HL.A · HL LENSES

Environmental law

Guiding question: How can environmental law help to ensure the sustainable management of Earth systems?

Environmental Systems and Societies Course Companion (Oxford, 2024), book pages 72–83



Understandings (1–6)

1. Laws are rules that govern human behaviour and are enforced by social or governmental authority.

2. Environmental law refers specifically to the rules about how human beings use and impact natural resources, with the aim of improving social and ecological sustainability.

3. Environmental laws can have an important role in addressing and supporting environmental justice, but they can be difficult to approve due to lobbying.

4. Environmental law is built into existing legal frameworks, but its success can vary from country to country.

5. Environmental constitutionalism refers to the introduction of environmental rights and obligations into the constitution.

6. Environmental laws can be drafted at the local, national or international level.

Understandings (7–12)

7. International law provides an essential framework for addressing transboundary issues of pollution and resource management.

8. UN conferences produce international conventions (agreements) that are legally binding, and protocols that may become legally binding, to all signatories.

9. International agreements can generate institutions or organizations to aid their implementation.

10. The application of international environmental law has been examined within international courts and tribunals.

11. There is an increasing number of laws granting legal personhood to natural entities in order to strengthen environmental protection.

12. Both legal and economic strategies can play a role in maintaining sustainable use of the environment.

What are laws?

Laws are rules that govern human behaviour and are made and enforced by social or governmental authority.

They are binding on the conduct of a community, aim to protect against abuses, and ensure rights as citizens.



Figure 1 Example of a symbol representing a law—a “no entry” road sign

Why have laws?

Laws defend us from people who may wish to do us harm for no good reason. The International Criminal Court seeks to do this by trying individuals for genocide, war crimes, crimes against humanity and aggression.

Laws promote the common good. If we all pursue self-interest only, all eventually suffer. The tragedy of the commons demonstrates this and there are examples throughout the book.

Laws help in resolving disputes over limited resources. The Antarctic Treaty ensured that Antarctica was used for peaceful purposes with no disputes over sovereign territory.

Laws help people to do the right thing. This could be in the form of moral laws or laws about doing no harm to others. Doing no harm to minorities is part of this.

What is environmental law?

Environmental laws are the legal frameworks that protect the natural environment.

Environmental law refers specifically to the rules about how human beings use and impact natural resources, with the aim of improving social and ecological sustainability.

The most important areas of environmental law relate to:

- pollution management—of air, soil and water
- wildlife and habitat conservation
- conservation of resources—environmental impact assessments (EIAs) on projects such as mining, development, industrial complexes, housing growth to address sustainability of forests, minerals, fisheries
- climate change.

TOK · THEORY OF KNOWLEDGE

Laws necessarily limit freedoms and therefore do harm to some as an unintended side-effect.

How true is it that laws must limit freedom and do have unintended side-effects?

Why have environmental laws?

Our environment is the total of all living and non-living things that influence human life. Clearly if laws only applied to actions between humans or to property belonging to humans, much of the environment would not be covered by the rule of law and common resources would be open to exploitation by a minority.

Environmental laws attempt to prevent overexploitation and degradation of natural resources for the short-term interests of a minority, above the long-term interests of the common good. Laws can support or ensure ethical behaviour when economic systems incentivize environmental and social harm.



Figure 2 Environmental laws are designed to protect the environment

Levels of drafting of environmental laws

Environmental laws can be drafted at the **local, national or international** level. Generally speaking, laws made at higher national or international levels supersede those made at lower or local levels, depending on the scope of power of the authority involved.

International

International laws or bilateral agreements may be created and applied to transboundary environmental issues related to pollution and resource management. International environmental agreements exist regarding, for example, fisheries, air pollution and trade in endangered species.

Examples: the Montreal Protocol, Kyoto Protocol, CITES and IUCN.

National level

Environmental laws around the world vary in scope, but typically share a common purpose: they use the legal system to protect the natural world and promote sustainability and environmental protection. This may involve forming an **environment agency**, or another body which oversees and enforces the laws and regulations, and ensures remedial work is done.

> **EXAMPLE: USA**
>
> The USA **Environmental Protection Agency (EPA)** was founded in 1970 to establish and enforce environmental laws. The mission of the EPA is to protect human health and the environment.

The EPA works to ensure that: (1/2)

- Americans have clean air, land and water
- national efforts to reduce environmental risks are based on the best available scientific information
- federal laws protecting human health and the environment are administered and enforced fairly, effectively and as Congress intended
- environmental stewardship is integral to USA policies concerning natural resources, human health, economic growth, energy, transportation, agriculture, industry and international trade, and these factors are similarly considered in establishing environmental policy

The EPA works to ensure that: (2/2)

- all parts of society—communities, individuals, businesses, and state, local and tribal governments—have access to accurate information sufficient to effectively participate in managing human health and environmental risks
- contaminated lands and toxic sites are cleaned up by potentially responsible parties and revitalized
- chemicals in the marketplace are reviewed for safety.

> Other national laws cover specific areas of the environment: **1. Air quality · 2. Water quality · 3. Soil quality · 4. Sustainability**

1. Air quality

Environmental law seeks to reduce air pollution levels and carbon emissions, particularly where they are harmful to human health. It does this through outlawing or limiting specific chemicals and pollutants, mandating air quality targets and enforcing regulations.

About **97%** of the world's population live in areas where air quality is usually worse than World Health Organization guidelines.



Figure 3 Air pollution from car combustion engines

1. Air quality: measuring and an example

Air quality indices (AQI) measure pollutants such as ozone, sulfur dioxide, nitrogen dioxide and particulate matter, but exactly what is measured depends on the country. There are websites giving global, national and local data on AQ in real time so that authorities can either issue warnings or stop outdoor activities.

> **EXAMPLE: CHINA**
>
> China's **New Air Law of 2015** has reduced air pollution nearly as much in seven years as the USA did in three decades, helping to bring down average global smog levels. Cities are required to meet national air pollution targets including greenhouse gases (GHGs) by controlling coal use and transport emissions.
>
> However, not all bad air quality is caused by anthropogenic sources. Beijing suffers the effects of sandstorms from the Gobi Desert, in which case the AQI can go above 1,000.

2. Water quality

Water pollution laws govern what can, and cannot, be discharged into water sources. They also control sewage treatment and disposal, plastics waste reduction in water sources, wastewater and animal waste management in industrial and agricultural sectors, and surface water run-off in urban areas and construction sites.



Figure 4 Water pollution

EXAMPLE: USA

The **Clean Water Act (CWA)** established the basic structure for regulating discharges of pollutants into the waters of the USA and regulating quality standards for surface waters. Created in 1948 and significantly reorganized and expanded in 1972, it was a most important modern environmental law.

3. Soil quality

Soil quality laws mandate what types of chemical discharges are allowed on soil and sediment, how soil health should be measured and monitored, and how pollutants should be cleaned up in the event of spills or other contaminant emergencies.

> **EXAMPLE: EUROPEAN UNION**
>
> The **EU Soil Health Law of 2023** sets a strategy for all soils to be in healthy condition by 2050 and to make protecting, restoring and sustainably using soils the norm. This is a comprehensive legal framework for soil protection.

4. Sustainability

These are environmental laws that protect biodiversity, natural habitats and existing ecosystems. Most governments have national laws that govern resource exploitation, both terrestrial and aquatic. These cover hunting and fishing, mineral resources, water resources and forestry.

> **EXAMPLE: INDIA**
>
> The **Biological Diversity Act of 2002** was in response to obligations under the UN Convention on Biodiversity (CBD). It aims to protect biodiversity, facilitate sustainable management of biological resources, and allow for equitable sharing of benefits.

To encourage **renewable energy** investment, environmental laws help to regulate and support industries such as wind, solar, biomass and hydroelectric. Nations may introduce subsidies or incentives to use renewable energy sources or reduce energy use.

Example: recycling in Germany (1/2)

On recycling of products, Germany has the **highest recycling rate in the world at over 66%**. This is due to strong government rulings.

- Under the **Packaging Ordinance** (Verpackungsverordnung – VerpackV) of 1991, manufacturers and distributors of goods are responsible for ensuring packaging is either returned or recycled. This applies to commercial and domestic goods. Quotas are set for the recovery of materials, which manufacturers and distributors must abide by.
- Under the **Closed Substance Cycle and Waste Management Act of 1996**, producers of goods are responsible for the avoidance, recycling, reuse, and correct disposal of any waste. This is the circular economy model (see subtopic 1.3).

Example: recycling in Germany (2/2)

66%+

Germany’s recycling rate, the highest in the world

The **green dot** on packaging means it is accepted for recycling and that the manufacturer has contributed to the cost of recycling it. Companies pay a licence fee to join the scheme, if they do not have to collect recyclable packaging themselves.

In addition, the culture of recycling is strong in the community and made easy for consumers with a national system of bins for different wastes. There is also a **“refund on return”** scheme for bottles and cans.

Local level

At the local level, councils can have laws about recycling and waste disposal.

In the UK, local councils collect waste and there are **338 local authorities in England**. Each council has slightly different rules, so there is considerable variation in “household waste” recycling rates (**from 18–64% in 2020–21**). This is confusing for consumers and many give up trying to “do the right thing” if littering is not punished in some way.



Figure 5 Recycling bin with glass, plastic and metal

Local level: other laws and schemes

Other laws and regulations at local level may be about:

air pollution caused by traffic congestion	noise levels	littering control
planning regulations	recycling requirements	and so on

Many cities around the world are working on schemes to reduce air pollution. Some schemes offer **incentives** for compliance, others apply **penalties** for non-compliance.

Activity 2

ATL skills used: thinking, communication, research

Find an example of a local environmental law or regulation where you live—for example, relating to air, water or soil pollution.

1. Describe what it says.
2. Explain why it is in force.
3. Explain what it aims to achieve.
4. Evaluate its effect.

Case study 1: The Tasmanian Dam Case, 1983

The South West Wilderness area of Tasmania is remote and rugged, has unique wildlife and flora, and is a **UNESCO World Heritage Area**. The Gordon-below-Franklin Dam project was planned to generate hydroelectricity and much-needed employment in the area by damming the Gordon River. After a failed attempt to stop other dams at Lake Pedder in the 1970s, the Tasmanian Green movement protested against the Gordon Dam project. The pro-dam lobby also protested that it should go ahead in a state with high unemployment that needed more power.



Figure 6 Lake Pedder

Case study 1: The Tasmanian Dam Case — outcome

The **state government supported the dam** but the **federal Australian government and environmental groups did not**. The case went to the Australian High Court which decided (in a judge vote of 4 to 3) that the federal government was correct. **The dam did not go ahead.**

This was a **landmark case**. When UNESCO designates a World Heritage Site, this has no binding force on any government. The overriding of state law by federal law, in support of the UNESCO designation, can be seen as a commitment to upholding environmental aims.

Large parts of Australia's main national environmental law, the **Environment Protection and Biodiversity Conservation Act 1999**, depend for their constitutional validity on the decision in the Tasmanian Dam Case.

Environmental impact assessments (EIAs)

Environmental law underpins the environmental impact assessments (EIAs) that many governments require. These assessments investigate and report on the environmental impacts of projects **before they can be carried out**. EIAs are vital in enabling sustainable development to occur.

TOK

How can we know when we should trust and defer to the authority of environmental experts?

Effectiveness of environmental laws

When a law is passed it is written into the **statute book** of a country, which is a collection of all the existing laws of that country. The effectiveness of the law depends on the **strength of legislation and its enforcement**. This can be diluted by various parties which lobby politically for weaker laws, or if enforcement is not firm enough; there has to be enough funding for regulators to identify and fine those who break the laws. Environmental laws are less effective if funding is low or if the laws are not generally accepted by civil society.

Economic systems incentivize financial profit for shareholders and directors over the long-term interests of the common good. If the **polluter-pays principle** is not enforced (see subtopic HL.b), the majority can suffer.

Case study 2: UK sewage in watercourses

Several decades ago, England and Wales became the only countries in the world to have a **fully privatized water and sewage disposal system**. There are 11 water companies, many owned by overseas companies. The UK's antiquated sewerage system is inadequate. Water companies have failed to invest to protect coastal and river environments. Instead, they rely on a network of around **18,000 licensed sewer overflows** to routinely discharge raw sewage into rivers and the ocean.



Figure 7 Sewage outfall pipe discharging into a lake

Case study 2: UK sewage — how it happens

The sewer system carries rainwater and wastewater from homes along the same pipes to water treatment works. When there is too much rainfall, water companies are allowed to discharge overflow from these pipes into the rivers and seas. In total, water firms in England discharged raw sewage into rivers **372,533 times in 2021**. Only **14%** of these rivers are in good biological health.

No new reservoirs have been opened since the water industry was privatized in 1991 and since that time the population of the UK has expanded by over 10 million.

The UK government water services regulation authority (**OFWAT**) regulates the companies but focuses on security and quality of supply and on keeping bills to consumers as low as possible.

Case study 2: UK sewage — fines and profits

GBP 250 million

fines for pollution over five years

GBP 50 billion

paid to shareholders since privatization

The water companies self-monitor and report sewage discharges to OFWAT but the government does not have the funding to do its own inspecting in enough breadth.

Questions

1. Explain why the water companies discharge raw sewage into English waterways.
2. Explain the potential results of sewage discharges into waterways.
3. Discuss the ways in which English water companies could improve the quality of water for consumers and the environment.

International environmental law

Causes of climate change, its consequences and solutions inevitably cross national borders, so environmental law frequently requires international discussion and regulation.

The UN held one of the first international summits on environmental problems and issues in **1972**. Since then, governments at multiple levels—along with human rights groups, non-governmental organizations (NGOs), and other international groups—have developed various frameworks, policies and treaties to safeguard natural resources, protect the environment, and forge connections between nations. International environmental lawyers have played a significant role in this.

Organizations working on environmental law at an international level include the **UNEP, CITES, Greenpeace, ClientEarth and WWF**.

Activity 3

ATL skills used: thinking, communication, social, research

Search online for “international environment organizations” and choose one that interests you.

1. Research this organization: describe its mission; explain how it operates; evaluate its achievements.

2. Discuss your selected organization with your class and establish what successful organizations have in common.

How do these laws work?

A nation's **constitution** is a set of principles and rules by which a country is organized and governed. In many nations (e.g. India, Singapore, the USA) the constitution is one document, ratified at the time the nation came into being.

Constitutional law is the body of law that defines the relationship between different entities within a nation, most commonly the judiciary, the executive and the legislature bodies.



Figure 8 A country's written constitution

Environmental constitutionalism

Environmental constitutionalism—where environmental rights and obligations are incorporated into national constitutions—has become a widespread phenomenon. Internationally, more and more environmental cases are effectively addressed by nations' constitutions. Climate change issues are increasingly being addressed in this manner.

TOK

How true is it that factual evidence may be abused, dismissed or ignored in politics?

Climate constitutionalism

Climate constitutionalism is increasing to address the global threat created by the climate crisis. Around the world, **150 countries** had taken action on environmental constitutionalism as of 2017, and in 2020, the London School of Economics identified **11 countries with "climate clauses"** in their constitutions:

Algeria · Bolivia · Côte d'Ivoire · Cuba · Dominican Republic · Ecuador · Thailand · Tunisia · Venezuela · Vietnam · Zambia

There may be more now. Most of these clauses are broad aspirations and pledges to action, not targets. Rights-based provisions are relatively scarce but **Tunisia's constitution guarantees all citizens the right to participate in the protection of the climate.**

More examples of international laws

International law in general sets out the rules that apply to relationships between states. It also sets out rules on many issues that states have agreed are of international importance. It provides an essential framework for addressing **transboundary issues of pollution and resource management**.

The ASEAN Agreement on Transboundary Haze Pollution (AATHP)

This is a **legally binding** environmental agreement signed in **2002** by the 10 states of the Association of Southeast Asian Nations (ASEAN) to reduce pollution by haze in Southeast Asia.

AATHP: the haze problem

Haze occurs when suspended dust and smoke particles accumulate in relatively dry air; **PM2.5 particulates** do most damage to lungs.

Haze from forest fires is a real problem when **deforestation for agriculture**, mainly in Sumatra and Kalimantan, is wind-blown over many ASEAN countries. The south-west monsoon blows the haze over Thailand, Singapore, Brunei and the Malay peninsula.

Enforcement of the agreement is difficult, however, as it partly depends on educating small farmers to encourage sustainable practices.

AATHP: Indonesia, Singapore and Greenpeace

75%

of Indonesia’s GHG emissions are from deforestation

Indonesia signed the agreement late and it is the **third largest GHG emitter** country in the world. Some 75% of its emissions are from deforestation.

Singapore has imposed strict rules on multinational palm oil companies that invested in Indonesia.

Greenpeace called for tighter regulations to control the overseas operations of big food companies, highlighting that contract farming through subsidiaries of multinational corporations was a major factor behind the high number of haze hotspots.

Illegal, unreported and unregulated (IUU) fishing

The FAO International Plan of Action (IPOA) to prevent, deter and eliminate Illegal, Unreported and Unregulated fishing (IUU)

The IPOA is **voluntary** within the framework of the UN Food and Agriculture Organization (FAO) Code of Conduct for Responsible Fisheries.

IUU fishing is an issue around the world. IUU occurs in most fisheries, and accounts for **up to 30% of total catches** in some. The objective of the IPOA is to prevent, deter and eliminate IUU fishing by providing all states with comprehensive, effective and transparent measures by which to act, including through appropriate regional fisheries management organizations established in accordance with international law.

How IUU fishing may occur

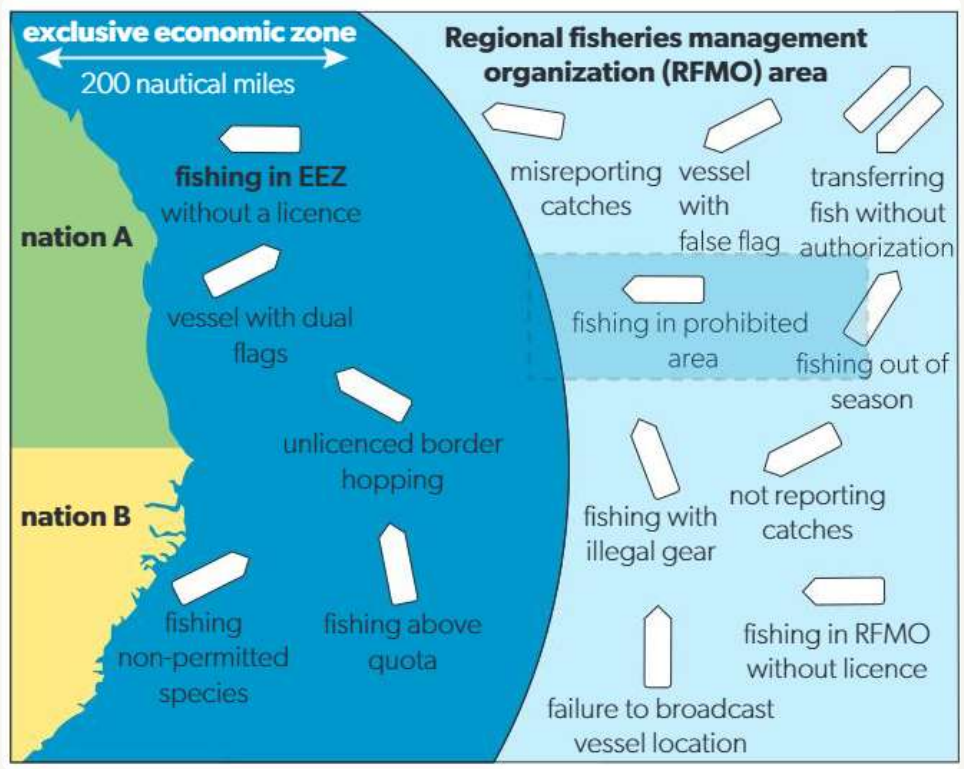


Figure 9 US graphic on IUU fishing. Adapted from: U.S. Government Accountability Office

Activity 4

ATL skills used: thinking, communication, research

Consider Figure 9 and your studies on sustainability and aquatic food production systems.

1. Review the ways in which IUU fishing may occur. How many are shown in Figure 9?
2. Which of these do you think are easier to regulate and why?
3. Describe ways in which nations A and B could ensure protection of their own EEZs (exclusive economic zones).
4. Explain why sustainable fishing is so difficult to achieve.

What does the UN do?

UN conferences produce international **conventions** (agreements) that are legally binding and **protocols** that may become legally binding to all signatories, though their development can be very slow and challenging.

There are difficulties involved in negotiating international agreements and the agreements have mixed results. **Difficulties include:**

- the complexity of the agreements
- rapidly evolving scientific knowledge
- pressures on individual governments from internal stakeholders with differing interests
- conflicts between countries over “differentiated responsibilities”
- financing commitments of high-income countries (HICs) towards low-income countries (LICs)
- general geopolitical conflicts
- potential economic impact of agreements.

The UN, the rule of law and UNEP

But as people recognize that climate change is happening and affecting them, it becomes a more urgent issue.

The **rule of law** in environmental matters is essential for equity in terms of the advancement of Sustainable Development Goals (SDGs), the provision of fair access by assuring a rights-based approach, and the promotion and protection of environmental and other socio-economic rights.

The **United Nations Environment Programme (UNEP)** is responsible for coordinating responses to environmental issues within the UN system. Conflicts over natural resources and environmental crimes intensify the problems. **At least 40% of internal conflicts** over the last 60 years have a link to natural resources.

TOK · THEORY OF KNOWLEDGE

At what level do political leaders and officials have different ethical obligations and responsibilities when making decisions that have such large impacts?

The Montreal Protocol, 1987

The Montreal Protocol of 1987 was an international treaty to phase out production of **ozone depleting substances (ODS)**. Since then there have been nine revisions and the **Kigali Amendment of 2016** phased down hydrofluorocarbons (HFCs) too as they are potent greenhouse gases (GHGs).

The Montreal Protocol was widely adopted because:

- replacement chemicals (HFCs) could be produced
- there was a clear scientific issue of ozone depletion
- the public recognized and understood the risks.

The Kyoto Protocol and the Doha Amendment

192 parties

Kyoto Protocol: adopted 1997, in force 2005

147 states

had agreed to the Doha Amendment (2012) by 2020

The **Kyoto Protocol** on GHG emissions, adopted in 1997, came into force in 2005 with 192 parties. It committed states to reduce GHG emissions by anthropogenic activities which are causing climate change.

A second round of targets in the **Doha Amendment** in 2012 had lower take-up by countries, with the USA not ratifying the Amendment and others dropping out. By 2020, 147 states had agreed to the Doha Amendment.

The Paris Agreement, 2015

The Paris Agreement of 2015 was negotiated by **196 countries** and signed by **195** (Iran, a major emitter, did not sign). The goal of this Agreement is to keep the global temperature increase to **2°C above pre-industrial levels** and to reach **net zero in carbon emissions by 2050**. Each year there are conferences to assess progress and agree goals. These are the **COP conferences**.

Unfortunately, zero carbon targets are far more complex to agree and implement than those for phasing out ODS; they vary depending on many factors and some countries are able to fund emission reductions in other countries, thus meeting their own targets. As a result, progress towards the Paris Agreement targets has been slow.

International conventions and courts

Conventions

International agreements can generate institutions or organizations to aid their implementation. There is a range of conventions covered in the ESS course. Specific agreements are the most successful, for example:

- the Convention on International Trade in Endangered Species (CITES)
- the International Union for Conservation of Nature (IUCN).

Courts and tribunals

International courts and tribunals have had some role in the development of international environmental law. Three examples follow:

- International Court of Justice (ICJ)
- International Tribunal for the Law of the Sea (ITLOS)
- European Court of Justice (ECJ)

The International Court of Justice (ICJ)

The ICJ, which has its seat in **The Hague**, is the principal judicial organ of the UN and rules on cases of discrimination and disputes between nations.

EXAMPLE: THE SILALA RIVER

The Silala River in the Atacama Desert flows across the Chilean and Bolivian borders and its status as an international waterway was disputed. This centred on which country could take the water in a time of mega-drought. The court did not need to rule in the end as both parties agreed that it was an international waterway and they would share the waters.



Figure 10 ICJ seal

ITLOS and the European Court of Justice

International Tribunal for the Law of the Sea (ITLOS)

An independent judicial body established by the 1982 UN Convention on the Law of the Sea.

European Court of Justice (ECJ)

The supreme court of the European Union (EU). It makes sure EU law is applied in the same way across the EU and that EU institutions and countries abide by EU law.



Figure 11 ECJ logo

An ECJ case and the difficulties courts face

EXAMPLE: WASTE IN WALLONIA, BELGIUM

One case was concerned with a Belgian law that prohibited waste that originated in member states from being dumped or stored in Wallonia (an area of Belgium). The ECJ ruled that **waste was "goods"** because it was the subject of a commercial transaction; therefore the Belgian law was counter to EU free movement of goods.

One of the difficulties faced by international judiciary bodies is how to evaluate appropriate compensation and damages for infringements of environmental law. Who decides the values is also complicated.

There are calls for a specialized **International Court for the Environment**.

Case study 3: Chagos Islands

A case brought before the **ITLOS** court is the dispute over the Chagos Islands in the Indian Ocean. The Chagos Archipelago is a group of atolls and 60 islands about 500 km south of the Maldives. They are a **British Indian Ocean Territory (BIOT)** because they were transferred to Britain after the Napoleonic Wars.



Figure 12 Map showing the Chagos Islands, the Maldives and Mauritius in the Indian Ocean

Case study 3: Chagos Islands — expulsion and rulings

Between **1967 and 1973**, the UK expelled the indigenous peoples on Diego Garcia, the largest and only inhabited island of the Chagos, to allow the USA to build an **airbase** there. Many of these 1,500–2,000 people were sent to the Seychelles or Mauritius.

Mauritius gained independence from the UK in 1968, and has since claimed the Chagos Archipelago as Mauritian territory, arguing that it was coerced into giving up the Chagos Islands. The **International Court of Justice ruled in 2019** that this action and the UK's continued administration of the Chagos was illegal. The UK dismissed this ruling as not legally binding.

Case study 3: Chagos Islands — the marine area

In **2010**, the UK announced the establishment of the **Chagos Protected Marine Area**—the world's largest marine reserve (larger than France or California). In 2015 the Permanent Court of Arbitration, a non-UN intergovernmental organization, ruled that this violated international law.

In 1992, the Maldives supported the UK's claim over the Chagos. In 2023, after the marine area was announced and fishing was prohibited in this area, they supported Mauritius' claim instead. The Maldives have a claim to fishing areas around the Chagos Islands within overlapping EEZs and **fishing is 67% of Maldivian exports**.

Case study 3: Chagos Islands — today

At the time of writing, the UK still controls the Chagos and the airbase operates. Local peoples have not returned and have not received compensation. **International law is complicated.**

Questions

1. Why did the UK make the indigenous people of the Chagos Islands leave?
2. Why did the UK government believe it had the right to do this?
3. Which three countries are now disputing their claims to the Chagos and why?
4. Who benefits from and who suffers in the current dispute?
5. Discuss in class the ethical and justice issues in this case.

What is personhood?

Personhood is a term in law and in philosophy which describes the status of being a person.

Granting legal personhood to natural entities can result in stronger environmental protection. Only a legal person can have rights, protections and legal liability in law. The law has a long history of granting legal personhood to corporations and other organizations, which means they have legal standing and can be sued or brought to court.

Examples of personhood

- the Ganges and Yamuna Rivers in India
- the Whanganui River (Te Awa Tupua) in New Zealand which is revered by the Maori people
- Mar Menor, a coastal saltwater lagoon in Spain—the first ecosystem to gain personhood
- Great ape personhood, first granted in 2007 by the Balearic Islands and then later by other countries.





Figure 13 Mar Menor, Spain (left) · **Figure 14** A silverback gorilla, part of the Great ape family (right)

Personhood: a complicated question

This is complicated too. Should personhood be granted to women, children, embryos, slaves, indigenous peoples, non-Great ape animals, aliens, A.I., mountains, scenic views, specific ecosystems, bacteria?

Indigenous knowledge systems do not recognize the distinction between humans and nature, or the differences between anthropocentric and ecocentric environmental value systems.

TOK

At what level can the practices of indigenous cultures be judged with any validity by applying the moral values of another culture?

Linking environmental law and environmental economics

Environmental laws may be enacted but it is difficult to gain the agreement of all stakeholders and to ensure compliance with the laws. Similarly, environmental economics (see subtopic HL.b) attempts to value ecosystem services in financial terms but who makes the valuation and using what criteria?

By **integrating the two approaches**, environmental sustainability may become more likely. For example, giving value to the cost of an oil spill can have an impact on the law which then imposes proportional fines.

Check your understanding

How can environmental law help to ensure the sustainable management of Earth systems?

1. Define law and environmental law.
2. Describe the three levels at which environmental laws can be drafted.
3. Explain how national environmental laws may and may not be effective, with examples.
4. Discuss an example of a UN law or treaty that is effective and one that is less effective.
5. Evaluate the benefits of giving personhood to four entities of your choice. Two of these should be non-living.