# **Environmental Standards**

### **Guidelines and Standards**

#### **Guidelines:**

A set of rules, directives and recommended criteria to be followed.

#### **Standards:**

A standard can be defined as a general rule, which is binding to a certain extent, preferably expressed in quantitative terms.

### **Example: Guidelines and Standards**

#### Drinking water quality standards:

acceptable/permissible values/levels of important water quality parameters for implementation or preservation of some desired quality of water for drinking purpose.

#### Drinking water guideline values (GVs):

concentrations of constituents that do not result in any significant risk to the health of the consumer over lifetime of consumption.

The WHO GVs are recommendations and meant for guidance, not mandatory for adoption

Drinking water standards adopted by a country have <u>legal</u> <u>binding for compliance</u> within the country.

#### **Environmental Standards**

A policy statement of description of the desired/acceptable situation with respect to environmental quality

Standards may differ in space and/or time; one approach is to relate them to the bearing capacity of the environment on which environmental stress has been exerted.

Environmental standards may be classified according to the so-called "Impact Chain Approach".

### **Environmental Impact Chain Approach**

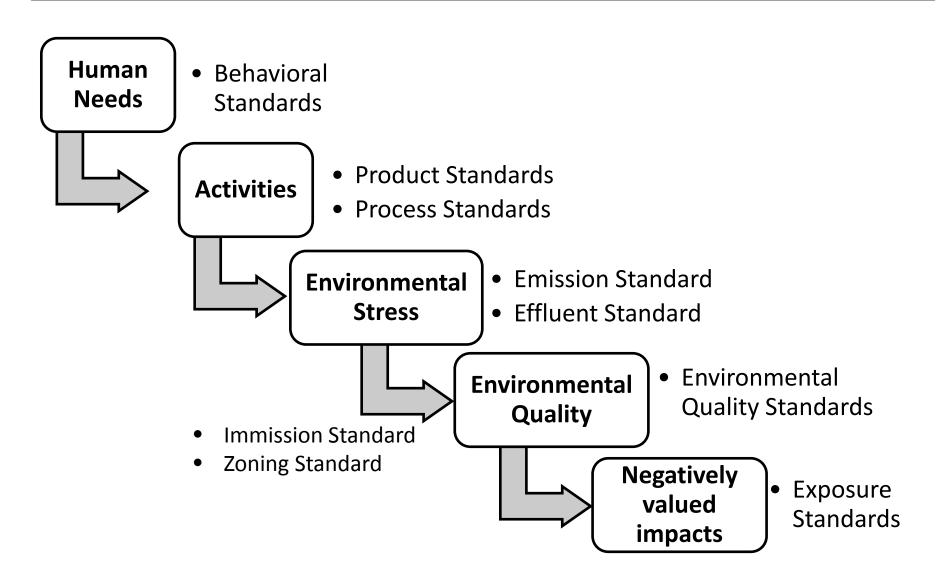
**Activities** 

Human needs

Environmental Loading/ Stress

Perception of Impact Environmental Quality

# **Impact Chain Approach and Standards**



# **Setting of Standards**

Setting of Standards

Source-oriented Approach

Impact-oriented Approach

- Behavioral Standard
- Product Standard
- Process Standard
- Emission Standard

- Immission Standard
- Zoning Standard
- Environmental Quality Standard
- Exposure Standard

# Comparison between Standards

**Setting of Standards** 

Source-oriented Approach

- Easy assessment
- Easy to maintain compliance
- Do not represent site or location specific conditions

Impact-oriented Approach

- Site specific and represent actual situation
- Need long term study on various effects
- Extensive modeling required
- Difficult for setting, maintenance and monitoring

### Classification of Standard based on Norms

Agent of Environmental Stress

- Substances
- Radiation
- Odor
- Noise
- Safety

Environmental Compartment

- Soil
- Surface water
- Groundwater
- Air

Value/ Function
Affected

- Health
- Ecology
- Usage

### **Environmental Quality Standards in ECR 1997**

Under Article 20 of ECA, 1995 the MoEF published the Environmental Conservation Rules 1997 by Gazette notification on 28 Aug, 1997.

#### Standards have been set for:

- ❖ Air
- Inland Surface Water
- Drinking Water
- Noise

Environmental

Quality Standards

### **Environmental Quality Standards in ECR 1997**

#### Standards have been set for:

- Sound for motor vehicle and motorized boad/launch/steamer
- Emissions from motor vehicles
- Odour
- Sewage Effluent
- Industrial Effluents
- Industrial Emissions
- Effluents and Emissions from Specific Industries

[fertilizer industries, Integrated Textile Mills and Large Processing Units, Pulp and Paper industries, Cement Industry, Industrial boilers, Nitric Acid Plants, Distillery, Sugar Industry, Tanneries, Food processing, Fish canning, Dairy, Starch manufacturing, Jute processing, Crude oil refinery]

Emission
and
Effluent
Standards

#### Limitations of Standards in ECR 1997

- Standards too stringent and may not be achievable in Bangladesh context
- Standards set without any impact study
- No averaging/exposure time for ambient air quality standards
- No standard for lead
- No indoor air quality standard
- Exposure time and position of the sampler not mentioned in motor vehicle emission standard
- No prioritization of parameters of drinking water quality
- No indoor noise standard
- Sampling period and location of sampling not mentioned in noise standards
- No statistical aspect of sampling and reporting (e.g. min. max. range or std. dev) have been suggested in case of effluent quality
- Frequency of sampling, reporting and verification-sampling have not been mentioned