption.
- Using transport means that generate no or less pollution, using public transport, prefer car pooling.
- Conserving water by collecting rainwater, closing tap water when not in use, etc.
- Using cloth towels and non-disposable cutleries instead of paper towels and disposable cutleries
- Stopping cutting of trees and planting trees as much as possible and keeping your area clean.
- Keeping volume of speakers at reasonable levels to avoid discomfort to others.
- Placing and using trash cans and dustbins around the college, homes, and commercial premises.
- Encouraging healthy lifestyles through balanced nutrition, exercise and yoga
- Creating environmental awareness among masses and help to enforce environment protection laws.

