

Course Code: CE 447

Course Title: Climate change and sustainable development

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LECTURE: 08

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Lecture plan

- Environmental standards
- Environmental impact chain approach
- Classification of standard based on norm
- Environmental conservation rule (ECR) 1997

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 GV's are recommendations and meant for guidance, **not mandatory for adoption**

Drinking water standards adopted by a country have **legal binding for compliance** within the country.

Environmental Standards

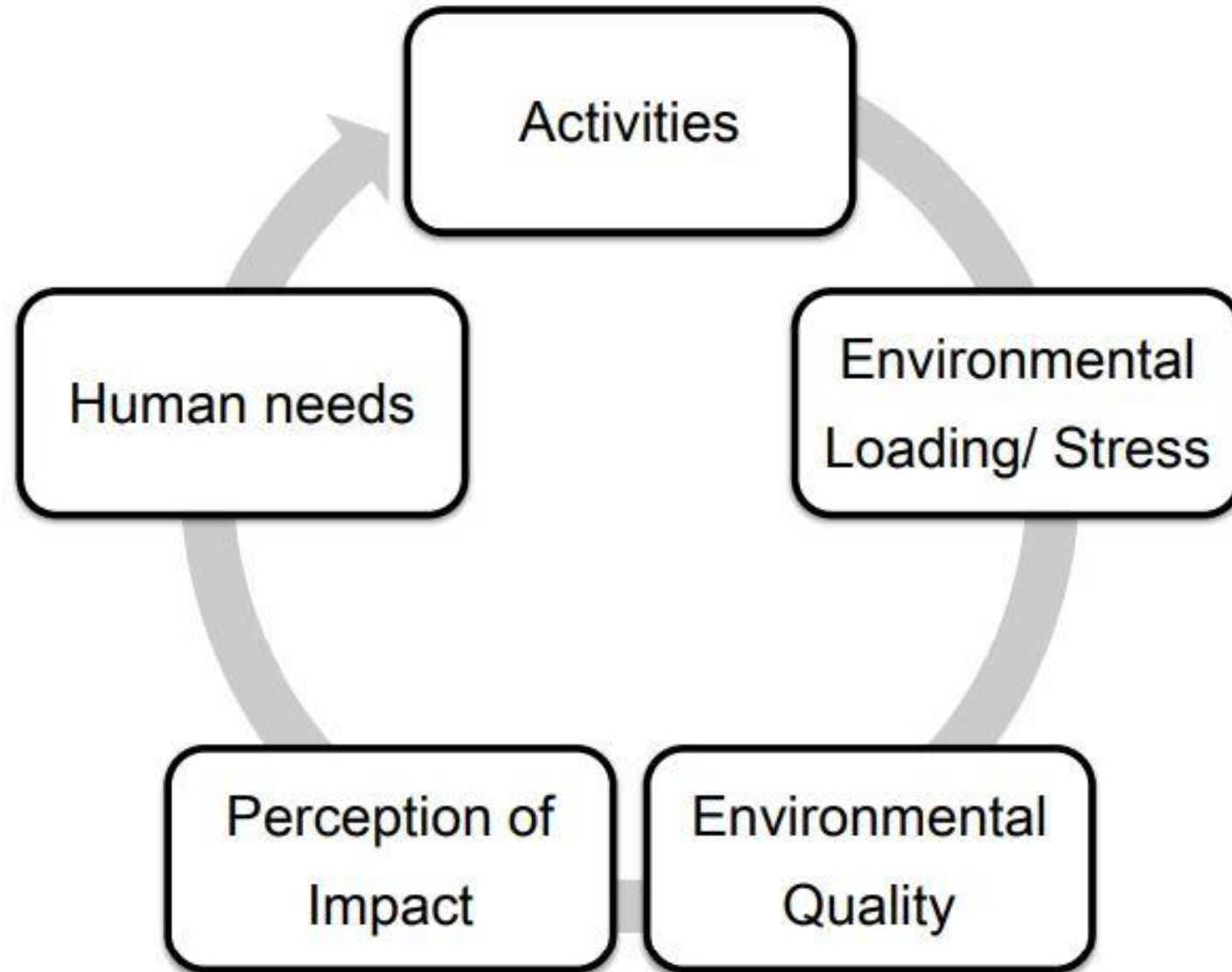
A policy statement of description of the desired/acceptable situation with respect to environmental quality

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”.

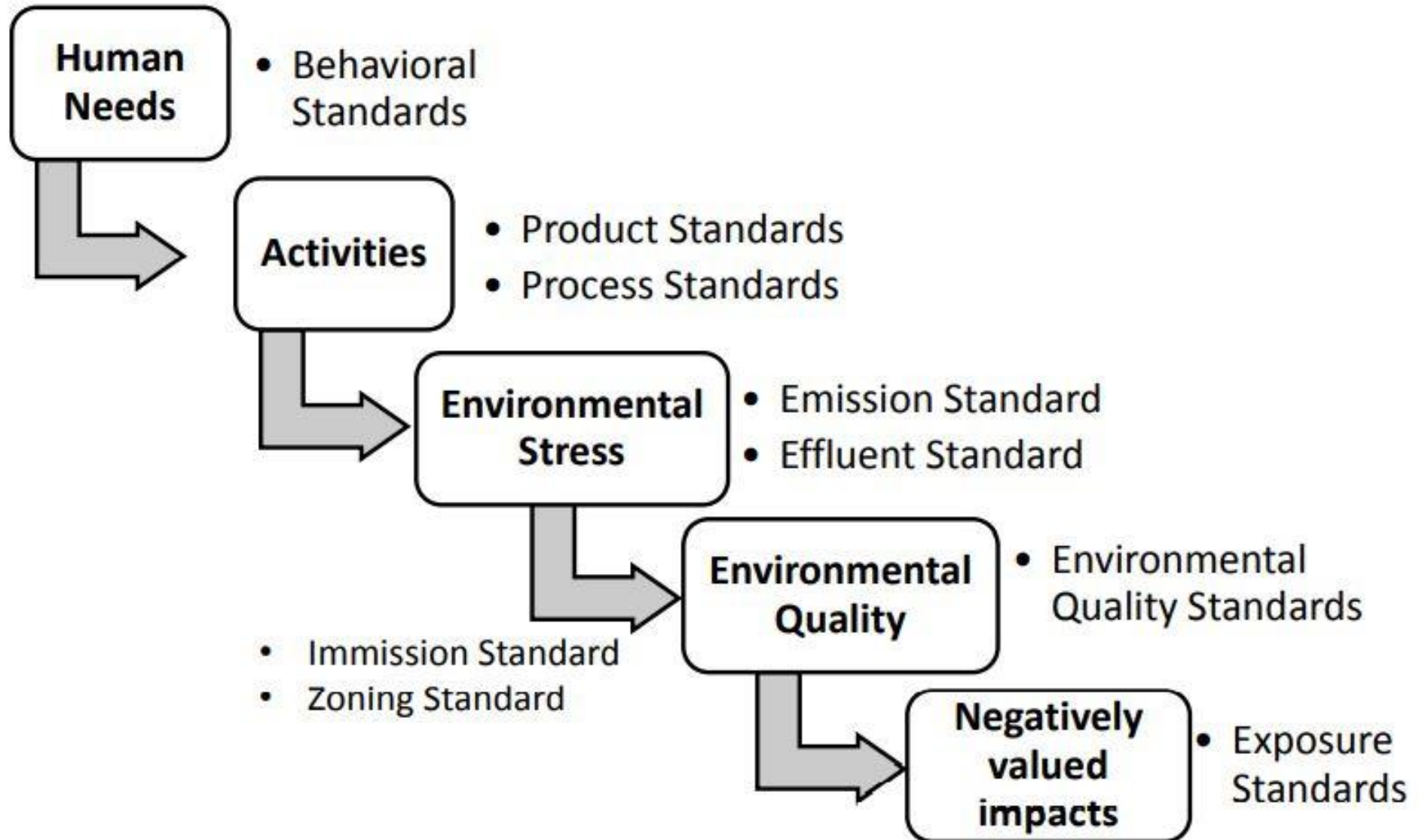
Environmental Impact Chain Approach

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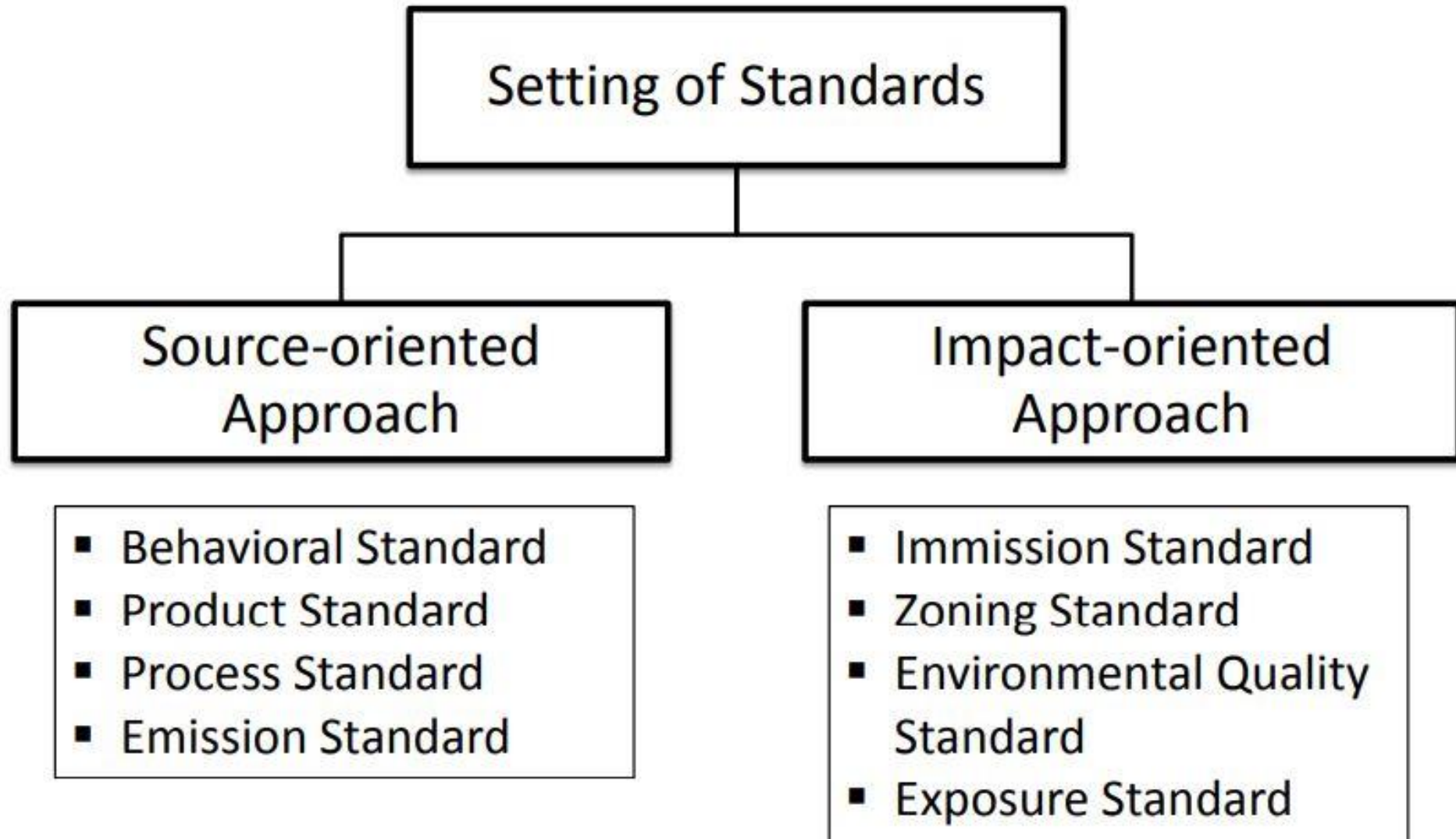
Impact Chain Approach and Standards

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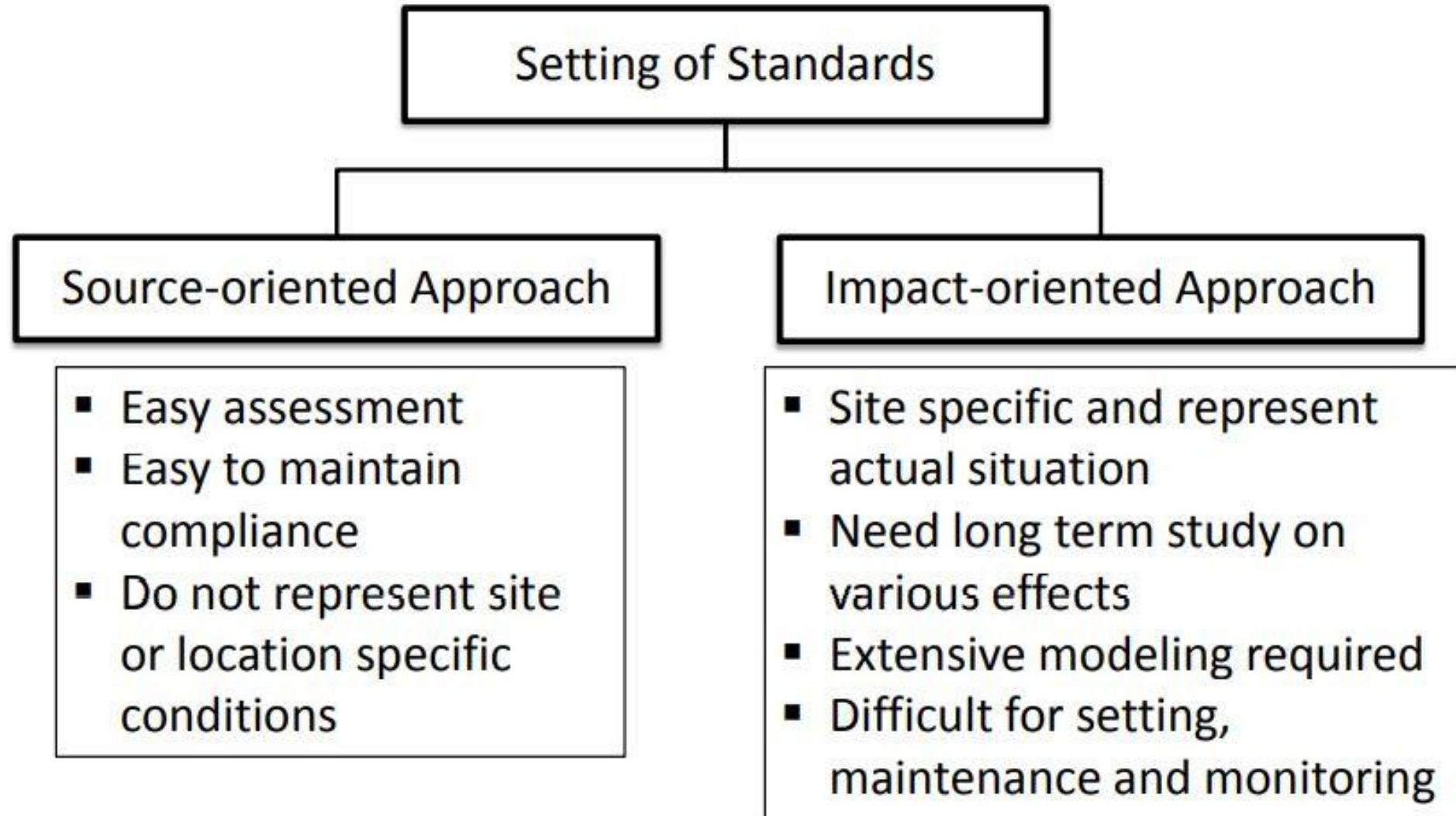
Setting of Standards

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Comparison between Standards

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Classification of Standard based on Norms

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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

***Emission
and
Effluent
Standards***

[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]

Limitations of Standards in ECR 1997

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- 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