Environmental law

HL lens a · HL only

Ten years without fishing

> A law can change what hundreds of thousands of people do every day.

- Commercial fishing ban in key Yangtze waters began in 2021.
- Dated 2022 survey:1249 porpoises versus 1012 in 2017, $+23.42\%$.
- The interval includes years before the ban; examine other influences.

Where environmental law comes from

Source	Example
Statute	Environmental Protection Law
Regulation	Power-station emission standards
Case law	Urgenda (2019)
Treaty	Montreal Protocol (1987)
Customary law	Do not harm another state

Hard law and soft law

Hard law

Binding and enforceable.

Treaties, statutes, regulations.

Soft law

Not binding; guides behaviour.

Rio Declaration, the SDGs.

Key principles

> **Precautionary principle**: uncertainty is no reason to delay action against serious harm.

- Prevention; polluter pays; impact assessment; **public participation**.
- Common but differentiated responsibilities.

Concentration is not load

1. **Given.** Concentration limit 2 mg/L; actual 1.5 mg/L; flow rises from 400 to 800 L/min.
2. **Loads.** Before: $1.5 \times 400 = 600$ mg/min. After: $1.5 \times 800 = 1200$ mg/min.
3. **Compliance.** $1.5 < 2$ mg/L in both cases, while pollutant load doubles.

Decision

A concentration limit alone does not constrain the total pollutant load

Types of legal instrument

Command and control

Standards, permits, bans.

A minimum limit may offer little extra incentive; enforcement matters.

Market-based

Taxes, charges, tradable permits.

Flexible, but outcome less certain.

Precaution is not a universal proof rule

Purpose

Proportionate preventive action despite uncertainty about serious or irreversible harm.

Identify evidence, alternatives and review arrangements.

Limits

Some instruments impose evidence duties on proponents.

No universal reversal of proof or requirement to establish zero risk.

Compare taxes and caps precisely

Price

A tax fixes a charge while emission responses may vary.

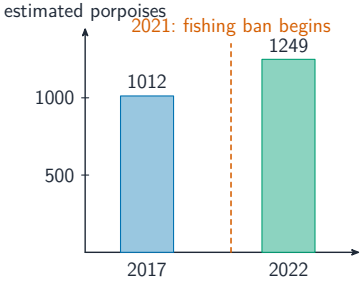
Setting an appropriate charge needs evidence.

Covered quantity

A well-enforced cap constrains covered quantity; allowance prices can vary.

Neither instrument guarantees fairness, compliance or complete ecological safety.

Did the fishing ban work?



$+23.42\%$ over five years recovery evidence, not proof the ban alone caused it

A 23% rise, but two counts are not proof of cause

Principles of environmental law

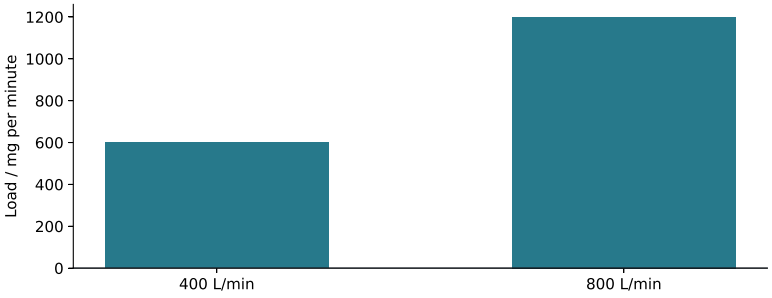
when to act
prevention
precautionary principle
EIA before approval

who pays
polluter pays
common but differentiated responsibilities

who has a say
public participation
intergenerational equity

Who has a say: participation, **intergenerational equity**

Pollutant load = concentration × flow



A concentration limit alone can let the load double

Shared interests, different legal regimes

High seas and airspace

No state may claim sovereignty over the high seas; international rules still apply.

States have sovereignty over airspace above their territory, while pollution crosses borders.

Antarctica

Treaty Article IV preserves positions on existing territorial claims and recognition.

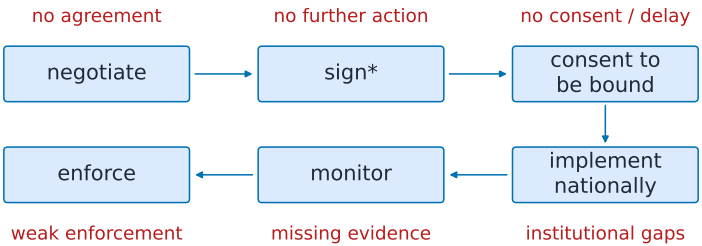
No new or enlarged claims during its operation; existing claims are not simply erased.

Milestones in international law

- **1971** Ramsar (wetlands)
- **1972** Stockholm Conference
- **1973** CITES (wildlife trade)
- **1982** Law of the Sea
- **1987** Montreal (ozone)
- **1992** Rio Earth Summit
- **1997** Kyoto (climate)
- **2015** Paris (climate)
- **2022** Kunming-Montreal
- **2023** High Seas Treaty
- **2025** ICJ climate opinion

Milestones have different legal statuses; spacing is not proportional to time.

From treaty to enforcement



*Shown here: signature subject to later ratification.
Accession is another route.

This is one illustrative route; accession and national legal systems can differ.

Why the Montreal Protocol worked

Ozone

Few producers, alternatives for many uses.

A fund and trade restrictions.

Climate

The whole economy emits.

Costs unequal; benefits slow.

Courts and climate

> The ICJ said in 2025 that states have legal duties to protect the climate system.

- Urgenda (2019), a 25 % cut ordered by 2020.
- KlimaSeniorinnen v Switzerland (2024), human rights breached.

Consent, signature and independent obligations

Treaty participation

Ratification, acceptance, approval or accession can establish consent under the rules.

Signature subject to ratification is not consent to the whole **treaty**.

Beyond one treaty

Withdrawal must follow applicable provisions.

Other treaties and customary obligations can continue; sovereignty is not exemption from all law.

Institutions and scientific assessments

Implementation

Secretariats support reporting, meetings and technical cooperation.

National institutions still need staff, resources and authority.

Do not confuse roles

CITES is a convention with national authorities and defined trade rules.

IUCN assessment is scientific evidence, not an automatic legal trade ban.

Judgments, opinions and compensation

Decision types

Binding judgments depend on parties and **jurisdiction**.

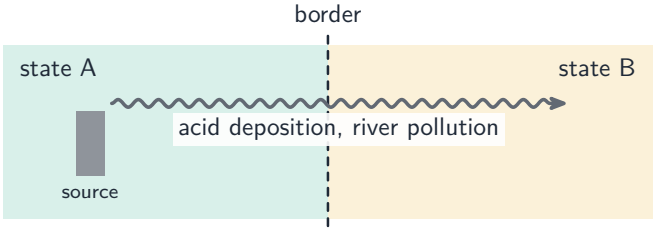
The ICJ 2025 climate advisory opinion has a different legal status.

Evidence for remedies

Identify harm, causation, responsibility and a legal remedy.

A pollution reading alone cannot set compensation for health, livelihood or ecological losses.

Pollution crosses borders



global commons: high seas, atmosphere, ozone layer

one state's law cannot reach the source; cooperation is needed

> No single state can solve these alone

Climate cases in court



Urgenda v Netherlands
Dutch Supreme Court: cut emissions $\geq 25\%$ below 1990 by end 2020

KlimaSeniorinnen v Switzerland
European Court of Human Rights: weak action violated rights

ICJ advisory opinion
states have climate duties under international law; not binding, widely cited

> Courts increasingly hold states to climate duties

What each institution does

treaty secretariat
is: reporting, meetings, support
is not: a global police

CITES
is: a convention; parties act via national authorities

IUCN
is: scientific assessment (Red List)
is not: a treaty or trade ban

a risk classification can inform a legal decision without being the decision

> IUCN assesses species; it is not a **treaty** or a trade ban

China's environmental laws

Tool	What it does
Daily penalties (2015)	Fines grow until the polluter stops
Protection tax (2018)	Pays per unit of pollutant
Central inspections	Officials held responsible
River-basin laws	Yangtze 2021, Yellow River 2023

Does breaking the law pay?

1. **Invented model.** Skipping treatment saves 50000 yuan/day; compare a 200000-yuan one-off fine with a 100000-yuan **daily penalty**.
2. **Annual saving.** $50000 \times 365 = 18.25$ million yuan; the one-off fine is about 1.1% of this.
3. **Daily comparison.** $100000 - 50000 = 50000$ yuan/day more in penalty than saved, assuming enforcement.

Decision

A penalty must exceed the gain, and detection must be likely

Rights of nature



critics: enforcement needs money and clear guardians; may clash with people's rights

> A river with legal personhood can be represented in court.

Community rules

> Not every effective environmental rule comes from a national government.

- Elinor Ostrom showed communities can manage commons well.
- Clear rules, monitoring and fair punishment.

Constitutional protection: Colombia's Atrato

T-622/2016

Constitutional Court addressed illegal-mining harm and community rights.

Recognized the river as a subject of rights with state/community representation.

Evaluate implementation

Legal recognition is an achieved legal outcome.

Funding, safety, guardianship, restoration and monitoring determine practical effects.

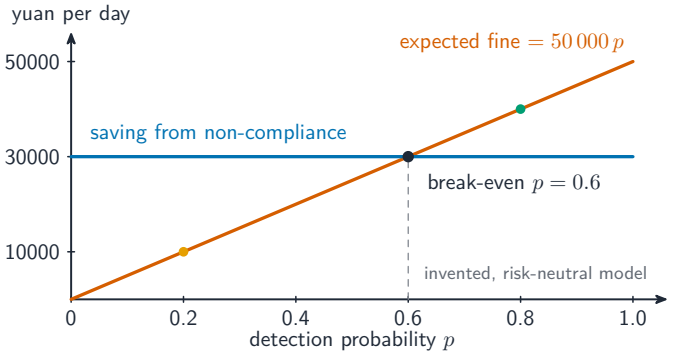
Detection changes the incentive

1. **Invented saving** 30 000 yuan each non-compliant day; fine 50 000 yuan if detected.
2. **At probability 0.2** Expected fine $0.2 \times 50\,000 = 10\,000$ yuan per day.
3. **Break-even probability** $30\,000/50\,000 = 0.6$ under the simplified model.

Decision

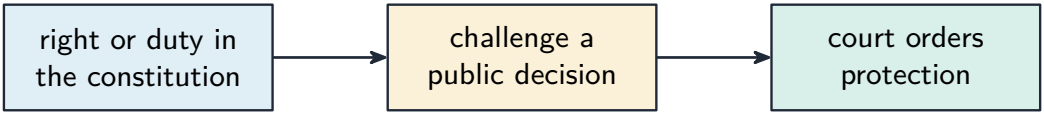
Include other liabilities, closure, repeated offences and behaviour; this is not permission to pollute.

The break-even detection probability



They cross at a probability of 0.6

A constitutional route to protection



depends on: access to a court, standing, costs, effective remedies

It depends on access, standing, costs and remedies

Why laws fail

> A law on paper does not guarantee a change on the ground.

- **Weak monitoring**, small penalties, **local protectionism**.
- **Corruption**, displacement, unequal access to justice.

Check: judging a law

Your turn

Which observation most strongly supports a causal contribution from the ban?

A. Porpoise numbers rose after 2021
B. Fishers received compensation
C. Fish increased in banned waters more than in similar unbanned waters
D. The law was passed by the national legislature

Read the recovery comparison

1. **Dated estimates** 2017:1012;2022:1249 finless porpoises.
2. **Change** $1249-1012=237$;$237/1012\times100\approx23.42\%$.
3. **Timing** The 2021 ban began inside the five-year comparison interval.

Decision

Recovery evidence supports evaluation, but the whole increase is not an isolated causal effect of the ban.

Exam tips

> Separate what a law says from whether it changed the environment.

- Name the law, its date and who it binds.
- Use the principles by name.
- Weigh monitoring, enforcement, fairness and **displacement**.

Check yourself

Try these

A factory discharges 2.4 mg/L at 600 L per minute. Find the load per day.

Explain why the Montreal Protocol succeeded.

Evaluate the Yangtze fishing ban.