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Contents

1. Status of marine litter and environment

1.1. Information, data and knowledge about the state of the environment

The most unique by the natural conditions, species, volumes and distribution of technogenic loads within Ukraine are the shelf of the north-western part of the Black Sea. This area belongs to the most stressed by anthropogenic loading, caused by a large specific contribution of river runoff and significant contaminating effects of coastal waters. The waters of the northwest shelf absorb waste of industry and life of 11 states of Europe and thus withstand the most powerful anthropogenic loading.

The main contribution to pollution of the marine environment belongs to the largest rivers of Ukraine - the Danube, the Dnipro River, as well as the Dniester and Southern Bug. In general, at least 60 rivers flow to the Black Sea from the Ukrainian part. The basins of large rivers cover a large part of the country's regions, in which hundreds of thousands of people live.

Ukraine has 18 maritime trading ports, three fishing ports and a large number of different terminals – the largest number of seaports among all the countries of the Black Sea-Azov basin. The number of vessels taken in the ports of Ukraine for this year is - 10,589 vessels. And the number of transported passengers is more than 500,000 people by the end of 2018. The length of the Black Sea coastline within Ukraine is 1 540 km, along which there are at least 13 resorts.

In view of this, all sources of anthropogenic pollution of the Black Sea, relatively conditionally, can be divided into five generalized types: industrial enterprises, transport; objects of municipal services; recreational centers; agricultural land; ports and port facilities, swimming vehicles, military bases. The coastal zone of the northwest shelf is highly developed and industrialized. Accidents on outdated sewers and pumping stations create additional sources of pollution. Industrial enterprises, located in the zone of direct influence on the water, cause the receipt of the largest number of pollutants in the marine environment. All this applies to the common sources of pollution of the Black Sea.

Marine litter (ML) is any persistent, manufactured or processed solid material discarded, disposed of or abandoned in the marine and coastal environment. Marine litter consists of items that have been made or used by people and deliberately discarded into the sea or rivers or on beaches; brought indirectly to the sea with rivers, sewage, storm water or winds; accidentally lost, including material lost at sea in bad weather (fishing gear, cargo); or deliberately left by people on beaches and shores.

It is estimated that about 6.4 million tons of marine litter are disposed in the oceans and seas each year. According to other estimates and calculations, some 8 million items of marine litter are dumped in oceans and seas every day, approximately 5 million of which (solid waste) are thrown overboard or lost from ships. Furthermore, it has been estimated that over 13,000 pieces of plastic litter are floating on every square kilometer of ocean today.

In order to implement measures to combat ML pollution effectively, we need to have reliable information on where the litter recorded in a given area is coming from (sources, means of release and geographical origin) and how it is getting into the marine environment and the site where it is recorded (pathways and transport mechanisms). Some items can have a number of potential sources and pathways of entry as well as geographic origins.

Main sea-based sources of marine litter: merchant shipping, ferries and cruise liners; fishing vessels; military fleets and research vessels; pleasure craft; offshore oil and gas platforms; and aquaculture installations.

Land-based sources of marine litter originate from coastal or inland areas including beaches, piers, harbours, marinas, docks and riverbanks. Municipal landfills (waste dumps) located on the coast, water bodies such as rivers, lakes and ponds that are used as illegal dump sites, riverine transport of waste from landfills and other inland sources, discharges of untreated municipal sewage and storm water, industrial facilities, medical waste, and coastal tourism involving recreational visitors and beach-goers, are the primary sources of land-based marine litter. Natural storm-related events can all create large amounts of materials that are washed from coastal areas that can end in the marine environment. High winds, large waves and storm surges produced by these natural events cause land-based items to be introduced into the marine environment.

Major sources of microplastics include fragmentation of larger items in the environment, release of abrasive additives from cosmetic and other products, release of fibres from the washing of textiles and the spillage of pre-production pellets or powders that are in transit or process prior to being made into everyday plastic items.In addition to microplastics it has recently been suggested that there may also be substantial inputs of other synthetic particles, for example as a consequence of tyre wear on roads.

Being able to distinguish between the waste that is generated locally, regionally and globally, is important when deciding on appropriate measures to prevent ML in a certain area.

The impacts of marine debris on biodiversity are considered under four broad headings

1) Ingestion and entanglement

2) Provision of new habitat—potential for debris to provide new habitats

3) Dispersal via rafting, including transport of invasive species

4) Ecosystem level effects.

Fishing related gear, balloons and plastic bags were estimated to pose the greatest entanglement risk to marine fauna.

Entanglement is mostly caused by fishing gear lost at sea. Derelict nets continue to exert “ghost fishing”, catching animals even if they sink or are lost on the seabed.

Animals captured in derelict gear, including invertebrates, finfish, turtles, birds, and mammals can starve, delayed mortality from injury, stress, infection, and fatigue are also considered cannibalize each other, drown, develop infections, and become diseased.

The number of species known to have been affected by either entanglement or ingestion of plastic debris has doubled since 1997, from 267 to 557 species among all groups of wildlife.

Of the 120 marine animal species listed on the IUCN red list, 54% have been found entangled in plastic items or had ingested plastic debris. In total, 180 species of animals have been documented to ingest plastic debris, including birds, fish, turtles and marine mammals. As many as 56 species of marine and coastal birds have been reported for entanglement worldwide.

Plastics in bluefin tuna represents a concern for this “endangered” species (IUCN Red List). The contents of the stomach of bluefin tuna consists of micro-, meso - and macroplastic.

Three endemic and threatened shearwater species (Calonectris diomedea, Puffinus yelkouan, Puffinus mauretanicus) as being particularly exposed to plastic accumulation.

Of the 69 seabird species that commonly occur in Scotland, 14 (20%) had evidence of ingesting plastic .

The northern fulmar Fulmarus glacialis was among the earliest seabird species reported to ingestmarine plastic debris. Fulmars are effective biological indicators of the abundance of floating plastic marine debris.

The plastic ingestion may represent a risk for vertical migrant lanternfishes due to the increase in buoyancy.

Impacts of Marine Litter on biodiversity include injuries and/or mortality caused by ingestion and entanglement, often threatening already vulnerable and/or endangered species such as marine mammals.

Ingestion of plastic items may cause harmful mechanical effects on seabirds, such as gastrointestinal blockages, ulceration, internal perforation. These are often causes of death. Also when damage is not so large, seabirds eating large plastic amounts will consequently reduce food intake, with detrimental effects on general fitness, especially limiting fat deposits, egg laying, movement capacity.

If ingested, beside causing mechanical problems in the digestive tract, plastics release chemicals included in the manufacturing process (plasticizers, e.g. phthalates, organotin compounds, alkylphenols, Bisphenol A) and also hydrophobic pollutants (e.g. alkylbenzenes, chlorinated hydrocarbons, PAHs, PCBs, DDT) adsorbed from the environment. In general, once in the bird stomach, acidic conditions will enhance desorption of metals from plastics. Chemicals adsorbed by plastics and released into the digestive fluid can be transferred to the tissue of birds with adverse effects.

Accumulation marine debris it can cause reduced light levels in underlying waters, low oxygen levels, and other physical changes or degradation of these habitats.

Habitat degradation due to marine debris has far-reaching impacts on ocean biodiversity since many critical areas, such as coral reefs, mangroves, salt marshes, seagrass beds, and macroalgae serve as breeding grounds or nurseries for nearly all marine species. The movement of marine debris by tides, currents, and storms can result in recurrent damage to marine animals and habitats, either through repeated damage in situ or when transported any distance.

Furthermore, efforts to remove marine litter can also cause harm to ecosystems; for example mechanical raking of marine litter can have an adverse impact on shoreline habitats .

Floating anthropogenic litter provides habitat for a diverse community of marine organisms. A total of 387 taxa, including pro- and eukaryotic microorganisms, seaweeds and invertebrates, have been found rafting on floating litter in all major ocea nic regions.

Because of the great persistence (especially of plastics) and the vast quantities of litter in the world’s oceans, rafting dispersal has become more prevalent in the marine environment, potentially facilitating the spread of invasive species.

1. Microplastics have been documented in a diversity of habitats and in over 100 species.

2. Microplastics can impact an organism at many levels of biological organization, including at the levels of populations and assemblages. Still, the majority of the evidence is at levels that

are sub-organismal (e.g. changes in gene expression, inflammation, tumour promotion) or affect individual organisms (i.e. death).

3. Microplastics can be a source and sink of hazardous chemicals to organisms, but its relative importance as a source of chemicals to wildlife relative to others (e.g. water, sediment, diet) remains under investigation.

4. Nano-sized plastics are probably as common as micro-sized plastics, yet the hazards may be more complex.

5. Microplastics can transport invasive species, including harmful algal blooms and pathogens.

Can be classified the behaviors of microplastics in the marine environment as physical behaviors (i.e. migration, sedimentation and accumulation), chemical behaviors (i.e. degradation and adsorption) and biobehaviors (i.e. ingestion, translocation and biodegradation.

presented the first evidence that microplastics are already becoming integrated into deep-water organisms. When studying organisms that live on the deep-sea floor shown that plastic microfibres are ingested and internalised by members of at least three major phyla with different feeding mechanisms.

Zooplankton readily ingest microscopic plastic (microplastic, < 1 mm), which are later egested within their faecal pellets. These pellets are a source of food for marine organisms, and contribute to the oceanic vertical flux of particulate organic matter as part of the biological pump.

- Verified that faecal pellets are a vector for transport of microplastics,

- polystyrene microplastics can alter the properties and sinking rates of zooplankton egests,

- faecal pellets can facilitate the transfer of plastics to coprophagous biota.

Investigated the transport of microplastics from the surface to deeper layers of the ocean via phytoplankton aggregates that constitute most of the sinking flux. As an effect of microplastic incorporation, the sinking rates of diatom Chaetoceros neogracile aggregates strongly decreased meanwhile the sinking rates of cryptophyte Rhodomonas salina aggregates increased.

The aggregation of microplastics and biogenic particles was significantly accelerated by microbial biofilms that had formed on the plastic surfaces. Aggregation behaviour facilitates the export of microplastics from the surface layer of the oceans and plays an important role in the redistribution of microplastics in the oceans since microplastics are able to adsorb and concentrate organic pollutants up to 1 million times more than the pollutant concentration in ambient waters, the ingestion of such small plastic fragments is, a probable route for the entrance and biomagnification of toxic chemicals in the marine organisms.

Microplastics contain organic pollutants, either added during plastic production (Diethylhexyl phthalate (DEHP) and efficiently sorb (adsorb or absorb) persistent, bioaccumulative and toxic contaminants (PBTs) from the environment.

Consequently, the microparticles laden with high levels of POPs can be ingested by marine bio.

Ingestion of microplastics has been demonstrated in a range of marine organisms, a process which may facilitate the transfer of chemical additives or hydrophobic waterborne pollutants to biota.

Evidenced that microplastics adsorb PAHs, emphasizing an elevated bioavailability of these chemicals after the ingestion to marine mussels, and the toxicological implications due to responsiveness of several molecular and cellular pathways to microplastics.

in addition small size microplastics and large surface area to volume ratio increases the contact area with the organism.

Some recent studies have shown MPs are ingested and can elicit negative effects in marine mussels (Mytilus edulis), marine oysters (Crassostrea gigas) and in the freshwater fish (Oryzias latipes). The role of MPs as vectors for transporting known environmental pollutants (e.g. persistent organic pollutants (POPs) and metals) has also been shown to be of significance in fish.

Existing scientific evidence shows that microplastics exposure triggers a wide variety of toxic insult from feeding disruption to reproductive performance, physical ingestion, disturbances in energy metabolism, changes in liver physiology, synergistic and/ or antagonistic action of other hydrophobic organic contaminants etc. from lower to higher trophics.

The consumption of microplastics bymarine organismsmay cause mechanical effects such as attachment of the polymer to the external surfaces thereby, hindering mobility and clogging of the digestive tract, or the effect could be chemical such as inflammation, hepatic stress, decreased growth 22].

microplastics are accumulated by planktonic and invertebrate organisms, being transferred along food chains. Negative consequences include loss of nutritional value of diet, physical damages 25].

microplastic ingestion can cause endocrine disorders in adult fish, which could result in neoplasia via epigenetic programming.

Proved that micro-PS cause feeding modifications and reproductive disruption in oysters, with significant impacts on offspring.

Marine biota interact with microplastics including birds, fish, turtles, mammals and invertebrates. The biological repercussions depend on to the size of microplastics encountered, with smaller sizes having greater effects on organisms at the cellular level. In the micrometre range plastics are readily ingested and egested, whereas nanometre-sized plastics can pass through cell membranes. Despite concerns raised by ingestion, the effects of microplastic ingestion in natural populations and the implications for food webs are not understood. There is evidence to suggest that microplastics enter food chains and there is trophic transfer between predators and prey.

The formation of heteroaggregates in the gut of prey organisms may delay microplastic clearance, potentially increasing the chances of microplastic trophic transfer to predators. Also, the survival and energetics of keystone species at lower trophic levels are negatively affected by ingestion of microplastics, thereby raising questions about the transfer of energy and nutrients to organisms at higher trophic levels for example, the marine copepod Paracyclopina nana play an important role in the aquatic food chain as a primary consumer and a major food source for higher trophic organisms. Thus, ingestion of microplastics by zooplankton could have critical impacts on the aquatic ecosystemas as a whole.

Is indicated that a considerable abundance of microplastics and plastic additives exists in the neustonic samples, and that pelagic areas containing high densities of microplastics overlap with

whale feeding grounds, suggesting that whales are exposed to microplastics during foraging; this was confirmed by the observation of a temporal increase in toxicological stress in whales.

Proved of plastic additives (phthalates causing reproductive tract disorders) in Mediterranean basking sharks for toxicological impacts of microplastics in filter-feeders species such as cetaceans mysticete, basking shark and devil ray.

Polymers of persistent plastics may contain chemical additives and contaminants, including some known endocrine disruptors that may be harmful at extremely low concentrations for marine biota, thus posing potential risks to marine ecosystems, biodiversity.

large concentrations of microplastic and additives can harm ecophysiological functions performed by organism.

Ingestion of microplastics by aquatic organisms, including species of commercial importance for fisheries and aquaculture, has been documented in laboratory and field studies.

One of the primary environmental risks of microplastics is their bioavailability for aquatic organisms. Bivalves are of particular interest because their extensive filter-feeding activity exposes them directly to microplastics present in the water column.

Coastal mussels (*Mytilus edulis*) sampled from around the United Kingdom all contain of microplastics and other anthropogenic debris. The spectra found that 50% of these debris items characterized were microplastic, with an additional 37% made up of rayon and cotton fibers.

studies shows that polyester fibers render greater adverse effects than polyethylene (PE) beads. Microplastic fibers pose a greater risk to Ceriodaphnia dubia, with reduced reproductive output observed at concentrations within an order of magnitude of reported environmental levels.

Smoked cigarette filters are the predominant coastal litter item; they presenting a source of bioplastic microfibres (cellulose acetate) and harmful toxicants to marine environments. studied the impacts of smoked cigarette filter toxicants and microfibres on the polychaete worm Hediste diversicolor (ragworm), a widespread inhabitant of coastal sediments. results illustrate the vulnerability of organisms in the water column to smoking debris and associated toxicants, and highlight the risks posed by smoked cigarette filter debris to aquatic life.

Detected eight aquaculture-related non-native, invasive species attached to anthropogenic litter items mostly related to aquaculture. These species are well-adapted to rafting on artificial surfaces and have a high potential to disperse via this vector. thereby threatening the marine biodiversity and the food web.

However, we still do not know exactly how harmful the plastic particles are to marine.

1.2. Gaps of knowledge and information, data and expertise on marine litter issue and national level peculiarities

There are not enough available data regarding marine litter in the water column and the water surface as most studies mainly focus on litter washed ashore or deposited on the seabed of the continental shelf. Therefore, floating litter is not satisfactorily assessed (MEE, 2018a).

There is a lack of sufficient information on the overall assessment of the current situation as regards to litter and its impact. There are no quantified data on the impact of litter on marine

biota. Generating estimates of catch rates and spatial/temporal patterns for entanglement are not yet possible due to the lack of quantitative information regionally. In addition, micro-plastics are a relatively new and poorly investigated topic in terms of their impacts on biota (MSFD Greece, 2012). It is difficult to estimate when the issues will be addressed as there are no scheduled surveys in the monitoring protocols. Issues of insufficient data could be encountered by funding research programmes focusing on the impacts of litter on marine life.

2. Legislation

2.1. National legislation and regulatory documents in Ukraine related to marine litter

Ukraine due to European integration has to align, adopt and implement all the EU Directives and Regulations to their national legislations, of which the most important related to marine litter.

- WATER CODE OF UKRAINE (ВОДНИЙ КОДЕКС УКРАЇНИ) 1995

✓ Article 89. Limitation of economic activity in coastal stripes along rivers, around reservoirs and on islands. The following are prohibited in coastal stripes along rivers, around reservoirs and on islands: landfill, garbage storage, liquid and solid waste storage facilities, cemeteries, cattle mounds, filtration fields, etc.

✓ Article 99. Prohibition of dumping of waste and garbage in water. The dumping of industrial, domestic, radioactive and other types of waste and garbage in the water is prohibited.

✓ Article 100. Protection of the surface of catchment and ice cover of reservoirs, watercourses, as well as seas, their bays and estuaries. It is prohibited for enterprises, institutions, organizations and citizens to pollute, clog surface of catchment, ice cover of reservoirs, watercourses, as well as seas, their bays and estuaries with industrial, domestic and other wastes, garbage, oil, chemical and other pollutants.

- Code of Merchant Shipping of Ukraine (Кодекс торговельного мореплавства України) 1995

✓ Article 305. Exemption from liability. The owner of the vessel is not liable for damage from pollution if it proves that this damage occurred as a result of: accidental dismissal of fossil fuels or waste as a result of their failure to accept their port in due time after the timely lodging by the vessel of the relevant application.

- On Approval of the Rules for the Protection of Inland Marine and Territory Sea from Pollution and Pollution (Про затвердження Правил охорони внутрішніх морських вод і територіального моря від забруднення та засмічення) 1996

✓ 7. Contaminants, including those containing water, and garbage, must be accumulated on vessels in special containers.

✓ 8. During the stay in inland sea waters and the territorial sea of Ukraine, vessels may, in accordance with the established procedure, deliver the pollutants, including the water containing them, and garbage, only to collecting vessels, floating reception facilities, and during the stay of the vessel in the port - on the shore reception facilities. Transactions with polluting substances, including those containing them, and garbage that are carried out on ships and collectors, are subject to mandatory registration in ship documents.

✓ 9. In the event of any discharges from ships into internal sea waters and the territorial sea of Ukraine of pollutants, including those containing them, and garbage, or their losses, as well as in the event of the threat of such a reset or loss of the master of the vessel's obligations To immediately notify the captain of the nearest seaport, take measures to maximize reduction of dumping or loss and to eliminate pollution.

✓ 14. The placement of waste and garbage by coastal objects into inland seawater and the territorial sea of Ukraine is prohibited.

- ✓ 15. In the case of carrying out works related to the construction of hydraulic structures, deepening of the bottom for navigation, mining, laying cables, pipelines, other communications, as well as conducting drilling and exploration, measures should be provided for the prevention of pollution of inland sea waters and the territorial sea by sewage, polluting substances, including radioactive, waste and garbage.
- ✓ 17. Temporary accumulation and storage of waste and garbage at the port territory is possible only in the presence of specially designated and equipped places and in case of their subsequent disposal and disposal. In this case, household waste and garbage taken from vessels must be disposed of in ports.
- ✓ 23. Seaports, ship repair yards provide: reception from garbage and waste ships with their placement at waste treatment facilities;
- ✓ 26. All operations with pollutants, their containing waters and garbage that are carried out at receiving wastewater treatment facilities and waste management facilities in ports, at ship repair and shipbuilding plants, are subject to mandatory registration in the established manner.

- The Law of Ukraine on Waste (Закон України Про відходи) 1998 with

- ✓ Article 33. Requirements for storage and disposal of waste. The unauthorized dumping and disposal of waste, including domestic ones, in the underground horizons, on the territory of cities and other settlements, in the territories of the nature reserve fund, on the lands of nature protection, recreation, recreation and historical and cultural purposes, within the limits of water protection zones and zones is prohibited. sanitary protection of water objects, in other places, which may pose a danger to the environment and human health. The burial of waste in the bowels is permitted in exceptional cases on the basis of special researches, observing the standards, norms and rules provided by the legislation of Ukraine.

- On approval of the Rules of registration of operations with harmful substances on ships, marine installations and in ports of Ukraine (Про затвердження Правил реєстрації операцій зі шкідливими речовинами на суднах, морських установках і в портах України) 2001

- ✓ Garbage - means all types of food, household and operational waste (except fresh fish and its residues) formed during the normal operation of the vessel and subject to permanent or periodic seizure, except for substances whose definition or list is given in Annex V to MARPOL 73 / 78 and other annexes to MARPOL 73/78.
- ✓ 6. Registration of operations with garbage
- ✓ 6.1. Registration is performed during garbage operations on vessels flying the flag of Ukraine, as well as on sea stationary and floating installations in case of stay in sea waters under the jurisdiction of Ukraine. Disposal of any garbage, except food waste, in special areas is prohibited. Only garbage that is thrown into the sea should be classified. For garbage of all categories, except category 1, dropped to reception facilities, only the total estimated quantity should be indicated.
- ✓ 6.2. For each vessel with a gross tonnage of 400 register ton and more and each vessel intended for the carriage of 15 persons or more who operate flights to ports or sea terminals under the jurisdiction of other countries, as well as on each stationary and floating platform that engaged in exploration and development of seabed mineral resources, in accordance with Resolution IMO MEPC.65 (37), garbage operations must be registered in the logbook for garbage operations, the form of which is given in Annex 4 to these Regulations.
- ✓ 6.3. On ships intended for the carriage of 15 persons or more, carrying out flights of less than one hour, garbage operations shall be recorded in the logbook.

- ✓ 6.4. On ships, stationary and floating platforms not covered by the requirements of paragraph 6.2 of these Rules, garbage operations are also recorded in the logbook.
- ✓ 6.5. Registration of operations with the following categories of garbage is required: - plastic; - Separating, siding or packing materials having buoyancy; - chopped paper products, rags, glass, metal, bottles, crockery and others; - food waste; - Ashes from incinerators.
- ✓ 6.6. Such operations with garbage are subject to registration, in each case, the following shall be indicated:
- ✓ a) dumping of garbage into the sea: - date and time of dumping; - vessel location (latitude and longitude); - category of dropped rubbish; - Approximate amount of waste garbage in each category in cubic meter. m; - signature of the commander in charge of the operation;
- ✓ b) delivery of garbage to reception facilities or other vessels in ports: - date and time of delivery; - the port or building, or the name of the vessel that took the debris; - the category of rubbish; - Estimated amount of garbage for each category in cubic meter. m; - signature of the commander in charge of the operation;
- ✓ c) garbage incineration: - date and time of start and end of operation; - vessel location (latitude and longitude); - Approximate amount of burned garbage per cubic meter. m; - signature of the commander in charge of the operation;
- ✓ d) Emergency or other extraordinary garbage disposal: - Event time; - port or vessel location during the event; - approximate quantity and category of discarded rubbish; - circumstances of seizure, discharge or loss, their causes and other general considerations.
- ✓ 6.7. The captain must obtain from the operator of port reception facilities or from the captain of the receiving vessel, a receipt or a certificate indicating the approximate amount of overloaded garbage. Receipts or certificates must be kept on board the vessel together with the logging of garbage collection for two years.
- ✓ 6.8. Operations on garbage accumulation on specialized ships during the performance of their work on a direct functional purpose (oil collectors during clearing of the water area of the port and the liquidation of the floating, filling stations, etc.) are recorded in the logbook. It is noted that the amount of rubbish is indicated by ship measurements. When handing over collected garbage, the ship's administration must receive a receipt or certificate in accordance with paragraph 1.14 of these Rules.

- On Approval of the Regulations on the System of Safety Management of Shipping on Sea and River Transport (Про затвердження Положення про систему управління безпекою судноплавства на морському і річковому транспорті) 2003

- ✓ 2.1. The administration of the base should ensure the proper condition of the base, territory and water area, including: the presence of a special site (places) with containers for dry garbage and waste oil products

- On Approval of Safety Rules for Port Workers and Service Auxiliary Fisheries Fleet Operators (Про затвердження Правил безпеки для працівників суден портового і службово-допоміжного флоту рибного господарства) 2007

- ✓ 7.8. Work on the elimination of pollution of the sea and port waters
- ✓ 7.8.1. Mooring of vessels to the garbage collector

- On Approval of the Rules for Prevention of Pollution from Inland Waterways of Ukraine (Про затвердження Правил запобігання забрудненню із суден внутрішніх водних шляхів України) 2007

- ✓ 4.1. Vessels and all other vessels (hereinafter - ships) operated on the VVSHU shall be equipped with systems and tanks for the collection and storage of oil and sewage as well as replaceable containers for garbage.
- ✓ 4.2. At VVSHU, discharges from oil vessels, hazardous substances, cargo residues, garbage, polluted and regulated water are not allowed. An exception is an isolated water ballast
- ✓ 4.8.Operations with sewage and debris are recorded in the machine journal, and on ships where it is not kept - in the ship or dispatching magazine.
- ✓ 7.5 The technological schemes in the port for the collection of harmful substances from the vessels, oil sludge, waste oils, cargo residues, sludge, sewage and garbage in the port shall ensure operational efficiency and prevent effective implementation ship cruises.
- ✓ 7.6. Any crew member, regardless of the type of activity, notices on floating oil spills or garbage in the adjoining area, shall notify the watch boss. In the event of the presence of oil spills and garbage near the vessel, the dispatching service of the port is immediately informed of the transfer to the relevant institutions and institutions of the state sanitary and epidemiological service on water transport and the navigational authorities, and the entry in the logbook is made.

  XII. Prevention of contamination of inland waterways with garbage
- ✓ 12.1. For the collection of garbage on ships, exchange containers are provided in accordance with Annex 5. In exchange containers there must be distinguishing signs that determine which type of garbage they are intended to (household waste, food waste, plastics, etc.). It is not allowed to mix food waste with household waste.
- ✓ 12.2. Interchangeable containers for garbage collection must be painted with anticorrosion paints, tight closure mats, be suitable for transportation and unloading, cleaning and disinfection. 12.3. In order to avoid spoilage of garbage, during the loading of containers with food and household waste, regular use of antiseptic and deodorant substances.
- ✓ 12.4 In the presence of a shredder of food waste and debris on a vessel, it is used for milling and mass preparation for combustion in a ship incinerator.
- ✓ 12.5 Vessels equipped with garbage incinerators must have documents certifying compliance with their established standards. Incineration of garbage in the incinerator is recorded in the logbook indicating the time, place of operation, characteristics and amount of waste that is being destroyed.
- ✓ 12.6. On ships that are not equipped with garbage processing and incinerators, garbage exchange bins shall be emptied only at coastal or floating treatment plants, on ships for integrated waste treatment, ship-collectors or elsewhere authorized by the relevant institutions and institutions of the State Sanitary and Epidemiological Service on water transport and agreed with relevant environmental protection authorities and authorities and port authorities.
- ✓ 12.7. Exchange containers for the collection and storage of garbage after each emptying are washed and disinfected at specialist stations by the forces and means of the port.
- ✓ 12.8 The provision of garbage to a ship-collector, a ship of integrated fleet maintenance or special forces is recorded in the magazine.

- On approval "Methods of calculating the amount of damages caused by the state as a result of violation of legislation on the protection and rational use of water resources" (Про затвердження "Методики розрахунку розмірів відшкодування збитків, заподіяних державі внаслідок порушення законодавства про охорону та раціональне використання водних ресурсів") 2009

- ✓ Calculation of the amount of compensation for damage caused to water bodies due to contamination by floating waste or debris

- On approval of the Safety Rules during the execution of exploration and development of oil and gas fields in the Black Sea and the Sea of Azov (Про затвердження Правил безпеки під час виконання робіт з розвідування та розроблення родовищ нафти і газу в акваторіях Чорного та Азовського морів) 2012
  - ✓ 1.11. Solid waste incineration at MNGO is allowed in special ovens equipped with insinuators (garbage canning plant (reduction in mass and volume)).
- PROCEDURE for providing services for the prevention and elimination of pollution of pollutants in the seaports of Ukraine (ПОРЯДОК надання послуг із забезпечення запобігання і ліквідації розливу забруднюючих речовин у морських портах України) 2013
  - ✓ Provision of services for the prevention and elimination of pollution of pollutants in the water area and in the port area is organized by the Administration. acceptance from garbage and waste ships with direct transfer to their specialized enterprises for further handling of them (including placement of them at waste treatment facilities) in accordance with the current legislation of Ukraine;
  - ✓ Business entities conducting overloading of goods containing hazardous chemical and loose materials should avoid contamination or contamination of the water area and the sea port territory, collect and transfer under contracts for further safe handling (including placement) all types of waste and contaminated water generated as a result of their activities
- Draft Law of Ukraine on Waste (Проект Закону України про відходи) 2016
  - ✓ "packaging waste" means any packaging which corresponds to the term "waste" as defined
- On Approval of Rules for the Development of Oil and Gas Fields (Про затвердження Правил розробки нафтових і газових родовищ) 2017
  - ✓ In order to prevent pollution of the marine environment during drilling of wells in the waters of the seas, their design should provide for the overlapping of the entire water column with water-insulating column.
  - ✓ The spilled rock (sludge), spent washing liquid, garbage of sea platforms should be taken offshore and buried in special sludges and landfills, and drilling wastewater - to be pumped into the underground horizons through absorption wells.
  - ✓ 59. Solid waste (sand, rock), garbage from offshore platforms are taken offshore and disposed of in specially designated areas.

2.2. Historical overview of legal framework

For the first time in the Ukrainian legislation such type of waste as sea litter is mentioned in 1995 in the Water Code of Ukraine. Namely, there is a thing about the prohibition of dumping in the water objects of waste and rubbish. In the same year, the Code of Merchant Shipping of Ukraine determines the absence, as such, of the responsibility for discharging garbage as a result of emergency situations or port failures. However, already in 1996, in the Rules for the Protection of Inland Sea Waters and the Territory of the Sea from pollution and contamination, it is noted that the registration of garbage handling operations is mandatory. A more detailed procedure of possible cases during the stay of ships and the handling of this type of waste in internal sea waters and the territorial sea of Ukraine is prescribed. In 1998, the Waste Act, which details the wastes in detail, comes out, but it somewhat duplicates the requirements for the storage and disposal of waste within the water protection zones and the zones of sanitary protection of water objects specified in the Water Code.

In the Rules for the Registration of Hazardous Substances in Ships, Marine Installations and in the Ports of Ukraine in 2001 the category of "rubbish" was first defined and the procedure for registering operations with rubbish was specified. In the Regulations on the system of safety management of navigation on sea and river transport in 2003, for the first time, we are talking about the necessary state of the base, territory and water area. The continuation of this topic is the Safety Rules for Port Workers and Service and Support Fisheries Fleet Workers (2007), which define work on the elimination of pollution of the sea and port waters. In the same year, in accordance with the Regulations for the prevention of pollution from inland waterways of Ukraine, a system for equipping vessels and all other craft, technological schemes for the collection and handling of garbage and crew members' behavior as a result of the identification of water pollution has been determined.

In 2009, the "Method for calculating the amount of damages caused by the state as a result of violations of legislation on the protection and rational use of water resources" was proposed.

In the Safety Rules during the exploration and development of oil and gas fields in the Black Sea and the Sea of Azov (2012), for the first time, the notion of insinuators - waste incinerators (mass and volume reduction) equipped with waste incinerators is mentioned. The procedure for provision of services for the prevention and elimination of pollution of pollutants in seaports of Ukraine (2013) determines the organization of acceptance from garbage and waste ships and their transfer to specialized enterprises for their further treatment.

The latest regulatory act, for today is the Rules for the development of oil and gas fields, which determine the order of disposal and disposal of marine litter. These points are not sufficiently detailed, only in two articles; therefore, more detail and further research is needed in relation to the management of this type of waste.

2.3. Gaps and challenges in the Ukrainian legal framework

From January 1, 2018, a ban on the dumping of untreated (untreated) household waste is set for Ukraine. At the same time, Ukrainians are obliged to sort the rubbish. This is provided by the Law of Ukraine "On Waste", to which the relevant amendments were made in 2012. Thus, according to the document, large-sized, repair and hazardous wastes in households should be collected separately from other types. The fine for violating such a norm for the population will be from 340 to 1360 UAH, for legal entities - from 850 to 1700 UAH. In addition, according to the document, hazardous waste should be separated during the assembly or sorting stage and transferred to specialized enterprises that have received licenses for the conduct of operations in the field of hazardous waste management. The law also provides that the carriage of garbage in specially equipped vehicles. An executor of such services will be determined by the local authorities on a competitive basis.

Burning of garbage is allowed only at specially designated enterprises or objects and only for the purpose of obtaining thermal and / or electric energy. Also, the law prohibits the design, construction and operation of landfills for household waste without the provision of groundwater protection systems, the extraction and disposal of biogas and filtrate.

3. Stakeholders analysis

At the national level the main responsible for marine litter is the The Ministry of Environment and Natural Resources of Ukraine (MEP), the central executive body whose activities are directed and coordinated by the Cabinet of Ministers of Ukraine. The Ministry of Environmental Protection is the main body in the system of central bodies of executive power, which ensures the formation and implementation of state policy in the field of environmental protection and environmental safety. (https://menr.gov.ua). The Ministry is entitled in the area of atmospheric air, preservation of ozone layer, restoration and protection of flora and fauna, restoration and protection of lands, restoration and protection of water resources (surface, ground, sea waters), efficient usage of water resources. Moreover, Ministry ensures legal and regulatory governing of the water management and land reclamation, geological study and efficient usage of mineral resources, as well as performs state supervision on the fulfillment of the requirements of the environment legislation.

However, other Ministries such as the Ministry of Infrastructure of Ukraine (https://mtu.gov.ua) is also important actors for the management of marine litter with respect to their sectors responsible for management. This Ministry responsible fot the Procedure for providing services for the prevention and elimination of the pollution substances in the seaports of Ukraine, prevention of pollution from inland waterways of Ukraine, registration of operations with harmful substances on ships, marine installations and ports of Ukraine.

Under the national law waste management maintain by the State Service for Marine and River Transport of Ukraine, which carries out control over observance of the requirements of the Rules for Handling Marine Litter on Vessels, Marine Stationary and Floating Facilities and Buildings.

State control over adherence to the requirements of the Rules for handling Marine Litter within the scope of competence is exercised by the State Azov Marine Ecological Inspection, the State Azov-Black Sea Ecological Inspection, the State Ecological Inspectorate of the Northwest Black Sea Region.

In accordance to the National Waste Management Plan, Ministries are entitled to develop and submit to the Cabinet of Ministers of Ukraine a draft framework law on waste, a draft act on the approval of the National List of Waste on the basis of the European (List of waste), an act on the implementation of a waste classification procedure, an act on determining the procedure for classifying waste as hazardous, an act on establishing an accreditation procedure for laboratories for conducting analyzes necessary for the classification and characteristics of waste etc. Local Authorities work closely with the Regional State Administrations, Business entities, National Academy of Sciences, State Television and Radio Broadcasting, State ecological inspections.

Today, at the first stage of the implementation of the Waste Management Strategy, implementation of the following general measures is foreseen Drafting of bills: on waste management; waste disposal; on combustion of waste; on waste management of the extractive industry; on household waste; on packaging waste; about waste petroleum products; about decommissioned vehicles; about batteries, batteries and accumulators; on waste electrical and electronic equipment and others.

Thus there is no state body, which is responsible to design and implementate of the policy for alternative management of packaging and other products. In addition, the port administrations, patrols are responsible for the implementation of all policies that target marine pollution, and with issues related to the surveillance and control of activities at the sea.

The tourist sector is also interested in managing the marine garbage, but sanatoriums and hospitals do not have the proper structure in their structure and can not contribute to contamination control, especially in the summer. First of all, the control of rubbish on theaters of sanatoriums should be placed on the departments of tourism and resorts.

For the monitoring of litter in the marine environment and biota responsible organizations are the Institute of Marine Biology, National Academy of Sciences of Ukraine, State Enterprise, Research Laboratory for the Prevention of Pollution of the Environment NDPKIMF, Southern Scientific Research Institute of Marine Fisheries and Oceanography, Physico-Chemical Institute of Environmental Protection and Human Rights, Research Institute, Ukrainian Scientific Center of Ecology of Sea. These institutions may provide important information and scientific insights through their research regarding the sources of litter, the status quo and further impacts on the marine environment and biota.

Furthermore, important is the contribution of several NGOs (e.g. Southern Ukrainian Ecological Union, Ukrainian branch of the International Academy of Ecology and Human and Nature Safety etc.) which contribute to the preservation of the environment, carry out sanitary days.

The workers of the scientific institutes on environmental issues as volunteers make a great contribution, collecting litter for the coastal areas (an example of UkrSCES). They are also subject to the control of marine garbage, along with other residents, consumers of plastic products, manufacturers, utilities, and others. They should join forces in joint efforts to address the issue of sewage in the country.

In the Appendix, an extensive list of stakeholders (217 organisations) related to marine litter in Ukraine have been identified and presented.

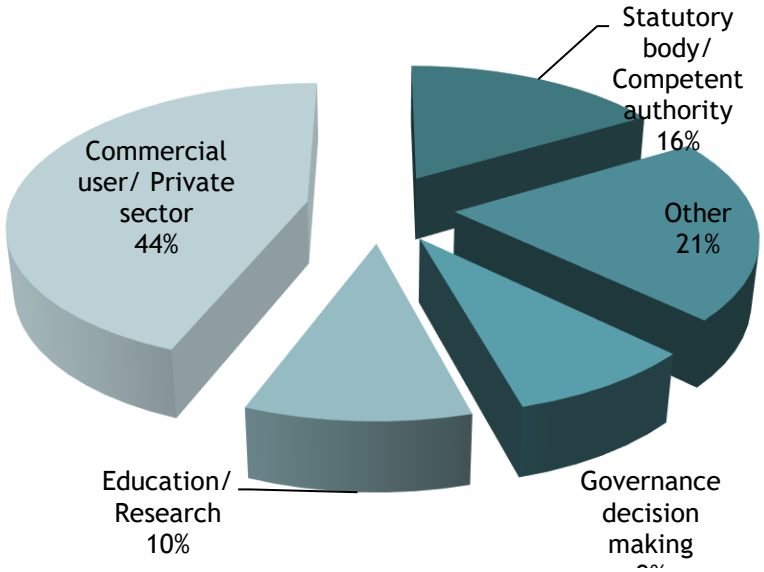

Figure 1. Stakeholder analysis (Source: extensive list of stakeholders).

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4. Strategies, practices, measures

4.1. National strategies for marine litter

Today, in the legislative framework, there are strategies for the development of Ukrainian seaports for the period up to 2038, waste management in Ukraine until 2030, the fulfillment of Ukraine's international obligations in the field of maritime safety and environmental protection from pollution and the introduction of mandatory instruments IMO for the period until 2022, the implementation of the provisions of the directives and regulations of the European Union in the field of international maritime and inland water transport ("road map"). All documents were approved only about a year ago. Action plans and measures according to these strategies have not yet been developed.

4.1.1 Strategy of development of sea ports of Ukraine for the period up to 2038

The strategy is developed in accordance with the Law of Ukraine "On Sea Ports of Ukraine" taking into account the main principles of implementation of the state policy in the field of transport, defines forecasts for cargo flows, tasks, main directions and ways of development of seaports and port industry in general, other basic parameters of development. The aim of the Strategy is:

- ✓ prevention of environmental pollution, compliance with the requirements for the use and protection of water objects within the territory and the water area of the seaport;
- ✓ implementation of EU standards on dangerous goods;
- ✓ bringing the standards of ecological safety of the work of sea ports in line with international ones.

Implementation of the Strategy will enable:

- ✓ conduction innovative activities through seaports using the latest technologies, implementing measures for resource conservation, and reducing the negative impact on the environment.

4.1.2 National Strategy for Waste Management in Ukraine until 2030

The waste management system in Ukraine is characterized by the following trends:

- ✓ accumulation of wastes both in the industrial and domestic sectors, which negatively affects the state of the environment and human health;
- ✓ improper disposal and disposal of hazardous waste;
- ✓ placing of household waste without taking into account possible dangerous consequences;
- ✓ improper use of waste as a secondary raw material due to the imperfection of the organizational and economic basis for their involvement in production;
- ✓ the ineffectiveness of the implemented economic instruments in the field of waste management.

The strategy defines the main directions of state regulation in the field of waste management in the coming decades, taking into account European approaches on waste management, based on the provisions:

- ✓ Framework Directive No 2008/98 / EC of the European Parliament and of the Council of 19 November 2008 on waste and repeal of certain directives;
- ✓ Council Directive 1999/31 / EC of 26 April 1999 on the disposal of waste;

- ✓ Directive 2006/21 / EC of the European Parliament and of the Council of 15 March 2006 on waste management in extractive industries, amending Directive 2004/35 / EC;
- ✓ Directive 94/62 / EC of the European Parliament and of the Council of 20 December 1994 "On packaging and packaging waste";
- ✓ Directive 2012/19 / EC of the European Parliament and of the Council of 4 July 2012 on waste electrical and electronic equipment (WEEE);
- ✓ Directive 2006/66 / EC of the European Parliament and of the Council of 6 September 2006 "On batteries and accumulators and spent batteries and accumulators".

- *Waste packaging*

  The lack of an efficient packaging waste collection system every year leads to a loss of significant resource potential for the processing industry in the form of waste paper and cardboard from 0.5 to 0.6 million tons, glass - 1 million tons, polymers - 0.6 million tons. As a result, the deterioration of the environmental situation.

  Accounting of volumes of formation, processing and utilization of waste packaging as a secondary raw material is not fully completed at the state level. The European principle of extended liability of the manufacturer is not realized, business entities are not responsible for further utilization of the used packaging.
- *The purpose of this Strategy is to create conditions for raising the standard of living of the population by introducing a systemic approach to waste management at the state and regional level, reducing the volume of waste generation and increasing the volume of their processing and reuse.*
- *Special measures are:*

- ✓ the drafting of a package on packaging and packaging waste in accordance with Directive 94/62 / EC of the European Parliament and of the Council of 20 December 1994 on packaging and packaging waste and best practices in Europe, which provides for:
- ✓ settlement of the issue of handling packaging waste;
- ✓ Distribution of responsibilities between the competent authorities and the participants in the packaging waste management process;
- ✓ requirements for the separate collection and storage of packaging waste based on best European practices and specific local requirements;
- ✓ ensuring the development of competition in the field of packaging waste management and the prohibition of the establishment of any monopolies in this area;

  Definition of obligatory for manufacturers and importers of standards for preparation for reuse and recycling of packaging waste, in particular:
- ✓ until December 31, 2023 - up to 60 percent of the weight of packaging waste;
- ✓ until December 31, 2025 - not less than 60 percent of the weight of packaging waste, 40 percent plastic; 45 percent of the timber; 50 percent of ferrous metals; 50 percent aluminum; 50 percent glass; 50 percent paper and cardboard;
- ✓ until December 31, 2030 - 65 percent of the weight of packaging waste, 60 percent plastic; 65 percent of timber; 75 percent of ferrous metals; 75 percent of aluminum; 75 percent glass; 75 percent of paper and cardboard.
- ✓ conducting informational work aimed at increasing the awareness of the population about the handling of packaging waste;
- ✓ ensuring the principle of inevitability of liability for violation of the rules for handling packaging waste, including failure to comply with established training standards for reuse and recycling of packaging waste.

- *The implementation of this Strategy will contribute to:*

- ✓ implementation of a waste management system on an innovative basis that will ensure the consumption of natural resources (natural resources - useful products - waste - secondary resources - useful products - waste);
- ✓ development of legislation in the field of waste management taking into account the requirements of the relevant European directives;
- ✓ qualitative changes in the field of waste management in accordance with best environmental practices;
- ✓ improvement of the state of the environment, as well as sanitary and epidemiological well-being of the population;
- ✓ compliance with environmental safety requirements during operation of waste management facilities and reduction of social tension.

4.1.3. Strategic directions fulfillment of international obligations of Ukraine in the field of maritime safety and the protection of the environment from pollution and introduction obligatory IMO tools for the period until 2022

- *Strategic Direction 1:*
- ✓ Implementation of international norms in the field of maritime safety and environmental protection against pollution in national legislation
- *Strategic Direction 2:*
- ✓ Ensuring the safety of merchant shipping and protecting the environment from pollution
- *Strategic Direction 3:*
- ✓ Development of national shipping
- *Strategic Direction 4:*
- ✓ Protection of the environment from pollution

4.1.4. Strategy for the implementation of the provisions of the European Union directives and regulations in the field of international maritime and inland water transport (road map)

Ukraine, as a party to international conventions and other international legal instruments in the field of merchant shipping, must adhere to international maritime safety standards and ship and port security. Their full implementation requires the existence of a well-structured system for ensuring the safety of navigation and overall security, which has proper organizational, personnel and material resources and a modern legal framework.
An important factor in the return of Ukraine to the world market for carriage by sea and inland waterways is the creation of a modern legal framework for attracting investment in this segment of the transport sector of the economy. To this end, it is imperative to bring national legislation in line with international shipping standards. One of this documents, that concerns marine wastes is:

- *Directive 2000/59 / EC of the European Parliament and of the Council of 27 November 2000 on port reception facilities for the reception of ship-generated waste and cargo residues*

✓ 58. Drafting and submitting to the Cabinet of Ministers of Ukraine a draft legislative act or ensuring the support of the relevant draft law in the course of consideration by the Verkhovna Rada of Ukraine, in particular, amending the Law of Ukraine "On Sea Ports of Ukraine" concerning the obligations of sea ports and marine terminals to ensure

acceptance from ship-generated waste and cargo residue vessels in accordance with the International Convention for the Prevention of Pollution from Ships, 1973, as amended by the 1978 Protocol thereto, and Directive 2000/59 / EC.

4.2. National action plans for marine litter

In the legal framework, among the plans of action, there are only obsolete documents of the Black Sea Emergency Plan of Action to the Protocol on cooperation in combating pollution of the Black Sea by oil and other harmful substances as a result of emergencies, the National Program for the Protection and Restoration of the Environment of the Azov and Black Seas . The most recent document is the Yuzhnyi Management Company's Ship Waste Management and Cargo Surplus Plan, which is sufficiently detailed with the necessary waste management measures.

- *Management plan with vessels and transport levels in department of "AMPU" (administration OF "Yuzhnyi").*

  The concepts and requirements set forth in this Ship Waste Management Plan (water containing pollutants and garbage) and cargo residues in seaports (hereinafter referred to as the Plan) apply to operations related to the waste of ships calling at seaport "Yuzhnyi".

4.3. Response management measures and actions in Ukraine

Among the practices and other measures related to the management of sewage and waste, the Ecological Program of Environmental Protection Measures may also be established in the city of Yuzhnyi, Odesa region, for the years 2017-2020. A number of individual general measures that can be used to prevent marine pollution and eliminate pollutants as a result of possible adverse events.

4.3.1. Ecological Program of Environmental Protection Measures of the city Yuznyi Odessa Region for 2017-2020

The need for the development of the program is due to the high level of man-made load on the territory of the city and the unsatisfactory environmental situation in the conditions of industrial production and market economy. The program is aimed at carrying out a complex of environmental and economic measures aimed at improving the ecological state of the environment by reducing the technogenic load on the environment, strengthening control over compliance with the requirements of the current legislation by the subjects of economic activity.

The program is aimed at improving the ecological status of the coastal zone, protection atmospheric air, water resources, rational land use, rational use and utilization of waste and waste products.

4.3.2. Implementation of the system of separate collection and utilization of garbage in Berehivskyi district

The overall goal of the measure is to solve the problem of waste management in the settlements of Berehivskyi district in accordance with the requirements of European legislation, by creating a comprehensive waste management system based on separate waste collection, which includes new technological solutions for waste management, are safe from the point of view of the environmental impact.

Among the special tasks of the project is the creation of 70 separate litter collection sites in intensive traffic areas, as well as the construction of a waste sorting plant in Janoshi village of Berehivskyi district, Zakarpatskyi region, using modern technologies for the composting of biological residues, the selection of secondary raw materials and the safe disposal of endings.

4.3.3. Measures to combat the harmful effects on the environment. Alternative solutions

Measures to prevent pollution of the water basin are identified.

The main measures for preventing pollution of the water basin by transport vehicles are:

- ✓ prohibition of discharges of polluting wastes from vessels in inland water bodies;
- ✓ adoption of international agreements on the termination of discharges from ships of all types of waste and washing of oil stores, their contaminated waters in open seas and oceans within
- ✓ established zones;
- ✓ equipment of vessels with additional means and installations for the disposal or disposal of certain types of waste, as well as for the temporary accumulation of a part of the waste followed by putting it on shore for disposal or recycling;
- ✓ development of new designs of vessels that would more guarantee the preservation of petroleum and petroleum storage, even in emergencies.

Methods of elimination of allowed contaminants

To date, there have been three main areas for the treatment of contaminated waters of seas and rivers, namely:

- ✓ mechanical collection from the surface of garbage and oil films
- ✓ chemical influence on oil films
- ✓ biological timetable of films.

4.3.4. List of waste utilization and disposal operations

List of waste utilization and disposal operations approved by the Order of the State Statistics Service of Ukraine January 23, 2015, No. 24 and concludes recycling operations, removal operations (deletion in specially designated places or objects (by burial), removal by burning or other types of disposal, disinfection).

4.4. Green Infrastructure

September 26-28, 2018 was the first forum on the topic "Green Infrastructure". On which discussed the Green Infrastructure Care Strategy. But the strategy itself has not yet been formed. All regulations relate only to planting greenery. Infrastructure issues are defined only in the context of the tourism industry.

Some issues of granting in 2016 subventions from the state budget to local budgets to implement measures on the socio-economic development of certain territories
Land Code of Ukraine
Tax Code of Ukraine
On the improvement of settlements
On Amendments to Certain Legislative Acts of Ukraine on Promotion of Construction
On some measures to preserve and reproduce forests and greenery
Expert evaluation of land plots

On Approval of Changes to the Methodology for Determining the Value of Green Plants
On Approval of Instructions for Designing, Technical Acceptance, Registration and Evaluation of Forest Cultured Facilities
On approval of the criteria for assessing the degree of risk from the implementation of economic activities in the field of improvement of settlements and the frequency of planned state supervision (control) of the local state administrations
On approval of the List of construction objects for which designing of city-planning conditions and restrictions are not provided
On Approval of the Regulation on Student Forestry
On Approval of the Rules for the Maintenance of Green Plants in the Settlements of Ukraine
On Approval of the Model Rules for the Improvement of the Territory of the Settlement
About the obligation to perform certain actions
About the complex reconstruction of neighborhoods (districts) of an outdated housing stock
On the Concept of Sustainable Development of Human Settlements
About the town-planning cadastre
About the Basic Principles (Strategy) of the State Environmental Policy of Ukraine for the period up to 2020
On the planning and development of territories
On the regulation of urban development activities
About collecting money
About taxi for calculating the amount of damage caused by green plantations within cities and other settlements

From the current issues concerning the development of the "green infrastructure" in Ukraine, namely, green building, innovations in the green economy, modern technologies in the cultivation of gardening material, the regulatory and legal basis includes only the modern problems of the development of the forest-park economy, problems and methods of plant protection, etc.

The legislative framework is devoted to the issue of ensuring sustainable development of urban settlements, the stable increase of ecological and sanitary-epidemiological safety of the territorial community's residence, the sustainable preservation of a high level of environmental capacity of the urbanized system, the formation of a continuous green cellular system and the impossibility of occurrence of pollution. In the legal field, the schemes of design, technical acceptance, registration and evaluation of the quality of landscaping of territories, arrangement of parks, squares, formation of green plantations and floristic design of territories, priority directions of greening of cities, aimed at providing favorable living conditions for its inhabitants with the maximum saving of budget of funds Risks, criteria, restrictions, requirements of greening of urban settlements, compensation of expenses for damage caused are considered.

In Ukraine, significant concentration of scientific research and financial resources in the development and implementation of green technologies and innovations so far does not occur, in general, is determined by negative indicators, and therefore is in complete decline.

4.5. Summary of issues and challenges faced in Ukraine related to marine litter that still need further actions to be adopted

Summarizing the foregoing, one can conclude that the management of marine litter is not equipped with the appropriate regulatory framework. Only relevant measures are prescribed on issues of waste at the national level, but regional and local levels are characterized by the absence of specific action plans and measures to address the issue of marine waste and litter.

5. Monitoring status

The legislative field of Ukraine is only being formed in the context of the implementation of obligations under the Association Agreement with the European Union.

6. Available spatial data

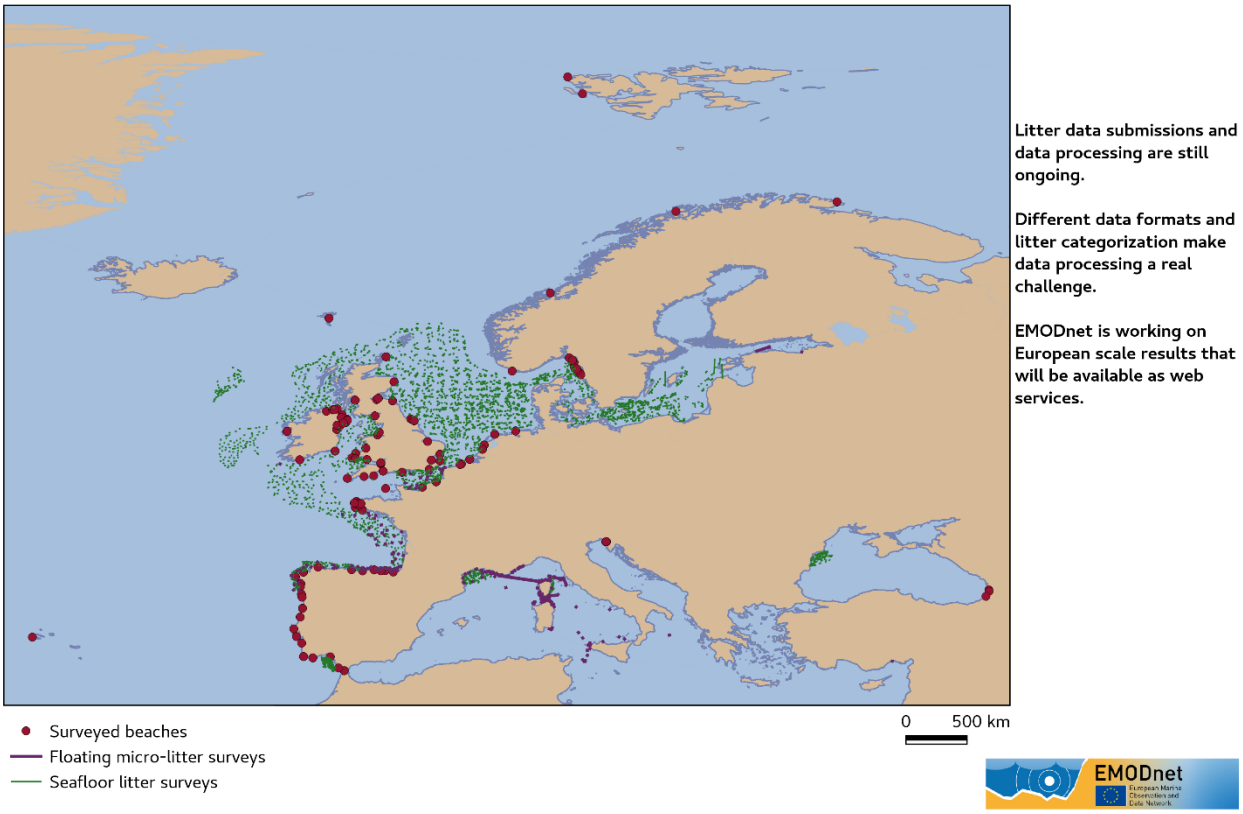
The initial assessment of the marine litter distribution spatial data within the Black Sea region revealed the essential gaps in this field of knowledge. The lack of observation and surveys due to the novelty of this research on the regional level is the main reason of these gaps.

The main results publicly available for the Black Sea were disclosed during the EMODNET-Chemistry (Phase 3) and available by the link:

http://www.emodnet-chemistry.eu/newsevents/news/EMODnet_Chemistry_litter_data_maps_first_release

According to the EMODNET first Data survey distribution map there are only 2 data-sets (Romania and Georgia) available for the Black sea.

EMODnet litter data. First data survey distribution map (23/03/2018)



The growing involvement of the regional scientific marine institutions in the marine litter researches will close the spatial data gaps to be covered by the results of ongoing and future activities, for the instance obtained during the EMBLAS II project.

In the frame of the EMBLAS II project ('Improving environmental monitoring in the Black Sea') basin-crossing multinational exploration surveys (Joint Open Sea Surveys, JOSS), specific national surveys (National Pilot Monitoring Studies, NPMS) and surveys from ships-of-opportunity, all including opportunistic monitoring of floating litter, were performed during 2016-2017 in the Black Sea. The surveys involved scientists from Georgia, Russia and Ukraine, while scientists from Romania, Bulgaria and Turkey participated to accompanying workshops and training.

The data collected during the EMBLAS II will be processed within the follow up EMBLAS+ and MARLITER projects showing the good connectivity among these activities. The results will be available via the web-interface of the Water quality Data Base (WQDB) to be updated with marine litter catalogues during the EMBLAS+. The thematic map series of the EMBLAS II will be developed according to the marine litter data collected during the JOSS, NPMS and surveys from the ships-of-opportunity.

7. Recommendations: policy, mitigation and management actions

Management of waste -

e.g. integration and improvement of waste management & recycling; measures to prevention and reduce solid waste in producers and consumers

Recommendations: implementation of the National Waste Management Plan by 2030, including the development and implementation of regional and local waste management plans (adaptation of national legislation to the requirements of European legislation) to reduce waste generation, including MSW.

Best Practices: Unfortunately, Ukraine has not yet implemented the Law on Waste, which obliges the population of the country to sort waste. However, there are local practices that aim to reduce the amount of waste generated. In most cases, such practices are initiatives of local or regional non-governmental organizations, ordinary citizens, rarely associations of houses and local authorities. Among these practices are the following: "Ukraine without trash" - a public organization that opened a recycling station in Kiev, they accept virtually all types of solid waste, as well as educate citizens on the topic of garbage sorting. The sorting station of the same format, but from another NGO is located in Rivne, the Green Land Change NGO has for the second year been educating citizens about sorting and receiving sorted waste. The city of Myrhorod, Poltava region since 2006 introduced the sorting of garbage into 3 fractions (PET bottles, glass and waste paper). In Nikolaev from 2016 on a local landfill the station for processing of biogas in the electric power was opened, moreover in 2018 all schools of Nikolaev switched to daily sorting of waste.

Legislative measures – this is part of the groups of measures laid down in the Bulgarian and Romanian marine strategies in the chapter on marine litter.

Recommendations: Develop separate or supplement existing regulatory / legislative instruments for the management of marine litter (river, marine, beach), taking into account the relevant Descriptors of the Marine Strategy Framework Directive (in particular D10). Development and implementation of special regulations to regulate vessels' liability for lost / abandoned fishing gear (including the use of financial mechanisms).

Best Practices: There are a number of laws and regulations governing waste management in Ukraine, among them: the Law of Ukraine "On Waste", the Decree of the Cabinet of Ministers of Ukraine "On approval of the National Waste Management Strategy in Ukraine until 2030", the Decree of the Cabinet of Ministers Ukraine on the National Waste Management Plan by 2030, the Cabinet of Ministers of Ukraine Resolution on Amending the Maritime Doctrine of Ukraine for the Period up to 2035, and others.

Ukraine has also signed a number of Conventions aimed at regulating the protection of the environment, combating debris, both land and aquatic environment: the Convention for the Prevention of Pollution by Disposal of Waste and Other Materials 1972; The 1992 Convention for the Protection of the Black Sea against Pollution; The International Convention for the Prevention of Pollution from Ships, 1973; The 1989 Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal; Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, etc.

In addition, within the framework of the Association Agreement, Ukraine has an obligation to implement a number of EU regulations that also address waste management issues (including marine litter): Framework Directive 2008/98 / EC " On waste and repeal of individual Directives »; Directive 94/62 / EC on packaging and packaging waste; Water Framework Directive (2000/60 / EC); Marine Strategy Framework Directive (2008/56 / EU Directive), and others.

It is worth noting that Ukraine is a member of the International Organization of the IMO, which is committed to taking the necessary measures to prevent the discharge of pollutants into water bodies. There are also a number of NGOs in Ukraine that are involved in environmental lobbying, including water bodies (NECU, MAMA-86, Ecology, Law, Human, etc.).

Port reception facilities

e.g. port fee, port register platforms etc.

Recommendations: Development and implementation of a legislative framework that should regulate the operation of offshore facilities, in particular on garbage management. There is a need to regulate the legal framework dealing with garbage disposal within ports (sanitary legislation, atmospheric air legislation, and laws governing waste management). Create conditions for storage, transportation and disposal / processing of waste from port complexes. Promote the development of waste management programs at port complexes (for example, when the waste of one port complex can be used on another). Develop a system of tariffs for receiving various types of ship waste at ports, and develop and approve a system of tariffs for waste management (acceptance, transportation, disposal or processing).

Best Practices: In the ports of Odessa, according to Ukrainian and international legislation, separate collection of waste from ships is carried out, including by their state of aggregation. In the South, for example, there are complexes that carry out special treatment of sludge containing petroleum products, as well as apply a systematic approach to the implementation of correct waste management, which has been gradually phased in over 15 years, as part of a pilot project on the implementation of international environmental management ISO14000 standards. In general, each port has its own internal approved Waste Management Plan, like all Ukrainian ships, and the duties of the ports include the function of cleaning the water area, thus clearing the waters not only of oil but also of dust. Today, in some ports, certain types of waste are recycled (disposed of) at special installations, while other port complexes send waste for recycling to specialized enterprises / organizations. The implementation of the instructions for receiving and handling ship waste at ports is followed by special port environmental inspections. Qualitative work on waste management at port complexes significantly depends on the established system of waste management in the city (updating / replacement of material and technical base, production facilities for recycling / processing, financial component (tariffs, penalties)).

Ship generated waste

Recommendations: Require all types of seagoing vessels to separate ship waste and dispose of it in specialized containers and packaging. In the future, special facilities will be developed and implemented for the disposal of certain categories of waste on ships. Develop recommendations to reduce / prevent the generation of garbage (for example, reduce the use of non-recyclable food packaging; prohibit the use of disposable plastic vessels or other plastic materials on ships). To promote implementation and implementation of the system of compensation and payment of damages caused by pollution from ships, ships and other navigable means of territorial and inland sea waters of Ukraine.

Best Practices: Today, some vessels have incinerators that dispose of food and other waste.Fishing generated waste & derelict fishing gear

Recommendations: Make it mandatory for all fishing vessels to collect ship waste separately and to store it in specialized containers and packages. Introduce an effective and efficient system of accounting for fishing gear on vessels, including the account of lost gear (gear, nets, etc.). Contribute to developing affordable and effective ways of recovering lost fishing gear. Promote the development and implementation of new types of fishing gear with less environmental impact and biodiversity (eg, radio beacon networks for loss tracing; special dolphin scare beacons, etc.). Facilitate the implementation and implementation of a system of compensation and compensation for damage caused by pollution from fishing vessels in the course of their activities.

Best Practices: There is an appropriate regulatory document in Ukrainian legislation that aims to regulate the control of fishing vessels - Order of the Ministry of Agrarian Policy of Ukraine "On establishing a system for remote control of fishing vessels". It states that the costs incurred by the shipowners are spent on the equipment of the vessels by technical means of control, transmission of the necessary information using the remote monitoring system.

Recommendations: Develop and carry out consistent and consistent outreach work to the population to raise awareness of waste management (eg on sorting and coordinated waste removal, with particular attention to rural areas). Develop and disseminate information materials on waste management and sustainable consumption. Promote the appropriate waste management in the media. Develop and implement a system of economic instruments to encourage the population to collect garbage separately (for example, the collateral for certain types of waste). Promote public involvement in grassroots cleanup activities, including the coast. Use the concept of civic science to conduct research on marine litter, including for monitoring purposes.

Best Practices: One example of large-scale landfill action is the All-Ukrainian Environmental Action Let's Make Ukraine Clean Together, implemented by the Let's Do It, Ukraine! NGO, part of the worldwide Let's Do It, World! . There are also a number of local initiatives aimed at clearing the natural areas of debris, for example, the association of active citizens of "EcoTerapia" in the Odessa region holds periodic actions to clean beaches and slopes by the sea. At the Ukrainian Scientific Center for Marine Ecology, there is a practice of involving students of Odessa educational institutions to carry out monitoring sessions on beach debris.Financial support and funding opportunities

Recommendations: Development and implementation of cost-effective tools for improving waste management, namely: implementation of a mechanism for full financing of the waste management system, taking into account the principles of "polluter pays", "extended producer responsibility" and "discharge charges"; providing financial assistance to economic entities (loans, grants, etc.) for environmental modernization, the introduction of cleaner production / technology, the creation of own waste processing and recycling facilities; creation of a financial guarantee mechanism for the closure, remediation and further monitoring of landfills[1] and more. At the population level, to encourage the transition to separate collection of waste, use the principle of pledging the value of certain types of waste and other types of bonuses (for example, return the cost of plastic packaging, etc.), and in the case of failure to comply with the statutory rules and regulations on waste management - use a system of different types of penalties and penalties.

[1] - *Cabinet of Ministers' Decree "On Approval of the National Waste Management Strategy in Ukraine by 2030"*

Best Practices: In this case, Ukraine should refer to the experience of European countries such as Germany, Sweden, France or Italy (pilot project where a plastic bottle can be exchanged for a subway ticket), or the experience of other developed countries, such as Turkey (where plastic bottles or aluminum cans can be handed over to special vending machines that will transfer money to a subway ticket or pay for stray food, etc.).

Monitoring

Recommendations: Ensure regular monitoring of debris in marine and river environments (especially rivers flowing into the Black Sea) and monitor beach debris. To involve in the monitoring of the garbage of the population within the framework of the concept of civic science.

Best Practices: **To date, the Decree No. 758 of the Cabinet of Ministers of Ukraine "On Approval of the Procedure for State Water Monitoring" has been implemented in Ukraine, where the objects of state water monitoring are: surface water masses, groundwater masses and seawater within the territorial sea and the exclusive maritime economic zone of Ukraine, including the zones (territories) to be protected. Upgraded water monitoring, in addition to standard indicators, includes monitoring of solid waste (debris) in the marine environment (rivers and beach areas), as well as acoustic (noise) pollution of the marine environment.Additional recommendations for measures and actions regarding marine litter**

e.g. fostering collaboration between neighboring/transboundary countries; coordination of authorities; controls; collaboration with scientists; policy implementation; political will; stakeholder engagement etc.

Recommendations: Development and implementation of regular transboundary activities aimed at: monitoring the state of the marine environment; implementation of joint activities to clean up the marine environment from pollution. Creating opportunities for transfer of innovation / data in the field of protection and purification of the marine environment. Development and implementation of a coordinated cross-border system for the sale of secondary resources (creation of a market for garbage sale).

Best Practices: Today there are striking examples of international projects that focus on the study of the marine environment. Among which Ukraine has joined: EMBLAS - I, II, Plus; ANEMONE and MARLITTER.

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APPENDIX

STRATEGIC DIRECTIONS
fulfillment of international obligations of Ukraine in the field of maritime safety and the protection of the environment from pollution and introduc tion obligatory IMO tools for the period until 2022

No. of p	Tasks and measures required to achieve strategic goals	Deadline	Finished this and
I.	Strategic Direction 1: In Proceedings of international standards in merchant shipping safety and protection of the natural environment from pollution th in the national legislation		
1.1	Improvement of the national regulatory framework and the implementation of IMO instruments (including those of a recommendatory nature) in thelegal field of Ukraine in the field of maritime safety and environmentalprotection from pollution	Constantly over 2018 - 2022 years	Mininfrastructure Ministry of Agrarian Policy Ministry of the Environment MES Ministry of Health MFA Ministry of Justice Maritime Administration State Gribiz Agency State Inspection IPAI State Enterprise "AMPU" CP "MPDS" State Guild Hydrography SE "KT" RSU "
1.2	Improvement of the legal and regulatory framework for the inevitability of punishment and application of sanctions against those responsible for violation of the rules of safety of merchant shipping and the protection of the natural environment	Constantly over 2018 - 2022 years	Mininfrastructure Ministry of the Environment Maritime Administration State Gribiz Agency State Inspection
1.3	Study international experience in ensuring the safety of merchant shipping and protecting the environment from pollution. In the implementation of best practices in the national legal system.	Constantly over 2018 - 2022 years	Mininfrastructure Maritime Administration Ministry of Agrarian Policy Ministry of the Environment
1.4	Development of mechanisms of interaction between public authorities and civil society institutions during the formation and implementation of state policy in the field of merchant shipping safety and environmental protection of one environment from pollution	Constantly over 2018 - 2022 years	Mininfrastructure Ministry of Agrarian Policy Ministry of the Environment MES Ministry of Health

			MFA
1.5	Development of informational support of activity of state authorities ,enterprises, institutions and organizations with the purpose of coveringactivities and bringing legal norms in the field of maritime safety and environmental protection	Constantly over 2018 - 2022 years	Mininfrastructure Ministry of Agrarian Policy Ministry of the Environment MES Ministry of Health MFA Ministry of Justice Maritime Administration State Gribiz Agency State Inspection IPAI State Enterprise "AMPU" CP "MPDS" State Guild Hydrography SE "KT" RSU "
1.6	To improve the mechanism of informing IMO and other parties of international treaties of Ukraine adopted within the framework of IMO, including through the Global Integrated Information System of IMO Navigation (GISIS IMO)	Constantly over 2018 - 2022 years	Mininfrastructure MFA Maritime Administration State Gribiz Agency State Inspection State Enterprise "AMPU" CP "MPDS" SE "KT" RSU "
1.7	Ensuring monitoring of the results of IMO activities in relation to theissuance of new international norms, in particular those of a recommendatory nature	Constantly over 2018 - 2022 years	Mininfrastructure MFA Maritime Administration State Gribiz Agency
1.8	Ensuring the necessary preparation of the position of Ukraine on thedevelopment and implementation of international legal norms within the framework of work in IMO, other international organizations, whose activities are related to merchant shipping, environmental protection from pollution, the implementation of state supervision (control) on safety at sea and river transport, navigational and hydrographic navigation facilities	Constantly over 2018 - 2022 years	Mininfrastructure MFA Ministry of Justice Maritime Administration Ministry of Agrarian PolicyState Fisheries Agency State Inspection IPAI State Enterprise "AMPU" CP "MPDS" State Guild Hydrography SE "KT" RSU "
1.9	Ensuring effective interaction with the IMO, other international organizations whose activities are	Constantly	Mininfrastructure Ministry of the

	related to merchant shipping, environmental protection from pollution, the implementation of state supervision (control) for safety on the sea and river transport, navigational and hydrographic provision of navigation	over 201 8 - 2022 years	Environment MFA Ministry of Justice Maritime Administration State Gribiz Agency State Inspection IPAI State Enterprise "AMPU" CP "MPDS" State Guild Hydrography SE "KT" RSU "
1.10	Provision of permanent representation of Ukraine in the work of the IMO, the International Labor Organization (ILO), the International Hydrographic Organization (IHO), the International Association of Naval Navigation and Lighthouse Services (IALA), the European Maritime Safety Agency (EMSA), the International Transport Workers' Federation (ITF) , The European Transport Workers' Federation (ETF) and others	Constant ly over 201 8 - 2022 years	Mininfrastructure Ministry of the Environment MES Ministry of Health MFA Ministry of Justice Maritime Administration State Gribiz Agency State Inspection IPAI State Enterprise "AMPU" CP "MPDS" State Guild Hydrography SE "KT" RSU "
1.11	Involvement of international technical assistance to improve the logistical and institutional capacity and training of specialists in specialized IMO training centers (International Maritime University (Malmo, Sweden), Maritime Law Institute (Malta), International Training Center of the International Labor Organization (Turin, Italy)	Constant ly over 201 8 - 2022 years	Mininfrastructure Ministry of the Environment Ministry of Agrarian Policy MFA Maritime Administration State Gribiz Agency State Inspection IPAI State Enterprise "AMPU" CP "MPDS" State Guild Hydrography SE "KT" RSU "
II.	<u>Strategic Direction 2:</u> Ensuring the safety of merchant shipping and protecting the environment from pollution		
2.1	Formation and was ealizatsiya consistent and effective public policy on merchant shipping safety and protection of the natural environment from	Constant ly over 201	Mininfrastructure M aritime Administration

	pollution th	8 - 2022 years	Ministry of Agrarian Policy Ministry of the Environment MFA Ministry of Justice State Gribiz Agency State Inspection
2.2	Improvement of public administration , supervision and control in the field of maritime safety and environmental protection against pollution	Constantly over 2018 - 2022 years	Mininfrastructure Maritime Administration Ministry of Agrarian Policy Ministry of the Environment MFA Ministry of Justice State Gribiz Agency State Inspection IPAI State Enterprise "AMPU" CP "MPDS" State Guild Hydrography SE "KT" RSU "
2.3	Strengthening the functional and institutional capacity of state authorities, enterprises, institutions and organizations authorized to fulfill obligations and responsibilities in Ukraine as flag states, port states and coastal states	Constantly over 2018 - 2020 years	Mininfrastructure Ministry of Agrarian Policy Ministry of the Environment MES Ministry of Health Maritime Administration State Gribiz Agency State Inspection IPAI State Enterprise "AMPU" CP "MPDS" State Guild Hydrography SE "KT" RSU "
2.4	Ensuring the functioning of the State Service of Marine and River Transport of Ukraine (Maritime Administration) with the task of assigning to it the functions and main tasks (duties) of the flag State, port state andcoastal state	2018 year	Mininfrastructure Maritime Administration
2.5	R eorhanizatsi I captains of marine ports and related services captains ofports, ensuring the release of the captain of sea port (in part ysli their services) to perform not peculiar tasks and functions in terms of providing administrative services and execution of certain business functions	2019 year	Mininfrastructure Maritime Administration State Enterprise "AMPU"

2.6	Development, implementation and maintenance of the functioning of the quality management system in the activities of state authorities authorized to perform state functions in the field of maritime safety and environmentalprotection against pollution	2019 - 2020 years	Mininfrastructure Ministry of Agrarian Policy Ministry of the Environment MES Ministry of Health MFA Ministry of Justice Maritime Administration State Gribiz Agency State Inspection
2.7	Revision of qualification requirements for persons who ensure the safety of merchant shipping and pollution from the environment, inspectors exercising the functions of the flag State and port state control , and persons conducting marine casualty investigations	2018 - 2019 years	Mininfrastructure Ministry of Agrarian Policy Ministry of the Environment Maritime Administration State Gribiz Agency State Inspection
2.8	Improvement of the procedure for state supervision of compliance with the requirements of international treaties and national legislation of Ukraine in the field of merchant shipping.	Continuing during 2018-2022	Maritime Administration Mininfrastructure Ministry of the Environment Ministry of Agrarian Policy State Gribiz Agency State Inspection State Enterprise "AMPU"
2.9	Drafting and Adoption of Changes to National Legislation to IncreaseLiability of Officials on Vessels under the State Flag of Ukraine and Shipping Companies for Violation of International and National Rules and Regulations	Constantly over 2018 - 2020 years	Mininfrastructure Maritime Administration Ministry of Agrarian Policy
2.10	Improvement of the mechanism for monitoring and control over the activities of recognized organizations, which concluded agreements on the delegation of authority to provide services on behalf of the administration of the Conventional Certification of vessels registered in Ukraine	2018-2019 years	Mininfrastructure Maritime Administration State Gribiz Agency
2.11	Broadening the range of classification societies, which delegated powerstion of statutory certification of ships with Ukrainian classification societies according to the list in accordance with paragraph 1 of resolution of the Cabinet of Ministers of Ukraine dated 06 March 1996 r. Number 172-r "On technical supervision of vessels entitled to sail under the flag of Ukraine"	2018 - 2022 years	Mininfrastructure Maritime Administration
2.12	Conducting periodic (at least once every two years) inspections (audits) of recognized organizations with which agreements on delegation of authority	Continuing during	Mininfrastructure Maritime Administration

	to provide services on behalf of the administration of the Conventional Certification of vessels registered in Ukraine	2018-2022	State Gribiz Agency
2.13	Ensure implementation N ational th search and rescue systems at sea in the sea search and rescue region of Ukraine	2018 - 2019 years	Mininfrastructure CP "MPDS" Maritime Administration DSNC State Border Service
2.14	Sustainable development and improvement of the main components of eerzhavnoyi management and security of navigation, including navigation and hydrographic support of navigation N ational search and rescue at seain maritime search and rescue region Ukraine, pilotage and vessel traffic control, coastal stations GMDSS , long-range vessel identification, surface water monitoring, ship and port protection, training, retraining andcertification of seafarers, other specialists in maritime transport	Continuing during 2018-2022	Mininfrastructure MES Ministry of Health Maritime Administration State Gribiz Agency DSNC IPAI State Enterprise "AMPU" CP "MPDS" State Guild Hydrography
2.15	Improvement of the effectiveness of state supervision (control) on ensuring the safety of navigation and environmental protection against pollution	Continuing during 2018-2022	Maritime Administration State Gribiz Agency State Inspection
2.16	Implementation of measures to create conditions for Ukraine's accession to the Paris Memorandum of Understanding on port State control of ships	2018 - 2022 years	Mininfrastructure Ministry of the Environment Maritime Administration State Enterprise "AMPU"
2.17	Improving the organization and investigate marine accidents events of ships with the requirements of IMO instrume Consumer Care. Ensure compliance with the principles of investigating marine casualties with ships as established by the Code of International Standards and Recommended Practices for the Investigation of an accident or incident at sea (Code of Accident Investigation), approved by Resolution of the International Maritime Organization MSC.255 (84) of 16.05.2008 , and Guidelines for Provision Assistance to investigators in the implementation of the Code of Accident Investigation, adopted by the Assembly of the International Maritime Organization Assembly A.1075 (28) of 04.12.2013	Continuing during 2018-2022	Maritime Administration of theMinistry of Infrastructure Ministry of Agrarian Policy State Gribiz Agency
2.18	Improvement and improvement of the organization and inspection of ships by inspectors of the flag State and Port State	2018 - 2019 years	Maritime Administration State Gribiz Agency
2.19	Implementation of modern information and	2018 -	Maritime

	analytical systems in the area of fulfillment of obligations and obligations of Ukraine as a flag / port / coastalstate and implementation of state supervision (control) for ensuring navigation safety	2019 years	Administration Mininfrastructure State Gribiz Agency IPAI State Enterprise "AMPU"
2.20	Improving the system of continuous monitoring and timely information,etc. of a navigational change an d the situation in the coastal waters of Ukraine	Continuing during 2018-2022	Mininfrastructure State Guild Hydrography State Enterprise "AMPU" CP "MPDS"
2.21	Conduct joint training exercises with countries on the Black Sea memorandum concerning search and rescue at sea and ensure sharing of best practices	Continuing during 2018-2022	CP "MPDS" Maritime Administration DSNC State Border Service
2.22	Performing an analysis (self-assessment) of Ukraine's fulfillment of its obligations and obligations as a flag State, port state and coastal state and ,following the results of such an analysis (self-assessment) , taking corrective actions and measures to eliminate the identified shortcomings	Every year tion to January 30for 2018 - 2022	Maritime Administration Mininfrastructure State Gribiz Agency IPAI State Enterprise "AMPU" CP "MPDS" State Guild Hydrography
2.23	Continuous thorough analysis of the results of inspections Ukrainianvessels Paris, the Mediterranean, Chor nomorskoho memoranda Port State Control inspectors and causes detainee tion Ukrainian ships and, as a result of this analysis, take corrective action	Continuing during 2018-2022	Maritime Administration
2.24	Carrying out a periodic analysis of the causes of emergencies of marine casualties with ships and the system of safety of navigation in general ,using the results of this analysis of corrective measures to eliminate identified shortcomings	Every year tion to January 30for 2018 - 2022 years	Maritime Administration Mininfrastructure State Gribiz Agency
2.25	Pho rmuvannya, adoption and implementation of the annual plan for the organization and inspection Ukrainian ship inspection control flag Statehaving regard lennyh develop procedures and to be approved enyhdetermining factor (profile) risk vessels under Ukrainian flag and periodic band c of inspections.	Continuing during 2018-2022	Maritime Administration State Gribiz Agency
2.26	Improvement of the system of training / retraining and retraining of persons whose duties include the fulfillment of the tasks and functions of the state in the field of maritime safety and environmental protection against pollution	Continuing during 2018-2022	Maritime Administration Mininfrastructure Ministry of the Environment State Gribiz Agency

			State Inspection IPAI State Enterprise "AMPU" CP "MPDS" State Guild Hydrography
III.	Strategic Direction 3: Development of national shipping		
3.1	Implementation of the reform of the system of state registration of sea vessels, the authority of the Maritime Administration to issue ship registration documents for sea vessels	2018 - 2020 years	Mininfrastructure Maritime Administration State Enterprise "AMPU" State Gribiz Agency
3.2	Development and introduction of an electronic system for the issuance of ship registration documents	2019 - 2020 years	Mininfrastructure Maritime Administration
3.3	Development and implementation of restrictions on the registration of marine vessels, depending on the technical condition, age, history of all inspections, ship detentions	2019 year	Maritime Administration State Gribiz Agency
3.4	Development and implementation mechanism for getting rid of ships sailing under the national law great ferry Ukraine for violation of internation al and national legislation in the field of maritime safety	2019 year	Mininfrastructure Maritime Administration State Gribiz Agency
3.5	Develop and implement a system of incentives for shipowners to comply with the requirements of international conventions by shipowners, fleet renewal, introduction of modern energy-efficient and environmentally sound technologies on ships	2019 - 2020 years	Mininfrastructure Maritime Administration State Gribiz Agency
3.6	Creation of economic incentives for shipbuilding and ship repair factories and enterprises	2018 - 2022 years	Mininfrastructure Ministry of Economic Development and Trade Ministry of Agrarian Policy
3.7	Development and implementation of national policies to promote employment in merchant shipping	Constantly over 2018 - 2020 years	Mininfrastructure
3.8	Development of sea ports of Ukraine with application of the best international practices	2018 - 2020 years	Mininfrastructure State Enterprise "AMPU"
3.9	Preservation of the personnel potential of Ukrainian sailors at the world's most competitive level through proper compliance with the requirements of the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978, implementation	Continuing during 2018-2022	Mininfrastructure MES Maritime Administration IPAI
3.10	Analysis in accordance Ukraine educational	Continui	Maritime

	qua lifikatsiynyh levels for seafarers qualification requirements , stipulated by the International Convention on Training and Certification of Seafarers and Watchkeeping, 1978 (as amended)	ng during 2018-2022	Administration Mininfrastructure MES IPAI
3.11	Increasing the level of theoretical and practical training of seafarers, providing viewing standard educational plans and standard educational programs of vocational education of maritime transport, creating economic incentives for shipowners during the practical training student s higher andvocational education institutions	Continui ng during 2018-2022	Mininfrastructure MES Maritime Administration IPAI
IV	Strategically second line 4: Protection of the environment from pollution		
4.1	Supervision (control) of observance by the subjects of international navigation of environmental standards and norms during their introduction in the field of commercial seafaring in Ukraine	Continui ng during 2018-2022	Mininfrastructure Ministry of the Environment Maritime Administration State Gribiz Agency State Inspection
4.2	Provision of safe handling, temporary storage and transportation of dangerous goods or goods that can be classified as hazardous during their sea transportation .	Continui ng during 2018-2022	Mininfrastructure Maritime Administration stevedoring companies, terminals
4.3	Providing available hone appropriate and adequate port reception facilities, that coincidences ovidayut user needs and standards of environmental protection th environment from pollution	2018 - 2019 years	Mininfrastructure Maritime Administration State Enterprise "AMPU"
4.4	Ensuring the acceptance of all non-prohibited by national legislation for thereception and disposal of types of ship waste (oil contaminated waters and oil residues , sewage, garbage, operational waste, cargo residues, separation) in seaports and terminals and their subsequent utilization taking into account the forecast indicators of ship measures for each of themMarine them port ome separately. Develop ment and approval of relevant requirements for business entities	2018 - 2019 years	State Enterprise "AMPU" Maritime Administration
4.5	Determination of the amount of financing and inclusion in the financial plan of the State Enterprise "AMPU" for the relevant years of expenditures in order to fulfill international obligations to ensure the mandatory acceptance of all types of ship waste	Continui ng during 2018-2022	State Enterprise "AMPU" Mininfrastructure
4.6	R ozrobka and implementation of requirements regarding the availability of plans approved waste handling in ports and terminals	2018 year	State Enterprise "AMPU" Maritime Administration
4.7	Preparation of proposals for the possibility of introducing operational measures to increase the	2019 year	State Enterprise "AMPU"

	efficiency of the process of processing and storing garbage on board and minimize the amount of potential garbage provided for in Annex V to the International Convention for the Prevention of Pollution from Ships 1973, as amended by the 1978 Protocol thereto (as amended), and Also, the use of ISO 21070: 2011 as a guide for managing and handling garbage on a ship		Mininfrastructure Maritime Administration of the Ministry of Agrarian Policy State Gribiz Agency
4.8	To improve the preparedness and response system for oil spills,hazardous and hazardous substances in the territorial sea of Ukraine	2018 - 2019 years	Mininfrastructure Ministry of the Environment Maritime Administration State Inspection DSNC State Enterprise "AMPU" CP "MPDS"
4.9	Preparation of proposals for the redistribution of functional responsibilities of state bodies, enterprises, institutions or organizations responsible for the elimination of oil spill accidents, hazardous and harmful substances in the territorial sea of Ukraine (outside the water areas of sea ports), identification of necessary forces and means for carrying out such operations	2018 - 2019 years	Mininfrastructure Ministry of the Environment Maritime Administration State Inspection DSNC State Enterprise "AMPU" CP "MPDS"
4.10	Review of plans for elimination of pollution in the water areas of sea ports of Ukraine taking into account the implementation of the risk management system, the current state of provision of seaports by forces and means of response, the prospective flow of goods for each seaport separately	Continuing during2018-2022	Mininfrastructure Maritime Administration State Enterprise "AMPU"
4.11	Fleet renewal of vessels used for the elimination of oil spill accidents, hazardous and harmful substances in the seaports, including in order to provide opportunities for liquidation of pollution of the water area of ports by chemical substances	Constantly over 2018 - 2022 years	State Enterprise "AMPU" Mininfrastructure
4.12	Ensuring Ukraine's accession to SafeSeaNet and CleanSeaNet	2019 - 2020 years	Mininfrastructure Maritime Administration State Enterprise "AMPU"
4.13	Ensure implementation of the measures (organizational, technical , control) to reduce emissions to air pollutants under Annex VI of the International Convention of Pollution from Ships, 1973, as amended by the 1978 Protocol thereto (as amended) for both existing and new vehicles	Continuing during2018-2022	Mininfrastructure Ministry of the Environment Maritime Administration State Gribiz Agency State Inspection
4.14	Maintenance of the register (list) of ship fuel suppliers	2018 year	Mininfrastructure State Enterprise "AMPU"

			Maritime Administration
4.15	Creating conditions and facilitating the use of more environmentally friendly fuels or technologies needed to reduce emissions of pollutants into the atmosphere	Continuing during 2018-2022	Mininfrastructure Maritime Administration State Enterprise "AMPU" State Gribiz Agency
4.16	Development and implementation of measures to strengthen the responsibility of fuel suppliers, who carry out fuel deliveries, which does not conform to the requirements of national and international documents.	Continuing during 2018-2022	Mininfrastructure Maritime Administration State Enterprise "AMPU"
4.17	Implementation of measures to ensure the withdrawal of free circulation for sale and use on the territory of Ukraine of marine fuel, marine diesel oil and marine gasoil with a limiting sulfur content (% by weight) exceeding the limit values set out in Directive (EC) 2016/802 of the European Parliament and the Council on May 11, 2016 on the reduction of sulfur content in certain types of liquid fuels	2018 - 2019 years	Ministry of Energy and Coal Mininfrastructure Ministry of Economic Development and Trade State Enterprise "AMPU" Maritime Administration
4.18	Increased awareness of maritime merchant shipping members regarding the need to minimize ship-generated cargo balances	Continuing during2018-2022	Mininfrastructure Ministry of the Environment Maritime Administration State Gribiz Agency
4.19	In conducting effective ways to raise public awareness about the protection of the natural environment from pollution	Constantly over 2018 - 2022 years	Mininfrastructure Ministry of the Environment Maritime Administration State Inspection State Gribiz Agency
V.	Analysis of the implementation		
5.1	Analysis of the implementation of the Strategic Directions for the implementation of Ukraine's international obligations in the field of maritime safety and environmental protection from pollution and the implementation of mandatory IMO instruments for the period up to 2022 and, if necessary,taking corrective measures	Every year until December 31, 2018 - 2022 years	Mininfrastructure Ministry of the Environment Maritime Administration Ministry of Agrarian Policy State Fisheries Agency
5.2	Development and implementation of proposals for revision of the Strategic Directions for the implementation of Ukraine's international obligations in the field of maritime safety and environmental protection against pollution and the implementation of mandatory IMO instruments for the period up to 2022	Every year until March 1,2019 - 2022 years	Mininfrastructure Ministry of the Environment Maritime Administration Ministry of Agrarian Policy State Fisheries Agency

List of waste utilization and disposal operations

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January 23, 2015, No. 24

Operation code	The name of the operation
Recycling operations	
R1	Use in the form of fuel (except for direct burning) or otherwise for energy
R2	Utilization / regeneration of solvents
R3	Recycling / Disposal of Organic Substances Not Applicable as Solvents [1]
R3 A	Composting of organic waste
R3 B	Fermentation of organic waste
R3 C	Processing paper and cardboard
R4	Recycling / utilization of metals and their compounds
R5	Recycling / utilization of other inorganic materials [2]
R6	Regeneration of acids and bases
R7	Recovery of components used to reduce contamination
R8	Recovery of components of catalysts
R9	Re-distillation of used petroleum products or other reuse of them
R10	Soil treatment, which has a positive effect on agriculture or improves the ecological situation
R11	Use of waste derived from operations under the codes R1 - R10
R12	Waste sharing for operations under the codes R1 - R11
R12 A	Sorting waste
R12 B	Mechanical and biological recycling of waste at IBP plants
R12 C	Disassembly of inappropriate vehicles
R12 K	Collection and pre-treatment of scrap metal and waste containing metals
Removal operations	
Deletion in specially designated places or objects (by burial)	
D1	Burial in the earth or dumping (landing) on land (landfill, etc.)
D5	Reset on specially equipped landfills (at landfills)
D12	Burial (special containers in the mine, etc.)
Removal by burning or other types of disposal, disinfection	

D2	Soil treatment (land) (biological decomposition of liquid or muddy waste in the soil)
D3	Pumping to depth (input of waste by pumping into wells, salt mines or natural reservoirs, etc.)
D4	Reset in superficial (usually artificial) reservoirs (placement of liquid or sludgy waste in pits, ponds, reservoirs, drainage basins, etc.)
D6	Reset in reservoirs except seas / oceans
D7	Resettlement to the sea / oceans, including burial (dumping) at the seabed
D8	Biological treatment not specified elsewhere in this Annex, resulting in the formation of end compounds or mixtures, which are then removed by any of the operations D1 to D10
D9	Physical and chemical processing, not specified elsewhere in this Annex, resulting in the formation of end compounds or mixtures, which are then removed by any of the operations D1 to D10 (evaporation, drying, neutralization, calcining, deposition, etc.)
D10	Burning on land

List of Stakeholders

1	Administration of Sea Ports of Ukraine, State Enterprise, Illichivskybranch	Statutory body/ Competent authority	Port	infrastructure and (public) service provider	Local	management of the sea port in the city	uspa.gov.ua/ilk/?lang=ua
2	Department on the issue of the use of the apparatus of the Odessa Regional Council	Statutory body/ Competent authority	Environment	Regional public authority	Regional	Issuance of permits for special water use, improvement of the ecological state of the region	l.kharina @ ukr.net
3	Department of Urban Management of the Odessa City Council	Statutory body/ Competent authority	Other	Regional public authority	Regional	urban management	list.dep@omr.gov.ua
4	Department of Health of Odesa City Council	Statutory body/ Competent authority	Healthcare	Regional public authority	Regional	health care management	zdravdelo@gmail.com
5	Odessa Regional Council	Statutory body/ Competent authority	Other	Regional public authority	Regional	International activity and cross-border cooperation, Organization of administrative-territorial organization of the Odessa region	genotdel@odessa.gov.ua
6	Department of Environment and recreational areas of the Odessa City Council	Statutory body/ Competent authority	Tourism	Regional public authority	Regional	ensuring the implementation of state policy in the spheres of environmental protection, rational use and protection of natural resources	ecocity@omr.gov.ua
7	Sector of the State Agency of Water Resources of Ukraine in the Odessa region	Statutory body/ Competent authority	Aquaculture	sectoral agency	Regional	Regulatory activity, Permit activity, International activities, Financial Statements of State Enterprises, European integration	odesa.to@davr.gov.ua
8	Department of Environmental Safety of the Industrial Safety Service, Illichivsk Branch of the State Enterprise "AMPU"	Statutory body/ Competent authority	Maritime transport	infrastructure and (public) service provider	Local	Environmental Safety	O.Yurchenko @ilk.uspa.gov.ua
9	State Ecological Inspection in Odessa Oblast	Statutory body/ Competent authority	Environment	infrastructure and (public) service provider	Regional	Public administration of the general nature	od@dei.gov.ua
10	Odesa branch of State Enterprise "Administration	Statutory body/	Maritime	infrastructure and	Local	management of the sea port in the city of	gaa@port.odessa.ua

	of Seaports of Ukraine"	Competent authority	transport	(public) service provider		Ilichevsk	
11	Kherson Fisherman Patrol	Statutory body/ Competent authority	Fisheries	general public	Local	Activities of other public organizations, n. in. and. in.	kherson_rp@ukr.net
12	Mykolaiv Fisherman Patrol	Statutory body/ Competent authority	Fisheries	general public	Local	Activities of other public organizations, n. in. and. in.	mk.rp@darg.gov.ua
13	Odessa Fisherman Patrol	Statutory body/ Competent authority	Fisheries	general public	Local	Activities of other public organizations, n. in. and. in.	od.rp@darg.gov.ua
14	Maritime Safety Service "Administration of Sea Ports of Ukraine"	Statutory body/ Competent authority	Maritime transport	infrastructure and (public) service provider	Local	Activities of other public organizations, n. in. and. in.	sbm@ods.uspa.gov.ua
15	Service of transportation and accompaniment of cargoes"Administration of Sea Ports of Ukraine"	Statutory body/ Competent authority	Maritime transport	infrastructure and (public) service provider	Local	Activities of other public organizations, n. in. and. in.	
16	Infoksvodokanal	Statutory body/ Competent authority	Maritime transport	infrastructure and (public) service provider	Regional	water supply and water supply in Odessa and adjacent populated areas in the Odesa region	https://infoxvod.com.ua/uk
17	Kherson Regional Council	Statutory body/ Competent authority	Other	Regional public authority	Regional	International activity and cross-border cooperation, Organization of administrative-territorial organization of the Kherson region	http://khor.gov.ua
18	Mykolaiv Regional Council	Statutory body/ Competent authority	Other	Regional public authority	Regional	International activity and cross-border cooperation, Organization of administrative-territorial organization of the Mykilaiv region	https://www.mk-oblrada.gov.ua
19	Bilgorod - Dniester port	Statutory body/ Competent authority	Port	infrastructure and (public) service provider	Local	cargo handling, ship management	http://www.bdport.com.ua/
20	Berdyansk port	Statutory body/ Competent	Port	infrastructure and (public) service	Local	cargo handling, ship management	bmtport.com.ua

		authority		provider			
21	Izmail port	Statutory body/ Competent authority	Port	infrastructure and (public) service provider	Local	cargo handling, ship management	http://www.izmport.com.ua/
22	Chornomorsky port	Statutory body/ Competent authority	Port	infrastructure and (public) service provider	Local	cargo handling, ship management	https://seaport.com.ua
23	Nikolaev port	Statutory body/ Competent authority	Port	infrastructure and (public) service provider	Local	cargo handling, ship management	https://www.portnikolaev.com
24	Specialized sea port Olvia	Statutory body/ Competent authority	Port	infrastructure and (public) service provider	Local	cargo handling, ship management	sc-olvia.com
25	Reni port	Statutory body/ Competent authority	Port	infrastructure and (public) service provider	Local	cargo handling, ship management	http://www.portreni.com.ua
26	Skadovsk port	Statutory body/ Competent authority	Port	infrastructure and (public) service provider	Local	cargo handling, ship management	http://uspa.gov.ua
27	Ust-Danube port	Statutory body/ Competent authority	Port	infrastructure and (public) service provider	Local	cargo handling, ship management	https://ustdunaisk.github.io
28	Kherson port	Statutory body/ Competent authority	Port	infrastructure and (public) service provider	Local	cargo handling, ship management	https://seaport.kherson.ua
29	Southern port	Statutory body/ Competent authority	Port	infrastructure and (public) service provider	Local	cargo handling, ship management	http://www.port-yuzhny.com.ua/
30	Odessa Sea Commercial Port	State Enterprise	Port	infrastructure and public service provider	Local	Formation and implementation of state policy in the field of maritime transport	www.port.odessa.ua
31	Chornomorsk , state enterprise, sea commercial port	state enterprise	Port	infrastructure and public	Local	maritime transport and infrastructure service provider	seaport.com.ua

				service provider			
32	State Enterprise "Mykolaiv Maritime Agency"	Other	Fisheries	sectoral agency	Local	Aquaculture service provider	v.sarnatsky@gmail.com
33	State Enterprise "Southern Research and Design Institute for the Development of the Fleet of Fisheries"	Other	Fisheries	sectoral agency	Local	Aquaculture service provider	flotproekt@ukr.net
34	State institution "Production and experimental Dnipro sturgeon fish breeding plant named after academician S.T. Artiuchik"	Other	Fisheries	sectoral agency	Local	Aquaculture service provider	vedorz@ukr.net
35	State institution "Novokakhovsky fish breeding farm of partial fish"	Other	Fisheries	sectoral agency	Local	Aquaculture service provider	nkrzcr@i.ua
36	State institution "Kherson Industrial Experimental Plant for Breeding Young Partial Fish"	Other	Fisheries	sectoral agency	Local	Aquaculture service provider	bigkorop@meta.ua
37	Basin Directorate of Water Resources of the Black Sea and the Lower Danube Rivers (BWRM of the Black Sea and the Lower Danube)	Other	Aquaculture	sectoral agency	Regional	Aquaculture service provider	oouvr.gov.ua
38	Basin Department of Water Resources of the Lower Dnipro River Basin	Other	Aquaculture	sectoral agency	Regional	Aquaculture service provider	www.buvr.kherson.ua
39	Danube Regional Water Resources Office	Other	Aquaculture	sectoral agency	Regional	Aquaculture service provider	dbuvr.od.ua
40	Regional office of water resources in Mykolaiv region	Other	Aquaculture	sectoral agency	Regional	Aquaculture service provider	mk-vodres.davr.gov.ua
41	Management of the Main Kakhovka Main Channel	Other	Aquaculture	sectoral agency	Regional	Aquaculture service provider	ugkmk.davr.gov.ua
42	The channel management of the river Ingulets	Other	Aquaculture	sectoral agency	Regional	Aquaculture service provider	ukri2019@ukr.net
43	Management of the North-Crimean channel	Other	Aquaculture	sectoral agency	Regional	Aquaculture service provider	upkk.com.ua
44	State Enterprise "Odessa Joint Directorate for the Construction of Water Management Facilities" (SE Odes'ka ODBVO)	Other	Aquaculture	sectoral agency	Local	Aquaculture service provider	36849291@ukr.net
45	State Design and Research Institute "Ukrpovdendividzhdoshp"	Other	Aquaculture	sectoral agency	Local	Aquaculture service provider	
46	Arcadia	Other	Healthcare	infrastructure and (public) service provider	Local	Treatment of tuberculosis, organs of vision, gynecological and urological diseases.	
47	White Acacia	Other	Healthcare	infrastructure and (public) service provider	Local	Rest, diagnostics, treatment: cerebrovascular, neurovascular pathology; diseases of the musculoskeletal system; obstetric and gynecological, uronephrologic	www.akacia.od.ua

						pathologies; diseases of the organs of vision	
48	Red eyes	Other	Healthcare	infrastructure and (public) service provider	Local	Treatment of diseases of the upper respiratory tract, cardiovascular and nervous system, rest and recovery	www.redzory.com.ua
49	Lermontovsky	Other	Healthcare	infrastructure and (public) service provider	Local	Treatment of diseases of the nervous and cardiovascular system, musculoskeletal system	
50	Myrnyi	Other	Healthcare	infrastructure and (public) service provider	Local		
51	Moldova	Other	Healthcare	infrastructure and (public) service provider	Local	Treatment of musculoskeletal system, cardiovascular and nervous system	
52	Odessa	Other	Healthcare	infrastructure and (public) service provider	Local	Diseases of the circulatory system, musculoskeletal system, traumatology and orthopedics, diseases of the respiratory system, cardiovascular system, peripheral and central nervous system, diseases of the gastrointestinal tract	www.sanodesa.com.ua
53	Chkalov sanatorium	Other	Healthcare	infrastructure and (public) service provider	Local	Treatment of diseases of the cardiovascular system, musculoskeletal system	http://www.chkalov.odessa.ua
54	Gorky sanatorium	Other	Healthcare	infrastructure and (public) service provider	Local	Treatment of diseases of the gastrointestinal tract, cardiovascular system, organs of vision, diabetes mellitus	https://gorkogo.org
55	Kuyalnik	Other	Healthcare	infrastructure and (public) service provider	Local	Diseases of the musculoskeletal system, gynecological and urological diseases, male and female infertility, skin diseases, peripheral vessels	https://kuyalnik.com
56	Lustdorf	Other	Healthcare	infrastructure and (public) service provider	Local	Wellness complex	http://ok-lustdorf.com.ua
57	Ministry of Emergencies of Ukraine "Odessa"	Other	Healthcare	infrastructure and (public) service provider	Local	Comprehensive treatment of the cardiovascular system, gastrointestinal tract, as well as disorders of	

						the musculoskeletal system, respiratory tract and gynecological diseases	
58	Dnepr, Detskyy Sanatoryy	Other	Healthcare	infrastructure and (public) service provider	Local	recurrent and chronic bronchi, convalescence pneumonia, respiratory disease, br. Asthma I and II Art. in the stage of the disease, often in the past with the most important respiratory diseases, chronical sinusitis, tonsillitis, pharyngitis and adenoidea	http://hodps.org.ua
59	Sanatoriy-Profilaktoriy Vp Komunalnoho Vyshchoho Navchalnoho Zakladu Khersonska Akademiya Neperervnoyi Osvity Khersonskoyi Oblasnoyi	Other	Healthcare	infrastructure and (public) service provider	Local		
60	Ku "Medychnyy Pansionat "Medyk" Khor	Other	Healthcare	infrastructure and (public) service provider	Local		
61	Sanatorium "Gopry"	Other	Healthcare	infrastructure and (public) service provider	Local	diseases of the musculoskeletal system, diseases of the nervous system, skin disease	sanatoriy-gopri.com.ua
62	Gileya	Other	Healthcare	infrastructure and (public) service provider	Local	prevention and treatment of occupational diseases, diseases of the respiratory organs and the musculoskeletal system. For you are offered: ultrasound diagnostics, physical procedures, magnetic laser therapy, electrophoresis, etc; aromatherapy, hydromassage, classic massage, inhalation.	gileya.com
63	Sanatorium "Primorye"	Other	Healthcare	infrastructure and (public) service provider	Local	treatment of diseases of the respiratory and respiratory tract, allergies, nervous system, cardiovascular diseases.	https://gport.com.ua/dsprimore.html
64	Sanatorium Chaika	Other	Healthcare	infrastructure and (public) service provider	Local	treatment of diseases of the respiratory and respiratory tract, allergies, nervous system, cardiovascular diseases.	www.paritetua.com
65	Sanatorium-preventorium Victory	Other	Healthcare	infrastructure and (public) service provider	Local	balneotherapy (pine baths, turpentine baths), hydrotherapy (hydromassage, hydrolaser douche),	https://www.zdravnica-ua.com/rus/san/myk/nikolaev/peremoh

						ozocerite baths, various types of physiotherapy, therapeutic massage, and many others.	a/
66	Dubki	Other	Healthcare	infrastructure and (public) service provider	Local	phthisiology, pediatrics, dentistry	https://uahotels.info/hotel/Sanatoriy-Dubki-Nikolaev/
67	Oblasnyy Dytyachyy Kardiorevmatolohichnyy Sanatoriy "Pivdennyy"	Other	Healthcare	infrastructure and (public) service provider	Local		
68	Sanatorium-preventorium "Seagull" GP NPKG "Zorya" - "Mashproekt"	Other	Healthcare	infrastructure and (public) service provider	Local		
69	YUZHNYY	Other	Healthcare	infrastructure and (public) service provider	Local	treatment of children with cardiovascular pathologies and associated diseases.	https://uahotels.info/hotel/Sanatoriy-YUzhniy-Nikolaev/
70	SANATORIY "NOVAYA ZHIZN'"	Other	Healthcare	infrastructure and (public) service provider	Local		http://new-life-mc.org
71	Fieldfair International (UK)	NGO/ Association	Environment	infrastructure and (public) service provider	Local		paul.goriup@fieldfare.biz
72	Association of self-organization of population of Odessa	NGO/ Association	Other	general public	Local	assistance to the development of democracy and capable communities in Ukraine through the development of self-organization and the creation of an effective system of public participation in matters of local importance.	office@ueco.com.ua
73	NGO " Agricola "	NGO/ Association	Other	general public	Local		agricola.ua@gmail.co, ng.agricola@gmail.com
74	GO Metz im. VI Vernadsky	NGO/ Association	Other	general public	Local		chorna@te.net.ua
75	GO Center for Regional Studies	NGO/ Association	Other	general public	Local	consolidation of efforts of scientists, public and political figures, citizens, aimed at creating conditions for the sustainable development of the Odessa region and the Ukrainian Black Sea coast.	igor_studennikov@ukr.net, utsc@te.net.ua
76	Public Council under the	NGO/	Aquacult	general	Local	promotion of public	liliyagrichulevi

	State Agency of Water Resources of Ukraine	Association	ure	public		participation in the formation and implementation of state policy in the field of water management development and hydrotechnical land reclamation, management, use and reproduction of surface water resources.	ch@gmail.com
77	Healthy nation plus	NGO/ Association	Healthcare	interest groups including NGOs	Local	teach Ukrainians to consume only high quality water and take care of their health	zdorovayanaciyaplus.blogspot.com
78	College of Maritime Lawyers	NGO/ Association	Other	interest groups including NGOs	Local	the development of international and national maritime law.	http://www.umba.org.ua/
79	KP "UZBEREZHZHY ODESI"	NGO/ Association	Fisheries	general public	Local		poberejye@omr.gov.ua
80	Maritime Society	NGO/ Association	Maritime transport	interest groups including NGOs	Local		www.sailors-society.org
81	For the benefit of Odessa	NGO/ Association	Other	interest groups including NGOs	Local		
82	Odessa regional organization of trade union of health workers	NGO/ Association	Healthcare	interest groups including NGOs	Local		
83	NGO EKOBALANS PRO	NGO/ Association	Other	business support organisation	Local	Technical tests and analyzes	syominan@ukr.net;
84	Southern Ukrainian Ecological Union	NGO/ Association	Environment	interest groups including NGOs	Local	Activities of other public organizations, n. in. and. in.	
85	Union of Environmental Auditors of Ukraine	NGO/ Association	Environment	interest groups including NGOs	Local	provision of organizational, legal, informational, methodical and financial support to the processes of preparation and certification of environmental auditors, accreditation of environmental auditing organizations, practices of conducting environmental audits and supervision of environmental auditing activities	
86	Lifestyle	NGO/ Association	Other	interest groups including NGOs	Local		
87	Ukrainian branch of the	NGO/	Environ	educatio	Local		

	International Academy of Ecology and Human and Nature Safety	Association	ment	n/ training centre and school			
88	Federation of Maritime Trade Unions of Ukraine	NGO/ Association	Maritime transport	interest groups including NGOs	Local	Activities of trade unions	www.umtuf.odessa.ua, facebook.com/ umtuf
89	Federation of Trade Unions of Water Transport Workers and Shipping Company of Ukraine	NGO/ Association	Maritime transport	interest groups including NGOs	Local	Activities of trade unions	
90	Hajibei estuary, fishing association	NGO/ Association	Fisheries	interest groups including NGOs	Local	Activities of other public organizations, n. in. and. in.	
91	Black Sea	NGO/ Association	Aquaculture	interest groups including NGOs	Local	Activities of other public organizations, n. in. and. in.	
92	Black Sea Maritime Professional Union	NGO/ Association	Maritime transport	interest groups including NGOs	Local	tasks for the organization of recreational activities for seamen	bsstu.od.ua
93	Association of Ukrainian Seafarers	NGO/ Association	Maritime transport	interest groups including NGOs	Local	Activities of other public organizations, n. in. and. in.	
94	Trade union workers the sea transport Ukraine	NGO/ Association	Maritime transport	interest groups including NGOs	Local	Activities of other public organizations, n. in. and. in.	www.mtwtu.org.ua, facebook.com /MTWTU
95	Union of sailors of long voyage	NGO/ Association	Maritime transport	interest groups including NGOs	Local	Activities of other public organizations, n. in. and. in.	
96	Water-motor sports and health club of amateur anglers	NGO/ Association	Maritime transport	interest groups including NGOs	Local	Activities of other affiliates not included in other categories	
97	Odessa Regional Organization of the Ukrainian Society of Hunters and Fishermen	NGO/ Association	Fisheries	interest groups including NGOs	Regional	Activities of other public organizations, n. in. and. in.	uoor.com.ua
98	Black Sea City Consumer Society	NGO/ Association	Other	interest groups including NGOs	Local	Provision of other individual services, n. in. and. in.	
99	Black Sea Women's Club	NGO/ Association	Other	interest groups including NGOs	Local	Activities of other non-governmental organizations, n. in. and. in.	
100	The Main Directorate of the State Consumer Protection Service in the Odessa region	Governance decision making	Environment	Regional public authority	Regional	management activity	gu@odesa.consumer.gov.ua
101	The main department of the DSNC Ukraine in the Odessa region	Governance decision making	Other	Regional public authority	Regional	emergency management, as well as the organization of measures to ensure fire and technological safety at the objects	odesa@mns.gov.ua

102	Department of Ecology and Natural Resources of the Regional State Administration	Governance decision making	Environment	Regional public authority	Regional	ensuring the implementation of state policy in the areas of environmental protection, rational use, reproduction and protection of natural resources, waste management, hazardous chemicals, pesticides and agrochemicals, ecological and within the competence of radiation safety, conservation, formation, conservation and use of the ecological network	ecolog@odessa.gov.ua
103	Department of Housing and Communal Services and Energy Efficiency of the State Administration	Governance decision making	Other	Regional public authority	Regional	providing on the territory of the region realization of the state policy in the sphere of housing and communal services, efficient use of fuel and energy resources, energy saving, renewable energy sources and alternative fuels	oblgkh@odessa.gov.ua
104	Odessa Regional State Administration	Governance decision making	Other	Regional public authority	Regional	the implementation of the Constitution, laws of Ukraine, acts of the President of Ukraine, the Cabinet of Ministers of Ukraine, other executive bodies of the highest level	genotdel@odessa.gov.ua
105	Department of Agrarian Policy of the RSA	Governance decision making	Other	Regional public authority	Regional	ensuring the implementation of the state agricultural policy in the territory of the Odessa region in order to guarantee the food security of the state	agropolitika@odessa.gov.ua
106	Office of the State Agency of Fisheries in the Odessa region	Governance decision making	Aquaculture	Regional public authority	Regional	fishery activity, ichthyology, reproduction of water bioresources, industrial fishery	od.rp@darg.gov.ua
107	Office of the Fleet Service	Governance decision making	Maritime transport	Regional public authority	Regional	maritime transport management	
108	Department of Transport and Communication Infrastructure of the Regional State Administration	Governance decision making	Maritime transport	Regional public authority	Regional	ensuring the implementation of state policy in the field of transport, maritime complex and communications	vtmk@odessa.gov.ua
109	Department of Tourism, Recreation and Resorts of the RSA	Governance decision	Tourism	Regional public authority	Regional	ensuring the implementation of state policy in the field	odtravel@odessa.gov.ua

		making				of tourism and resorts on the territory	
110	Administration of seaports of Ukraine (Odessa reception)	Governance decision making	Maritime transport	infrastructure and (public) service provider	Regional	To promote the development of the maritime transport infrastructure of Ukraine and increase the competitiveness of Ukrainian seaports through administrative reform and creation of conditions and mechanisms for attraction of investments.	odesa@uspa.gov.ua
111	Department of Environmental Safety of the Production Safety Service, Illichivsk branch of the State Enterprise "Administration of Seaports of Ukraine" (administration of the Illichivsk Seaport)	Governance decision making	Environment	infrastructure and (public) service provider	Local	management of the sea port in the city of Ilichevsk	o. yurchenko @ ilk . uspa. gov. ua
112	State Ecological Inspection of the Crimean- Black Sea District	Governance decision making	Environment	infrastructure and (public) service provider	Local	environmental protection, rational use, reproduction and protection of natural resources.	krimbs@dei.gov.ua
113	Kherson Regional State Administration	Governance decision making	Other	Regional public authority	Regional	the implementation of the Constitution, laws of Ukraine, acts of the President of Ukraine, the Cabinet of Ministers of Ukraine, other executive bodies of the highest level	http://khoda.gov.ua
114	Department of Culture, Tourism and Resorts	Governance decision making	Tourism	Regional public authority	Regional	ensuring implementation of the state policy in the field of culture, tourism and resorts on the territory of the region	https://visitkherson.gov.ua
115	Mykolaiv Regional State Administration	Governance decision making	Other	Regional public authority	Regional	the implementation of the Constitution, laws of Ukraine, acts of the President of Ukraine, the Cabinet of Ministers of Ukraine, other executive bodies of the highest level	http://www.mk.gov.ua
116	State enterprise " Odessa center of the south scientific research the institute the sea fishy economy and oceanography "	Education/ Research	Education	higher education and research	Local	draft documents, regulatory activity, fishery activities, aquaculture, industrial fishery, international activity, licensing system, administrative services, fleet of the fishing industry.	uki19902016@gmail.com, jugniro@meta.ua
117	Life support, research institute	Education/ Research	Education	higher education and research	Local	to investigate, detect and inform the public on issues of biological danger to the	www.bio-bezpeka.org.ua

						environment (food, household items, building materials, toxic soils, radio frequency radiation, industrial and domestic wastes, destructive religions, etc.), seek to increase the normative bases of the country at the state level, to produce bio-safe products.	
118	Institute of Marine Biology, National Academy of Sciences of Ukraine, State Enterprise	Education/ Research	Environment	higher education and research	Local	comprehensive fundamental and applied research in various fields of biology and ecology of aquatic ecosystems, develops new methods for the selection, processing and analysis of scientific information, conducts environmental expertise, and improves the methods of protection and integrated management of water ecosystems.	http://www.imb.odessa.ua
119	Institute of Market Problems and Economic-Ecological ResearchNAS Ukraine b	Education/ Research	Environment	higher education and research	Local	the formation of the scientific and applied foundation of the strategy and tactics of sustainable socio-economic development of Ukraine, new systemic tactical and programmatic solutions to strengthen the competitiveness of Ukraine's economy. The scientific works of the Institute are largely worked out to solve the problems of the development of the Ukrainian Black Sea region and the Ukrainian Pridnavia.	oss_iprei@ukr.net
120	Research Laboratory for the Prevention of Pollution of the Environment NDPKIMF	Education/ Research	Environment	higher education and research	Local	research on pollution prevention	e- mail : unii_eco@ukr.net
121	Scientific Research Design Institute of the Marine Fleet of Ukraine	Education/ Research	Environment	higher education and research	Local	research of state policy in the areas of sea and river transport for ensuring traffic safety, navigational and hydrographic provision of navigation, shipping maritime traffic.	E- mail : unii@ukr.net
122	Regional Center	Educati	Maritim	educatio	Regio	scientific researches	

	of Occupational Pathology , Ukrainian Research Institute of Transport Medicine	on/ Research	e transport	n/ training centre and school	nal		
123	Odessa Maritime Academy	Education/ Research	Maritime transport	higher education and research	Local	higher education and research in maritime issues	rector@onma.edu.ua
124	Odessa State Ecological University	Education/ Research	Environment	higher education and research	Local	higher education and research in environment issues	info@odeku.edu.ua
125	Odessa National Medical University	Education/ Research	Other	higher education and research	Local	higher education and research in mesicine issues	
126	Odessa National Maritime University	Education/ Research	Maritime transport	higher education and research	Local	higher education and research in maritime issues	priem@onmu.odessa.ua, office@onmu.odessa.ua
127	Odessa National University named after. Il Mechnikov	Education/ Research	Other	higher education and research	Local	higher education and research in general issues	snigirev.s@gmail.com
128	Southern Scientific Research Institute of Marine Fisheries and Oceanography	Education/ Research	Fisheries	higher education and research	Local	research in issues of Marine Fisheries and Oceanography	
129	Ukrainian Research Institute of Transport Medicine, State Enterprise	Education/ Research	Maritime transport	higher education and research	Local	research in issues of transport medecine	www.medtrans.com.ua
130	Physico-Chemical Institute of Environmental Protection and Human Rights, Research Institute	Education/ Research	Healthcare	higher education and research	Local	research in issues of Environmental Protection and Human Rights	www.pchip.gov.ua
131	Chornomorndproekt , State Design and Research Institute of Maritime Transport	Education/ Research	Maritime transport	higher education and research	Local	Research of Maritime Transport	www.blasdari.com
132	The Black Sea Department of the Ukrainian Environmental Academy of Sciences	Education/ Research	Environment	education/ training centre and school	Local	research in environment issues	katstep2013@gmail.com
133	Ukrainian Scientific Center of Ecology of Sea	Education/ Research	Environment	higher education and research	Local	observing the state of the components of the marine ecosystem (water, bottom sediments and biota) and the main natural and anthropogenic factors of influence; creation and maintenance of ecological information databases and data bank; scientific analysis of data for the purpose of assessment, diagnosis and prognosis of	vkomorin@gmail.com

						marine ecosystem condition and the development of scientifically substantiated recommendations for making managerial decisions; creation and maintenance of interactive cartographic systems using modern geoinformation technologies; study of the peculiarities of the development of biocenoses due to changes in the environment under the influence of anthropogenic pressure.	
134	Kakhovka Technical School	Education/ Research	Education	education/ training centre and school	Local	Aquaculture service provider	dktsh@meta.ua
135	Black Sea Fishing Port	Commercial user/ Private sector	Port	business support organisation	Local	Aquaculture service provider	www.imrp.com.ua
136	Odessa City Development Fund	Commercial user/ Private sector	Other	infrastructure and (public) service provider	Local	improving the well-being and quality of life of the city's population, and promoting the socio-economic development of Odesa	odessafund.com.ua, facebook.com / odessafund
137	"UkrEkoProm"	Commercial user/ Private sector	Waste	infrastructure and (public) service provider	Local	waste management and environmental services in Odessa and throughout Ukraine	office@ueco.com.ua
138	SE "Sea Commercial Port" Southern "	Commercial user/ Private sector	Maritime transport	infrastructure and (public) service provider	Local	processing of bulk and general cargoes: coal, pellets, iron ore concentrate. The transshipment terminal is equipped with two stokers, two wagons for unloading wagons, a system of conveyor lines with galleries and overpasses	post@port-yuzhny.com.ua
139	Akvafrost , Open Company, the factory	Commercial user/ Private sector	Aquaculture	infrastructure and (public) service provider	Local	Processing and preserving of fish, crustaceans and mollusks	www.vodnyj-mir.ua
140	Odessa Stomach Plant , Ltd.	Commercial	Fisheries	infrastructure and	Local	the reproduction of endangered native	tel . +380 (48) 785-90-25,

		user/ Private sector		(public) service provider		species of fish	tel . +380 (48) 785-90-24
141	AQUADEL, LTD.	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Seafood processing / Fish preserves / Fish products	
142	TRANSGRUP-FINANS, LCD	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Seafood processing / Fish preserves / Fish products	
143	FIRST DIVISION RIBNA PLANT, PE	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Seafood processing / Fish preserves / Fish products	
144	WATER REGION, LCD	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Seafood processing / Fish preserves / Fish products	
145	SCIENTIFIC AND VIROBNICHE OB'DNANNYA ”CHORNOMORSKA KEFAL”, LCD	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Seafood processing / Fish preserves / Fish products	
146	RIBS FARM AQUATOP, LCD	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Seafood processing / Fish preserves / Fish products	
147	VEGA, PE	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Seafood processing / Fish preserves / Fish products	
148	Odesk Ozerninsk Complex, LCD	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Seafood processing / Fish preserves / Fish products	
149	INTERNATIONAL BIZNES CLUB, MALE KP U FORMI LCD	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Seafood processing / Fish preserves / Fish products	
150	CAGUL, PE	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Seafood processing / Fish preserves / Fish products	
151	ARTEK, PF	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Seafood processing / Fish preserves / Fish products	
152	NVO ODESRIBGOSP, LCD	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Seafood processing / Fish preserves / Fish products	

153	RIBOLOVETSKO-RECREATION CENTER ”DUNAY”, LCD	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Seafood processing / Fish preserves / Fish products	
154	SILSKOGOSPODARSKE VIROBNICHE PIDPRIYUMSHSTVO NIKAGROSTAR, LCD	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Seafood processing / Fish preserves / Fish products	
155	TERRAPORT, LCD (LCDARISTV Z OBSERVED VIDPOVIDALN_STU "TERRAPORT")	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Seafood processing / Fish preserves / Fish products	
156	PIVDENNI BEREGA, PBC (PARTNERSHIP WITHOUT VIDPPOVIDALNNYSTU "PIVDENNNI BEREGA")	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Seafood processing / Fish preserves / Fish products	
157	STIMUL, MPP (MALE PRIVATNE PIDPRIYUMSTVO 'STIMUL')	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Seafood processing / Fish preserves / Fish products	
158	KOMBITON, PE (PRIVATNE PIDPRIЄMSTVO 'KOMBITON')	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Seafood processing / Fish preserves / Fish products	
159	CHORNOMORSKA RIBA, PE (PRIVATNE PIDPRIMENIE 'CHORNOMORSKA RIBA')	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Seafood processing / Fish preserves / Fish products	
160	ATLAS-OIL 1, LCD	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Seafood processing / Fish preserves / Fish products	
161	ODESSA PASSIFIC	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Seafood processing / Fish preserves / Fish products	
162	AQUATORIA-AGRO, LCD	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Seafood processing / Fish preserves / Fish products	
163	AKVAFARMING, LCD	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Seafood processing / Fish preserves / Fish products	
164	RIBALSKA PRIST, LCD	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Seafood processing / Fish preserves / Fish products	
165	AGROTAL-PRODUCT, LCD	Commercial user/ Private	Fisheries	infrastructure and (public) service	Local	Seafood processing / Fish preserves / Fish products	

		sector		provider			
166	ZEUS MS, LCD	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Seafood processing / Fish preserves / Fish products	
167	DIP-8, PE	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Seafood processing / Fish preserves / Fish products	
168	EVEREST LTD., LCD	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Seafood processing / Fish preserves / Fish products	
169	BESTIS SYSTEM, LCD	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Seafood processing / Fish preserves / Fish products	
170	LEGAL CORPORATIONS, LCD	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Seafood processing / Fish preserves / Fish products	
171	KHERSONRYBHOZ, PJSC	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Fish farming / Catch of commercial fish	
172	Fish farming / Catch of commercial fish	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Fish farming / Catch of commercial fish	
173	KSP TON	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Fish farming / Catch of commercial fish	
174	STANISLAVAGRO, PE	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Fish farming / Catch of commercial fish	
175	MAYSTER FISH, KOMPANIYA, PE	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Fish farming / Catch of commercial fish	
176	NIZHNEDNIPROVSKY, NATIONAL NATURAL PARK	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Environmental Protection Activities / Scientific Activities / Environmental Education and Recreation Activities ...	
177	INTOK, COLLECTIVE C / G PIPALITY	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Fish farming / Catch of commercial fish	
178	SILSKOGOSPODARSKE SIM,	Comme	Fisheries	infrastruc	Local	Fish farming / Catch of	

	LCD	rcial user/ Private sector		ture and (public) service provider		commercial fish	
179	VIROBNICHE STATE GIFT ORRT, PE	Comme rcial user/ Private sector	Fisheries	infrastruc ture and (public) service provider	Local	Fish farming / Catch of commercial fish	
180	GEMMA, LTD., LTD FIRM	Comme rcial user/ Private sector	Fisheries	infrastruc ture and (public) service provider	Local	Cultivation, processing, sale of freshwater fish / Fish stock / Commercial fish ...	
181	KATRAN IK, PE	Comme rcial user/ Private sector	Fisheries	infrastruc ture and (public) service provider	Local	Fish farming / Catch of commercial fish	
182	MALE COLLECTIVE PIPELINE GOLFKAN I K	Comme rcial user/ Private sector	Fisheries	infrastruc ture and (public) service provider	Local	Fish farming / Catch of commercial fish	
183	AQUABIORESURS, LCD	Comme rcial user/ Private sector	Fisheries	infrastruc ture and (public) service provider	Local	Fish farming / Catch of commercial fish	
184	HOLY MYKOLIA, SILSKOGOSPODARSKY VIRUBNICHIY KOOPERATIV	Comme rcial user/ Private sector	Fisheries	infrastruc ture and (public) service provider	Local	Fish farming / Catch of commercial fish	
185	VYROBNICHE STATE GIFT OF P_VDEN RIBA, PE	Comme rcial user/ Private sector	Fisheries	infrastruc ture and (public) service provider	Local	Fish farming / Catch of commercial fish	
186	Myslyvskyi-RIBALSKE PIDPRIЄMSTVO DNIPROVSKE HERSONSKOЇ GARNIZONNOЇ ORGANIZATSIЇ PIVDENNOЇ REGIONALNOЇ ORGANIZATSIЇ LCDARISTVA VIYSKOVIH MISLIVTSIV TA Fishermen ZBROYNIH FORCES UKRAINY, TDG	Comme rcial user/ Private sector	Fisheries	infrastruc ture and (public) service provider	Local	Fish farming / Catch of commercial fish	
187	RIBOVODNA FERMA VIKOL, LCD	Comme rcial user/ Private sector	Fisheries	infrastruc ture and (public) service provider	Local	Fish farming / Catch of commercial fish	
188	VK AKVAPROM, LCD	Comme rcial user/ Private sector	Fisheries	infrastruc ture and (public) service provider	Local	Fish farming / Catch of commercial fish	
189	MARLIN KHERSON, LCD	Comme rcial user/ Private sector	Fisheries	infrastruc ture and (public) service provider	Local	Fish farming / Catch of commercial fish	

190	DANA PRIS, PE	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Fish farming / Catch of commercial fish	
191	GREEN LITTERS SICH, PE	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Fish farming / Catch of commercial fish	
192	AMUR LTD., LCD	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Fish farming / Catch of commercial fish	
193	KHUTIR RIBBLEH, POLYUVANNYA TA VIDPOCHINKU SHIP, LCD	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Fish farming / Catch of commercial fish	
194	RIBOVODNA FERMA - YuVENT, LCD	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Fish farming / Catch of commercial fish	
195	NOVY RIBKOMBINAT, LCD	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Fish farming / Catch of commercial fish	
196	Ribolovetske Virishalny, PE	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Fish farming / Catch of commercial fish	
197	YUG-AKVAPROM, LCD OB'ЄDNANA RIBNA KOMPANIYA	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Fish farming / Catch of commercial fish	
198	SFINKS-YUG, LCD	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Fish farming / Catch of commercial fish	
199	STROYKROK, LCD	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Fish farming / Catch of commercial fish	
200	SILSKOGOGODARSKA RIBOVODNE PRIVATNE PIDPRIMEZHIM AMUR-AQUA	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Fish farming / Catch of commercial fish	
201	VIROBNICHO KOMERTSIYA FIRMA YELEN AND KO, LCD	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Fish farming / Catch of commercial fish	
202	MIZHGALUZEVA VIROBNICHO-KOMERTSIYNA FIRMA SPIRULINA LTD, LCD	Commercial user/ Private	Fisheries	infrastructure and (public) service	Local	Fish farming / Catch of commercial fish	

		sector		provider			
203	SPIRULINA PLUS, NVF, LCD	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Fish farming / Catch of commercial fish	
204	SOUTH TRADE HOUSE, PE	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Fish farming / Catch of commercial fish	
205	SINLU, LCD	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Fish farming / Catch of commercial fish	
206	AVERNO, LCD	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Fish farming / Catch of commercial fish	
207	SURIN V.V., PE	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Fish farming / Catch of commercial fish	
208	ACCESSIONAL SURF, LCD	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Fish farming / Catch of commercial fish	
209	KATRA N, LCD	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Fish farming / Catch of commercial fish	
210	PIVDENNI BEREGA, PBC	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Fish farming / Catch of commercial fish	
211	VIKHID, LCD	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Fish farming / Catch of commercial fish	
212	POKROVSKOE, TZOV	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Fish farming / Catch of commercial fish	
213	AKVARIUM, VIRUBNICHIY KOOPERATIV	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Fish farming / Catch of commercial fish	
214	UKRRYBRESURS, LCD	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Fish farming / Catch of commercial fish	
215	GRIN GLOBE UKRAINA, LCD	Commercial	Fisheries	infrastructure and	Local	Fish farming / Catch of commercial fish	

		user/ Private sector		(public) service provider			
216	FISH-FOOD, LCD	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Fish farming / Catch of commercial fish	
217	MARKET-AGRO, LCD	Commercial user/ Private sector	Fisheries	infrastructure and (public) service provider	Local	Fish farming / Catch of commercial fish	

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