

Environmental Laws

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| 1) NATIONAL ENVIRONMENTAL LAWS | 80 Marks |
| 2) INTERNATIONAL ENVIRONMENTAL LAW | 20 Marks |

Part-I

NATIONAL ENVIRONMENTAL LAWS

I. EVOLUTION AND HISTORY OF ENVIRONMENTAL LAW

Q. Define following terms: (V.V.Imp)

1. Environment
2. Adverse Environmental effect
3. ECO System
4. Pollution
5. Proponent

Ans:

1. ENVIRONMENT

Environment is a very wide and comprehensive concept in environmental law. It refers to everything that surrounds human beings and influences their life, health, and activities. Under the Pakistan Environmental Protection Act, 1997 (PEPA), environment includes air, water, land, all layers of the atmosphere, and all living organisms such as human beings, animals, and plants. It also includes the interaction and relationship among these elements, which is known as the ecological system.

In a broader sense, the environment is not limited to natural elements only. It also includes human-made surroundings such as buildings, roads, industries, and urban infrastructure. Social, cultural, and economic conditions are also considered part of the environment because they directly affect the quality of human life. For example, poverty, lack of sanitation, and overpopulation can also create environmental problems. Therefore, environment is a combination of natural systems and human systems working together.

Environment can also be divided into different types for better understanding. These include the natural environment (forests, rivers, mountains), the built environment (cities, roads, industries), and the social environment (communities, institutions, and human relationships). All these aspects are interconnected and influence each other. A change in one part of the environment often affects the other parts.

From a legal point of view, the concept of environment is very important because any activity that affects any of its components may come under legal regulation. Governments make laws and policies to protect the environment from harmful activities such as pollution, deforestation, and overuse of natural resources. Courts in Pakistan have also played an important role in protecting environmental rights by linking them with fundamental rights, especially the right to life.

Example:

If industries release untreated waste into a river, it not only pollutes water but also harms aquatic life, affects people who use the water for drinking or farming, and damages the overall ecological balance. Similarly, rapid urbanization without proper planning can reduce green spaces, increase air pollution, and create waste management problems. All these situations

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show how different aspects of the environment are connected and how human activities can disturb them.

2. ADVERSE ENVIRONMENTAL EFFECT

Adverse environmental effect means any harmful or negative impact on the environment. According to PEPA, it includes impairment of the environment, damage to human health and safety, and harm to living organisms such as plants and animals. It also includes pollution, contamination, and any activity that makes the environment unsafe, unhealthy, or unfit for its natural use.

This concept is very important in environmental law because it helps authorities identify harmful activities and take legal action against them. If an activity is likely to cause an adverse environmental effect, it may be restricted, controlled, or even prohibited. For example, before starting a large industrial project, the law may require an Environmental Impact Assessment (EIA) to evaluate its possible effects on the environment.

Adverse environmental effects can take many forms. These include air pollution, water pollution, soil contamination, noise pollution, and loss of biodiversity. Some effects are visible and immediate, such as smoke from factories or polluted water, while others are slow and long-term, such as climate change, desertification, and depletion of natural resources.

These effects can also be classified as reversible or irreversible. Reversible effects can be corrected over time, such as cleaning polluted water or planting trees. However, irreversible effects cannot be undone, such as the extinction of a species or permanent damage to ecosystems. This makes it very important to prevent environmental harm before it occurs.

In Pakistan, various policies such as the National Environment Policy and the National Climate Change Policy emphasize the need to reduce adverse environmental effects through proper planning, regulation, and public awareness. The law also encourages the use of cleaner technologies and sustainable practices to minimize environmental damage.

Example:

Industrial smoke containing harmful gases can cause respiratory diseases in humans and contribute to global warming. Similarly, dumping untreated sewage into rivers can make water unsafe for drinking, kill aquatic life, and spread diseases. Excessive use of chemical fertilizers and pesticides in agriculture can damage soil quality and contaminate groundwater. All these are examples of adverse environmental effects because they harm both the environment and living beings.

3. ECOSYSTEM

An ecosystem is a natural system in which living organisms interact with each other and with non-living components such as air, water, and soil. It is a balanced and interconnected system where each element plays an important role in maintaining stability. The survival of one component often depends on others, creating a chain of relationships within the ecosystem.

Ecosystems can exist at different levels and sizes. They can be small, like a pond, or very large, like a forest or ocean. There are different types of ecosystems, including terrestrial ecosystems

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(forests, deserts, grasslands) and aquatic ecosystems (rivers, lakes, seas). Each ecosystem has its own unique characteristics and supports specific types of plants and animals that are adapted to that environment.

The main components of an ecosystem are biotic (living) and abiotic (non-living) elements. Biotic components include plants, animals, and microorganisms, while abiotic components include sunlight, water, air, soil, and temperature. These components interact through processes such as food chains, energy flow, and nutrient cycles. For example, plants produce food through sunlight, animals depend on plants for food, and microorganisms decompose dead matter to return nutrients to the soil.

The concept of ecosystem is very important in environmental law because it highlights the importance of balance and sustainability. Any disturbance in one part of the ecosystem can affect the entire system. Human activities such as deforestation, pollution, overfishing, and urban expansion can disturb this balance and lead to serious environmental problems.

In Pakistan, policies like the National Conservation Strategy (1992) and the National Environment Policy emphasize the protection of ecosystems and the sustainable use of natural resources. Conservation of forests, wildlife, water resources, and biodiversity is considered essential for maintaining ecological balance and ensuring long-term development.

Example:

A forest ecosystem is a complete system where trees provide oxygen and shelter, animals depend on plants for food, and microorganisms help in decomposing organic matter to maintain soil fertility. If large-scale deforestation takes place, it can lead to loss of wildlife, soil erosion, reduced rainfall, and climate changes. Similarly, in a river ecosystem, pollution can kill fish, destroy aquatic plants, and affect people who depend on the river for their livelihood. These examples show how disturbing one part of an ecosystem can affect the whole system.

4. POLLUTION

Pollution is one of the central concerns of environmental law because it directly affects human health, ecosystems, and the overall quality of life. In legal terms, pollution refers to the introduction of harmful substances, energy, or contaminants into the environment in such a way that it changes its natural condition and causes damage. This definition is intentionally broad so that it can cover all types of environmental harm, whether visible or invisible.

Pollution is not limited to just dirt or waste that we can see. It also includes invisible dangers such as toxic gases in the air, chemicals in drinking water, or even excessive noise that disturbs human life. The law recognizes different forms of pollution, including air pollution, water pollution, land pollution, and noise pollution. Each type has its own sources and impacts, but all of them result in environmental degradation.

For example, air pollution commonly occurs when factories release smoke containing harmful gases like carbon monoxide and sulfur dioxide. In cities like Lahore or Karachi, vehicle emissions are a major cause of smog, which leads to breathing problems and other health issues. Water pollution happens when untreated industrial waste or sewage is discharged into rivers and canals. A clear example is when factories dump chemical waste into the River Ravi, making the water unsafe for drinking, agriculture, and aquatic life. Land pollution can be seen

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in the improper disposal of solid waste, such as plastic bags and garbage heaps, which not only damage soil quality but also create unhygienic conditions. Noise pollution, although often ignored, is also harmful; for instance, constant loud traffic or construction noise can lead to stress, hearing loss, and sleep disturbance.

An important aspect of pollution in law is that it must cause or be likely to cause harm. This harm can be to human health, property, wildlife, or the environment itself. Even if the damage is not immediate, the potential for harm is enough to bring an activity under legal control. For instance, releasing small amounts of toxic chemicals regularly may not show immediate effects, but over time it can accumulate and cause serious environmental damage.

Under Pakistani environmental law, pollution is strictly regulated through standards such as the National Environmental Quality Standards (NEQS). These standards set limits on how much pollution can be released into the environment. If a factory exceeds these limits, it is considered a violation of the law and can face penalties, fines, or even closure. This reflects the principle that no one has the right to harm the environment for personal or commercial gain.

Another important point is that pollution can be both direct and indirect. Direct pollution occurs when a company openly discharges waste into a river. Indirect pollution may occur when harmful substances seep into groundwater over time due to poor waste management practices. Both forms are equally important in environmental law because they contribute to long-term environmental damage.

5. PROPONENT

The concept of a proponent is equally important because environmental law does not only identify problems but also assigns responsibility. A proponent is the person, company, or organization that proposes, plans, or undertakes a project that may have an impact on the environment. This term is widely used in environmental procedures, especially in Environmental Impact Assessment (EIA) and Initial Environmental Examination (IEE).

In simple terms, the proponent is the one who wants to carry out a project. This could be a private company planning to build a factory, a real estate developer constructing a housing society, or even a government department undertaking a large infrastructure project like a dam, highway, or power plant. Regardless of who they are, once they propose a project that may affect the environment, they become legally responsible as a proponent.

The role of the proponent is not just limited to proposing a project; it also includes ensuring that the project is environmentally safe. Before starting certain types of projects, the proponent is required by law to conduct an Environmental Impact Assessment (EIA). This process involves studying the possible environmental effects of the project and suggesting measures to reduce or prevent harm. For example, if a company wants to set up a cement factory, it must first analyze how the factory will affect air quality, nearby communities, and natural resources. Based on this study, the company must take steps such as installing pollution control equipment or choosing a location that minimizes harm.

Another example can be seen in the construction of a housing society. The developer (proponent) must consider issues like waste disposal, water supply, sewage treatment, and

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green spaces. If these factors are ignored, the project can lead to serious environmental problems such as water shortage, pollution, and loss of biodiversity.

The law places several responsibilities on the proponent. These include submitting environmental reports, obtaining approval from environmental authorities, following prescribed standards, and implementing mitigation measures. The proponent must also ensure continuous compliance even after the project has started. This means that environmental responsibility does not end with approval; it continues throughout the life of the project.

If a proponent fails to fulfill these obligations, legal action can be taken. For instance, if a factory starts operations without EIA approval or violates pollution standards, the authorities can impose fines, shut down the project, or initiate legal proceedings. This ensures that development activities are carried out responsibly and do not harm the environment.

The concept of the proponent is closely linked with the “polluter pays principle,” which means that the person responsible for pollution must bear the cost of managing and reducing it. This principle encourages proponents to adopt environmentally friendly practices from the beginning, rather than causing harm and dealing with consequences later.



Q. Explain comprehensively the evolution process of environmental laws in Pakistan. (V.Imp)

Ans:

Introduction

The evolution of environmental laws in Pakistan reflects the growing awareness of environmental protection and sustainable development in the country. In the early years after independence, Pakistan did not have a separate and organized legal framework for environmental protection. The focus of the government was mainly on economic growth, industrial development, and infrastructure building. As a result, environmental concerns such as pollution, deforestation, and degradation of natural resources were largely ignored. However, with the passage of time, the negative effects of unplanned development became visible in the form of water pollution, air pollution, loss of biodiversity, and climate-related issues.

International developments also played an important role in shaping Pakistan’s environmental laws. Global movements and conferences emphasized the need for environmental protection, which influenced Pakistan to adopt similar measures at the national level. Gradually, the government began to introduce policies, strategies, and laws to control environmental damage and ensure sustainable use of natural resources. The judiciary also played a significant role by interpreting environmental protection as part of fundamental human rights, especially the right to life.

The development of environmental law in Pakistan can be understood in different phases, starting from the pre-1970 period with limited laws, followed by the emergence of formal environmental legislation in the 1980s, and then the establishment of a comprehensive legal framework through the Pakistan Environmental Protection Act, 1997. Later, various policies

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and strategies further strengthened this framework. The following is a detailed explanation of this evolutionary process.

1. Early Phase (Before 1970) – Lack of Specific Environmental Laws

In the early years of Pakistan, there were no specific environmental laws. However, some provisions related to environmental protection existed in general laws. These laws were not designed specifically for environmental protection but indirectly addressed certain environmental issues.

For example, the Pakistan Penal Code contained provisions against public nuisance, which could be used in cases of environmental harm. Similarly, laws relating to factories, forests, fisheries, and local government also included some measures for controlling pollution and protecting natural resources.

However, these laws were limited in scope and effectiveness. They did not address modern environmental challenges such as industrial pollution, climate change, or biodiversity loss. There was also a lack of proper enforcement and awareness.

Example:

If a factory caused smoke pollution, action could be taken under nuisance laws, but there was no comprehensive system to regulate emissions or ensure environmental standards.

2. Influence of International Developments (1970s)

The 1970s marked an important turning point in environmental law worldwide. The Stockholm Conference 1972 played a key role in raising global awareness about environmental issues. Pakistan also participated in this conference, which encouraged the country to take environmental protection more seriously.

As a result, Pakistan started recognizing the importance of environmental conservation and began taking initial steps to develop policies and institutions. However, progress was still slow, and a comprehensive legal framework was yet to be established.

3. Introduction of Formal Environmental Legislation (1980s)

A major development in Pakistan's environmental law came in the 1980s with the introduction of the Pakistan Environmental Protection Ordinance, 1983. This was the first law specifically designed to deal with environmental issues in the country.

This ordinance led to the establishment of environmental protection institutions at the federal and provincial levels. It also introduced basic concepts of environmental regulation, such as pollution control and environmental standards.

However, the ordinance had several weaknesses. It lacked strong enforcement mechanisms, detailed procedures, and public participation. Therefore, it could not effectively deal with the increasing environmental challenges.

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4. Development of Policy Framework (1990s)

In the 1990s, Pakistan made significant progress by introducing environmental policies and strategies. One of the most important developments was the National Conservation Strategy (NCS), 1992.

The NCS was the first comprehensive policy document that focused on sustainable development. It aimed to conserve natural resources, improve environmental quality, and promote public awareness. It also highlighted key areas such as forestry, water management, and biodiversity conservation.

The NCS laid the foundation for future environmental laws and policies by providing a clear direction for environmental protection in Pakistan.

5. Pakistan Environmental Protection Act, 1997 (PEPA)

The most important milestone in the evolution of environmental law in Pakistan is the Pakistan Environmental Protection Act, 1997. This Act replaced the 1983 Ordinance and provided a comprehensive legal framework for environmental protection.

PEPA, 1997 introduced several important features, including:

- Establishment of the Pakistan Environmental Protection Council
- Creation of Environmental Protection Agencies (EPAs)
- Introduction of Environmental Impact Assessment (EIA) and Initial Environmental Examination (IEE)
- Setting of National Environmental Quality Standards (NEQS)
- Provision for penalties and enforcement mechanisms

This Act significantly strengthened environmental governance in Pakistan and provided legal tools to control pollution and protect natural resources.

Example:

Before setting up a large industrial project, companies are required to conduct an EIA to assess its environmental impact. This helps in preventing adverse environmental effects before they occur.

6. Growth of Environmental Policies (2000s and Beyond)

After PEPA, Pakistan continued to develop its environmental policy framework. Important policies include the National Environment Policy, 2005 (approved in 2006), which provides guidelines for addressing environmental issues such as water pollution, air quality, waste management, and biodiversity conservation.

Another important development is the National Climate Change Policy, 2012, which focuses on addressing climate change challenges, including global warming, floods, and energy efficiency.

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These policies emphasize sustainable development, public awareness, and integration of environmental considerations into economic planning.

7. Role of Judiciary in Environmental Law

The judiciary in Pakistan has played a very important role in the development of environmental law. Courts have interpreted the right to a clean and healthy environment as part of the fundamental right to life under the Constitution.

Through public interest litigation, courts have taken action against environmental pollution and have directed government authorities to enforce environmental laws. Judicial activism has helped in strengthening environmental governance in the country.

Example:

Courts have ordered industries to install pollution control systems and have taken action against illegal cutting of forests and improper waste disposal.

8. Recent Trends and Challenges

In recent years, Pakistan has taken further steps to address modern environmental challenges such as climate change, urban pollution, and water scarcity. However, several challenges still exist, including weak enforcement of laws, lack of resources, and limited public awareness.

There is also a need for better coordination between federal and provincial governments, especially after the 18th Amendment, which transferred many environmental responsibilities to the provinces.

Conclusion

In conclusion, the evolution of environmental laws in Pakistan has been a gradual process influenced by both national needs and international developments. Starting from limited legal provisions, Pakistan has developed a comprehensive legal and policy framework, particularly with the introduction of the Pakistan Environmental Protection Act, 1997 and subsequent policies. The role of international conferences, national strategies, and judicial activism has been significant in shaping this evolution. Although considerable progress has been made, there is still a need for effective implementation and stronger enforcement to address current environmental challenges. A proper understanding of this evolutionary process helps law students to appreciate the development of environmental law and its importance in ensuring sustainable development in Pakistan.



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Q. Illustrate the relationship between: International Law and Environment Law. (V. Imp)

Ans:

Introduction

The relationship between international law and environmental law is essential for understanding how environmental protection is carried out across the world. Environmental problems such as climate change, water pollution, and biodiversity loss do not remain limited within one country; they often spread beyond borders and affect many nations at the same time. Because of this, individual countries cannot solve these issues on their own. International law provides a system of rules, principles, and agreements that guide countries in dealing with such global environmental challenges. Environmental law at the national level is largely influenced by these international developments, as states adopt and implement global commitments through their own legal systems.

Nature of the Relationship

International law and environmental law are closely linked because environmental protection has become a global concern. Environmental law is not only about local or national issues; it is also about protecting shared resources such as the atmosphere, oceans, and biodiversity. These resources are often called “common concerns of mankind,” which means all countries have a shared responsibility to protect them.

International law provides general principles and obligations, while national environmental law gives them practical effect. For example, international law may require countries to reduce pollution, but it is the responsibility of each country to make laws, create institutions, and enforce standards within its territory. In this way, international law acts as a framework, and national environmental law acts as the implementation tool.

Role of International Treaties and Agreements

Treaties and agreements are the main instruments through which international law influences environmental protection. Countries voluntarily enter into these agreements to address environmental problems collectively.

For example, global agreements on climate change require countries to limit greenhouse gas emissions. In response, Pakistan developed the National Climate Change Policy 2012, which outlines measures such as promoting renewable energy and reducing carbon emissions. Similarly, international agreements on ozone layer protection led to the gradual phase-out of harmful substances like chlorofluorocarbons (CFCs).

Another example is international conventions on biodiversity, which encourage countries to protect endangered species and natural habitats. As a result, Pakistan has taken steps to establish national parks and protected areas, and to conserve wildlife.

These treaties help in setting common standards, promoting cooperation, and ensuring that all countries contribute to environmental protection.

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Influence on National Environmental Laws

International environmental law has played a major role in shaping the environmental legal system of Pakistan. Many important principles that are now part of national law originated at the international level.

For instance, the **principle of sustainable development** emphasizes that economic growth should not harm the environment or future generations. This principle is reflected in Pakistan's National Conservation Strategy (1992) and National Environment Policy (2005/2006).

The **precautionary principle** suggests that lack of full scientific certainty should not be used as a reason to delay action against environmental harm. For example, if there is a risk that a new chemical may be harmful, authorities can restrict its use even if complete scientific proof is not available.

The **polluter pays principle** means that the person or company causing pollution must bear the cost of managing and reducing it. For example, if a factory contaminates a river, it must pay for cleaning the water and compensating affected communities.

Pakistani courts have also used international environmental principles in their decisions. In several cases, the courts have interpreted the constitutional right to life to include the right to a clean and healthy environment.

Implementation at National Level

International law does not automatically apply within a country unless it is implemented through domestic legislation. This makes national environmental law very important.

In Pakistan, laws such as the Pakistan Environmental Protection Act, 1997 (PEPA) provide the legal framework for implementing international commitments. Institutions like environmental protection agencies are responsible for enforcing these laws, monitoring pollution levels, and ensuring compliance.

For example, if Pakistan commits under an international agreement to control industrial pollution, it implements this through National Environmental Quality Standards (NEQS). Industries are required to follow these standards, and failure to do so can result in penalties.

Another example is the requirement of Environmental Impact Assessment (EIA). Before starting large projects such as dams, highways, or power plants, proponents must assess environmental impacts and take measures to reduce harm. This reflects international best practices in environmental governance.

Need for International Cooperation

Environmental issues often require cooperation between countries because they are interconnected and transboundary in nature. Pollution from one country can easily affect neighbouring countries, and global problems like climate change impact the entire planet.

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International law encourages cooperation in several ways:

- Sharing scientific knowledge and technology
- Providing financial assistance to developing countries
- Coordinating policies and strategies

For example, developed countries may provide financial and technical support to countries like Pakistan to adopt clean energy technologies such as solar and wind power. Similarly, countries work together to manage shared water resources and prevent marine pollution.

Without such cooperation, it would be very difficult to address global environmental challenges effectively.

Challenges in the Relationship

Despite the strong relationship between international law and environmental law, there are several challenges. One major issue is that international law relies on the willingness of states to comply. There is no strong global authority to enforce environmental agreements strictly.

Some countries may prioritize economic development over environmental protection and may not fully implement their international commitments. For example, industries may continue polluting due to weak enforcement or lack of resources.

In Pakistan, challenges include limited financial resources, lack of technical expertise, weak institutional capacity, and low public awareness. These factors can make it difficult to fully implement international environmental standards.

Another challenge is balancing development and environmental protection. Developing countries often face pressure to grow economically, which can sometimes conflict with environmental goals.

Conclusion

In conclusion, international law and environmental law have a strong and interdependent relationship. International law provides the guiding principles, frameworks, and agreements needed to address global environmental problems, while national environmental law ensures their implementation and enforcement within a country. This relationship is essential for promoting sustainable development and protecting shared environmental resources. Although there are challenges in terms of compliance and enforcement, continued cooperation, commitment, and legal development can strengthen this relationship and lead to more effective environmental protection at both national and international levels.



Environmental Laws

Q. Is environmental law just a soft law? Comments, supported by logical arguments. (V.Imp)

Ans:

Introduction

Environmental law has developed as an important branch of modern legal systems, both at national and international levels. However, there is often a debate about whether environmental law is merely “soft law” or whether it has binding legal force. This question arises mainly because many international environmental rules are found in declarations, guidelines, and policies that are not strictly enforceable like traditional laws. At the same time, there are also binding treaties, national statutes, and judicial decisions that clearly impose legal obligations. Therefore, environmental law cannot be simply classified as entirely soft law. It is a mixture of both soft law and hard law, working together to achieve environmental protection. Understanding this distinction is important for law students to analyze the true legal status and effectiveness of environmental law.

Understanding Soft Law and Hard Law

To answer the question, it is important to first understand the meaning of soft law. Soft law refers to rules, principles, declarations, or guidelines that are not legally binding but still influence the behavior of states and institutions. Examples include international declarations, action plans, and policy documents. These do not create strict legal obligations but provide guidance and set standards.

On the other hand, hard law consists of legally binding rules such as treaties, statutes, and regulations that can be enforced through courts or legal authorities. Non-compliance with hard law can lead to penalties or legal consequences.

Environmental law includes both of these forms, which is why it is often described as a “hybrid” legal field.

Why Environmental Law is Considered Soft Law

There are several reasons why environmental law is often seen as soft law, especially at the international level.

First, many foundational environmental instruments are non-binding. For example, international declarations on environmental protection provide general principles but do not impose strict legal duties. These instruments rely on voluntary compliance by states.

Second, environmental issues are complex and require flexibility. Countries have different economic conditions, levels of development, and environmental priorities. Soft law allows states to adopt environmental measures according to their own capacities without being strictly bound by rigid rules.

Third, enforcement at the international level is weak. There is no global authority that can strictly enforce environmental rules. As a result, many environmental agreements depend on cooperation and goodwill rather than strict legal enforcement.

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For example, climate change agreements often set targets and goals, but enforcement mechanisms are limited, making them closer to soft law in practice.

Why Environmental Law is Not Just Soft Law

Despite these arguments, it is incorrect to say that environmental law is only soft law. There are strong reasons to show that it also includes binding legal elements.

First, many international environmental treaties are legally binding. Once a country signs and ratifies a treaty, it becomes obligated to follow its provisions. For example, agreements on ozone protection and biodiversity impose clear duties on states.

Second, at the national level, environmental law is mostly hard law. In Pakistan, laws such as the Pakistan Environmental Protection Act, 1997 (PEPA) are fully binding. They set standards, create institutions, and provide penalties for violations. For instance, industries that exceed pollution limits can face fines, closure, or legal action.

Third, courts play an important role in strengthening environmental law. In Pakistan, the judiciary has interpreted the right to life to include the right to a clean and healthy environment. Through public interest litigation, courts have enforced environmental standards and held authorities accountable. This gives environmental law a strong legal status.

Fourth, soft law often develops into hard law over time. Many environmental principles, such as sustainable development and the polluter pays principle, started as soft law but are now widely accepted and applied in binding legal frameworks.

Balanced View: A Combination of Soft and Hard Law

The most logical view is that environmental law is a combination of both soft law and hard law. Soft law plays an important role in setting goals, developing principles, and encouraging cooperation among states. Hard law ensures enforcement, accountability, and legal certainty.

For example, an international declaration may introduce a principle like sustainable development (soft law), and later this principle is incorporated into national legislation or treaties (hard law). In this way, soft law acts as a foundation, while hard law provides legal force.

This combination makes environmental law more effective because it balances flexibility with enforceability.

Conclusion

In conclusion, environmental law cannot be described as just soft law. Although many of its international aspects are based on non-binding principles and voluntary commitments, it also includes strong elements of hard law, especially at the national level and in binding international treaties. The true nature of environmental law is a mixture of both soft and hard law, where soft law helps in developing ideas and cooperation, and hard law ensures implementation and enforcement. This balanced approach allows environmental law to

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respond effectively to complex global challenges while maintaining legal authority and accountability.



Q. What are the natural resources? Who own them? (V.Imp)

Ans:

Introduction

Natural resources are the basic elements of nature that make life possible and support human development. They include everything that humans obtain from the natural environment for survival, comfort, and economic activities. With the increase in population, industrial growth, and technological advancement, the use of natural resources has expanded rapidly, raising serious concerns about their depletion and misuse. Environmental law plays a key role in regulating the use, protection, and distribution of these resources to ensure that they are not exhausted or damaged. One of the most important legal questions is not only what natural resources are, but also who owns them and who has the right to use them. In Pakistan, this issue is governed by constitutional principles, statutory laws, and environmental policies that emphasize sustainable development and public welfare. A clear understanding of natural resources and their ownership helps law students analyze environmental issues, conflicts over resource use, and the role of the state in protecting public interest.

MEANING AND TYPES OF NATURAL RESOURCES

Natural resources are all those materials, substances, and components that exist in nature and are useful for human beings. These resources are not created by humans but are obtained directly from the environment. They are essential for survival as well as for economic and industrial development.

Natural resources can be classified in several ways:

1. Renewable and Non-Renewable Resources

Renewable resources are those that can be replenished naturally over time. These include air, water, forests, sunlight, and wind. For example, solar energy is continuously available, and forests can be restored through replantation. However, renewable resources can still be depleted if they are overused. For instance, excessive cutting of trees without reforestation leads to deforestation and loss of biodiversity.

Non-renewable resources are limited and cannot be replaced once they are used. These include minerals, coal, oil, and natural gas. For example, petroleum extracted for fuel cannot be regenerated within a human lifetime. Overuse of such resources leads to permanent depletion and creates energy crises.

2. Based on Nature and Use

Natural resources can also be divided into:

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- **Land resources** (soil, agricultural land)
- **Water resources** (rivers, lakes, groundwater)
- **Mineral resources** (gold, copper, coal)
- **Biological resources** (plants, animals, forests)

For example, land is used for farming and construction, while water is essential for drinking, irrigation, and industrial use. Forests provide timber, medicine, and help maintain ecological balance. Minerals are used in industries such as construction and manufacturing.

3. Exhaustible and Inexhaustible Resources

Exhaustible resources are those that can run out, such as fossil fuels and minerals. Inexhaustible resources, like sunlight and air, are available in unlimited quantity and are not likely to be depleted by human use.

Importance of Natural Resources

Natural resources are essential for human survival and economic progress. They provide food, energy, shelter, and raw materials for industries. For example:

- Water is necessary for drinking and agriculture
- Forests provide oxygen, timber, and support wildlife
- Minerals are used in building roads, houses, and machinery

They also maintain ecological balance. For instance, forests absorb carbon dioxide and help control climate, while oceans regulate temperature and support marine life.

However, misuse of natural resources can lead to serious environmental problems. Overuse of groundwater can cause water shortages, and excessive mining can destroy ecosystems. Therefore, proper management is necessary.

OWNERSHIP OF NATURAL RESOURCES

The ownership of natural resources is a complex legal issue and is not absolute. In modern environmental law, natural resources are generally considered to belong to the people as a whole, and the state acts as a trustee to manage them.

1. State Ownership (Public Ownership)

In Pakistan, most natural resources are owned and controlled by the state on behalf of the public. This means the government is responsible for managing these resources for the benefit of all citizens, not for private gain.

For example:

- Rivers, lakes, and forests are under government control
- Minerals like oil, gas, and coal are regulated by the state
- National parks and wildlife reserves are managed by government authorities

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This concept is based on the **public trust doctrine**, which means that certain resources are preserved for public use and the government must protect them.

2. Private Ownership (Limited Rights)

Although the state has overall control, individuals can have limited ownership rights over certain natural resources, especially land. For example, a person may own agricultural land and use its resources for farming.

However, this ownership is not absolute. The landowner cannot use the resource in a way that harms the environment or public interest. For instance:

- A factory owner cannot dump waste into nearby water bodies
- A landowner cannot cut protected forests without permission
- A housing society must follow environmental regulations

Thus, private ownership is always subject to environmental laws and restrictions.

3. Community Rights

In some cases, local communities have traditional rights over natural resources. For example, villagers may use nearby forests for firewood or grazing animals. These rights are often recognized but regulated to prevent overuse.

For instance, in northern areas of Pakistan, local communities are sometimes involved in forest management to ensure sustainable use.

4. International Perspective (Common Heritage of Mankind)

At the global level, some natural resources are considered the common heritage of mankind. This means they belong to all humanity and must be protected collectively.

Examples include:

- The atmosphere (affected by global pollution and climate change)
- Oceans and marine resources beyond national boundaries
- Antarctica, which is reserved for peaceful and scientific purposes

No single country can claim full ownership over these resources, and international law governs their use.

ROLE OF LAW IN REGULATING OWNERSHIP

Environmental laws in Pakistan, especially the Pakistan Environmental Protection Act, 1997 (PEPA), regulate the use and protection of natural resources. These laws ensure that:

- Resources are used in a sustainable manner
- Pollution and environmental damage are controlled
- Projects affecting natural resources undergo Environmental Impact Assessment (EIA)

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For example, before starting a mining project, the company must obtain approval and ensure that it does not harm the environment.

Policies such as the National Conservation Strategy (1992) and National Environment Policy (2005/2006) also emphasize conservation and sustainable use of resources.

Conclusion

In conclusion, natural resources are essential elements of nature that support life and economic development. They include renewable and non-renewable resources, each with its own importance and limitations. The ownership of these resources is not absolute but is based on legal principles that prioritize public interest and environmental protection. In Pakistan, the state acts as a trustee of natural resources, ensuring their proper management and sustainable use. While individuals and communities may have limited rights, these are always subject to environmental laws and regulations. Proper understanding of natural resources and their ownership is crucial for ensuring sustainable development and protecting the environment for future generations.



Q. Write a detailed note on the natural resources and doctrine of public trust. (V.Imp)

Ans:

Introduction

Natural resources are the essential components of the environment that provide the basic necessities of life and support human development. They include water, air, forests, minerals, wildlife, and soil, all of which are vital for survival, economic activities, and ecological balance. These resources are finite, and their misuse or over-exploitation can lead to environmental degradation, scarcity, and long-term harm to both humans and wildlife. To ensure their sustainable use, environmental law provides legal mechanisms for the management and protection of natural resources. One of the most important principles in this context is the **Doctrine of Public Trust**, which guides how governments and authorities must manage these resources for the benefit of present and future generations.

Natural Resources: Meaning and Classification

Natural resources are resources that occur naturally in the environment and are useful to humans. They are not created by humans but are extracted, utilized, and managed to meet various needs, including food, energy, water, and shelter. The law recognizes their importance and regulates their use to prevent depletion and ecological damage.

TYPES OF NATURAL RESOURCES

A. Renewable and Non-Renewable Resources

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- **Renewable Resources:** These can naturally replenish over time, provided they are not overused. Examples include sunlight, wind, water, forests, and fisheries. For instance, forests can regenerate if trees are replanted and deforestation is controlled.
- **Non-Renewable Resources:** These exist in finite quantities and cannot be regenerated on a human timescale. Examples include minerals, coal, petroleum, and natural gas. Excessive extraction of petroleum can lead to energy crises, demonstrating the finite nature of such resources.

B. Land, Water, Mineral, and Biological Resources

- **Land Resources:** Soil, agricultural land, and rangelands are essential for food production and settlement.
- **Water Resources:** Rivers, lakes, groundwater, and oceans are necessary for drinking, irrigation, energy generation, and industrial use.
- **Mineral Resources:** Coal, gold, copper, and other minerals are critical for industrial development and infrastructure.
- **Biological Resources:** Forests, wildlife, and biodiversity provide food, medicine, ecological services, and support climate balance.

C. Exhaustible and Inexhaustible Resources

- **Exhaustible Resources:** Minerals, coal, oil, and forests (if not replenished) can run out.
- **Inexhaustible Resources:** Sunlight, wind, and air are virtually limitless and not prone to depletion under normal conditions.

IMPORTANCE OF NATURAL RESOURCES

Natural resources are vital for:

- **Human survival:** Water, air, and food are indispensable for life.
- **Economic development:** Minerals and fossil fuels support industries and energy production.
- **Ecological balance:** Forests, wetlands, and oceans regulate climate, absorb carbon dioxide, and support biodiversity.
- **Cultural and social life:** Rivers, mountains, and forests are integral to many cultural and traditional practices.

However, overuse and mismanagement can lead to water scarcity, deforestation, soil erosion, and biodiversity loss, emphasizing the need for legal protection.

DOCTRINE OF PUBLIC TRUST

The **Doctrine of Public Trust** is a fundamental principle in environmental law that establishes the responsibility of the state to manage natural resources for the benefit of the public. It originates from Roman law, which held that certain resources like air, water, and the sea were

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common to all and could not be privately owned. Over time, this principle has been incorporated into modern environmental and constitutional law to ensure sustainable use of natural resources.

1. Key Principles of the Doctrine

1. **Natural resources are owned by the public:** The state holds natural resources as a trustee for the benefit of all citizens. Resources like rivers, forests, and the atmosphere cannot be exploited solely for private profit.
2. **State as a trustee:** The government or state authorities have the legal responsibility to conserve and protect these resources.
3. **Use for public benefit:** The resources should be used equitably to serve current and future generations.
4. **Accountability:** Authorities managing these resources can be held accountable if they fail to protect or misuse them.

2. Legal Basis and Application

The doctrine has been recognized in:

- **International law:** The concept is reflected in treaties and agreements that treat certain resources, such as oceans and the atmosphere, as global commons.
- **National law:** In Pakistan, the Constitution, environmental laws like PEPA 1997, and policies such as the National Conservation Strategy (1992) embody the principles of public trust. Courts in Pakistan have repeatedly applied this doctrine to ensure environmental protection.

Example: In the case of water pollution, courts have held that rivers and water bodies are public resources. Industries cannot discharge untreated waste into rivers because it violates the public's right to clean water, which is protected under the public trust doctrine.

Example in Forest Management: Forests are managed by the government on behalf of the people. Cutting trees indiscriminately or converting forests for private projects without approval is considered a violation of the public trust.

3. Significance of the Doctrine

- **Sustainable development:** Encourages responsible use of resources to meet present needs without harming future generations.
- **Environmental protection:** Provides a legal foundation for regulating pollution, deforestation, and over-extraction.
- **Public accountability:** Ensures that the government and private actors cannot exploit resources solely for personal or corporate gain.
- **Judicial enforcement:** Courts can intervene if the state or private actors violate environmental duties, thereby providing legal remedies for public harm.

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4. Modern Examples

- Implementation of **Environmental Impact Assessments (EIA)** for development projects in Pakistan ensures that resources like water, forests, and land are not harmed.
- National parks, wildlife sanctuaries, and protected forests in Pakistan are maintained under the doctrine of public trust.
- Court interventions to stop illegal mining, river pollution, and encroachment of wetlands show practical enforcement of the doctrine.

Conclusion

In conclusion, natural resources are the essential materials provided by nature that support life, development, and ecological balance. Their proper use and protection are critical for sustainable development. The Doctrine of Public Trust reinforces the legal and ethical principle that these resources are owned by the public and must be managed by the state for the benefit of present and future generations. By combining legal regulation with the doctrine of public trust, environmental law ensures accountability, prevents misuse, and promotes sustainable management of resources. For law students, understanding this doctrine is crucial to grasp the legal foundation for environmental protection and resource management in Pakistan.



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