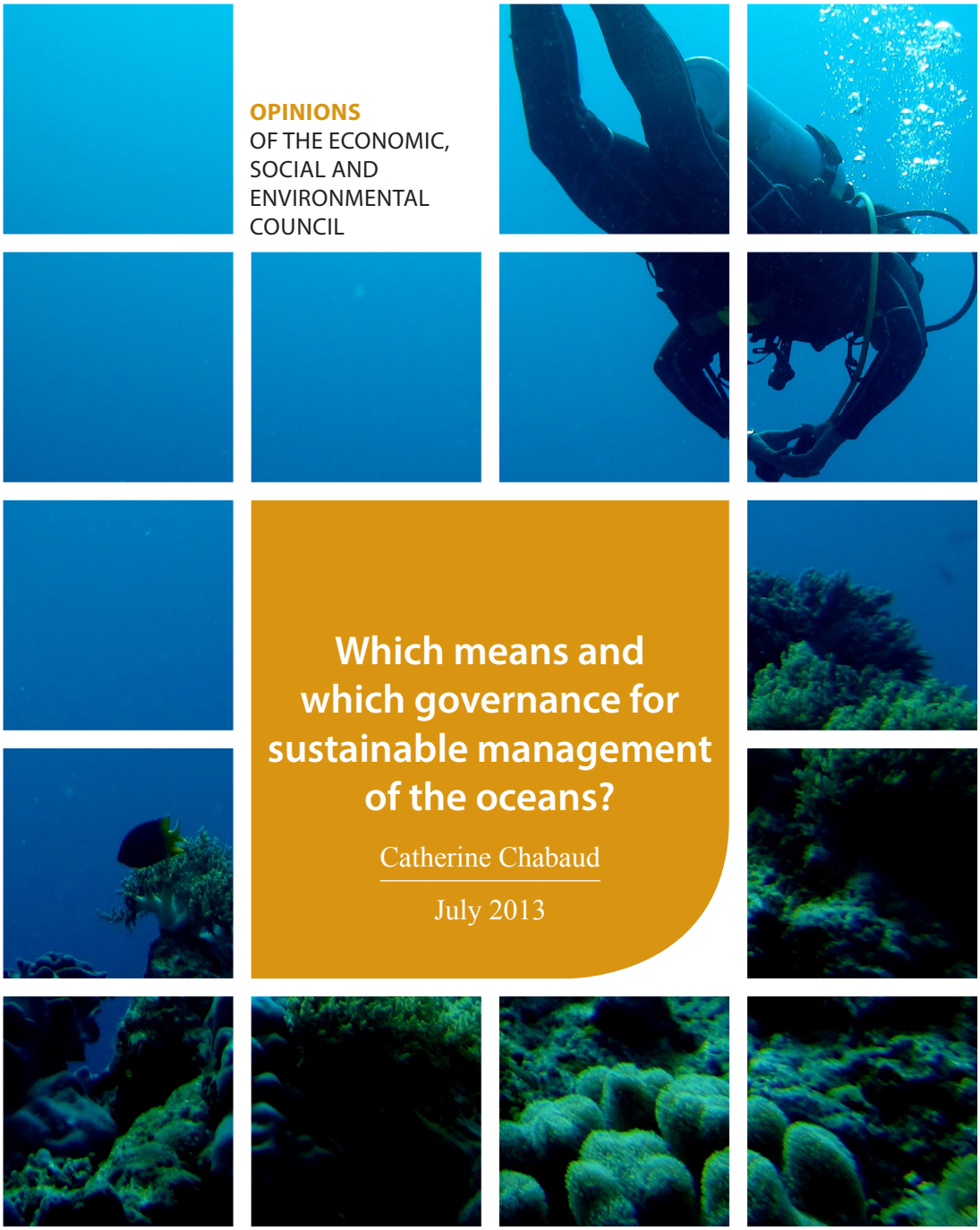

OPINIONS
OF THE ECONOMIC, SOCIAL AND ENVIRONMENTAL COUNCIL

Which means and which governance for sustainable management of the oceans?

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July 2013

RÉPUBLIQUE FRANÇAISE
LIBERTÉ - ÉGALITÉ - FRATERNITÉ
CONSEIL ÉCONOMIQUE SOCIAL ET ENVIRONNEMENTAL

Les éditions des JOURNAUX OFFICIELS

2013-15
NOR : CESL1100015X
Wednesday 31 July 2013

OFFICIAL JOURNAL OF THE FRENCH REPUBLIC

2010-2015 Mandate – Session of 9 July 2013

WHICH MEANS AND WHICH GOVERNANCE FOR SUSTAINABLE MANAGEMENT OF THE OCEANS?

Opinion of the Economic, Social and Environmental Council
on the report presented by
Ms Catherine Chabaud, rapporteure

on behalf of the
Section for Environment

Petition brought before the Economic, Social and Environmental Council through a decision by its bureau on 8 January 2013 pursuant to Article 3 of Order No. 58-1360 dated 29 December 1958 as amended, concerning the Organic Law on the Economic, Social and Environmental Council. The Bureau has entrusted the Section for Environment with the preparation of an opinion and report entitled *Which means and which governance for the sustainable management of the oceans?* The Section for Environment, presided over by Ms Anne-Marie Ducroux, designated Ms Catherine Chabaud as rapporteur.

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WHICH MEAND AND WHICH GOVERNANCE FOR SUSTAINABLE MANAGEMENT OF THE OCEANS?[1]

Opinion

Introduction

«We must enter these ocean depths, which are unique environments, with respect - which we sorely lack -, with the desire not to destroy harmony where it exists.
When I take something from the ocean, for the benefit of humanity, I must ask whether I know if I need it right now, tomorrow or the day after tomorrow and what I need it for».

Gilles Bœuf, President of the French Museum for National History
in his hearing before the Section for Environment

The French refer to them in the plural, the English-speaking world in the singular. In fact they are five and one at the same time, since they are all inter-connected. The oceans cover 71% of the Earth's surface and contain 98% of its water resources. According to the UN, over 2.6 billion individuals depend primarily on the oceans for their protein requirements and over 2.8 billion people live less than one hundred kilometres from their coasts. The oceans provide the rainwater and the majority of the oxygen that are required for life. They provide vital ecological services, such as climate regulation, through the permanent circulation and mixing of their depths and through their carbon dioxide absorption capacities.

Food, biological and pharmaceutical resources, minerals, petroleum, tidal energy … so great is the potential of the oceans that fifty years ago, the nations of the world decided it was necessary to establish a legal framework for part of the ocean areas that previously been considered free. The Convention of the Law of the Sea, signed in 1982 in Montego Bay, following thirty years of negotiations, created, in particular, the Exclusive Economic Zone, which extended the borders of coastal States out to two hundred nautical miles from their coasts.

For France, which has a presence in all ocean regions of the Earth as a result of its overseas territories, the Exclusive Economic Zone (EEZ) thereby acquired represents an area of eleven million square kilometres. By comparison, the terrestrial surface area of France - including the overseas territories - is a mere 675,000 square kilometres. France therefore possesses the second largest maritime area after the United States, and in the future, this may become the largest, with the extension of its continental shelf.

Spurred on by the opportunities offered to our country, ambitious policies have been undertaken in the maritime area since the 1960s, but have lacked continuity. The best illustration of this is oceanographic exploration, launched in 1967 under the aegis of General de Gaulle, with the creation of the National Centre for Ocean Exploitation (CNEXO), the forerunner of the French Research Institute for Exploration of the Sea (IFREMER) which currently positions France as one of the most advanced nations in this field. During the

1 **The draft opinion was adopted in its entirety by public vote with 144 votes and 18 abstentions** (see annexed voting results).

same period Jacques-Yves Cousteau, the adventurer, cinematographer and popularizer of the underwater world, declared that the oceans need to be protected just as much as they need to be explored; his travelogue and journal «Three Adventures of the Calypso» aroused a passion for the sea in the imaginations of several generations and they certainly heralded a nascent ecological conscience.

Today, the starting point for ambitions in this field appears to be a shared approach to information gathering, ranging from the collaborative dynamic of the Grenelle de la mer summit to the Maritime Congress. Public-sector decision-makers are beginning to take on board the arguments of maritime actors regarding the formidable potential that our oceans possess. A Senate report highlighted this just a few months ago: *«The increasing economic, diplomatic and ecological importance of maritime areas in the context of globalisation means that the sea is, now more than ever, a key political factor that enables a State to shine and affirm its power on the international stage.»* In France and in Europe, we are beginning to see the emergence of integrated maritime policies.

At the same time, as our knowledge about this environment increases (though huge swathes of it remaining to be discovered and fathomed) our awareness of the extent to which the oceans are impacted is a constant cause for concern. These impacts are linked to how human activities are being conducted at sea, within the same areas - although it would be more accurate to speak in terms of volumes rather than areas - (fisheries, maritime transport, offshore drilling, etc.). They are also linked to how they are conducted on land (global warming, pollution from land-based sources such as plastic refuse, wastewater outflows, etc.). According to Gilles Bœuf, four major pressures on the marine environment can be clearly identified: destruction and pollution of habitats and ecosystems, over-exploitation of resources, species dissemination and global climate change.

Recent data measuring these impacts reveals the limits to the resilience of the marine environment. Entire ecosystems are in the process of undergoing irreversible, far-reaching change, (ocean acidification and reduced ocean biomass are impacting the entire food chain, and ocean warming may be altering the pattern of ocean currents). Impact measurement has also highlighted threats to human health and safety.

An awareness of the need to preserve the marine environment is nothing new; it has been pointed out, first of all by maritime actors themselves. A considerable number of decisions taken, both to establish legal frameworks and to reduce the direct impacts of human activities at sea, have demonstrated their efficacy when implemented effectively.

But the situation is an urgent one, as the world is in the process of capitalising on maritime environments. Also, France's findings are shared by other nations. Zones that had previously not been exploited, such as the high seas and the Arctic, are now coveted by nations who anticipate a dire shortage of land-based resources and who are developing technologies to access those that are discovered at sea. Other maritime zones are perishing due to the non-application of protective measures that have been clearly identified.

The commitments made by the nations at the Rio+ 20 Conference in 2012 gave grounds for optimism, particularly on the development of an international instrument pertaining to biodiversity in the zones located beyond the limits of national waters (the high seas), within the context of the United Nations Convention on the Law of the Sea.

However, there are still questions that need to be answered. How can we reconcile legitimate ambitions with the necessary remediation and preservation of the oceans? How can we jointly manage this formidable environment in a sustainable way? What role can

France play at the national, European and international levels? How can all French maritime actors, who are often at the cutting-edge of their fields, play a role in the implementation and promotion of relevant sustainable management solutions in the marine environment?

If the sea were the Earth, the Economic, Social and Environmental Council (ESEC) would devote not one, but ten or twenty opinions to these issues and perhaps an equal number of reports. After reflecting on where the limits for the issue lie, the ESEC decided to address the oceans in their entirety rather than just the high seas, as had previously been envisaged, and decided not to deal with coastal issues (apart from some exceptions) as these merit an entirely separate report and opinion).

In its report, it examines oceans, maritime activities, ocean impacts and ocean governance. Each chapter highlights current and emerging knowledge.

In this non-exhaustive opinion, the ESEC suggests a number of recommended approaches regarding the type of means and governance that are applicable for what it considers to be the priority issues.

All of these recommendations have an unvarying common threat running through them, from conception to implementation: the need for an approach that addresses the environment and human beings, one that is eco-systemic, jointly-espoused and collaborative. One illustration of this aspiration is the management of protected maritime areas: areas so designated are managed by all of the actors concerned, researchers and fishermen, industrial-sector companies, associations and elected representatives.

Four key areas are covered:

- research, knowledge and training;
- promotion and sustainable management of human activities at sea;
- prevention of major environmental hazards;
- improvement of governance.

Finally, there are two prerequisites for the successful implementation of the following recommendations:

- France must see itself as a maritime nation and take full responsibility for its overseas territories, which provide it with 97% of its maritime zones (hence the designation as the «French Archipelago» originating in the Grenelle de la mer summit) and which provide it with a presence in all of the World's ocean regions;
- An ambitious maritime policy must be developed, as well as the means through which to implement it, whilst drawing upon its maritime legitimacy and the responsibilities that this entails.

Recommendations

Other studies conducted in other fora have already recommended numerous actions for implementation. In the light of the assessment set out in the report, the ESEC has opted to flag up ***priority issues*** *to address the issue of the means and governance required for sustainable ocean management.*

Furthermore, the ESEC wishes to reiterate that the scope of our assessment extends to the oceans as a whole, which, (apart from some exceptions) does not include coastal issues.

1st Key area: continue and consolidate marine knowledge acquisition and research efforts

Action: continue and consolidate marine research efforts

The report accompanying this opinion highlights the limits to our understanding of the marine environment, and of ecosystems in particular. However, human activities at sea are increasing and are being carried out in areas that were previously inaccessible. Due to a lack of sufficient knowledge, the appropriate preservation and management measures are not necessarily being taken.

And yet, France's role in developing marine science is widely recognised, particularly due to its oceanographic observation capabilities. The «Marine Programme» created in 2012 surveys the state of the art in the marine science field and identifies strategic orientations.

Generally speaking, the strategic «pillars» or core areas identified in the «Marine Programme» should serve as a basis for real-world decisions that translate these orientations into research programmes.

Focus No.1 on technical means

***Recommendation*: in the first instance, maintaining the capabilities of the French Oceanographic Fleet Mixed Service Unit (UMS) must remain a priority.**

***Recommendation:* the ESEC takes the view that everything must be done to keep the *Marion Dufresne*, an oceanographic vessel that plays a crucial scientific and logistical role, particularly in the Southern Ocean. All measures must be taken to ensure the renewal of its charter contract beyond 2015, and the refurbishment of its structure and equipment.**

In terms of seeking the necessary financing for renewal of the fleet's vessels, the ESEC wishes to highlight the importance of engaging in reflection on the economic model for the fleet. This model must take into account the increasingly interministerial nature of its uses and missions.

Recommendation: **the ESEC wishes to emphasise the need for the pooling of observation facilities at sea (all types of vessels and fixed installations) at the national and/or European level. This option must be the subject of a prior feasibility study to identify any obstacles to such a pooling of facilities.**

The Marine Programme reveals that *«one of the challenges of the 21st century is to utilise the oceans for the conducting of ongoing, long-term observations»*. Developing knowledge of the marine environment calls for an increase in the data collected from the oceans and from space.

Recommendation: **maintaining satellite resources will be vital to ensure such continuity in data collection. Cross-cutting technological advances are required and expected in the development of submarine robots and in marine optics (which, through the study of the optical properties of the particles in water and the use of space imaging, will enable monitoring of the development of biological and mineral particles).**

Focus No. 2 on basic and applied research

The Marine Programme reveals that knowledge is fragmented and even non-existent in a number of fields: ecosystems and their habitats, the remarkable environments of the polar environment, the deep ocean (biological and mineral resources) and the tropical insular zones (coral reefs, mangroves, etc.) Progress is also necessary in the detection of ecosystem services jointly with the economic and social sciences.

Recommendation: **efforts in basic research must be continued on all marine ecosystems for which knowledge is insufficient, particularly by determining their initial states.**

Recommendation: **in the applied sciences field, there is an urgent need to evaluate activities having the greatest impact. The ESEC would like to see resources being applied where the risks are greatest. The issue of irreversibility or remediation of past and present impacts (endocrine disruptors, nuclear waste, plastic particles, eutrophication of estuaries, etc.) should even be the subject of cross-disciplinary programmes for the upstream framing of public policy.**

Recommendation: **regarding overseas maritime areas (97% of the surface area of the French EEZ), particular efforts must be made in support of overseas local programmes, particularly those involving inter-regional scientific cooperation. Furthermore, improved synergies between national and local teams must be found in order to prevent the risk of redundancies and discrepancies between the various initiatives, as was noted by the Council in its opinion on overseas renewable energiesii**[ii].

Focus No. 3 on the contribution of all actors

Involvement of other actors in the research effort, particularly businesses, must be stepped up.

Recommendation: **the ESEC takes the view that partnerships between scientific research and industry remain inadequate and need to be developed further. Moreover, the consolidation of links between actors possessing scientific expertise, such as certain non-governmental organisations (NGOs), is crucial.**

Recommendation: **: the involvement of citizens and professionals (transportation, fisheries, etc.) in observation of the marine environment could be pursued. Emerging participatory sciences projects should be promoted.**

Recommendation: **the ESEC asks that the «joint marine platform» recommended in the Grenelle de la mer summit be established. This platform could, at a minimum, collate the information to be addressed to the various publics with an involvement in the sea. It could play a role in identifying the various priorities, in connecting the actors concerned, and in scientific and economic cooperation at the international level**.

Focus No. 4 on the means for EU and international ambitions

In 2011, the EU adopted a framework programme for research and innovation for the period to 2020, which identified marine and maritime research as an important priority.

France must fully participate in the implementation of «Horizon 2020», and support calls for projects.

Recommendation: **the National Research Strategy must articulate strong national ambitions for the sea and draw upon these national ambitions to lead Europe to develop European ambitions.**

Finally, at the international level, although the first «Global Integrated Assessment of the State of the Marine Environment by the Regular Process for Global Reporting and Assessment» is underway, under the aegis of the United Nations, the support granted it by Member States is still insufficient.

Recommendation: **the ESEC considers it a priority to finalise the global integrated assessment of the state of the marine environment adopted in 2005 by the United Nations General Assembly.**

Recommendation: **: the ESEC asks that reflection be rapidly engaged in regarding how to establish synergies between the Intergovernmental Panel on Climate Change (IPCC) and the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES), to optimise their respective endeavours addressing the oceans. For this reason, it is vital that French representatives in both of these bodies work together to communicate this reflection to their respective Bureaux.**

Action: step up efforts in education, awareness-raising and training

Since 1977, when environmental education began to be addressed by the national education system, to its incorporation into recent official plans for sustainable development education (SDE), advances have been made in a number of respects, partly thanks to the energy and commitment of teachers. As attested to by the network of documentary resource centres, the sea is by no means absent as an area of concern. The Amiens Regional Centre for Documentary Teaching Resources (CRDP) is a centre of excellence for SDE.

Recommendation: **: the ESEC would like to see the dissemination and use in schools of manuals in order to promote sustainable development education in junior and high schools. From now on, teachers should be encouraged to draw upon publications provided by the Amiens CRDP, particularly those that concern the oceans.**

Recommendation: **the ESEC recommends that teachers, and also head teachers and inspectors, receive SDE training.**

Recommendation: **the ESEC would like the fiftieth anniversary of marine environment classes in 2014 to be an occasion to reaffirm the commitment of civil society and teachers to this exceptional teaching resource and to remove administrative and financial obstacles to the development of these, and indeed all introductory classes.**

Recommendation: **the ESEC has already called for[III] improved coverage of sustainable development in all higher learning syllabuses, and also for it to be incorporated into vocational learning programmes within each employment sector. This overall framework must be used to communicate the specific nature and the importance of maritime issues.**

The ESEC is very happy that Environmental and Sustainable Development Education is one of the subjects that has been chosen for the next environmental conference in September 2013. It wishes to reiterate the importance of the actions of the associations to educate society about eco-citizenship and raise awareness among the public regarding the environment and sustainable development.

2nd Key area: promotion and sustainable management of human activities at sea

Action: for all activities, promote an ecosystem, collaborative approach for their development within the marine environment

As the joint report emphases, marine economic activities, both old and new, are bound to develop. As actors become aware of the issues at stake, they must increasingly adopt an ecosystem approach.

New and very promising areas of activity are developing in the industrial sector as a result of the abundant resources of our seas. An ecosystem approach must be a precondition for growth of these resources.

The reduction and control of marine pollution is already at the heart of Part XII of the Montego Bay Convention, which sets out obligations for States in this area, and, specifically, a general obligation to protect the marine environment.

This dimension is taken up by the European Union (EU) in the 2008 Marine Strategy Framework Directive, requiring all Member States to take the necessary measures to reduce the impacts of activities at sea. The Directive sets as its objective the attainment or maintenance of a good environmental status at the latest by 2020. This environmental Directive is built upon an ecosystem approach. It was transposed into French law through the Grenelle II Law, and must be implemented jointly at territorial level by means of «action plans». France has also decided to create a National Strategy for Sea and Coast which is set to be adopted by Decree in 2014.

The ESEC is insistent that all plans should include the maritime component, to make integrated marine policy a reality.

Recommendation: **the marine component should appear on the maps of strategy and planning plans, whenever beneficial in addressing cross-over areas involving both land and sea. Efforts already made by the National Geographical Institute (IGN) and the Marine Hydrographic and Oceanographic Department (SHOM) must be continued.**

Recommendation: **the Council asks that marine biodiversity, a fundamental component of biological diversity, particularly in the overseas collectivities, be addressed in the draft framework legislation on biodiversity in a manner commensurate with its importance. This will require that the surveys to be carried out will number among the core priorities of future budgetary planning.**

Recommendation: **the Council takes the view that training programmes for all occupations involving sea and coast-related activities, and first and foremost engineering, must be based on knowledge of these environments, an ecosystem approach to activities, the study of all impacts and the incorporation of the concept of collective sustainable management.**

Furthermore, eco-design is consistent with the ecosystem approach because it encompasses dimensions such as preserving and adding value to marine biodiversity, water

quality and, more generally, the overall environmental management of a site, throughout its entire life cycle. Eco-design principles apply both to boats and to marine production plant such as offshore drilling platforms, wind arrays and pipelines, and also to coast and port infrastructure. Eco-design must be factored into the new fleet of container ships, which is expanding at a considerable rate, and to the storage conditions for goods transported by container.

The Council takes the view that the eco-design of plant, vessels and infrastructure required for marine and coastal human activities must become the rule and be included in the selection criteria for competitive tenders. For small-scale fishing craft, this rule must nevertheless allow for progressive implementation and provide for accompaniment of the actors concerned, though training etc.

***Recommendation:* to support this process, the Council recommends that the financial costs and the costs of the various impacts of eco-design be calculated using the entire life cycle of the project, rather than merely its initial phase.**

***Recommendation:* the ESEC considers that an initial inventory[IV], to include an impact study on marine fauna and environments, must be conducted systematically in zones where infrastructure or activities are planned so as to identify the project's environmental hazards as accurately as possible; the obtaining of operating permits for offshore drilling platforms must be made mandatory.**

***Recommendation:* : project execution should require upstream joint consultation between all of the actors concerned. This joint consultation must be engaged in at a time when all options are open. The conclusions of the joint consultation must be taken into account in the final project design.**

***Recommendation:* the ESEC also considers it necessary to require the operator to conduct regular ecological monitoring of the site and to return it to compliance where required, in line with methods that need to be stipulated by ministerial order. Furthermore, it must be made mandatory for the operator to pass on all corresponding data to the public authorities**.

Focus No.1 on ship-building

The five global shipping fleets - commercial, fishing, pleasure, scientific and military - are constantly being renewed. In Europe and France, however, ship-building has been declining for a number of years. For businesses in this sector, the need to innovate is set to become a major priority in coming years. France's Council for the Orientation of Research and Innovation in Shipbuilding and Related Activities (CORICAN) which unites all actors in the ship-building industry, is committed, between now and 2020, to promoting fuel economic, clean, safe and intelligent ships through its «Ship of the Future» programme.

***Recommendation:* to safeguard the future of French and European ship-building, the ESEC considers it vital to develop ship-building and repair sectors that endorse eco-design for ships.**

***Recommendation:* the ESEC is supportive of initiatives in this field, the most representative of which is without a doubt the «Ship of the Future» programme operated by CORICAN. Initiatives such as these must be capable of being rolled out to all five of the shipping fleets referred to above, particularly the scientific and oceanographic fleets, and also to Marine Renewable Energy (MRE).**

Recommendation: **: the ESEC would like to see experimentation with, and development of, innovative fishing technologies included in work on the fishing vessel of the future (taking into account tonnage conditions), particularly technologies designed to limit the impact of fishing gear on the environment.**

Marine energy resources are of strategic interest in the context of global priorities, such as climate. Their potential is beginning to be actively exploited in certain regions. This mobilisation merits long-term backing at national level.

Recommendation: **a long-term MRE development policy must be provided for in the future energy transition Act. Priority must be given to those activities for which there exists genuine potential for business and job creation in France[v].**

Recommendation: **the ESEC is keen to see the take-off of MRE in concrete terms within the European renewable energies development context. Such a development will provide even more of a structure if it is based on quantified and ambitious objectives.**

Focus No. 2 on the dismantling of ships and offshore plant

In terms of ship dismantling, Asian shipyards continue to dominate the market. The entry into effect of the 2009 Hong Kong Convention for the «Safe and Environmentally Sound Recycling of Ships» could relaunch work on the establishment of an industrial activity sector in France and Europe.

Recommendation: **the ESEC is happy that Parliament has adopted the law authorising the ratification by France of the Hong Kong convention on ship recycling. This ratification must now proceed as swiftly as possible. ESEC would like the European Union and the Member States to do likewise.**

In France, despite commitments undertaken under the Grenelle process, actions carried out by private actors will not at this stage be sufficient to develop well-defined sectors of activity (commercial, defence, fishing, pleasure).

Recommendation: **building upon the opportunity presented by France's ratification of the Hong Kong Convention, the Council asks that reflection begin again on the creation of a French and European sector for ship and offshore plant dismantling, together with the involvement of the State as strategist and operator, and with the mobilisation of all actors.**

Recommendation: **concerning pleasure ships, a voluntary ship dismantling operation exists. This could be developed through an eco-holding in new ships. The State could then either create an Extended Producer Responsibility (EPR) activity, or facilitate a voluntary agreement and approve eco-organisations for pleasure ships. France should carry this project within the European context so as not to penalise the competitiveness of French shipyards.**

A number of reports have already identified port sites equipped with plant having the potential to accommodate ships over one hundred metres long.

Recommendation: **the Council considers it necessary to more accurately identify, in consultation with the collectivities concerned, which sites could be used effectively, taking into account their current working programme**.

In April 2013 the European Parliament voted in favour of measures concerning the recycling of ship materials, prior to their being dismantled, although it rejected the measure for the creation of a recycling fund financed through a port charge in favour of incentivising measures.

Recommendation: **The ESEC asks that, following prior consultation with actors in the maritime transport sector, the setting in place of a European fund be looked into, to support the creation of a recycling sector for commercial ships. The Council thinks that the principle of an ecotax levied at the European level on ships making stopovers in EU ports is an appropriate one, and is keen to ensure that this does not jeopardise the competitiveness of companies. The Council wishes to emphasise that such a fund would support recycling actions compliant with the Hong Kong Convention**.

Focus n° 3 on sustainable fisheries and aquaculture

As the report accompanying this opinion highlights, the combined effects of the intensification of human development and pressures exerted on the environment (increased fishing activities, pollution, climate change, etc.) have reduced ocean productivity in a highly alarming manner. The Food and Agriculture Organisation (FAO) points out that fish is a resource that provides animal protein to five billion individuals, and stresses that 60% of fish stocks are exploited to the maximum and 30% are over-exploited.

Fishermen are confronted by a dwindling resource, by pollution, by invasive aquatic species and by illegal, undeclared and unregulated fishing, assessed in the 1990s as representing between eleven and twenty-six million tonnes every year.

Small-scale fishing relies in the main on the resources of the coastal strip, which has prompted its actors to adopt a number of techniques through a sustainability process to adapt to the species that are seasonally present in their territories. This small-scale fishing sector must also continue to improve its selectiveness and to promote its occupations.

Although the major industrial fishing companies are continuing their activities without changing their practices, some fishermen are now developing an ecosystem approach[VI]. Having been alerted to and penalised by the overall deterioration in fisheries resources, these latter are increasingly implementing solutions which will require wholesale deployment in order to be fully effective.

Consumers have scant knowledge of this state of affairs, which prevents them from being selective enough in their purchasing choices.

Recommendation: **the ESEC notes that although fishermen are responsible for the issue of fisheries resources, the responsibility is not theirs alone. The actions of the various actors in the fishing sector, consumers and the policies implemented all have an impact on this resource. Our assembly considers that there is a need to launch a National Fishing and Sustainable Aquaculture Pact.**

Recommendation: **: the ESEC recommends the organisation of a major awareness-raising campaign to promote the responsible consumption of seafood among the general public, whilst drawing upon existing initiatives.**

The emphasis must be placed on criteria such as the type and origin of the species sold (type of stocks and traceability), the fishing techniques used to catch them (responsible fishing), landing areas, seasons, etc. To promote best practice throughout the entire chain,

all actors should be involved in the campaign, from fishermen to fishmongers and restaurant owners.

Recommendation: **the ESEC wishes to reiterate its proposal for the creation of a European label certifying products from sustainable fishing. The criteria for this official quality mark must imperatively include environmental and social traceability criteria (working conditions, safety, etc.).**

Recommendation: **the ESEC recommends stepping up existing cooperation between researchers and fishermen in order to effectively implement the ecosystem approach, developing research on fish handling and processing equipment in order to reduce the impact on the resource, and promoting innovation for fishing vessels of the future, thereby reducing their overall environmental impact (see recommendations made for ship-building).**

Illegal, undeclared and unregulated fishing poses serious ecological and economic hazards: it impoverishes fisheries resources, degrades ecosystems and seriously penalises those fishing fleets that comply with regulations

Recommendation: **our assembly calls for the stepping up of the prevention of illegal fishing, particularly in the outermost peripheries of the EEZ under French sovereignty.**

Our assembly takes the view that **this prevention must make use of the two existing supporting structures of regional cooperation with fishing States and coastal States on the one hand, and with national missions on the other hand**. There remains a risk, however, that decisions regarding the future military programming law to be tabled in 2013, as well as decisions concerning other administrations involved in the sea, will result in reductions in maritime capacity and resources, as they did in the past. Those missions that do not fall exclusively within the military domain, such as Action of the State at Sea (AEM), may face cuts, and this will apply to the overseas regions.

Recommendation: **the ESEC asks that actions such as those implemented in the French Southern and Antarctic Lands (FSAAL) be applied generally (e.g. the stepping up of monitoring using modern methods, heavy financial penalties, confiscation and re-allocation of contravening vessels that are seized).**

Among the commitments of the Grenelle de la mer summit is the development of sustainable fishing and aquaculture. Two charters have been signed with this objective in mind: one on 7 July 2010 on environmentally responsible leisure fishing, and the other on 11 February 2011 constituting a commitment to the sustainable development of French aquaculture.

Recommendation: **the ESEC asks that an assessment be conducted on the implementation of these charters.**

Recommendation: **the ESEC calls for the increase of joint operating and management units (UEGC) to organise fisheries management for which the operating criteria conform, in its opinion, to the desired direction taken by production methods within the sector.**

Accordingly, not all fishing types can be dealt with using the same approach. The ESEC finds that **deep-sea fishing** (between 400 and 1,500 metres) raises real questions as to its sustainability. Furthermore, debate on this issue is extremely tense. One of the pact's objectives must be to bring together the actors concerned.

Let us outline the arguments put forward by each side. Condemnation of deep-sea fishing is based on two criticisms: the fishing methods used, particularly the use of trawling nets, which wreak havoc with habitats, and the lack of any protection for captured species (modest-sized populations, slow growth, late reproduction, etc.). The rapid and major decline of the targeted populations has in fact been observed as soon as this fishing method was used. The more moderate opponents, who espouse the precautionary principle, cite insufficient monitoring or simply question the need for this type of fishing. In the opinion of those who defend this type of fishing, the regulations and controls set in place between 2000 and 2010 have borne fruit and have proven that sustainable exploitation of fisheries resources is possible. The positions of each side currently appear to be irreconcilable.

The ESEC finds that the European Commission has the issue in hand, and has proposed toughening up of the permits system and the progressive banning of fishing gear that specifically targets deep-sea species.

Recommendation: **our assembly finds that the direction being taken by the EU appears consistent with the ecosystem approach continuously recommended in this opinion. It nevertheless calls for a general debate to begin on this issue in order to clarify what the consequences of the decisions to be taken would be for the sector.**

Recommendation: **generally speaking, the ESEC recommends that a research programme be launched on fishing techniques, particularly those used for deep-sea fishing, and on their impact on ecosystems (effect of bycatches, damage caused to the sea bottom and to habitats, etc.). It wishes to reiterate the desire expressed in its opinion on the future common fisheries policyvii to see the European Union equipped with a body tasked with coordinating research work conducted by the Member States and then analysing its results. Furthermore, our assembly recommends that reflection be undertaken within the National Council for the Sea and Coasts (CNML) on the future of deep-sea fishing.**

Recommendation: **the absence of a social component within the reform of the Common Fisheries Policy (CFP) was noted previously with regret in the aforementioned ESEC opinion. The ESEC wishes once again to insist on the need to improve on-board safety and the working conditions of fishermen.**

Finally, the extent of industrial fishing ought to give rise to reflection on the development of aquaculture. This latter is practised by some fisheries companies throughout the world and accounts for around a quarter of global catches (some 20 Mt). The produce from this type of fishing (anchovies, sardines, horse mackerel, etc.) is for the most part destined for the various aquaculture sectors following transformation by the industry into flour and oil. For each kilo of farmed carnivorous fish or shrimp, three to twelve times that amount needs to be caught, depending on the feeding methods adopted. So, without criticising aquaculture, there does appear to be an urgent need to examine its production model.

Recommendation: **to limit reports of impacts of aquaculture on fisheries resources, the ESEC recommends the carrying out of research into the production of substitute foods to replace fish flours and oils whilst maintaining the quality of farmed species. Some research projects have proven successful using vegetable-based ingredients. The Council would also suggest that this sector be guided towards the farming of herbivorous and omnivorous species.**

Action : promote new occupations and help existing occupations to develop

The development of sectors practising eco-design will require breakthrough technologies and sweeping changes to occupations. The social implications of this will need to be taken into account. The high level of technical skills and demanding environmental requirements will make a quality process for professional training essential. Only qualified personnel will be able to demonstrate a high-level of vigilance as regards safety standards within a complex environment with ever-present risks.

Recommendation: **the implementation of eco-design by different sectors must be accompanied by needs assessment for new occupations and specific training.**

The International Labour Organisation (ILO) Maritime Labour Convention will enter into effect in August 2013. Although the first four sections of the Convention have already been incorporated into EU law, ahead of its entry into effect, Section V pertaining to the monitoring obligations of States may only be adopted in its most basic form.

Recommendation: **the Council would like the social partners, seafarers and ship-owners, to engage in negotiations at EU level (with a genuine desire for a successful outcome) on what would be the best criteria for application within the EU of Section V of the Maritime Labour Convention.**

Recommendation: **the Council would like France, which ratified the Convention in February 2013, to set in place the inspection system required in order to monitor compliance with standards, namely social standards, by vessels calling to ports (Port States in fact have inspection powers under the Convention).**

Recommendation: **France must have more inspectors who are authorised and trained to conduct on-board ship inspections. The number of specialist labour inspectors is extremely low.**

Préconisation **: the ESEC would like the list of ship inspection operations delegated by the State to approved classification companies to be as short as possible.**

Knowledge of the content of containers, and the safety of their transportation are newly-emerged priorities for maritime transportation. The ESEC asks that the safety and public health regulations pertaining to this type of transportation be complied with. A code of good practice negotiated under the auspices of the International Maritime Organisation (IMO)/ILO and the UN Economic Commission for Europe (UNECE), will enter into effect in 2014.

Recommendation: **the State must show itself to be particularly exemplary in the application of on-board social and environmental standards for ships belonging to public-sector establishments or those that it charters.**

3rd Key area: prevent major environmental harm

Whilst the accompanying report assesses all of the environmental impacts to which oceans are subjected, this opinion focuses on two major sources from which these impacts originate that are insufficiently highlighted: global warming and pollution from land-based sources.

Action: Start acting now on the consequences of global warming and more effectively address marine biodiversity

Through atmospheric transfer, thermohaline circulation and their remarkable heat and CO2 storage capacities, the oceans play a major role in the Earth's climate mechanisms.

Our assembly is of the opinion that the planetary regulatory function of the oceans must from now on be fully addressed, along with the potentially devastating effects of global warming on oceanic water masses and marine ecosystems (melting of Arctic ice, increasing water temperatures and sea level rises, acidification, etc.). However, despite a succession of studies, decisions taken to limit climate change-associated risks are insufficient and the choices made by decision-makers continue to prioritise the short term.

Addressing this is all the more urgent given that sea levels are rising more rapidly than predicted and the CO2absorbing capacity of the oceans has been steadily falling for a number of years, both in the North and in the South.

Recommendation: **the ESEC expressly asks France to promote the inclusion of the role of the oceans in the negotiations being conducted for the United Nations Framework Convention on Climate Change.**

Ocean acidification is occurring. The reported continuation of this phenomenon risks being accompanied by the jeopardising of entire marine ecosystems. Fisheries and the food security of millions of people could be placed in grave danger as a result..

Recommendation: **our assembly recommends better integration of the effects of global warming on ocean chemistry and marine ecosystems in all international and European negotiations linked to the environment (climate, biodiversity, eco-taxation, etc.).**

Recommendation: **the ESEC asks for the European Union to play a significant role in the global inter-disciplinary programme on ocean acidification risk** (this programme is a component of the oceans and coastal zones sustainability plan and its main objective is to understand the impacts of acidification)**.**

Recommendation: **our assembly calls upon the EU to incorporate this issue into the future Framework Programme (FP) for Research and Development, by investing specifically in long-term research on carbon storage and energy production using the capacities of phytoplankton through a number of methods such as algae reactors**[VIII].

Action: reduce the impacts of land-based pollution sources

Land-based pollution sources such as refuse, non-point source pollution, etc. have a major impact on the oceans (even in the high seas), which is addressed at length in the accompanying report. Adopted in 1995, the Global Programme of Action for the Protection of the Marine Environment from Land-based

Activities (Washington programme) seeks specifically to prevent this accelerated deterioration by calling upon States to discharge their duty to preserve and protect the marine environment. Almost twenty years since its adoption, for the most part it is not known about. It supplements the stipulations of the Montego Bay Convention in support of the reduction of land-based pollution sources.

Recommendation: **having noted the current shortfalls in the application by the States of the obligations set out in the Montego Bay Convention concerning the control of marine pollution, the ESEC recommends the adoption of a framework convention for the prevention of land-based marine pollution sources. Provision should be made for this to be broken down at regional level through additional area-specific protocols.**

It should set itself the objective of gradually removing pollution sources, notably by applying the «polluter pays» principle through legislative stipulations and specific action programmes.

Recommendation: **the ESEC takes the view that the theoretical and practical guide that the Global Programme of Action constitutes is an effective tool for incorporating environmental concerns into development plans and strategies at the global, regional and national levels. The ESEC would like France to actively promote this programme.**

Recommendation: **the ESEC asks that France take the initiative in re-starting this dynamic at the European and Mediterranean levels, with the focus on the priority issues of the studies selected for the 2012-2016 period: nutrients, detritus and wastewater. To attain this objective, the input of the European Bank for Reconstruction and Development (EBRD), a vital component of whose mandate is environmental protection, should be sought**.

Recommendation: **the ESEC recommends that the Marine Strategy Framework Directive be used as an opportunity to raise awareness and mobilise all private and public-sector actors on issues pertaining to land-based pollution sources.**

Focus No.1 on pollution sources and water treatment

In terms of national water management guidelines, pollution prevention is the main priority for the tenth water supply agencies programme for 2013-2018. Breakdown figures for individual allocations to interventions allocate 68% of the financial resources of agencies to this action. The Council is happy to hear this.

In this context, the ESEC calls for the land-sea link to be given greater attention by the territorial collectivities, even those that are not coastal. Urban planning schemes currently provide for the implementation of integrated sea and coastal management.

Recommendation: **in accordance with the Water Framework Directive and with international or regional requirements (OSPAR Convention, Nitrates Directive, Bathing Water Directive, etc.), monitoring programmes for coastal water masses and**

transition must be set in place everywhere. These must strive to identify the principal sources of hazardous substances emissions, including pharmaceutical, radioactive and microplastics residues.

Since 13 June 2013, France has been under a conviction by the European Union Court of Justice (EUCJ) for non-compliance with the Nitrates Directive. The potential fine amounts to several tens of millions of Euro.

***Recommendation:* our assembly asks that France immediately take all measures necessary to meet the requirements of the European Water Directives.**

***Recommendation:* At the international level, the ESEC considers it necessary for all actors with a seat on the World Water Council to ensure that the issue of the link between continental and marine waters is debated at the next World Water Forum (Korea 2015).**

***Recommendation:* our assembly asks that efforts be made to equip or to finish equipping the overseas collectivities with sanitation systems and purification stations** - all or part of the effluent of some of these collectivities is still being discharged directly into the sea -**, and to bring the plant and performance of defective continental infrastructure into line with standards, particularly on the Mediterranean coast.**

***Recommendation:* the Council also takes the view that France ought to take the initiative in developing the same types of plant in the Mediterranean through the Action Plan for the Protection of the Marine Environment and the Sustainable Development of the Coastal Areas of the Mediterranean and/or the restarting of North/South collaboration.**

***Recommendation:* the Council insists, moreover, that water treated by stations be recycled, wherever possible and appropriate, for land uses that pose no health impacts.**

Priority must be given to the optimal treatment and filtration of effluent. Where water is discharged out to sea, it must not have any impact upon fragile coastal ecosystems. Accordingly, whilst ensuring that the project remains economically sound, the outflow must in such cases be located at a sufficient depth and distance from the shoreline to facilitate the dilution and bacterial breakdown of toxic molecules that have been able to withstand water treatment processes.

Focus No.2 on macro-waste and microplastics

Aquatic waste is nothing more than on-land waste that has either reached the sea or been jettisoned into it. Currently, marine environment protection policy overlaps with waste management policy.

***Recommendation:* to combat this type of ocean pollution, the ESEC proposes the implementation of a comprehensive, integrated waste reduction policy based on the eco-design of consumer goods and the reduction of packaging. Implementation approaches are set out in detail in Commitment 67 of the Grenelle de la mer summit. The ESEC nevertheless recommends:**

❒ *Upstream*

***Recommendation:* building upon its previous opinionsIX, it recommends the general roll-out of adjustment to the contributions of producers signed up to an EPR**

plan. Implementation of this incentive-based logic will mean that contributions are lower where products are eco-designed (generating little waste and recyclable) and conversely higher where they are not. This mechanism would be even more effective if applied at the European level. With this in mind, the ESEC requests that industrial-sector companies, and specifically cosmetics manufacturers, commit to refraining from the use of microplastics in their products.

***Recommendation:* the ESEC would also emphasise that a highly effective collection system is not enough to prevent the dispersal of waste and takes the view that ongoing information and awareness-raising programmes are needed.**

***Recommendation:* the Council furthermore recommends the more strict application of penalties provided for by the Criminal Code (second class offences) in the case of the tipping of refuse, waste, unwanted materials and other objects in private or public places.**

❒ *Once waste is in circulation*

***Recommendation:* the ESEC considers it necessary to concentrate efforts on means and methods that are capable of preventing this waste from reaching the sea, accumulating on the open sea and in deep waters, and breaking down into micro-particles**

***Recommendation:* our assembly encourages the installation of urban storm drains or the improvement of their functioning and the implementation of wastewater capture systems, drawing upon the Enabling Decree for the Water and Aquatic Environments Law (LEMA) of 11 July 2011, authorising the levying of a tax for urban rainwater management. Communes committing to these measures ought to be eligible for support from water agencies.**

***Recommendation:* : the ESEC recommends improving the cleaning of waterways by including this action in the Programmes for Development and Water Management (SDAGE) and the Plans for Development and Water Management (SAGE) and through the use of environmental contracts wherever these exist, as these are catchment-level intervention mechanisms. All available means must be used (hydraulic dams, locks, floating booms, boats, etc.) and facilities managers must be mobilised and coordinated.**

❒ *At the point of arrival of waste at the sea*

***Recommendation:* The ESEC advocates the mobilisation of local actors for the methodical cleaning of beaches and shorelines, particularly after extreme climate events such as storms and flooding which result in the dispersal of large volumes of waste.**

***Recommendation:* the ESEC considers it vital to step up the observation and identification of sea waste and micro-plastics from its fragmentation, to develop environmental impact studies, and to reflect on their large-scale removal from the oceans, where this seems feasible.**

4th Key area: improving governance

Action: step up national governance of the sea

Cross-disciplinary policies have always been difficult to implement and continue over the long-term in France.

Issues pertaining to seas and oceans - with the exception of fisheries - are not mentioned in the name or the official remit of parliamentary committees, even if each assembly has a study group for these issues.

In the State Budget, resources pertaining to the sea are identified in a number of ministerial portfolios (Agriculture and Fisheries, Defence, Ecology, Sustainable Development and Planning, Civil Security, etc.) and are broken down into numerous programmes within these portfolios.

Since the creation of «Seas» as a budget line in 1981, it has sometimes been entrusted to a ministry, and frequently to a Secretary of State, but sometimes it has not been allocated at all. Fisheries were only unbundled from Agriculture and allocated to the Sea in 2012.

Furthermore, since 1978 France has used an Interministerial Portfolio to organise and coordinate State action on the sea, which in 1995 became the General Secretariat of the Sea (SgMER). SgMer is a task force office that depends on other ministerial departments for its budget and staff.

The Interministerial Committee of the Sea (CiMER) is chaired by the Prime Minister, and was last convened in 2011.

Recommendation: **the ESEC recommends making national steering of French maritime policy more efficient and coherent. To this end, it would emphasise the importance of two factors: the permanency of the institution tasked with such governance on the one hand, and the political nature of the role entrusted to the head of this institution on the other hand. Its head would need to espouse the mission in every way, and also embody it politically.**

One option would be to create a major Ministry of State, entrusted with Seas, on a permanent basis which would manage the CIMER, on behalf of the Prime Minister, and would possess a General Delegation for Seas, which would be interministerial in nature, along similar lines to the General Commission for Sustainable Development (CgDD)..

The main drawback of this option resides in the fact that the long-term viability of interministerial portfolios is not assured. It will require a high degree of political will and consensus which is far from being the case currently. It will also require transfers of competences and offices, for which there is no consensus.

Recommendation: **the Council favours a second option, which would involve significantly strengthening and overhauling the role of SGMer. The joint, collaborative ecosystem approach to maritime issues, their highly interministerial and international nature and the distribution of budget appropriations dedicated to these issues should lead one to envisage seas policy being overseen by a High-Commissioner with the rank of Minister, supported by a more robust SGMer administration, and reporting directly to the Prime Minister. The ESEC wishes to state explicitly that SGMer ought to include the «fisheries» area.**

Whilst retaining its role as a task force office, it should be supported in its role of designing integrated maritime strategy and driving public policy on behalf of the Prime Minister, and would be equipped to effectively conduct oversight of these policies. Specifically, this would entail ensuring that policy gives priority to the long term.

The SGMer team should at a minimum be consolidated through an even greater interministerial and multi-disciplinary logic in order to fully reflect:

- **– the genuinely integrated nature of French maritime strategy;**
- **– the importance of the ecosystem approach to marine issues;**
- **– the need to address issues - above and beyond their purely operational aspects - by taking a joint approach with actors, particularly those within the National Council for Sea and Coasts (CNML).**

Furthermore, the overseas collectivities, some of which possess extensive powers regarding maritime issues, must be involved in all decisions and operations pertaining to their maritime territories.

These efforts will obviously only make sense if the new integrated French maritime strategy is rapidly formulated in order to be adopted at a meeting of the InterMinisterial Committee of the Sea (CIMER).

Recommendation: **the Council takes the view that the importance of the strategy and the maritime priorities at stake justify CIMER convening annually. It would also emphasise that the representation of actors within the maritime world, particularly economic actors, is not always satisfactory within national bodies, and within the ESEC itself in particular, and asks that this be taken into account as regards the make-up of the National Energy Transition Council (CNTE).**

Action: step up European and international governance of the sea

Europe possesses an integrated maritime policy. The key areas of this policy are the sustainable exploitation of seas and oceans, the creation of a knowledge and innovation base and how to encourage the EU to adopt the role of lead partner in international maritime affairs. The Limassol Declaration of October 2012 reminded Member States of the importance of this policy.

France has itself demonstrated an ability to play a dynamic role in international negotiations concerning the oceans: this was the case at the Montego Bay Convention, and it is currently the case regarding biodiversity on the high seas, which is not governed by any existing international convention.

Préconisation **:the ESEC supports the action taken by France and by civil society which has ensured that by as soon as 2013, and at the latest by Autumn 2014, the United Nations General Assembly will be starting negotiations, within the framework of the United Nations Convention on the Law of the Sea, that seek to culminate in the adoption of an international legal instrument for the protection of biodiversity in the high seas.**

Recommendation: **this international agreement, which is at least as ambitious as the Nagoya Protocol on Access to Resources and Benefit Sharing (ABS) concerning biodiversity under the jurisdiction of the State, should address the preservation of biodiversity on the high seas, access and benefit-sharing for the exploitation of marine genetic resources, protected marine areas, environmental impact assessments and support for research and marine technologies transfer.**

Recommendation: **the ESEC proposes that the International Seabed Authority should be a stakeholder in the resources of the high seas, particularly as regards genetic marine resources. It should have the necessary means at its disposal to carry out its new roles.**

Recommendation: **the ESEC wishes to remind readers of the undertaking by the international community to have placed 10% of the oceans covered by Marine Protected Areas by 2020. This objective must be followed through.**

Recommendation: **the principle of closer involvement by civil society organisations in international governance, based on identified best practice, was endorsed at Rio + 20. There is an urgent need to draw the relevant practical consequences by stepping up the role of civil society in all international bodies. Civil society must be accorded active participant status - ensuring that its voice is heard, and that it has access to information and an extended right of amendment - and be granted the corresponding resources.**

Recommendation: **the ESEC recommends changing the way the IMO is governed in order to consolidate a collective ecosystem approach to priority issues.**

Recommendation: **France's own interests and responsibilities ought logically to lead it to play a major role in setting EU integrated maritime policy. As regards the protection of biodiversity, sustainable exploitation of the seabed and subsoil, management of fisheries resources and MRE development, the ESEC takes the view that our country ought to play a particularly active role and convince our partners of the need for integrated, collective responses to each of these major priorities.**

Focus No. 1 on the nature of flags, competitiveness and employment

The Montego Bay Convention establishes that a «genuine link» exists between the craft and the Flag State. This responsibility of the State, as a result of the link of nationality, is the corollary of freedom of navigation. However, the nature of this link remains undefined. The 1986 Convention, which did define its nature, never came into effect, and open register regimes have used the principle to the advantage of shipowners.

Recommendation: **the Council - highlighting the fact that France has neither signed nor ratified the 1986 Convention on Conditions for Registration of Ships - wishes Europe to engage in a process of reflection on the «genuine link» that addresses contemporary changes in maritime and environmental law. The relationship with the registering State must be based on the identification of the true owner.**

Recommendation: **accordingly, as provided for by one of the commitments of the Grenelle Sea Act, France must launch an international initiative against flags of convenience in line with the anti-tax-haven initiative brought before the G20, and play a role in defining objective evaluation criteria for flags within the context of this initiative.**

Recommendation: **without challenging the rule that makes ship registration a competence of the EU Member States, the Council proposes the creation of a European register which would take as a reference the most stringent EU register in the areas of security and social and environmental standards. This European flag would be allocated as a genuine quality label, and would lend visibility to European Union ships, which already have an excellent reputation worldwide. This flag would safeguard the employment of European seafarers and would eliminate flags of convenience in European waters.**

Focus No. 2 on protection of the Arctic

The situation in the Arctic is very different from that of the Antarctic. In fact, there is nothing like the Antarctic Treaty, signed in Washington, to govern the ambitions of States in this region, for which the main conventions are agreements on the boundaries of maritime areas.

However, two multilateral instruments exist, the 1920 Treaty Concerning Spitzbergen, and the Arctic Council, established in 1996 in the form of a high-level international forum. States such as France, and also NGOs, have seats on the Council with observer status.

For different reasons, these two instruments have too limited a scope at a crucial time for the future of the Arctic Ocean. In fact, the melting of Arctic pack-ice is opening up the prospect of exploitation of fisheries, oil and gas resources and maritime traffic.

Recommendation: **the Council wishes the Arctic to have a high degree of sustainable management of its resources, should these be exploited as a result of melting of the ice-sheets. An international protective framework must be identified.**

Recommendation: **Arctic Council members should undertake to set up a Regional Fisheries Management Organisation (RFMO). The scientific council for this RFMO should be tasked with setting out management rules that ensure that Arctic ecosystems are preserved.**

Recommendation: **Arctic Council members should undertake to negotiate a regional convention to protect and develop biodiversity. This convention should make provision for the creation of Marine Protected Areas on the high seas using the OSPAR convention as a model.**

Recommendation: **in the spirit of the Rio + 20 Declaration, the ESEC would like France to advocate in favour of expanding the prerogatives granted for observer status at the Arctic Council.**

Focus No.3 on environmental responsibility

as the ESEC recommended in its opinion on the safety of marine oil rigs[X], its recommendation is that France should extend the environmental liability regime applicable to «purely» ecological damage to all maritime waters under the jurisdiction of the French State and ensure that this issue is referred to the European Union as a matter of priority.

Recommendation: **the ESEC backs action by the Senate to integrate ecological harm at the European level.**

List of references for the opinion

I Report by the Senate Committee for Foreign Affairs, Defence and the Armed Forces, 2012.

II Patrick Galenon; Renewable energies overseas: laboratory for our future; opinion by the Economic, Social and Economic Council, Les éditions des Journaux officiels, July 2011.

III Pierre Crosemarie; An overview of the Grenelle environmental initiative; opinion by the Economic, Social and Economic Council, Les éditions des Journaux officiels, February 2012.

IV Jacques Beall, Alain Feretti; Preventive management of environmental risks: safety of marine oil rigs; opinion by the Economic, Social and Economic Council, Les éditions des Journaux officiels, March 2012.

V Catherine Tissot-Colle, Jean Jouzel; Energy transition: 2020-2050, a future to be built, a road to be mapped; opinion by the Economic, Social and Economic Council, Les éditions des Journaux officiels, January 2013.

VI Note on fisheries: «The ecosystem approach means no longer taking a stock-based approach to marine resource management but rather taking into account how the fishing of each stock will impact upon the structure and functioning of ecosystems, in terms of all of their components. Issues such as bycatches (rejected at sea) or the destruction of habitats by fishing gear are also taken into consideration. This comprehensive approach makes it more ambitious as a model than sustainable fisheries. It is the product of the international desire that emerged with the Rio Declaration in 1992 and the FAO Code of Conduct for Responsible Fisheries in 1995, the aim of which is to promote a strategy for integrating the fisheries sector into the ecosystem as a whole so as to promote the sustainable development, equity and resilience of a social and ecological system that is finely intermeshed.The ESEC endorses this vision, which addresses all of the areas vital to the viability of the activity: ecological, social and economic»

VII Joëlle Prévot-Madère; The future common fisheries policy; January 2012.

VIII An algae reactor is a specific type of bioreactor, designed to cause theproliferation of phytoplanktonic algae. The biomass thereby produced can be used of in a number of ways. For example, it can be used in biofuel or to mineralise carbon dioxide (CO2 capture).

IX Michèle Attar; Les enjeux de la gestion des déchets ménagers et assimilés en France en 2008 [Priority issues for household and similar waste management in France in 2008]; opinion by the Economic, Social and Economic Council, les éditions des Journaux officiels, April 2008.

X Jacques Beall, Alain Feretti, previously cited.

Voting

Voting on the full text of the draft opinion

Number of voters	162
Voted for	144
Abstentions	18

The ESEC adopted

Voted for: 144

Agriculture group	Mr Bailhache, Mr Barrau, Mr Bastian, Ms Beliard, Ms Bernard, Ms Bocquet, Ms Bonneau, Mr Clergue, Mr Giroud, Ms Henry, Mr Lefebvre, Mr Pelhate, Mr Roustan, Ms Sinay, Mr Vasseur.
Cottage Industry Group	Ms Amoros, Mr Crouzet, Ms Foucher, Mr Griset, Mr Le Lann, Mr Liébus, Mr Martin, Ms Sassano.
Associations Group	Mr Allier, Ms Arnoult-Brill, Mr Charhon, Ms Gratacos, Mr Leclercq.
CFDT Group	Mr Blanc, Ms Boutrand, Ms Briand, Mr Duchemin, Ms Hénon, Mr Honoré, Ms Houbairi, Mr Le Clézio, Mr Malterre, Ms Nathan, Mr Nau, Ms Nicolle, Ms Prévost.
CFE-CGC Group	Ms Couturier, Ms Couvert, Mr Delage, Mr Dos Santos, Mr Lamy, Ms Weber.
CGT-FO Group	Mr Bellanca, Mr Chorin, Mr Hotte, Ms Millan, Ms Nicoletta, Mr Peres, Ms Perrot.
Cooperation Group	Mr Lenancker, Ms Rafael, Ms Roudil, Mr Verdier.
Enterprise Group	Mr Bailly, Ms Bel, Ms Castera, Ms Coisne-Roquette, Ms Dubrac, Ms Duhamel, Ms Frisch, Mr Gailly, Ms Ingelaere, Mr Jamet, Mr Lebrun, Mr Lejeune, Mr Marcon, Mr Mariotti, Mr Mongereau, Ms Parisot, Mr Placet, Mr Pottier, Ms Prévot-Madère, Mr Roger-Vasselin, Mr Roubaud, Ms Roy, Mr Schilansky, Ms Tissot-Colle.
Environment and nature Group	Mr Beall, Mr Bonduelle, Ms de Bethencourt, Ms Denier-Pasquier, Ms Ducroux, Mr Genest, Mr Genty, Mr Guerin, Ms de Thiersant, Ms Laplante, Ms Mesquida, Ms Vincent-Sweet.
Mutual Insurance Group	Mr Andreck, Ms Vion.
Overseas Group	Mr Arnell, Mr Galenon, Mr Grignon, Mr Janky, Mr Kanimoa, Mr Omarjee, Ms Tjibaou.

Qualified Leading Figures Group	Mr Aschieri, Ms Ballaloud, Ms Brishoual, Ms Brunet, Ms Chabaud, Ms Flessel-Colovic, Mr Gall, Ms Grard, Ms Graz, Mr Guirkinger, Mr Jouzel, Mr Khalfa, Mr Kirsch, Mr Le Bris, Ms Levaux, Mr Lucas, Mr Martin, Ms de Menthon, Ms Meyer, Mr Obadia, Ms Ricard, Mr Richard, Ms du Roscoät, Mr de Russé, Mr Soubie, Mr Terzian, Mr Urieta.
Liberal professions Group	Mr Capdeville, Mr Gordon-Krief, Mr Noël, Ms Riquier-Sauvage.
UNAF Group	Ms Basset, Mr Damien, Mr Farriol, Mr Feretti, Mr Fondard, Mr Joyeux, Ms Koné.
UNSA Group	Ms Dupuis, Mr Grosset-Brauer, Mr Rougier.

Abstentions: 18

CFTC Group	Mr Coquillion, Ms Courtoux, Mr Ibal, Mr Louis, Ms Parle, Ms Simon.
CGT Group	Ms Crosemarie, Mr Delmas, Ms Doneddu, Mr Durand, Ms Geng, Ms Kotlicki,Mr Mansouri-Guilani, Mr Marie, Mr Michel, Mr Rabhi, Mr Teskouk, Ms Vagner.

Annexes

Annex 1: List of Leading Figures Heard and met

✓ **Mr Jean-Pierre Beurier**
Professor at the Maritime and Ocean Law Centre, Nantes University

✓ **Mr Gilles Bœuf**
President of the French Museum of Natural History (MNHN);

✓ **Mr Thierry Canteri**
Director of the Iroise Natural Marine Park;

✓ **Mr Lucien Chabason**
Advisor to the IDDRI Board;

✓ **Mr Jean-Philippe Chateil**
Deputy Secretary General of the Merchant Naval Officers' Federation (CGT-affiliated);;

✓ **Ms Antidia Citores**
Legal Coordinator at Surfrider Foundation Europe;

✓ **Mr Laurent Debas**
Managing Director of Planète Mer;

✓ **Mr Yves Fouquet**
Head of the Ifremer Geochemistry and Metallogeny Laboratory;

✓ **Ms Francoise Gaill**
Director of the CNRS Ecology and Environment Institute (INEE);

✓ **Mr Elie Jarmarche**
Mission Head at the Secretariat General for the Sea;;

✓ **Mr Dominique Kervazo**
Marine Advisor at the Pôle Mer Bretagne;

✓ **Mr Christophe Lefebvre**
Chairman of the IUCN's French Committee;

✓ **Mr Michel Le Cavorzin**
Secretary General of the National Federation of Maritime Unions (CGT-affiliated);

✓ **Mr Denez L'Hostis**
Seas and Coasts Mission Head at France Nature Environnement ;

✓ **Mr Philippe Perennez**
Managing Director of the French Maritime Cluster;

✓ **Mr Jean-Pierre Thébault**
Ambassador, Delegate for the Environment;

✓ **Mr Philippe Valette**
Managing Director of Nausica – "Blue Society".

The Section wishes to thank all of the above-named individuals.

Furthermore, the rapporteur heard the following named individuals privately:

- ✓ **Mr Éric Banel**
  Delegate-General, Armateurs de France;
- ✓ **Mr Pascal Bolot**
  Prefect and Senior Administrator, French Southern and Antarctic Lands (FSAL);;
- ✓ **Mr Hubert Carré**
  Director-General of the National Fisheries Commission;
- ✓ **Mr Gérard Grignon**
  President of ESEC Overseas Delegation;
- ✓ **Mr Sylvain Pioch**
  Geographer and Ecological Engineer, University Lecturer at Paul Valéry Montpellier III University;
- ✓ **Mr Julien Rochette**
  Researcher, Ocean and Coastal Zones at the IDDRI;
- ✓ **Ms Wendy Watson**
  Deputy Director-General and Executive Secretary of the UNESCO Intergovernmental Oceanographic Commission.

Annex 2: Composition of the Section on the date of the vote

✓ **President** : Anne-Marie DUCROUX

✓ **Vice presidents** : Patricia RICARD et Catherine TISSOT-COLLE

❒ **Agriculture Group**

✓ Rémi BAILHACHE

✓ Marie-Thérèse BONNEAU

✓ Claude ROUSTAN *Reporting administratively to the group*

❒ **Cottage Industry Group**

✓ Alain GRISET

❒ **CFDT Group**

✓ Marc BLANC

✓ Yves LEGRAIN

❒ **CFE-CGC Group**

✓ Gabriel ARTERO

❒ **CFTC Group**

✓ Marie-Josèphe PARLE

❒ **CGT Group**

✓ Pierrette CROSEMARIE

❒ **CGT-FO Group**

✓ Anne BALTAZAR

❒ **Coopération Group**

✓ Denis VERDIER

❒ **Entreprise Group**

✓ Eveline DUHAMEL

✓ Catherine TISSOT-COLLE

❒ **Environment and nature Group**

✓ Jacques BEALL

✓ Antoine BONDUELLE

✓ Allain BOUGRAIN DUBOURG

✓ Anne-Marie DUCROUX

✓ Gaël VIRLOUVET

❒ **Mutual Insurance Group**

✓ Pascale VION

❒ **Student organisations and youth movements Group**

✓ Antoine DULIN

❒ **Overseas Group**

✓ Patrick GALENON

❒ **Qualified Leading Figures Group**

✓ Catherine CHABAUD

✓ Maud FONTENOY

✓ Jean JOUZEL

✓ Dominique MEYER

✓ Patricia RICARD

✓ Bernard BAUDIN *Reporting administratively to the group*

❒ **UNAF Group**

✓ Alain FERETTI

❒ **Associates Group**

✓ Daniel BOY

✓ Joëlle CHERIOUX de SOULTRAIT

✓ Jean-Marc JANCOVICI

✓ Patricia MAMET SOPPELSA

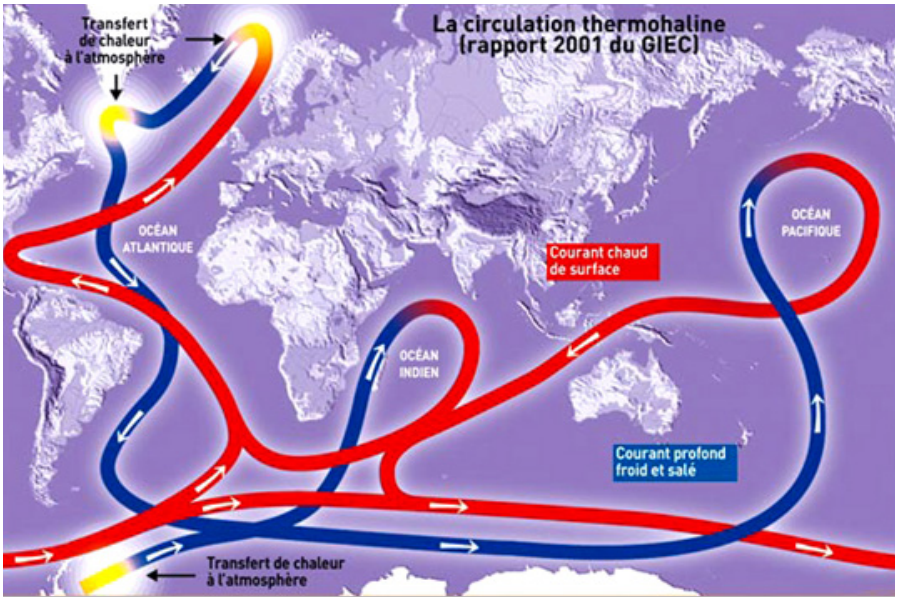
✓ Yves MANSILLON

✓ Elisabeth MERCIER

✓ Claire NOUVIAN

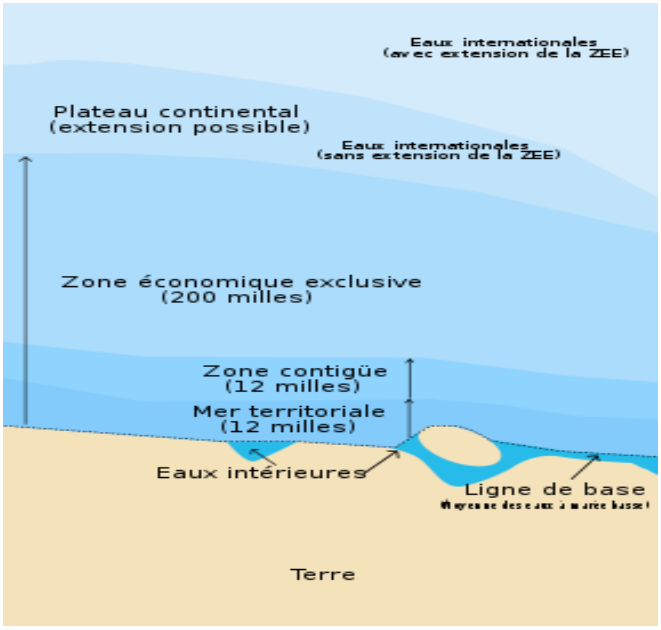
✓ Sylvianne VILLAUDIERE

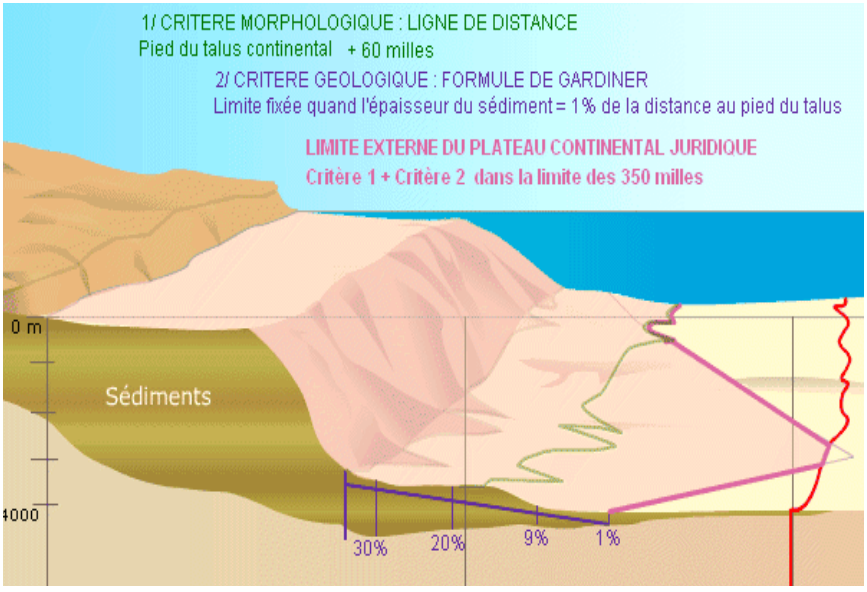
Annex 3: Thermohaline Circulation



Source: IPCC.

Annex 4: Maritime Zones of International Law of the Sea





Source: ifremer.

Annex 5: Maritime Zones under French Jurisdiction

Source : overcast.fr

Annexe n° 6: glossaire

Abyssal

adjective used to designate ocean depths lying at over 2,000 metres beneath the surface.

Amenities

pleasant aspects of the environment (or social environment), which cannot be appropriated or quantified in terms of monetary value.

Anthropic

resulting either directly or indirectly from human activity. Pertaining to human activity.

Anoxia

decrease in dissolved or present and bioavailable oxygen in the environment (ground, sediment, water, atmosphere, etc.)

Aquifer

geological formation made up of permeable or fissured rock in which water can infiltrate, circulate and accumulate. The term "aquifer" also refers to the rock formation or the water that it contains, provided that it can be mobilised, whether this water is present temporarily or permanently.

Aragonite

a mineral in the carbonate family whose crystals can be as large as 30 cm. Aragonite can be synthesised by certain marine organisms.

Archaea

also called archeobacteria, Archaea form a group of unicellular micro-organisms that lack both a nucleus and intracellular organelles

Bathymetric

pertaining to bathymetry, the science of measuring the underwater depths and reliefs of water bodies, enabling the ocean bottom to be mapped.

Benthic

pertaining to benthos (sea bottom). Designates mobile organisms living on or near deep-water environments, contrary to pelagic species.

Biocenosis

In ecology it means all living beings living together within a designated area.

Biogeochemistry

a scientific discipline examining how matter is transformed and what happens to it as a result of a cyclical process that is biological, chemical and geological in nature.

Bioreactor

a device designed to cause the multiplication of micro-organisms such as algae, fungi, yeasts and bacteria. Some are designed for the proliferation of planktonic algae for carbon dioxide (CO_2) capture or biofuels production projects.

Biotope

a given biological environment that provides stable habitat conditions to a range of animal or plant species (biocenosis)

Bleaching

(coral): a stress phenomenon that can result in coral death. Visually, the animal becomes discoloured. There are multiple causes of this stress and these are currently being researched (for example, temperature variations and acidification)

Chemosynthetic

adjective describing the process used by a living organism to produce organic matter by means of the reduction of inorganic matter (autotrophy) through the energy resulting from chemical reactions. The term is also applied to organisms (bacteria) that are capable of this type of synthesis, and also to the components resulting from it. Unlike chlorophyllic photosynthesis, which requires a light source, chemosynthesis can take place in total darkness.

Cyanobacteria or cyanophytes

incorrectly referred to as "blue algae" (for a long time it was thought that these were members of the plant kingdom), these are photosynthesising bacteria, i.e. capable of producing their own organic material using solar energy. They have existed on Earth for 3.5 billion years, and fix carbon dioxide and release dioxygen. They have played a primordial role in oxygenating the atmosphere and oceans, in creating the first carbon sink of organic origin and in deacidifying the ocean.

Coccolithophores

these are algae with a single-cell that is surrounded by a collection of calcium carbonate plates called coccoliths. When these algae die, their skeletons fall down to the sea floor and disintegrate. They are the principal component of chalk rock.

Conchyliculture

shellfish farming, particularly bivalve molluscs such as oysters, mussels, cockles, and scallops.

Coral harvesting

coral collection. Coral harvesting has led to the disappearance of medium-to-large-size red coral colonies with the majority of these colonies having been collected up to depths exceeding one hundred meters. Today, a more methodical approach is used for coral collection.

Dumping (social)

the practice by some States of adopting employment and salary legislation that is less favourable for employees than those of other States, with a view to attracting enterprise to their country.

Ecosystemic

refers to a complete ecological system (biotope or biocenosis), including the relationships of living organisms with each another and with their environment. "The ecosystem approach is a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way." (FAO).

Eutrophication

originally this referred to the eutrophic (i.e. nutrient-rich) nature of an aquatic environment, without any negative connotations. Over the last thirty years or so, it has been used to designate the alteration and deterioration of aquatic environments through excessive nutrient supply, essentially from agricultural fertiliser and industrial and urban waste. This alteration leads to floral proliferation (planktonic algae), a change in the physical and chemical characteristics of water (diminished oxygen content, notably) and the impoverishment of biodiversity.

Smoker

name given to the vents or chimneys of hydrothermal sites through which superheated fluids (several hundred degrees) are discharged. They are termed "black" smokers and "white" smokers depending on the colour of the fluids that are discharged from them. This colouring is essentially due to their composition and degree of dilution.

Fumigation

technique for treating produce and other consumer goods that involves exposing them to potentially toxic substances (biocides) as a vapour in order to preserve them.

Histopathology

Botanical or medical discipline involving diagnosis by means of a microsopic tissue assay. (living or dead tissue).

Hydrodynamic

the study of moving liquids.

Hydrolysate

the chemical breakdown of a substance by the action of water creating new molecules.

Hydrosphere

refers to the totality of terrestrial zones where water is present in either a liquid state (oceans, lakes and water courses, subterranean tables, etc.), a solid state (icecaps, ice sheets, glaciers, etc.) or a gaseous state (atmosphere).

Ichtyology

branch of natural science that studies fish.

Illegal (fishing)

"Illegal fishing refers to fishing activities: conducted by national or foreign vessels in waters under the jurisdiction of a State, without the permission of that State, or in contravention of its laws and regulations; conducted by vessels flying the flag of States that are parties to a relevant regional fisheries management organization but operate in contravention of the conservation and management measures adopted by that organization and by which the States are bound, or relevant provisions of the applicable international law; or in violation of national laws or international obligations, including those undertaken by cooperating States to a relevant regional fisheries management organization. "(FAO)

Maerl

substrate composed of living species (debris from algae, cockles molluscs, etc.). Maerl also refers to an algae present on Breton sea beds.

Manning (company)

maritime employment agency specialising in personnel recruitment and management; intermediary between seafarers and shipowners.

Microbiology

pertaining to microbiology, science consisting in the study of micro-organisms.

Unreported (fishing)

"Unreported fishing refers to fishing activities: which have not been reported, or have been misreported, to the relevant national authority, in contravention of national laws and regulations; or undertaken in the area of competence of a relevant regional fisheries management organization which have not been reported or have been misreported, in contravention of the reporting procedures of that organization. "(FAO)

Unregulated (fishing)

"Unregulated fishing refers to fishing activities: in the area of application of a relevant regional fisheries management organization that are conducted by vessels without nationality, or by those flying the flag of a State not party to that organization, or by a fishing entity, in a manner that is not consistent with or contravenes the conservation and management measures of that organization; or in areas or for fish stocks in relation to which there are no applicable conservation or management measures and where such fishing activities are conducted in a manner inconsistent with State responsibilities for the conservation of living marine resources under international law. "(FAO)

Oligotrophy

decline in nutrients in an environment. An environment is termed oligotrophic when it is (or becomes) particularly nutrient-poor.

Osmotic

refers to diffusion between two liquids of differing molecular concentration separated by a semi-permeable membrane. Osmotic pressure causes the dilute solution to flow into the concentrated solution.

Pelagic

describes the marine environment of the open sea (as opposed to the coastal zones and sea floor) and designates the lifeforms living within it.

Phagocytary (cell)

cells possessing the ability to absorb and digest foreign particles.

Photosynthetic

adjective used to describe organisms capable of photosynthesis, the process of synthesising organic matter under the action of light.

Phylum

designates an evolutionary lineage composed of species that all originate from the same ancestor.

Picophytoplankton

fraction of phytoplankton between 0.2 and 2 µm in size. This type of plankton forms a part of primary production in nutrient-poor areas such as the central zones of the oceanic water column.

Polymer

high-mass macromolecule composed of a chain of similar molecules called monomers, the atoms of which are bonded. A polymer may be organic (most frequently the case) or inorganic; natural, artificial or synthetic

Posidonia

aquatic flowering plants in the posidoniaceae family endemic to the Mediterranean (they are also found on the Australian coasts). Posidonia grass beds play a number of fundamental roles within the coastal marine environment: spawning ground, nursery, food source, oxygen production and carbon sink, erosion protection, etc.

Protozoa

single-cell organisms living primarily in water, some species of which are human parasites. A number of sub-branches contain marine organisms, such as acantharea, radiolaria actinopoda. etc.

Psychrophile

organism capable of surviving and growing in waters with a temperature close to 0°C (polar or abyssal seas).

Psychrosphere

lower section of ocean, where conditions are almost constant (temperature, salinity, etc.), irrespective of the latitude or season.

Radionuclide

chemical element that is naturally or artificially radioactive.

Trophic network

complex of interlinked food chains within an ecosystem through which energy and biomass circulate.

Single Ship Company

"for a ship-owning company, the Single Ship Company rule consists in owning only one ship, with the fleet as a whole placed collectively under the management company that manages ships that belong to different owners, thereby retaining the advantages of the fleet as a whole, whilst avoiding the disadvantages that apply to single ships". (Dunkirk Commercial Court, 24 May 1982, French Maritime Law 1988). This allows ship-owners to partition risk.

Rare earth metals

group of metals having similar properties, but some of which have unique characteristics that make them useful in a number of modern industrial applications.

Thermophile

designates an organism that requires a high temperature (between 60 and 110°C) to survive and multiply.

Triglyceride

lipid which is the main constituent of vegetable oils and animal fats. Triglycerides are an energy source stored in the adipose cells. The fatty acids that they contain can be collected by means of hydrolysis.

Upwelling

oceanographic phenomena occurring when, due to the action of strong marine winds, bottom water rises to the surface, bringing with it a significant quantity of nutrients. Upwelling zones, which are quite rare, are characterised by a cold sea that are rich in phytoplankton.

Eelgrass

a marine grass belonging to the Zostera genus. Widespread throughout the world, this genus is claimed by various different sources to include between five and thirteen species. Eelgrasses play an important role in sediment deposition, substrate stabilisation and the support of other algae.

Annex 7: Glossary of fishing techniques

Beam trawl	Net adapted from a dredge net, bag-shaped and mounted on a rigid, usually metal, frame. Beam trawls are heavily weighted to ensure good contact with the bottom despite being trawled at a speed of 5 to 6 knots. Chains are placed at the front of the net in the lower section to detach fish from the sediment and make them enter the trawl.
Bottom trawl	Conical-shaped net trawled by a boat. The mesh used for the retaining net, called a codend, is adapted to suit the target species.
Bottom-set and Drift-net	When weighting exceeds floatation, the gillnet rests on the bottom and is referred to as a bottom-set gillnet. When the net is positioned close to the surface and is not anchored, the term drift-net is used. End-to-end, the nets can span several tens of kilometres.
Cast net	Net shaped like a flared cone, weighted around its edge and held by means of a line secured at its centre, which, when cast from the shore or from a craft, catches fish by falling and closing around them.
Dredge	Metal or net basket mounted on a rigid frame. This has an opening that varies in shape and size. Its lower section is fitted with a blade or with teeth that scrape the sediment. Dredges are essentially used for collecting shell-fish. Some are used to catch sandeel which are used as bait for line-caught bass.
Gillnet	Rectangular panel of netting deployed vertically in the water; floats are mounted on the upper section whilst the lower section is weighted to hold the nets in a vertical position; netting of the panel is adapted to suit the targeted species.
Lift net	Small, raised net, generally mounted on a circular frame; it is cast into the water and raised by hand from a small craft or from the shore.
Long-line	Main line, to which hooks are attached. The long-line is either held on the bottom by means of anchors, or at the surface by means of floats. In this case it is referred as either floating or drifting. The most commonly used type in Europe is the bottom-set long-line. several thousand hooks can be set with each fishing operation.

Pelagic trawl	Trawl net that moves along in the mid-water, between the surface and the bottom, but without touching it. As with bottom trawling, there are simple pelagic nets which are trawled by a single craft, and also pair trawls, which are trawled by two craft. A pelagic trawl is, generally speaking, much larger than a bottom trawl. Its front part is made of simple twine or very large mesh, which funnels the fish into the rear section of the net.
Pot	Trap in the form of a cage or basket, used for catching crustaceans, fish or molluscs (synonym: trap).
Purse-seine	Encircling net characterised by the use of a purse-line on the bottom which closes the net like a draw-string purse which enables all of the fish caught to be retained.
Seine	Rectangular net used at the surface. Encircling seine nets can be more than one kilometre in length with a corresponding height of between 100 and 200 meters. The principle of seine fishing is to encircle a shoal of fish detected by sonar. At the end of encircling, in order to stop the fish escaping from the bottom, the net is closed at the bottom.
Square net	Coastal or estuary fishing gear, composed of a horizontal piece of netting, generally square-shaped, supported by a framework and which, after being immersed to the required depth, is periodically lifted either by hand or mechanically.
Stern trawling	Setting and hauling of trawler nets is carried out from the stern, on the centre-line of the craft, using a Gilson winch, with a ramp on the largest trawlers.
Traps	Also called pots. These have a rigid structure covered in netting, with an opening. Traps are laid in rows, with the traps all attached to one another and weighted down to make sure they sit solidly on the seabed. A "trap-setter" is a vessel that can lay several hundred traps.
Trawl	Funnel-shaped net trawled by one or two boats.
Troll-lines and Hand-lines	Very simple gear, composed of one or more hooks fixed on the end of a line. Single lines are either hauled by hand, or fixed at the end of a rod. A number of lines may be hauled simultaneously using outriggers. Lines can be either manual or automated. This technique enables very high-quality fish to be caught, which is hauled aboard alive.

Annex 8: Main conventions cited in the report

❒ **United Nations**

- ***Geneva Convention, 1958***
- ***United Nations Convention on the Law of the Sea, 1982***
- ***United Nations Convention on Conditions for Registration of Ships,1986***
- ***Convention on Biological Diversity, Conservation of Biodiversity, 1992***

❒ *International Maritime Organisation*

- International Convention for the Safety of Life at Sea, (SOLAS: Safety Of Life At Sea), 1914
- Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, known as the London Convention, 1972
- Convention on the International Regulations for Preventing Collisions at Sea,1972
- International Convention for the Prevention of Pollution from Ships(MARPOL: Marine Pollution), 1973
- Container Security Initiative, (CSI), December 2002
- Hong Kong Convention on the Safe and Environmentally Sound Recycling of Ships, 2009

❒ *European Union*

- *Bern Convention on the Conservation of European Wildlife and Natural Habitats, 1979*
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- *Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, 1989*

❒ *Regional Organisations*

- UNEP
  - Convention for the Protection of the Mediterranean Sea Against Pollution, termed the Barcelona Convention, 1976 amended in 1995
  - Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region, termed the Cartagena Convention, 1983
  - Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region and Associated Protocols, termed the Nairobi Convention, 1985
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Annex 10: Table of Acronyms

ABS	Access and Benefit-Sharing
ACRO	Association for the Monitoring of Radioactivity in the West
ADPIC	Trade-Related Aspects of Intellectual Property Rights
AEM	Action of the State at Sea
AMS	Alternator Management System
ANDRA	National Radioactive Waste Management Agency
APER	Association for Environmentally-Responsible Pleasure Boating
CBD	Convention on Biological Diversity
CEDRE	Centre of Documentation, Research and Experimentation on Accidental Water Pollution
CEI	Call for Expressions of Interest
CFP	Common Fisheries Policy
CGDD	Commissioner-General for Sustainable Development
CIMER	Inter-Ministerial Seas Committee
CMU	Overseas Maritime Council
CNES	National Space Research Centre
CNEXO	National Centre for Ocean Exploitation
CNML	National Council for the Sea and Coasts
CNTE	National Energy Transition Council
CNPMEM	National Committee for Maritime Fisheries and Farms
COML	Census of Marine Life
CORICAN	Council for the Orientation of Research and Innovation in Shipbuilding and Related Activities
CRDP	Regional Centre for Documentary Teaching Resources
CSDP	Common Security and Defence Policy
CSI	Container Security Initiative
CSIC	Conseil supérieur de la recherche scientifique - Higher Council for Scientific Research
CWC	Chemical Weapons Convention
DCP	Dispositifs conservateurs de poissons - Fish Conservation Mechanisms
EBRD	European Bank for Reconstruction and Development
EEZ	Exclusive Economic Zone
EPR	Extended Producer Responsibility
ESEC	Economic, Social and Environmental Council
EU	European Union
EUCJ	European Union Court of Justice
FAO	Food and Agriculture Organization of the United Nations
FMC	French Maritime Cluster
FNPPSF	Fédérations nationales des pêcheurs, plaisanciers et sportifs français - National Federations of French Fishermen, Pleasure Boaters and Sportsmen
FP	Framework Programme (Research and Technical Development)
FSAL	French Southern and Antarctic Lands
GICAN	Groupement des industries de construction et activités navales - Grouping of Ship-building and Related Industries
GOOS	Global Ocean Observing System
IAEA	International Atomic Energy Agency
IEA	International Energy Agency
ICCAT	International Commission for the Conservation of Atlantic Tunas
IDDRI	Institut du développement durable et des relations internationals
ICES	International Council for the Exploration of the Sea

IEA	International Energy Agency
IFM	Institut français de la mer - French Sea Institute
IFPEN	Institut français du pétrole énergies nouvelles - IFP Energies Nouvelles
IFREMER	Institut français de recherche pour l'exploitation de la mer - French Research Institute for Exploitation of the Sea
IGN	Institut géographique national - National Geographic Institute
ILO	International Labour Organisation
IMO	International Maritime Organisation
IMP	Integrated Maritime Policy - Institute for Sustainable Development and International Relations
IOC	Indian Ocean Commission
IOC	Intergovernmental Oceanographic Commission of UNESCO
IPBES	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
IPCC	Intergovernmental Panel on Climate Change
IQOE	International Quiet Ocean Experiment
ISA	International Seabed Authority
ISEMAR	Institut supérieur d'économie maritime Nantes-Saint-Nazaire - Higher Institute for Marine Economics Nantes-Saint-Nazaire
ITF	International Transport Worker's Federation
LEMA	Loi sur l'eau et les milieux aquatiques - Law on Water and Aquatic Environments
LNG	Liquefied Natural Gas
MEDDE	Ministère de l'Environnement, de l'écologie, du développement durable et de l'énergie - Ministry for Ecology, Sustainable Development and Energy
MPA	Marine Protected Areas
MRE	Marine Renewable Energies
MSFD	Marine Strategy Framework Directive
NGO	Non-Governmental Organisation UNO United Nations Organisation
NOAA	National Oceanic and Atmospheric Administration
ORGP	Organisation régionale de gestion des pêches - Regional Organisation for Fisheries Management
OTE	Ocean Thermal Energy
PAH	Polycyclic Aromatic Hydrocarbons
POGO	Partnership for Observation of the Global Ocean
RIF	Registre international français - French International Register
SAGE	Schéma d'aménagement et de gestion des eaux - Plan for Development and Water Management
SCOR	Scientific Committee on Oceanic Research
SDAGE	Programme for Development and Water Management SGMERSecrétariat général de la mer - Secretariat General for Seas
SDE	Sustainable Development Education
SHOM	Service hydrographique et océanographique de la Marine - Marine Hydrographic and Oceanographic Department
SNML	Stratégie nationale pour la mer et le littoral - National Seas and Coast Strategy
SPAMI	Specially Protected Areas of Mediterranean Interest
TAC	Total Allowable Catch
TBT	Tributyltin
UEGC	Unité d'exploitation et de gestion concertées - Joint Exploitation and Management Units
UICN	International Union for Conservation of Nature

UMS	Unité mixte de service - Mixed Research Unit
UNCED	United Nations Conference on Environment and Development
UNCLS	United Nations Convention on the Law of the Sea
UNCTD	United Nations Conference on Trade and Development
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
VLRI	Very Large Research Infrastructure
WEO	World Environment Organisation
WTO	World Tourism Organisation

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Printed by the Direction de l'information légale et administrative, 26, rue Desaix, Paris (15th arrondissement))
from documents provided by the Economic, Social and Environmental Council

Serial No.: 411130015-000713 – Legal registration: July 2013

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Communications Department of the Economic, Social and Environmental Council

PEFC 10-31-2190 IMPRIM'VERT®

OPINIONS
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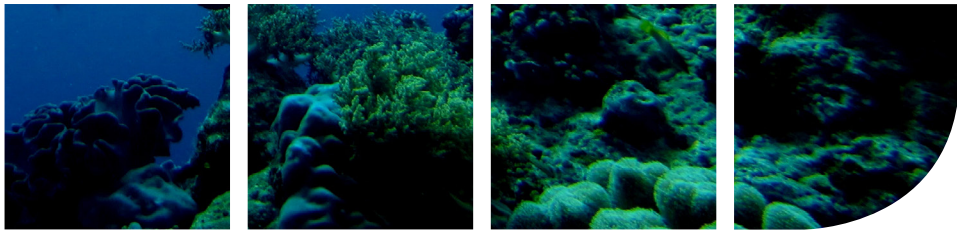
The oceans cover 71% of the Earth. Some marine resources are already being exploited, and yet they are little, and poorly, understood. Only 5% of the oceans has been systematically explored. There may be 750,000 marine species awaiting discovery.

Economic activities at sea are developing, some of which offer new opportunities such as marine renewable energy resources and biotechnologies. All of these activities raise questions as to their impacts. The framework for the governance of the oceans is complex and incomplete, especially on the high seas, where no legislation specifically protects biodiversity.

In its report, the ESEC sets out to highlight what we know, alongside what we don't know. Its opinion sets out recommendations for the promotion of new governance and a new framework for human activities designed to safeguard sustainable ocean exploitation, through the use of a joint, ecosystem approach.



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No 41113-0015 price: € 28.80
ISSN 0767-4538 ISBN 978-2-11-120919-0

9 782111 209190