



# 4 Environmental Balance

The objective of this unit is to study the importance of maintaining the environmental balance, unfavourable effects of the imbalance of the environment and the way how the environmental ethics pave the path for the sustainable development.

# Environmental balance

The surrounding that is created by biotic (living) and abiotic (non-living) components is environment. While plants and animals of this environment belong to the living part, solar energy, air, water, soil, land forms, rocks etc. belong to the non-living part. These living components maintain mutual relationships with the non-living components in the eco system. The environmental balance depends on this relationship.

## Importance of maintaining the environmental balance

All plants and animals living on the earth are called the bio-community. Maintenance of the environment where bio-community lives, while protecting the environmental attributes by reacting to the changes that naturally occur is environmental balance.

Interactions occur between plants and animals. Those living beings maintain relationships with the physical environment. The environmentalists consider man too as an essential component of the environment. Similarly the environmental factors too influence the activities of the living beings; activities of living beings too influence the environment. Maintenance of this mutual balance of influence is important for the existence of living beings.

## Factors causing the collapse of environment balance

All living beings (plants and animals) including man get their basic needs fulfilled from the physical environment. The environment is composed of the components which are linked to each other. A change that occurs in one component, causes to changes in the whole environment.

Man utilizes the physical environment in different ways for the following needs;

- To Fulfil the basic needs like food, clothes, costumes and housing
- For transport and communication
- For trade

When population increases, the needs as well as their complexity too increase. Hence due to the use of modern technology and increase of production, man has to go a speedier journey, surpassing the environment.

During the period when the traditional agriculture was the main economic activity of man, the impact on the environment was minimum. However, after the industrial revolution, the impact of man on environment became acute. The damage caused to the environmental balance due to the expansion of agriculture and industries at a rapid speed along with modern technology was immense. The environmental balance began to collapse due to the excessive addition of waste material to the environment and adverse effect on the components of it. Collapsing of the environmental balance in this manner is termed as environmental imbalance.

### Factors that cause environmental imbalance

- Excessive utilization of resources
- Irregular development processes
- Excessive burning of fossil fuel
- Use of agro-chemicals
- Deforestation
- Reclamation of low lands
- Irregular utilization of land
- Employment of improper technology



Figure 5.1 - Factors influencing environmental imbalance

It is clear that such processes which are carried out targeting the development of a country have damaged the environmental balance. Though development is essential, it must be achieved while protecting the environmental balance with minimum damage to the environment.



### Activities

1. State three human activities that cause environmental imbalance.
2. State three problems that have emerged due to such human activities in an area in your District/ Province.

### Unfavorable effects of collapsing of environmental balance

Unfavorable effects that occur due to the collapse of the environmental balance affects the whole environment on the earth. At present, as never before in the human history, the earth's environment has faced a severe crisis. Scientists and environmentalists have warned that if the present environmental damage continues further, around another 200 years, the earth will convert into a condition which is not conducive for man and other living beings to live.



Figure 5.2 - Unfavourable effects of the collapsing of environmental balance

Human activities are the root cause for most of these environmental problems. All the countries in the world must cooperate to find solutions for these problems.

## Human activities that affect the environment

1. Destruction of forests.
  - Destruction of flora and fauna
  - Destruction of water sources
2. Use of Agro-chemicals.
  - Destruction of soil and aquatic life
  - Contamination of water
3. Use of fossil fuel for energy.
  - Air pollution
  - Increase of the environmental temperature
4. Improper urbanization.
  - Adding of waste to environment
  - Blocking the water ways
5. Improper disposal of waste
  - Emergence of environmental health hazards
  - Destruction of natural beauty
6. Experimentation of military weapons (armament)
  - Atmospheric pollution
  - Water pollution in oceans

### Assignment

1. Prepare a report on an incident relating to collapsing the balance of the world environment based on the following titles.
  - Incident
  - Date
  - Country
  - Impact

## Necessity of environmental ethics

**Favorable habits which are necessary to maintain the environment in a desirable manner are called environmental ethics.**

Ethics are bound with personal behaviour. They are accorded to the standard rules and regulations, customs and traditions followed by the people in the societies where they live. Man has acted inquisitively since he began to deal with the environment. Then, he used to treat natural environment and natural objects which have created in the conducive surrounding for living with devotion and respect. Man who lived then, received knowledge about the environment as he worked basing on beliefs, faiths and religions. Faiths and beliefs like respecting trees and creepers, protecting them, making offerings and beseeching for the protection of the guardian deities of the forest when entering to the forest are linked to the religious and social life.

Since ancient times, as man considered the environment as essential for survival, he began to worship and protect it.

Likewise, man lived with nature in harmony and protected it. It is important to identify the necessity of environmental ethics as strategies of environmental conservation, in the journey towards sustainable development. If it is necessary to maintain the environmental balance, we must adjust to the strategies mentioned in environmental ethics. Every religion has highlighted the importance of protecting the environment.

## Sustainable Development

The development that is conducted fulfilling the present needs while building an environment that ensures the rights of fulfilling the needs of future generations could be termed as sustainable development.

The necessity of having a sustainable development approach in preparing development plans, is of paramount importance. In following such an approach, more attention must be focused on environmental ethics as well. The present day development problems prove that in sustainable development both environment and development must be maintained in collaboration. There, the attention must be focused on the ability of the future generations to fulfil their needs.

Due to the lack of sufficient attention paid to the environment in present day, when large scale when development projects are done, there is a danger of collapsing the environmental balance.

Different national level as well as international level procedures have been followed to protect the environmental balance.

Under the national conservation plan the following procedures have been followed;

- Planning of land use
- Conservation of wild life and forests
- Promotion of agriculture without damaging the forests, water and soil
- Coastal conservation
- Launching environmental educational programme
- Establishment of the Central Environmental Authority
- Establishment of the Ministry of Environment

Two Acts have been passed to protect the environmental balance in Sri Lanka

- Coastal Conservational Act
- National Heritage Forest Act

Procedures that have been taken at international level

- Ramzar Convention on the conservation of wet lands
- Montreal Convention aiming at the protection of the ozone layer

Under this situation, the concept of sustainable development clarifies the guideline about the factors on which utilization of resources must be based on. Accordingly, while fulfilling the needs of the present generation, the environment must be secured for the needs of the future generations too.



### Activities

1. State a few environmental ethics found in different religions.

## Assignment

Explain how you, as a student of a school can act to minimize the unfavourable effects occur due to the breaking down of environmental balance.

## References

- Physical Environment on earth, H.K.N. Karunaratna
- Physical Geography : Part I, Educational Publications Department

## Glossary

• Environmental balance	- பார்சரீக னுலீனலல	- சூழலியல் சமநிலை
• Environmental system	- பரீசர படிடகிய	- சூழலியல்தொகுதி
• Components	- சர்லக	- கூறு
• Bio system	- சேல படிடகிய	- ஁யிர்த் தொகுதி
• Modern technology	- னல னாக்ஷனய	- நவீன தொழினுட்பம்
• Production capacity	- னிஷ்பாடின டார்லல	- ஁ற்பத்தி இயலளவு
• Environmental imbalance	- பார்சரீக ஁ச஁னுலனய	- சூழலியல் சமநிலையின்மை
• Fossil fuels	- பூசில ஁ன்டன	- சவட்டு எரிபொருள்
• Environmental ethics	- பரீசர ஁லார் டீல	- சூழலியல் ஁ழுக்கநெறிகள்
• Sustainable development	- னிரசர சர்லடனய	- பீண்தகு ஁பிவிருத்தி
• Urbanization	- னாஸீகரனய	- நகராக்கம்
• Central Environmental Authority	- ஁டால பரீசர ஁டிகாரீய	- மத்திய சூழல் ஁திகார சபை
• Coast Conservation Act	- ஁ரல சர்லக்ஷன பனல	- கரையோரப் பாதுகாப்புச் சட்டம்
• National heritages	- சூகிக ஁ரூல	- தேசிய மரபுரிமைகள்