



GUIDELINES
FOR A
NATIONAL OCEAN POLICY
FOR THE
ARGENTINE REPUBLIC



The Academy of the Sea

Although no one has been able to go back
and make a new beginning...
anyone can start again now
and make a new ending.

Saying attributed to the Jesuit missionary Francis Xavier, 1506 – 1552

Reason for and purpose of these guidelines

This document intends to make a contribution to the development of an Ocean Policy for the Argentine Republic. Controversial aspects have been deliberately avoided, focus being placed instead on proposals for action in areas which – while they may have been considered as very basic or descriptive of something obvious and essential– are still outstanding in the agenda for national development. The sea has been many times the object of thought, but hardly ever has it been addressed systemically.

Let us try together to plan this longed-for future!



The Argentine Republic's Academy of the Sea

The idea of establishing an Academy of the Sea in the Argentine Republic began to develop out of the interest of its 23 founding members in the course of the year 1995. It was formally established as a scientific, non-profit civil association in February of 1996. The Academy adopted as its Headquarters the Naval Centre in the City of Buenos Aires, which lends its facilities to let the Academy conduct its activities.

The purposes which, under Article 2 of its Constitution, guide the activities of the Academy are the following:

- a) Investigate, clarify, and confer prestige on, matters relating to the seas, in the broadest sense of the word, in order to contribute to the growth of the country and to the well-being of its people;
- b) Support the exercise of Argentina's jurisdictional rights in respect of maritime, aerial and space navigation; the exploration, generation, exploitation and conservation of marine resources, and traffic at sea and in ports;
- c) Promote and disseminate scientific and technological research, encouraging the corresponding studies;
- d) Stimulate the sustainable development of maritime activities in the framework of international cooperation;
- e) Extend these purposes to rivers and lakes, at national and regional levels;
- f) Develop society awareness on maritime issues.

The guiding objective of the Academy is to maintain a permanent, multidisciplinary reflection on the sea based on the diversity of its members' academic and professional backgrounds in an effort to put together the perspectives of the different scientific disciplines and thus obtain a conceptual wealth, updated with the developing knowledge on the sea.

During the eighteen years of its existence, the Academy has held more than 160 monthly Ordinary Plenary Sessions, at which very diverse topics relating to the sea have been analysed, through the interdisciplinary approach offered by the members' different disciplines and by experts invited to lecture the Academy on particular subjects.



Members conduct individual and collective research on issues of particular interest for to the Academy. These studies, and the “Inaugural Presentations” which members give on joining the Academy, shape the series of publications entitled “Thalassic Papers”. These texts, which recall the name given to the ocean in ancient Greece, are available for consultation on the Academy’s web page: www.academiadelmar.org.ar.

The Academy also organises various activities jointly with other institutions to disseminate its knowledge and raise awareness of its objectives and research work.





The Academy of the Sea

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Guidelines for a National Ocean Policy for the Argentine Republic

The ocean has always played a role in Argentina's history: trade and the defense of the territory have been linked, since before the independence of the country, with the vast Atlantic coastline where large rivers – some of which are particularly easy to navigate– flow from the interior of the continent into the sea. Argentina's maritime interests began to take shape with the thinking and proposals of Manuel Belgrano, Secretary of the Royal Consulate of Buenos Aires, between 1794 and 1810; then, during the presidency of Domingo Faustino Sarmiento (1868–1874), the modern national institutions related to the sea became consolidated. Finally, these institutions acquired their first systematic formulation at the beginning of the 20th century, with the thinking and action of a variety of ocean visionaries, among them Admiral Segundo R. Storni.

Now, a century after those important milestones, Argentina faces the challenge of taking advantage of the new applications engendered by an accelerated scientific and technological revolution for the sustainable and lasting exploitation of its resources and the preservation of its oceanic interests.

The sea, seen as one single entity made up of all the oceans and seas of the world, is complex, dynamic, broad and deep; it requires a systemic approach as a subsystem of System Earth, and contains a huge quantity of life and biodiversity. It is suffering from human actions: many marine species are at risk of extinction from over-exploitation, the pollution produced by dumping waste, and the application of immature technologies. What is happening in the sea is affecting the planet's entire ecosystem.

Argentina has an large seaboard: the areas of the sea under its national jurisdiction are larger than its whole terrestrial territory. This is an area that contains significant natural resources which can be exploited. Part of this maritime region is under a sovereignty-related controversy with a colonial power, and this affects national security.

These Guidelines for a National Ocean Policy represent a contribution of the Academy of the Sea intended to give the Argentine Republic a conceptual basis for an agreement on a National Policy that would address the universe of problems related to the sea in a syste-

mic manner and contribute to a planned course of action. The Guidelines are based on the idea that the sea is a system, which can be successfully addressed only through the understanding of its complexity and the consequences that human behaviour has on it.

A National Policy must be based on a long-term strategy which would allow the preservation of the right to enjoy the ocean to its full extent for future generations. That is why these Guidelines drawn up by the Academy are also directed at developing awareness of the ocean in Argentinian society, by means of education and culture.

Through seminars, exchanges of correspondence, debates and meetings, the Academy is striving to disseminate this document throughout Argentinian society. In this way, the Academy of the Sea joins in the reflection – which has already been going on for more than 200 years – on Argentina's oceanic interests.

Buenos Aires, 20th November, 2013.

Néstor Antonio Domínguez
President of the Academy

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Introduction

The seas, which cover 71% of the Earth's surface, are a key element in the global life-support system; acting together with the atmosphere, they help maintain the balance of gases, including oxygen; they represent one of the main habitats for biodiversity on the planet and are a source of life and resources for humanity.

This invaluable contribution offered by the sea is affected by human activity, which alters the marine environment to some degree. Frequently, such activity has a negative effect, through either negligence or the need to respond to growing demands combined with technologies that are either immature or poorly applied.

Prominent among these harmful effects are the pollution caused by continental effluents, hydrocarbon spills, naval accidents, incidents involving nuclear vessels, the disposal of contaminating waste in the depths of the seas, the discarding of fish and unwanted by-catches, overfishing, as well as attempts, not properly thought through, to fertilize the seas. Some of these attempts have taken place in parts of the South Atlantic, and were intended to produce areas of higher primary productivity and to increase the absorption of CO₂ from the atmosphere.

The international community is achieving levels of scientific and technical knowledge that now allow mankind to start identifying and quantifying some of the changes that are taking place on the earth and icecaps, in the atmosphere, the oceans, lakes, and rivers, both among one another and in relation to human activity, and, in that way, to begin to understand the impact of man's actions on the global system.

The expansion of the world's population and the extension of economic development to emerging countries are increasing both the demand for resources and the interest in exploiting vast areas of the oceans beyond coastal jurisdictions, keeping pace with the advance of new technologies. To all this we must add the emergence of new threats to international security and the persistence of actions designed to establish or impose a certain order on the seas, in accordance with the capabilities and interests of each of the various international actors, instead of as the result of international cooperation.

The demand for energy at a global level may increase by 45% by 2030; meanwhile, about 67% of the energy supplies come from fossil fuels. It is essential that this increased need be satisfied without increasing CO₂ emissions, which can be achieved only if the so-called clean, renewable and non-polluting energies are developed, (such, for instance, as biomass, solar, wind, water and geothermal, as well as energy from marine sources like waves, tides, currents, and thermal and saline gradients), and if hydrogen is produced off-

shore.

The international law of the sea has been evolving for centuries. The greater part thereof has been codified in the United Nations Convention on the Law of the Sea (UNCLOS), to which more than 160 States are party. In certain matters, however, the legal framework remains confusing, overlapping or sectorial, and otherwise affected by a multiplicity of international research, negotiation and regulatory bodies, such as the International Maritime Organization (IMO); the World Meteorological Organization (WMO); the Intergovernmental Oceanographic Commission (IOC) of UNESCO; the International Hydrographic Organization (IHO); the United Nations Environment Programme (UNEP); the United Nations Development Programme (UNDP); the Food and Agriculture Organization (FAO) and UN-Oceans, among others.

In the ocean, legal frontiers do not coincide with the ecosystems' natural ones. Natural characteristics and legal norms contribute to shape a territory subject to a complex inter-dependence, in which many national measures can be properly evaluated only by their regional and global consequences, after a reasonable period of time has elapsed.

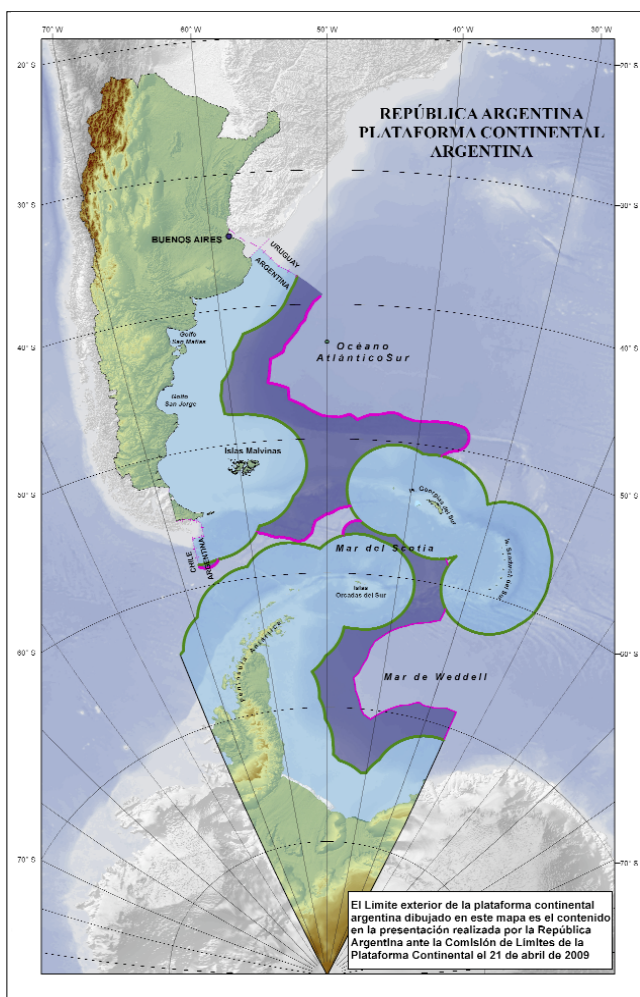
Many countries are reviewing their way of managing the environment and marine resources, as well as their presence and actions in the oceans of the world, by providing themselves with the means and the policies that are necessary to enhance their national interests in this area.

Argentina, with its extensive maritime coastline, has jurisdiction over significant areas of the South Atlantic and the inter-oceanic waterways; its activities in Antarctica must also be taken into account. The submerged territory under national jurisdiction is larger than the land territory covered by that jurisdiction. The whole area under its jurisdiction or responsibility extends to more than 16 million km².

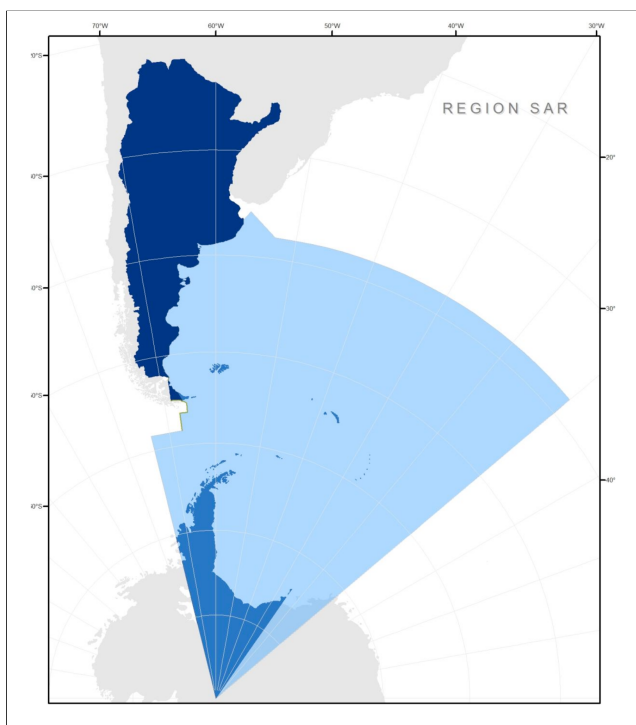
The controversy with the United Kingdom over the Islas Malvinas, South Georgia and South Sandwich Islands and the corresponding maritime and insular areas of the South Atlantic affects not only the current interests of Argentina but also its chances of new and future advancements.

This enormous natural patrimony, derived from the sea and its coastlines, is part of the permanent and vital interests of the country. Therefore, and particularly in today's international context, the National Government has to establish a strategy with the necessary long-term planning to address every issue related to the sea in a coordinated and fiscally sustainable way. This course of action must be pragmatically integrated with the national foreign policy, thus embodying a genuine National Policy.

The outline of an ocean policy ought, therefore, to start from the identification of the interests involved; to this end, essential principles and criteria constitute these Guidelines' basic assumptions. Based on these principles and criteria, an action plan has been sketched out that tries to assert the interests thus far identified, as well as the defense of national sovereignty over territories and resources, the full enforcement of applicable domestic and international law, and an integrated administration of the sea and its shores.



Maritime Argentina: Exclusive Economic Zone and extension of the continental shelf



The SAR area of responsibility of the Argentine Republic

Extent:

Northward:

35° 38' S / 55° 52' W

Eastward:

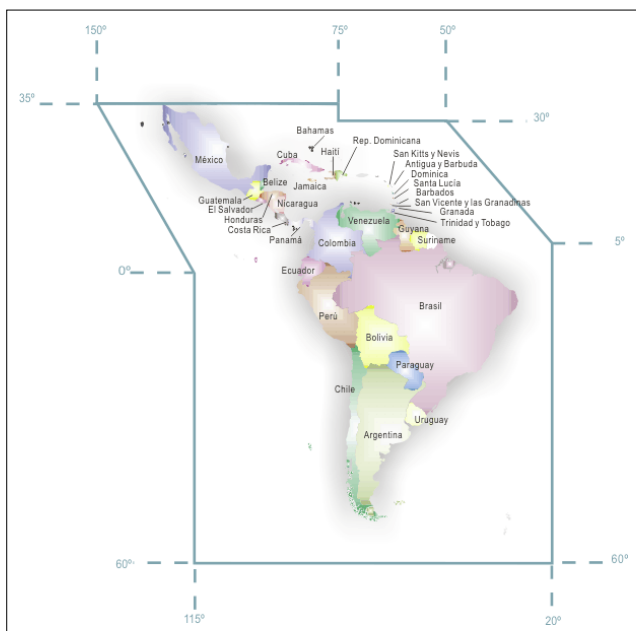
37° 56' S / 10° 00' W as far as the South Pole

Westward:

58° 21'.1 S / 74° 00' W as far as the South Pole

A total of approximately:

16,136,748 km²



Area of application of the Treaty for the Prohibition of Nuclear Weapons in Latin America and the Caribbean (Treaty of Tlatelolco)

Areas under the jurisdiction of the Argentine Republic	
Argentine Territory both insular and on the American continent	2.791.810 km ²
Argentine Antarctica	965.597 km ²
Waters under national sovereignty and jurisdiction, from the baselines to a distance of 200 NM	4.799.732 km ²
Continental shelf from the 200 NM to the outer limit submitted to the Commission on the Limits of the Continental Shelf (CLCS)	1.781.885 km ²
Search And Rescue area of responsibility (SAR)	16.136.748 km ²

Prepared by the [Argentine]Naval Hydrographic Service based on its own data and those of the National Geographic Institute [of Argentina].

1. General principles for a National Oceanic Policy

The Lawrence Hall of Sciences and the College of Exploration of the University of California (Berkeley) maintain a web site called Ocean Literacy, where seven principles considered essential in relation to the ocean are defined:

- The Earth has one big ocean with many features.
- The ocean and life in the ocean shape the features of the Earth.
- The ocean has a major influence on the weather and climate.
- The ocean makes the Earth habitable.
- The ocean supports a great diversity of life and ecosystems.
- The ocean and humans are inextricably interconnected.
- The ocean is largely unexplored.

The following principles are postulated to link the ocean with the specific peculiarities of Argentinian society and, thus, to help arrive at a definition of its maritime interests. These principles seek to guide, in a general manner, that society's thinking and conduct in relation to the sea:

1.1. Use of knowledge. Use the best scientific and technological information available in all areas of knowledge.

1.2. **An interdisciplinary and systemic approach.** Ensure the existence of a dynamic and interdisciplinary dialogue between all actors involved to promote a systemic conception of the sea that be institutionally articulated both at the political and scientific levels, and adapted to insure adequate ocean management and national marine awareness.

1.3. **Safe, healthy oceans for the present and future generations.** Guarantee that oceans remain healthy and safe, with adequate safeguards for biodiversity, for the benefit and prosperity of the present and future generations.

1.4. **Exploring, assessing, exploiting and using sea and shore resources within a framework of sustainable economic development.** Use and exploit marine resources in a rational and sustainable manner.

1.5. **International participation and harmonization.** Participate actively in the making of international policies on the exploitation and administration of resources that constitute the common heritage of mankind. Seek to harmonize national with international policies in conformity with national interests.

1.6. **Precautionary approach.** Apply the precautionary approach whenever there is a lack of consensus or sufficient information.

1.7. **Dialogue among governmental actors, individuals and private associations.** Identify and agree, using a systemic approach, on the various Argentinean interests in the sea both within and beyond its areas of jurisdiction, using mechanisms that would involve the various governmental and private actors, in an attempt to resolve certain recurring conflicts which have a serious environmental impact, such as those which hamper a reasonable relationship between conservation and development, public and private interests, national and provincial interests, global and local perspectives, as well as those arising from the competing interests of different actors.

1.8. **Free exercise of rights.** Develop the capacity to exercise fully the applicable rights over the sea, its use and its resources, developing a broader presence in all areas where one's own interests so require.

1.9. **Capacity and participation:** Analyze the local problems relating to the sea taking into account the global information available in order to draft national policies that are compatible both at regional and global levels. Have the techno-scientific knowledge enriched by experience, the capacity for systematic observation and, above all, a determined and explicit political will to take action in ocean matters.

1.10. **Maritime education and awareness:** Foster a national marine awareness through education and other available means.

2. Objectives of the National Oceanic Policy

To define and strengthen Argentina's interests in the sea, its sovereign rights and the development of a national marine awareness, to make the most of existing resources and provide, moreover, a conceptual framework for their defense, conservation and use in a viable, sustainable manner.

3. Range of application of the National Oceanic Policy

- 3.1. The geographical range of application is the ocean and its coasts, but, depending on the circumstances affecting the analysis, it may be extended to other areas of influence (like rivers and lakes).
- 3.2. The thematic range includes all disciplines related to the sea, which may be brought together as follows:

Techno-Scientific Scope:

- a) Research and development of marine sciences and technologies with a trans-disciplinary approach.
- b) Research into non-conventional energies (such as wave, tide and marine-currents).
- c) Increased navigational security in areas of interest.
- d) Ecologic systemic evaluation of the sea and its resources to contribute to a more significant offer of environmental services.
- e) Science in diplomacy, diplomacy for science and science for diplomacy (see Glossary).
- f) Applied Ocean Engineering.

Political and Legal Scope:

- a) Environmental administration and coastal management.
- b) Law of the Sea and Maritime Law.
- c) Institutional development.
- d) Geopolitics, thalassic politics and geostrategy.
- e) Territorial planning and, in particular, coastal management and legislation.
- f) Common heritage of mankind (high seas, seabed, etc.).
- g) Foreign policy, defense and security.

h) National and international rivers and lakes which flow directly into the sea.

Economic Scope:

- a) Marine pollution.
- b) Marine sources of non-conventional energy (waves, tides, marine currents, etc.).
- c) Marine industry able to contribute both to the defense of national maritime interests and to exploration for, and exploitation of, ocean resources.
- d) International trade.
- e) Offshore mining.
- f) Fisheries and aquaculture.
- g) Offshore oil and gas.
- h) Ports.
- i) Transport by water.
- j) Genetic resources.

Cultural Scope

- a) Underwater archaeology.
- b) Marine sports and leisure sailing.
- c) Marine education and culture.
- d) Argentinian history bound to the sea.
- e) Tourism and recreation.

4. Action Plan for a National Oceanic Policy

To achieve the objectives of this oceanic policy, it is essential to put into place an action plan drawn up in accordance with certain general criteria which would later turn into concrete actions.

The following criteria may be considered, in no particular order of priority:

Observation and knowledge

1. Systemically develop and integrate the various observatories which involve both remote sensors and in situ observations. These observatories should be focused on the analysis of the environmental aspects, on the analysis of the direct and indirect uses of marine territories, and on the analysis of the evaluation of resources, both renewable and non-renewable. Integration of all this information should be fed into models for predicting the main oceanic climatological, economic and social phenomena. These observatories must also be used to keep track of the available technologies and information for all uses

of the sea.

2. Promote knowledge of basic and applied sciences with incorporation of state-of-the-art technologies in all matters relating to the sea.

3. Integrate research on marine and related areas with its applications.

4. Continuously assess the existence of, and opportunities offered by, the resources of the sea and its coasts, favoring the rational exploration for, and exploitation of, the same.

5. Enhance the National System of Sea Data.

6. Develop a marine energy matrix.

Planning

7. Incorporate ocean and coastal matters into national planning.

8. Integrate planning for sea and land areas.

9. Supervise, both quantitatively and qualitatively, what has been planned and implemented, incorporating continuous evaluation concepts. Consider the adoption of indicators to evaluate the conditions and utilization of coastal and maritime areas.

10. Establish clear planning timetables to keep actions on track.

11. Integrate planning and decentralize administration, with community participation.

12. Develop a strategic approach to marine energy.

Administration

13. Accord equal political importance to all national territories, both on land and at sea.

14. Integrate the management of coastal zones and their areas of influence with that of adjacent marine and fluvial territories.

15. Maintain coordinated national strategies, positions and policies at all sea related fora.

16. Set up an economic evaluation program for marine activity to quantify the national efforts on marine affairs.

17. Set up a federal agency, autonomous and financially self-sufficient (within the National Executive Power), to administer the National Ocean Policy by calling together governmental agencies, individuals, and private organizations committed to marine issues. In parallel, create within the Office of the Chief of Cabinet a specific area to control and supervise compliance with, and administration of, the National Ocean Policy in every area of government.

18. Coordinate economic activities related to the sea (like fishing, aquaculture, mining, energy — particularly offshore renewable energy —, transportation by sea, ship building, tourism and cultural activities, amongst others), in an effort to maintain a common approach to national oceanic affairs.

19. Develop waterways and their port facilities, to benefit from the advantages of fluvial and oceanic shipping as compared to other means of transportation (both in terms of economic costs and environmental consequences).

20. Promote sport sailing and the development of ports that contribute to its safe practice.

Education and Culture

21. Incorporate maritime, environmental and technical topics into national and provincial study curricula at both primary and secondary levels of education.

22. Educate and act with a view to the sustainable development of maritime regions on the basis of economic, environmental and socio-cultural pillars.

23. Develop a national marine awareness by means of cultural activities such as programmes of conferences, museums, aquaria and the preservation of sites of subaquatic value.

24. Contribute to the updating of the study curricula of educational institutions on topics related to the sea.

25. Promote the establishment of institutes, laboratories and research centers related to

maritime interests.

Prevention

26. Develop a flexible response system to deal with the different kinds of oceanic emergencies (severe storms, floods, red tides, etc.)

27. Track global climate change, through data and analyses, and develop means of prevention and plans for mitigation y adaptation. Ensure flexibility in the use of information from multiple sources.

28. Apply the following criteria to the consequences of pollution, both of marine and land origin, on marine areas:

- Prevent contamination.
- Combine prevention with control of contamination in the sea areas under the sovereignty or jurisdiction of Argentina, enforcing UNCLOS, IMO Conventions and other applicable international legal instruments.
- Continuously update legislation dealing with human impact and apply due penalties to those who damage the marine environment.
- Maintain permanent controls on the marine environment and ecosystem.

Security and Defense

29. Develop actions to project the national interests in the marine areas, boosting the presence of the national flag, and the security and defense of the areas and resources under the jurisdiction of the country.

30. Continue to ensure the safeguarding of human life at sea.

31. Conserve and protect marine biodiversity.

32. Consolidate jurisdictional boundaries and contribute to the administration of the resulting areas.

33. Promote the peaceful use of the sea, including observance of the zones free of nuclear weapons , as established by international treaties.

34. Contribute to the maintenance and updating of the observation network and the oceanographic, environmental and socio-economic databases, so that they may also be

used for defense and security.

Dissemination

35. Diffuse marine data and information, so that they can be used as elements of analysis and support for decision-making by both public and private agents.

36. Complete, keep updated, and encourage the use of national cartography in all significant marine areas.

37. Link nautical cartography to planning for marine spaces.

38. Allow the development of, and stimulate the participation of, the population in one's own marine areas and those of interest, in accordance with both domestic and international law.

39. Identify, protect and enrich the marine and submarine patrimony.

Glossary

The expressions used, and some concepts which stem implicitly from this document, should be interpreted as follows:

Area of Search and Rescue Responsibility: The area assigned to the Argentine Republic by the International Convention on Maritime Search and Rescue, 1979 (The SAR Convention).

Argentine's Antarctic Sector: Antarctic Territory claimed by the Argentine Republic.

Baselines: Lines along the coast that separate internal waters from the territorial sea waters^{IV}.

Continental shelf: National territory beneath the sea.

Continental territory: National land mass which is part of the American Continent.

Insular Territory: Islands and their surrounding maritime areas which belong to the national territory.

Interest: The "Diccionario de la Lengua Española" (Dictionary of the Spanish Language of the Spanish Royal Academy) in its 22nd Edition of 2001, defines interest as "*Convenience*

or benefit in the moral or material order". Hans J. Morgenthau, in his book "Politics among nations. The struggle for power and peace", affirmed that an interest is the permanent parameter by which political action ought to be judged and guided.

National interests: Those which guarantee the existential identity of a nation and, as such, are also the objectives of its foreign policy. Ambassador Vicente G. Arnaud, member of the Academy, says in this regard: *"The 'national interest' is an ambiguous concept, with no precise definition, but it is a factual reality. The important thing about the national interest is not to define it, but to identify it and that it ought to contain the only objectives of any government and of any policy: the wellbeing of the population and the development and territorial integrity of the country. In identifying it, convenience, usefulness and benefits should coincide with an ethic based on reason, because without it, there is no rationality. Identification of the national interest should lead to the adoption of State Policies, not just government ones, for the latter are subject to change. Policies, some temporary and others permanent until they have been carried out, on which there is majority agreement among the political parties, the various classes and interests of the population and public opinion, that require the provision of the means to implement them"*^{III}.

National marine awareness: Understanding on the part of a society of its own maritime interests.

Permanent interest: An interest which links the existence of the nation with its future. Morgenthau considers national interests as permanent when they are relatively constant over long periods, although they can evolve slowly.

Permanent vital interests: Those which link the existence of the nation with its future, and which, in extreme cases, can lead to the use of force. For the purposes of these Guidelines, those interests are related to sovereignty and independence, territorial and maritime integrity, as well as to self-determination, freedom and the wellbeing of the population.

Precautionary approach: "In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation"^V.

Science in diplomacy, informing foreign policy objectives with scientific advice; **diplomacy for science,** seeks to facilitate international cooperation, whether in pursuit of top-down strategic priorities for research or bottom-up collaboration between individual scientists, and **science for diplomacy,** using science cooperation to improve international rela-

tions between countries¹. These concepts are related to the idea of “soft power”, introduced by Professor Joseph Nye in Harvard in 2004. This very relationship can be applied between science and the law of maritime interests, as expressed by Dr. Ariel W. González¹¹.

Sustainable (when used in the Spanish version of this document as “sostenible”): In March 1987, the World Commission on the Environment and Development, established in 1983 by the United Nations by Resolution 38/161 of the General Assembly, produced a report entitled “Our Common Future”, also known as the “Brundtland Report” after Madam Gro Harlem Brundtland, ex-Prime Minister of Norway and chairperson of the Commission. The report coined the emblematic expression “sustainable development”, which translates into Spanish as “desarrollo sostenible”.

The United Nations General Glossary of Terminology and Translation (2001) translates “sustainable” as *“que puede mantenerse, duradero, perdurable, continuo, persistente, viable, estable, tolerable, soportable, aceptable, sostenible”*.

The “Diccionario de la Lengua Española” (Dictionary of the Spanish Language of the Spanish Royal Academy), in its 22nd Edition of 2001 defines “sostenible” as follows: *adj. Of a process: That which can be maintained by itself as, for instance, economic development with no external assistance or reduction of existing resources.*

Sustainable (when used in the Spanish version of this document as “sustentable”): Dr. Ariel J. Lorefice states in a letter to the “La Nación” newspaper issued on 14th January 2004 that *“in 1970, with the UNESCO decision to encourage the establishment of biosphere reserves, the notion of sustainable development became entrenched as the priority objective to stimulate areas of ecological reserve, to contain not only flora and fauna species at risk of extinction, but also to support human presence in the framework of sustainable development, i.e. to allow the exploitation of natural resources without degrading them or placing their biodiversity at risk”*.

The “Diccionario de la Lengua Española” (Dictionary of the Spanish Language of the Spanish Royal Academy), in its latest 22nd Edition of 2001 defines “sustentable” as follows: *adj. That can be sustained or defended by arguments.*

Systemics: *“An open set of concepts, models and practical tools useful for a better understanding and eventual management of complex situations or entities of any type”^{vi}.*

Techno-science: A term which designates the complex interweaving of contemporary science and technology in so far as its intentional applications.

Transdisciplinarity: *“The general characteristic of cybernetic and systemic concepts, methods and models which provide specialists with a metalanguage for the study in common of complex situations in systems”^{vii}.*

Vital interest: One for the defense of which a society is prepared to use force as a last resort.

ANNEX I

Legal instruments

National

- **National Constitution.**
- **Law 15802.** Ratification of the Antarctic Treaty.
- **Law 17094.** Extension of Argentina’s sovereignty over to the continental shelf and the territorial waters.
- **Law 19922.** Hydrographic Law.
- **Law 20094.** Shipping Law.
- **Law 20645.** Treaty of the Río de la Plata and its maritime front.
- **Law 22445.** Approval of the International Convention on Maritime Search and Rescue, 1979.
- **Law 22584.** Convention on the Conservation of Antarctic Marine Living Resources.
- **Law 22963.** Law on National Cartography.
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- **Law 24815.** National Commission on the Outer Limit of the Continental Shelf.
- **Law 24922.** Federal Fishing Regime, with its Regulatory Decree No. 748/99.
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- **Law 25675.** National Environmental Policy.
- **Law 26107.** Approval of the Agreement on the conservation of albatrosses and petrels.
- **Law 26120.** Approval of Agreement on the Privileges and Immunities of the International Tribunal for the Law of the Sea.
- **Law 26154.** Promotional system for exploration and production of hydrocarbons.
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