

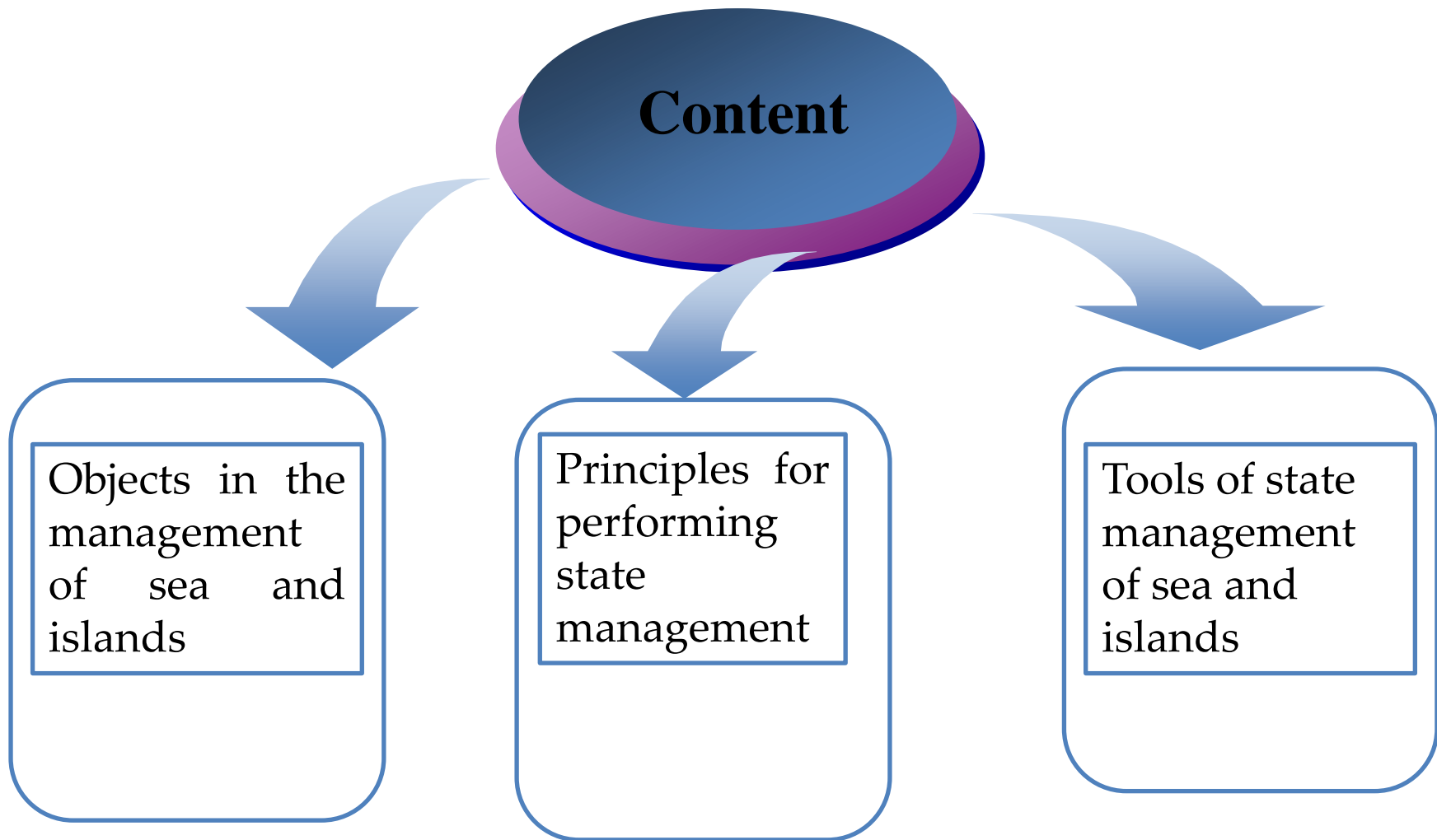


MARINE RESOURCES AND ENVIRONMENT MANAGEMENT

Topic 4 - Management Of Marine Resources And
Environment

4.1 Tools for managing environmental resources

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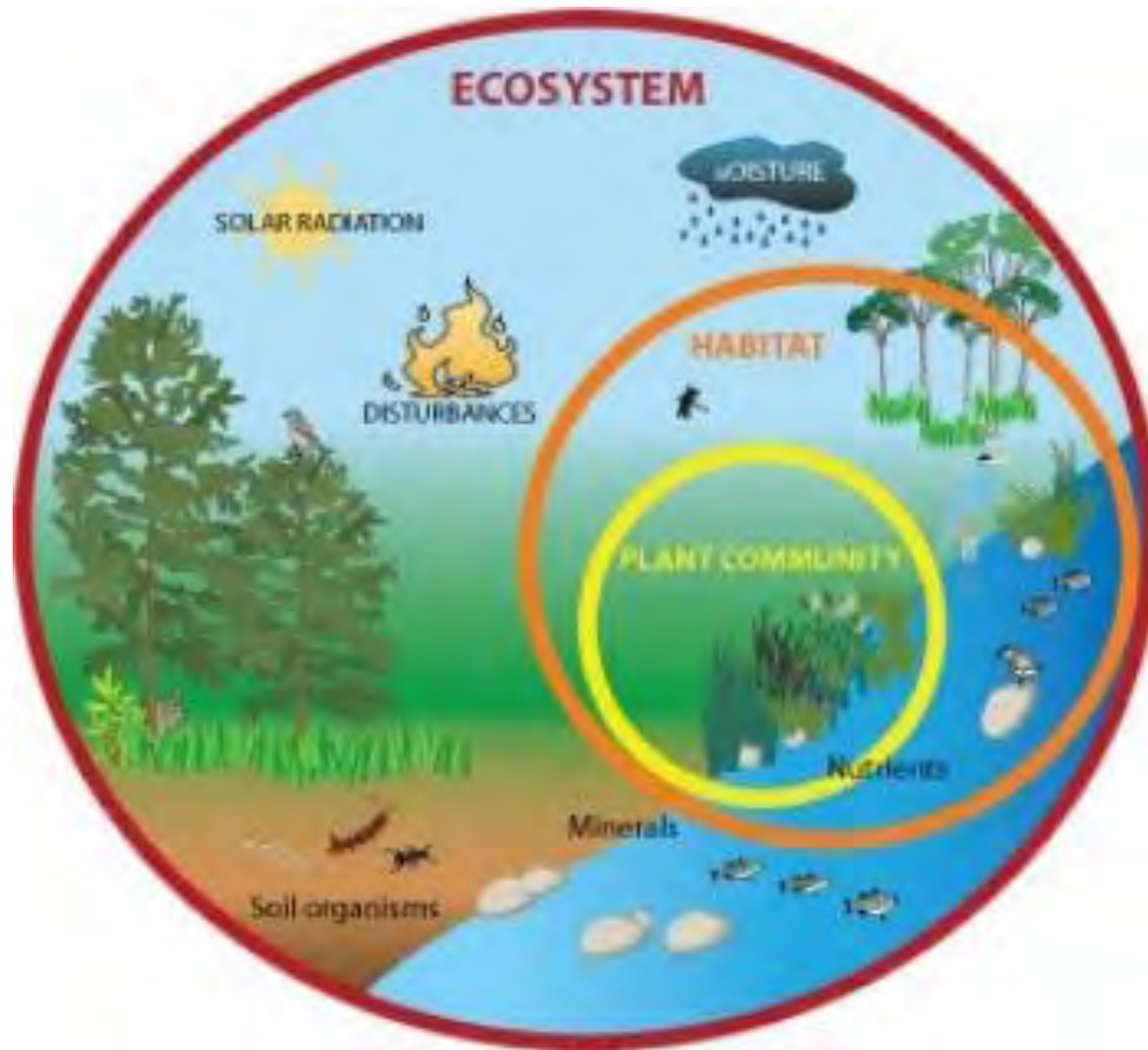
A full-page background image of a tropical ocean. The water transitions from a deep navy blue at the horizon to a bright turquoise in the middle, and finally to white foam as waves break in the foreground. The texture of the water is visible with small ripples and whitecaps.

1. Objects in the management of sea and islands

Biodiversity (ecosystem)

- ❖ Biodiversity is the difference between organisms living everywhere, including: terrestrial, oceanic and other aquatic ecosystems, as well as systems ecology of which organisms are a part. The term biodiversity covers the variation within a species, between species, and between different ecosystems.
- ❖ According to the World Wide Fund for Nature (WWF) (1989): Biodiversity is the abundance of life on earth, the millions of species of plants, animals and microorganisms, the genes contained in species, which are extremely complex ecosystems that live in the same environment.

Biodiversity (ecosystem)



Biodiversity (ecosystem)

- ❖ According to the Convention on Biological Diversity (Rio-92 Conference), biodiversity is the variety between living organisms from all sources including airspace, land, sea, aquatic ecosystems other. It includes species diversity, between species and ecosystems.

Marine ecosystems are the largest aquatic ecosystems in the world, including oceans, salt flats and intertidal ecosystems, estuaries, lagoons, mangroves, coral reefs and deep seas.

Biodiversity (ecosystem)

- ❖ Marine and coastal ecosystems in Vietnam provide many economic benefits (food, income, employment) and many community values (visits, entertainment, culture) to human life, through important services and functions such as regulation, provision of food, culture and support. The demand for ecological services is increasing due to population growth and economic development in coastal areas

Biodiversity (ecosystem)



Conceptual diagram illustrating the abundant and highly diverse marine resources of the Verde Island Passage, Philippines.

Diagram courtesy of the Integration & Application Network (ian.umces.edu), University of Maryland Center for Environmental Science. Source: R. Boquien, G. Di Carlo, and M.C. Quiblan, 2010. *Adapting to Climate Change: Maintaining Ecosystem Services for Human Well-being in the Verde Island Passage, Philippines*. Conservation International, Arlington, VA, USA.

Marine environment

- Protection of the marine environment is the prevention of negative effects of human and natural activities on the marine environment, causing pollution and degradation of the marine environment and coastal marine areas.
- The QCVN on marine environment protection in Vietnam?
 1. QCVN 10-MT:2015/BTNMT - National technical regulation on sea water quality
 2. QCVN 43:2012/BTNMT - National technical regulation on marine sediment quality

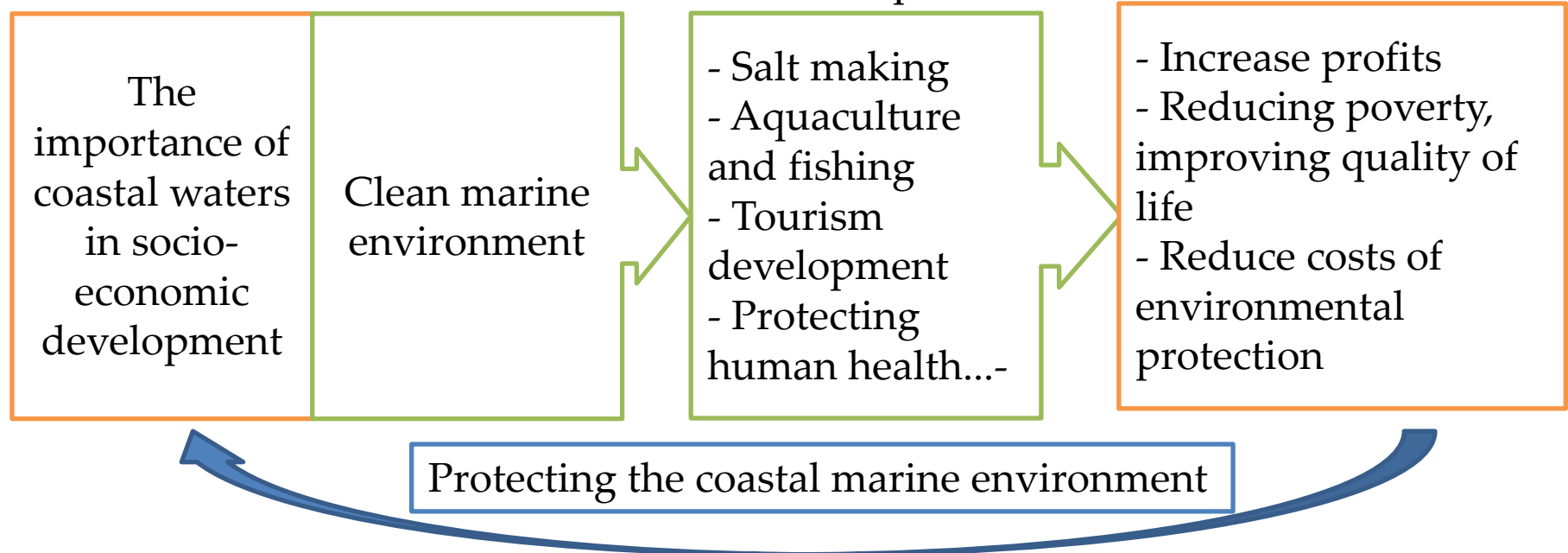
Marine environment

- Marine protection has a number of specific characteristics that need urgent protection, including: Biodiversity needs to be protected: Ecosystems (mangroves; coral reefs; sea-grasses; tidal flats; estuaries, lagoons, bays; wetlands); Biological resources.
- The coastal marine environment where there are specific socio-economic activities such as: seaports, shipping, marine tourism, aquaculture, salt making; places subject to direct and long-term impacts of continental and offshore pollution sources (discharge of industrial zones, export processing zones, economic zones; discharge of residential areas; drift of oil pollution...).
- Coastal area is the result of marine environmental protection process (verifies the results of state management in controlling and treating waste sources from the continent, outside the protected area and within the protected area).

Marine environment

Coastal waters are the transitional places between the mainland and the sea, where there is a lot of pressure on the environment due to socio-economic activities from the mainland. The source of discharge from the continent to the sea accounts for about 52% of marine pollution, so the coastal waters are sensitive areas, containing "hot spots" of marine pollution.

The importance of coastal waters in socio-economic development



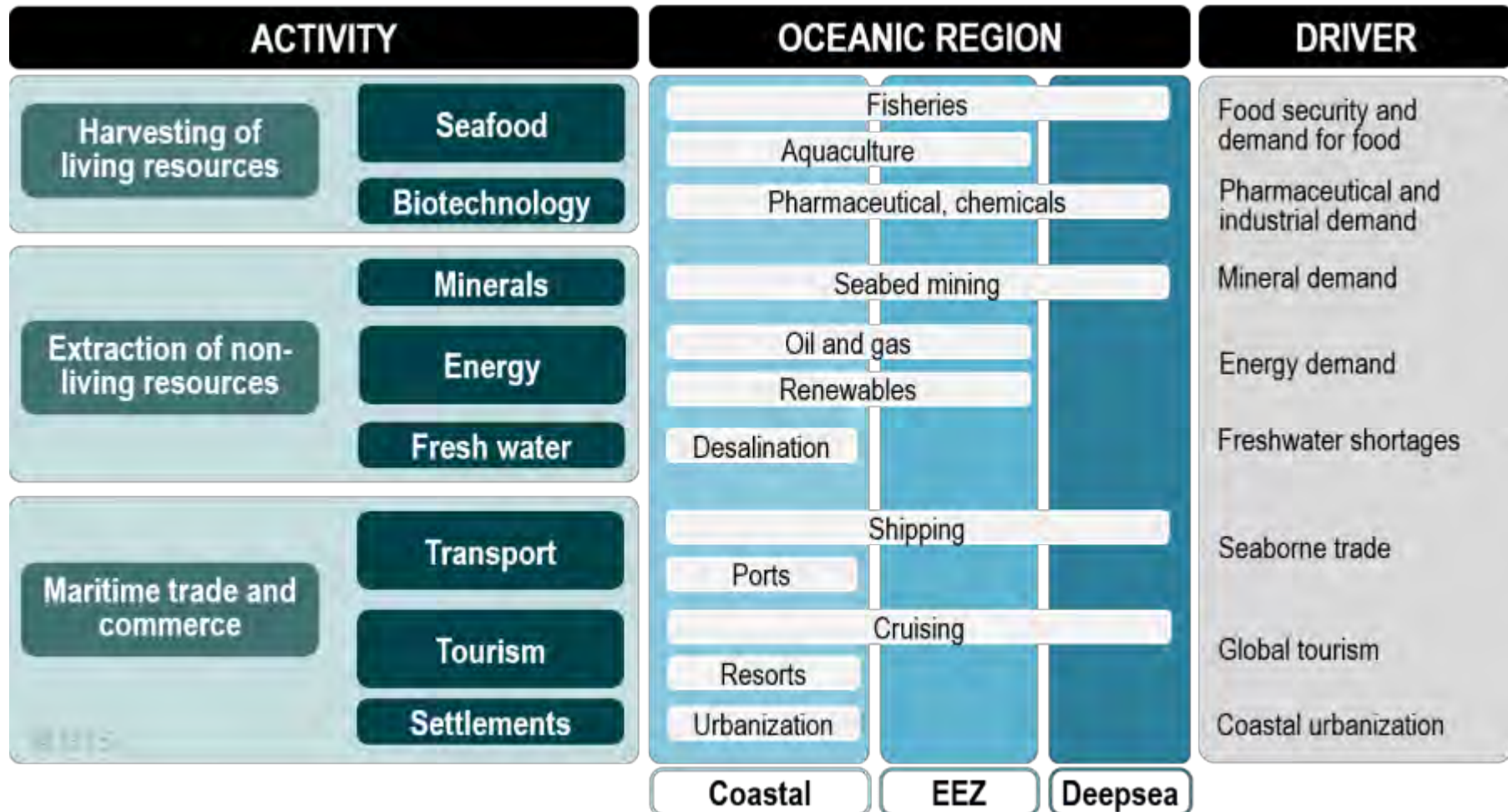
Socio-economic development activities


Marine economy is a combination of economic activities at sea with economic activities on land, in which the sea mainly plays the role of exploiting raw materials, for transportation and tourism activities at sea. . Meanwhile, most activities of organizing production, processing, logistics services for marine exploitation are located on land. The strong development of the scientific and technological revolution in recent decades has greatly helped people in exploiting and using many types of natural resources of the sea and ocean.

Marine economic activities:

- Industrial/artisanal legal
- Mass tourism/ Ecotourism
- Aquaculture
- Ocean Shipping
- Construction of a port
- Sea entertainment
- Offshore mineral extraction
- Ocean Studies
- Access to genetic resources

Socio-economic development activities



A photograph of an offshore wind farm. Several wind turbines are visible in the distance, their silhouettes against a sky with soft, colorful clouds from a low sun. The foreground is filled with the dark, choppy surface of the ocean.

Principles for performing state management

The purpose of State management of sea and islands

For the integrated and unified state management of seas and islands:

- Develop, apply and implement solutions that are **interdisciplinary, inter-agency, inter-regional**.
- There must be community engagement and marine spatial management based on **an ecosystem approach**.

Purpose of integrated management of seas and islands:

- Ensure multidisciplinary development.
- Multi-objective use (optimization).
- Ensure multi-benefit (mutual benefit) between the state, private sector, stakeholders and local communities.
- Simultaneously, it minimizes conflicts of interest between sectors in the process of exploiting and using natural resources and environment of sea, coast and islands. .

State management of the sea plays an important role in:

- Organize the formulation, appraisal, submission or promulgation according to legal competence.
- Licensing for socio-economic and scientific activities on sea and islands as prescribed by law.
- Direct, monitor, inspect, guide and supervise the organization and implementation of legal documents, strategies, policies, master plans, plans, programs, schemes and projects on sea and islands.
- Summary of domestic and foreign experiences and models on state management of seas and islands; promptly adjust and handle new problems arising in the state management of seas and islands.

According to actual needs:

Principle 1: Ensuring the supremacy of sovereignty, sovereign rights and national jurisdiction in the management of seas and islands (*principle of national sovereignty*).

Principle 2: Ensuring the consistency of national interests in the management, exploitation and use of the sea, coast and islands (*priority principle for national interests*).

Principle 3: Ensure the uniformity, effectiveness and efficiency of law enforcement and international conventions to which Vietnam is a contracting party in the management, exploitation, use and protection of seas and islands (*principle on law*).

According to actual needs:

Principle 4: Balance the need for economic development and the rationality and sustainability in the exploitation and use of resources (*Principles of sustainable development*).

Principle 5: Planning activities for exploitation and use of seas and islands on the basis of spatial planning, ensuring multi-purpose integration, balancing the interests of sectors, fields and areas. coastal localities (*planning principles*).

Principle 6: Respecting the ownership rights of the entire people and ensuring social justice in the exploitation and use of natural resources and the enjoyment of sea and island resources (*the principle of fairness*).

According to actual needs:

Principle 9: Developing advanced and modern material and technical potentials commensurate with the objectives and capacity of management, exploitation, use and protection of seas and islands (*principle of strengthening and maintaining resource control*).

Principle 10: Create an equal, active and proactive position in international cooperation on the sea in order to solve problems of common human, international and regional concern such as: responding to climate change disaster prevention, disaster recovery, protection of ocean life, etc. (*principles of international integration*).

The mechanism of State management of sea and islands

- Mechanism for formulating, promulgating and organizing the implementation of master plans and plans on the use of seas and islands.
- Mechanism for appraisal, allocation or lease of sea and island areas to organizations and individuals for exploitation and use.
- Mechanism for coordination in inspection, supervision and handling of violations of the law on sea use.
- Dispute settlement mechanism in management, exploitation and use of seas and islands.
- Mechanism for organizing and managing basic investigation activities, keeping and sharing information and documents on sea and islands.
- Coordination mechanism in international cooperation, training and marine scientific research.

A large, complex offshore oil platform is situated in the middle of a deep blue ocean under a clear sky. The platform features a dense network of steel beams and supports, with several tall, yellow derrick structures rising from the deck. A long, yellow crane arm extends from the left side of the platform. The water is a deep, textured blue, and the sky is a pale, clear blue.

Environmental resource management tool

- ☐ Laws and policies
- ☐ Economic tools
- ☐ Environmental taxes and fees
- ☐ Technical tools
- ☐ Deposit-Refund Systems
- ☐ Eco-label

☐ Laws and policies

- The system of legal documents on the integrated and unified management mechanism for seas and islands(*)
- The system of standards, regulations and economic-technical norms on exploitation and use of seas and islands is based on the requirements of integrated and unified management of seas and islands.
- Administrative decisions are issued by competent state agencies to implement integrated and unified management mechanisms and policies on seas and islands.

☐ Laws and policies

Environment law: The legal basis of environmental management are documents on international law and national law in the field of environment

International law on the environment: is a set of international principles and rules governing the relationship of states, between states and international organizations in preventing and eliminating damage caused to the environment by individual countries and the environment beyond national devastation.

The Law on Environmental Protection of Vietnam: promulgated by the National Assembly on December 27, 1993 and amended and supplemented with Resolution No. 52/2005/QH11 dated November 29, 2005. This is the highest legal provision of State on the environment with 15 chapters.

☐ Laws and policies

Many aspects of environmental protection are mentioned in other documents such as the Mineral Law, the Petroleum Law, the Maritime Law, the Labor Law, the Land Law, the Forest Protection and Development Law, the Health Protection Law of people, the Ordinance on Dikes, the Ordinance on the Protection of Aquatic Resources, the Law on Protection of Traffic Works.

Law on Environmental Protection: Includes 15 chapters

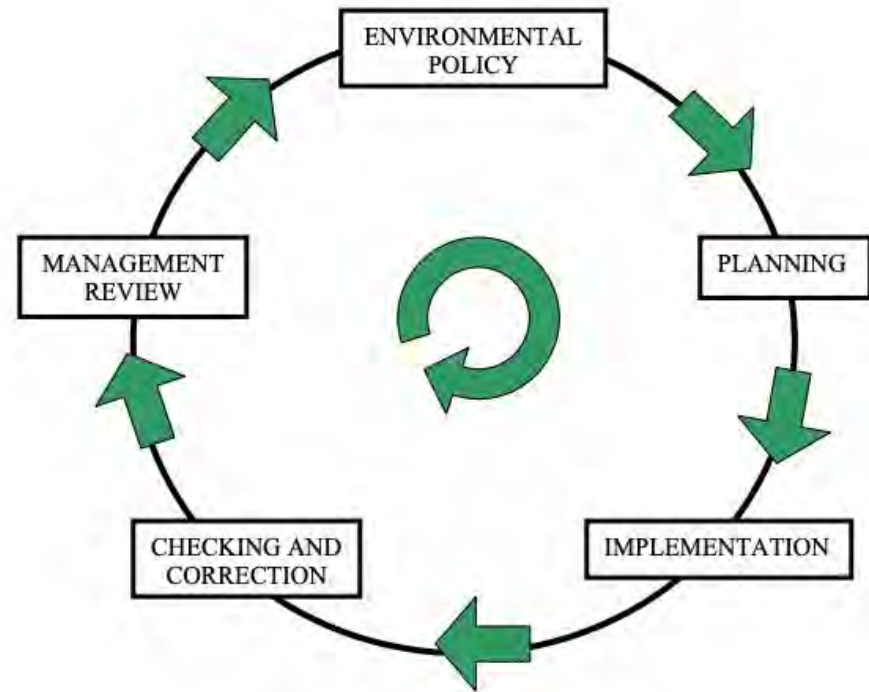
☐ Laws and policies

Environmental policy, any measure by a government or corporation or other public or private organization regarding the effects of human activities on the environment, particularly those measures that are designed to prevent or reduce harmful effects of human activities on ecosystems.

Environmental policies are concretized in the Law on Environmental Protection (domestic) and international conventions on the environment

❑ Laws and policies

Each administrative level has its own environmental policies. It both concretizes the laws and policies of higher levels while taking into account local characteristics. The correctness and success of policy at the local level plays an important role in ensuring the success of policy at the central level.



☐ Economic tools

Economic tools are built on the basic principles of a market economy with the aim of reconciling the conflicts between economic growth and environmental protection.

Economic tools are a condition for businesses to proactively plan environmental documents and comply with the law by integrating environmental protection costs with production, business and product costs. . This is a measure being applied by many countries around the world and has brought positive results

Economic instruments are diverse, including taxes, fees and charges, pollution COTA, deposit-refund systems , economic subsidies, eco-labels, the ISO system of standards.

☐ Environmental taxes and fees

Environmental taxes and fees are sources of budget revenue contributed by organizations and individuals using the environment. Unlike taxes, environmental fees are collected to pay for environmental protection activities

Based on the subject of tax and fee can be divided into types:

- Taxes and fees for waste
- Taxes and fees for wastewater
- Taxes and fees for air pollution
- Taxes and fees for noise.

☐ Environmental taxes and fees

- ☐ User fees.
- ☐ Taxes and fees for products that cause pollution (eg sulfide, carbon, fertilizer taxes...) during and after use.
- ☐ Taxes and administrative fees to contribute financially to the licensing, monitoring and administration of the environment
- ☐ Environmental service fee: "Environmental service fee is a form of fee to be paid when using some environmental services. The fee level corresponds to the cost for that environmental service. Besides, this fee also includes aims to limit the excessive use of environmental services"

☐ Technical tools

❖ Technical tools for direct support:

- Information system and database on sea and islands;
- Technical system for monitoring the exploitation and use of seas and islands

❖ Technical tools for indirect support:

- Network of organizations for basic investigation and research on seas and islands.
- Network of agencies, units and emergency response forces at sea and islands (support).
- Network of training and communication to raise public awareness in service of state management of seas and islands.

☐ Deposit-Refund Systems

A deposit-refund system combines a tax on product consumption with a rebate when the product or its packaging is returned for recycling. Deposit-refunds are used for beverage containers, lead-acid batteries, motor oil, tires, various hazardous materials, electronics, and more.

In addition, researchers have shown that the approach can be used to address many other environmental problems beyond waste disposal. By imposing an up-front fee on consumption and subsidizing "green" inputs and mitigation activities, a deposit-refund may be able to efficiently control pollution in much the same way as a Pigovian tax.

☐ **Deposit-Refund Systems**

The scope of use of **Deposit-Refund Systems** includes:

- ☐ Products that are likely to pollute the environment when used but can be recycled or reused
- ☐ Products with a large amount of waste and expensive disposal costs.
- ☐ The products contain toxins, making them difficult to handle. If these products are improperly destroyed, they will pose a serious risk to the environment and human health.
- ☐ The deposit-return system is particularly suitable for solid waste management.
- ☐ Currently, these countries have been expanding the application of the deposit - refund system to other fields such as ship hulls, used cars, lubricants, batteries containing lead, mercury, and cadmium; pesticide bottles, household electrical appliances such as television sets, refrigerators, air conditioners.

☐ Deposit-Refund Systems

- ☐ Environmental deposit is an economic tool applicable to economic activities that have the potential to cause environmental pollution and damage.
- ☐ The main content of environmental deposit is to require businesses and production facilities to deposit a sum of money at a bank or credit institution before conducting an investment activity. This is to ensure the commitment to implement measures to limit environmental pollution and degradation.
- ☐ During the process of investment and production, if enterprises/facility take proactive measures to prevent and overcome environmental pollution or degradation, restore the current state of the environment as promised. After that, they will get their deposit back.
- ☐ On the contrary, if the enterprises/facility fail to fulfill its commitments or goes bankrupt, the deposited money will be withdrawn from the bank account / credit institution to spend on troubleshooting and environmental degradation.

☐ Ecolabels

Ecolabels (also "Eco-Labels") and **Green Stickers** are labeling systems for food and consumer products. Eco-label is an official symbol indicating that a product has been designed to be less harmful to the environment than other similar products.

Eco-label is a title granted by the State to products that do not cause environmental pollution in the production process and the product or its use.

☐ Ecolabels

- ☐ Eco-labelled products are an affirmation of the credibility of the product and of the manufacturer. Eco-labelled products often have high competitive strength and the market price is often higher than similar products.
- ☐ Thus, eco-labels are an economic tool that affects manufacturers through the reactions and psychology of customers. Many manufacturers have been investing in their products to be recognized as "green" products. Being eco-labelled and the conditions for being eco-labelled are getting stricter and stricter

Homework

Mr. A's family uses sea surface to make rafts to raise shrimp, so what is the amount of money that Mr. A's family pays to the state (Taxes, fees, charges...)?