

Class 35

E & E

13.07.2023

(Thursday)

1. Water Pollution

2. Environment Protection Act, 1986 (EPA)

3. Environment Impact Assessment (EIA)

1. Water Pollution

- ✓ 1 - What? & ✓ Types
- ✓ 2 - Major Pollutants of Water
- 3 - Sources
- 4 - Effect
- 5 - Control

1. What

an undesirable change in

Composition / Condition
of a water body

→ °Temperature
°Turbidity

NH_4^+ , NO_3^- ,
Hg, As, Pb,
Pesticide residues,
Pathogenic microorganisms,

excessive
nutrients

• PO_4^{3-} • NO_3^-

which makes it
unsuitable/unsafe
for

Human
consumption

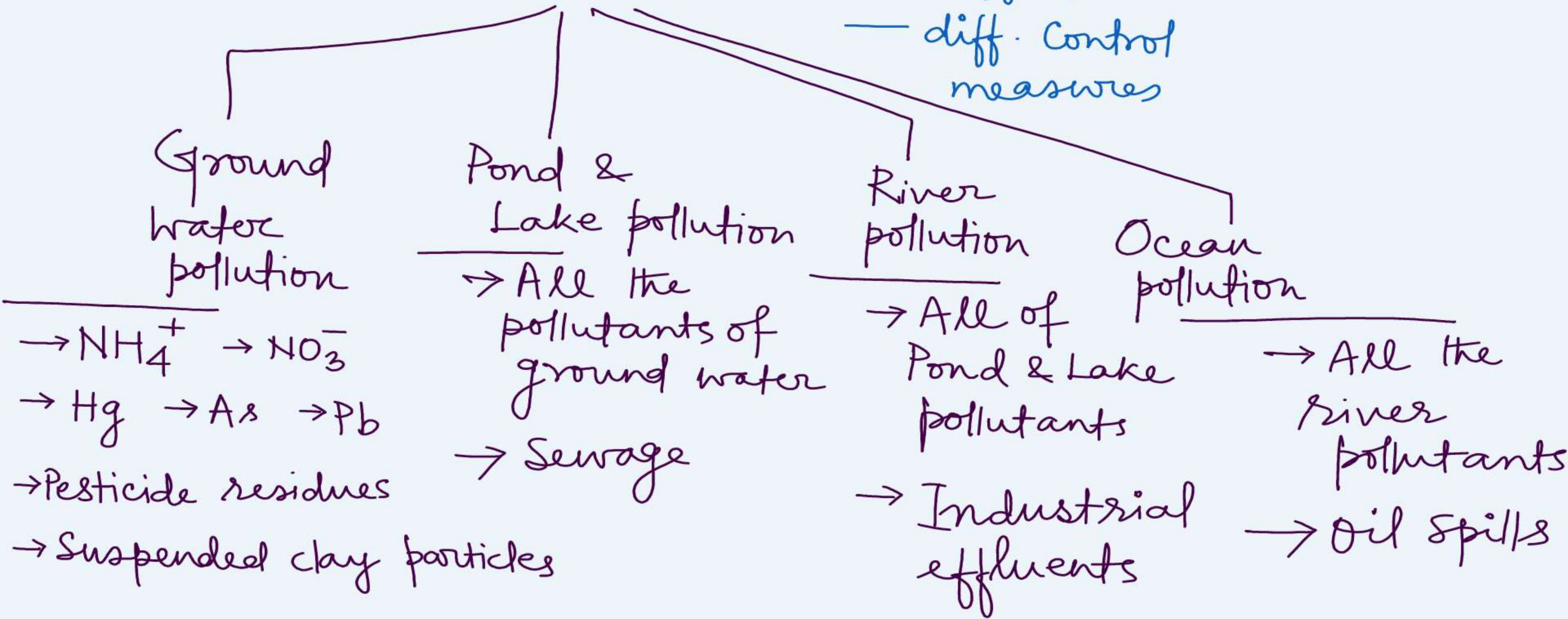
Agricultural
use

The life forms
supported in water
body

1A. Types

based on the nature
of water bodies

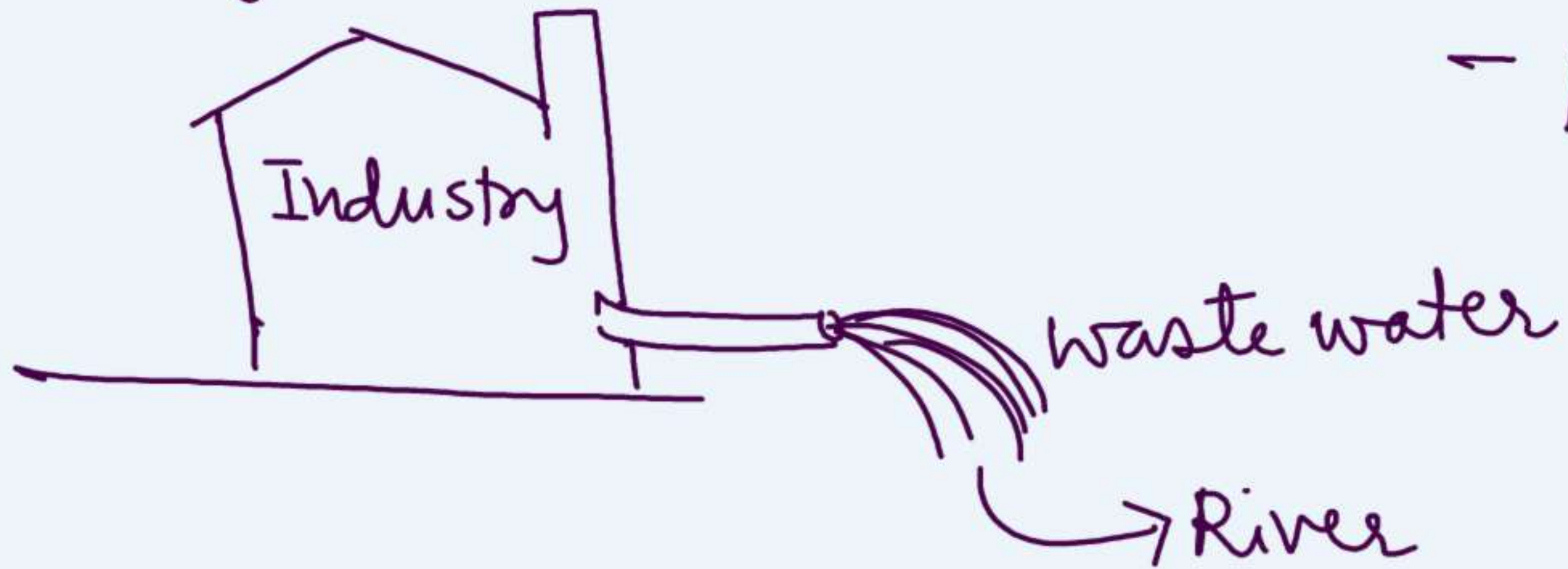
due to this — diff. pollutants
— diff. control measures



3. Sources

Point source

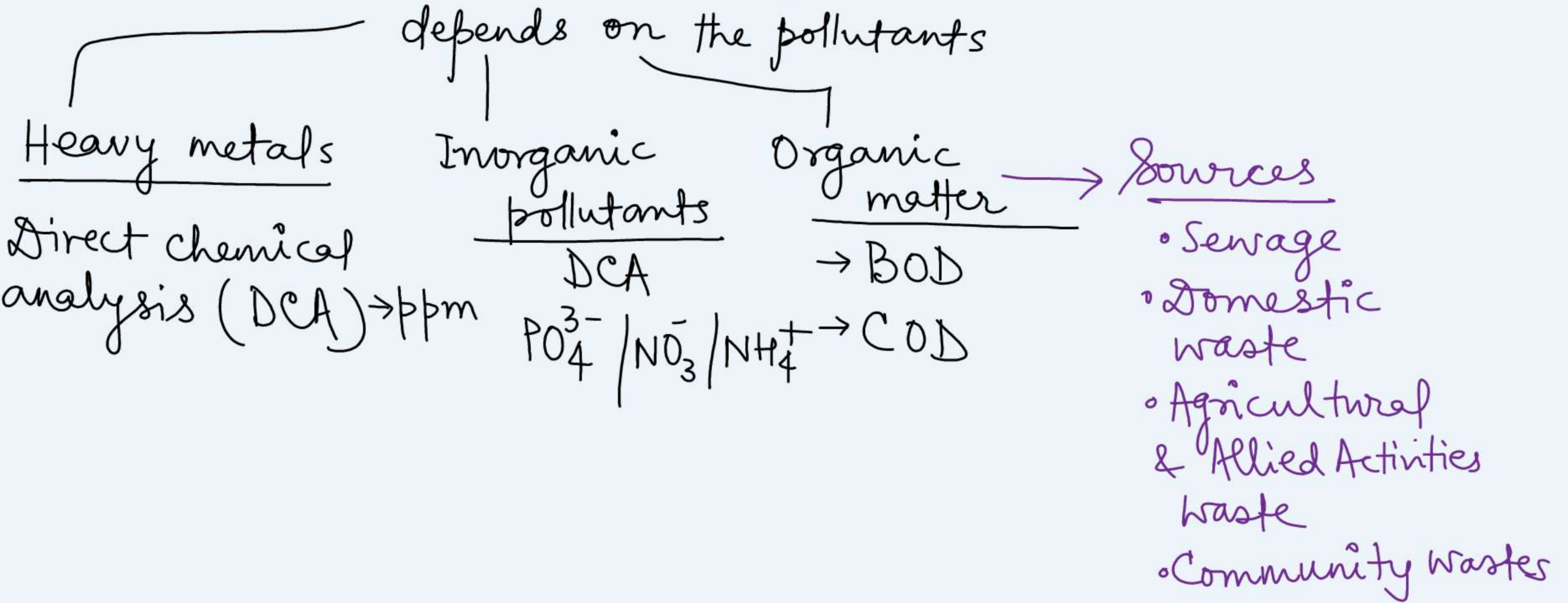
- ✓ clearly identifiable
- ✓ Specific source



Diffuse / Non-point Source

- Several sources
- Not clearly distinguishable
- Farm run-off
- Leaching to ground water

Measurement of pollution



BOD

Biological Oxygen Demand

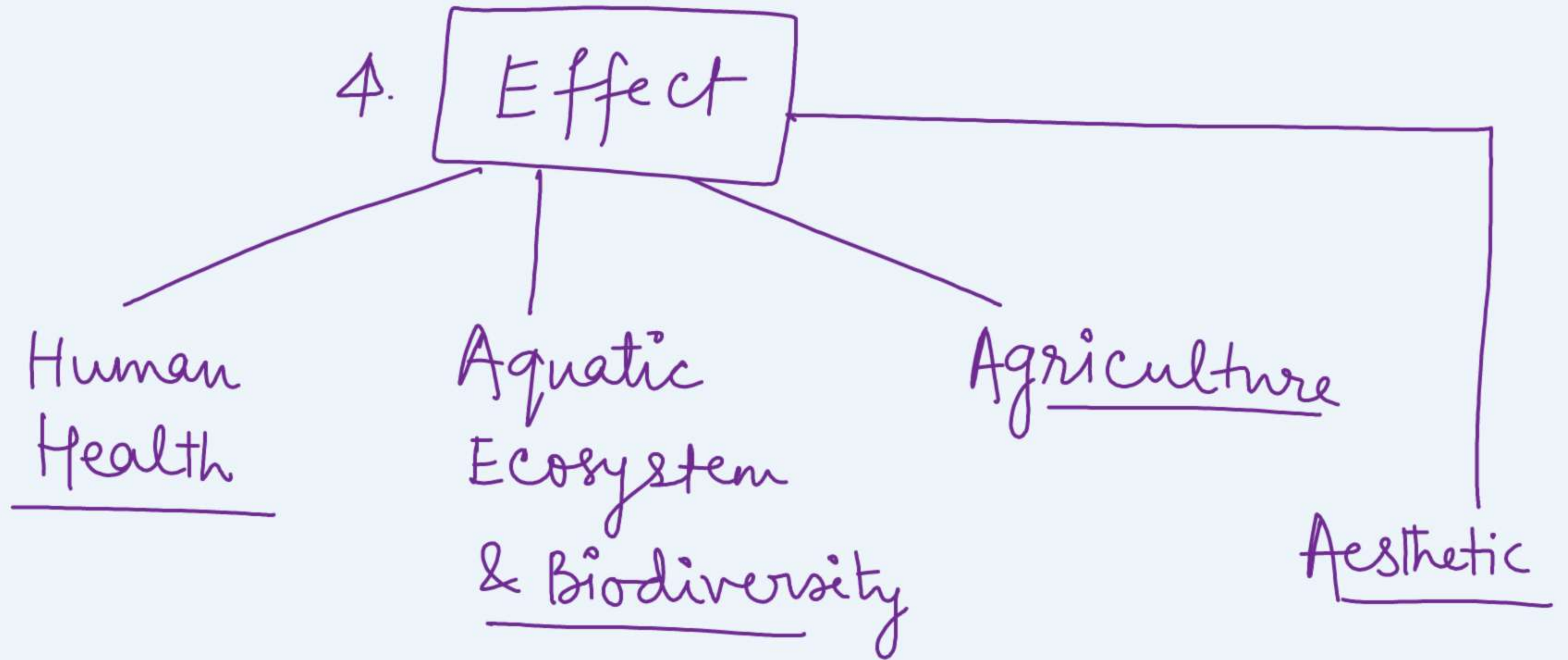
COD

Chemical Oxygen Demand

BOD : The O_2 required by microorganisms to breakdown the organic pollutants

COD : The O_2 required for non-biological oxidation of organic pollutants

↓
(Higher than BOD)



Control

Laws & Rules

1) Water (Prevention and Control of Pollution) Act, 1974

2) Environment Protection Act, 1986

↳ various rules

Bodies

1) Central Pollution Control Board (CPCB)

(2) SPCB

