Book - Unit 1 – Introduction

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Site: UNITED NATIONS INFORMATION PORTAL ON MULTILATERAL ENVIRONMENTAL AGREEMENTS
Course: Introductory Course to the International Legal Framework on Marine Pollution
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1. The oceans

The marine world is both majestic and fragile. Big, beautiful, powerful, life supporting, ancient and mysterious, the world's waters are also delicate and vulnerable. The earth's oceans and seas need protection by and from the planet's dominating species.

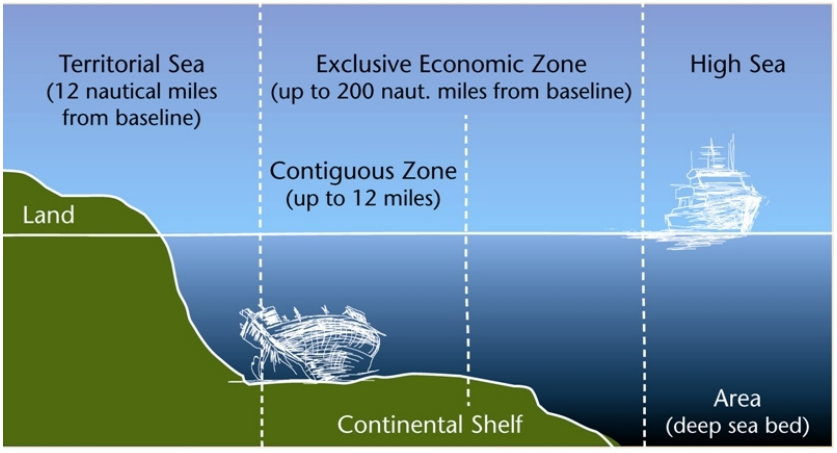
The oceans are thought to have been formed as a result of icy comet collisions with the Earth occurring from 4.5 to 3.9 billion years ago, forming steam which gravity condensed and pulled into depressions in the planet's surface. The Earth's major oceanic depressions form the Pacific, Indian, Atlantic, Southern and Arctic Oceans. These oceans are a thin film over the Earth's surface, on average, only a few kilometres deep. Oceans and seas currently cover approximately 71% of the Earth's surface, 360 million square kilometres. This thin layer of oceans forms about 90% of the Earth's biosphere, by volume, and was the original source of life on Earth about four billion years ago. Oceans and seas contain the greatest amount of life by mass.

2. Maritime Zones

In law, the marine environment is divided into maritime zones. These comprise areas within national jurisdiction, such as the territorial sea, exclusive economic zone and continental shelves, as well as areas beyond national jurisdiction, such as the high seas and deep seabed. The sovereignty of a state extends, beyond its land territory and its internal waters, to a belt of sea adjacent to its coast, described as the territorial sea. This area typically extends 12 nautical miles from the state's coast. The exclusive economic zone is an area beyond and adjacent to the territorial sea, typically extending 200 nautical miles from the state's coast.

A continental shelf of a coastal state comprises the submerged prolongation of the land territory of the coastal state - the seabed and subsoil of the submarine areas that extend beyond its territorial sea to the outer edge of the continental margin. A state may be able to assert jurisdiction in some matters to the edge of its continental shelf even if it extends beyond the exclusive economic zone.

Areas beyond national jurisdiction must be managed cooperatively. Further, the flows of the ocean's currents run through national jurisdictions but cannot be permanently held or managed there. Accordingly, contaminants cannot be contained within the maritime jurisdiction of one source state. They must also be managed cooperatively.



3. Why protect the marine environment from pollution?

Seas and oceans perform important ecological functions and provide many benefits to human beings. They are home to numerous animals, plants and other marine organisms that form marine ecosystems and support the livelihoods of hundreds of millions of people. Diverse marine organisms and their genetic resources could hold cures for many of the ailments that we face. Marine fishing is fundamental to the economies of many countries.

Fish and many other marine organisms cannot survive in polluted waters that are toxic to them. Marine organisms that are used for food can become contaminated with substances such as mercury, which is harmful to human beings. In addition to chemical substances, items like fishing lines, metal rings, straps, glass and plastics hamper the mobility of marine animals. Once entangled, marine mammals and other organisms have trouble breathing, eating or swimming, all of which can result in their death. Items such as broken glass and chemicals can also harm swimmers and other people using the marine environment.

4. Sources of marine pollution

The regulation of marine pollution is usually analyzed according to the identified source producing the marine pollution. The sources and their respective contribution to marine pollution load (by mass) are: land-based (82%), vessel-based (9%), dumping of waste at sea (8%) and off-shore activity (1%).

Land-based sources include sewage outfalls, industrial discharges, runoff from urban stormwater and agriculture, river borne and airborne pollution, and litter. Vessel-based sources include operational discharges such as bilge water discharges, but not the operation of a vessel for the purpose of discharging waste, as that is dumping. Pollution from vessels can take the forms of oil, chemicals, lost cargo and equipment, sewage, garbage, fumes and invasive exotic species. Dumping is the deliberate disposal of wastes at sea. Offshore activity generates minor pollution primarily through the use of oily drilling muds and by production blow outs.

Marine environment is also harmed by the acidification caused by airborne CO_2 pollution. Oceans absorb one third of CO_2 emitted into the atmosphere. The higher concentration of CO_2 into the seawater, the more acidic the oceans become. This alteration of the natural chemical balance affects marine ecosystems, such as coral bleaching.

The grand scale upon which humans make use of marine resources is placing pressure on various marine ecosystems. In some cases, different uses conflict with and undermine each other. For example, waste disposal has undermined fishing and recreation in some areas. In some cases, over fishing has exhausted marine resources or destabilized part of the marine ecosystem. For example, exotic organisms transported in ship ballast water are invading new ecosystems. As pollution has increased, the assimilative capacity of semi-enclosed seas, in particular, has been nearly exhausted, resulting in negative impacts on related health, and on economic and social activities.

Example: Torrey Canyon

On 19 February 1967, the “Torrey Canyon” left Kuwait. She was the first of the big supertankers, carrying a full cargo of 120,000 tons of oil. On 18 March, she struck Pollard’s Rock in the Seven Stones reef between the Scilly Isles and Land’s End, England. 31 million gallons of oil leaked from the ship and spread between England and France, killing marine life along the Cornish coast of Britain and the Normandy shores of France, blighting the region for many years. The spill left destitute many families and businesses dependent on sea resources for sustenance.

Investigations revealed that the accident resulted from a combination of factors, including: Poor ship design; poor operational scheduling, incompetence of the crew and poor navigational procedures.

The ship’s operations involved many countries. At the time, the Torrey Canyon was owned by a subsidiary of Union Oil in the United States, registered in Liberia, chartered to BP Shell in the UK, and operated by Italian crew. The vessel left Kuwait for an unknown destination and the slick affected French and English waters. There were no emergency procedures and disaster response strategies stipulated in international law at the time. The situation raised numerous questions, including which state was responsible to check that the vessel was safe.