



National and Kapodistrian
University of Athens
Faculty of Law



Athens **PIL**
Athens Public International Law Center

Marine SCIENTIFIC RESEARCH

The role of the state

Matina Papadaki

*PhD Candidate, National and Kapodistrian University of Athens, Law Faculty

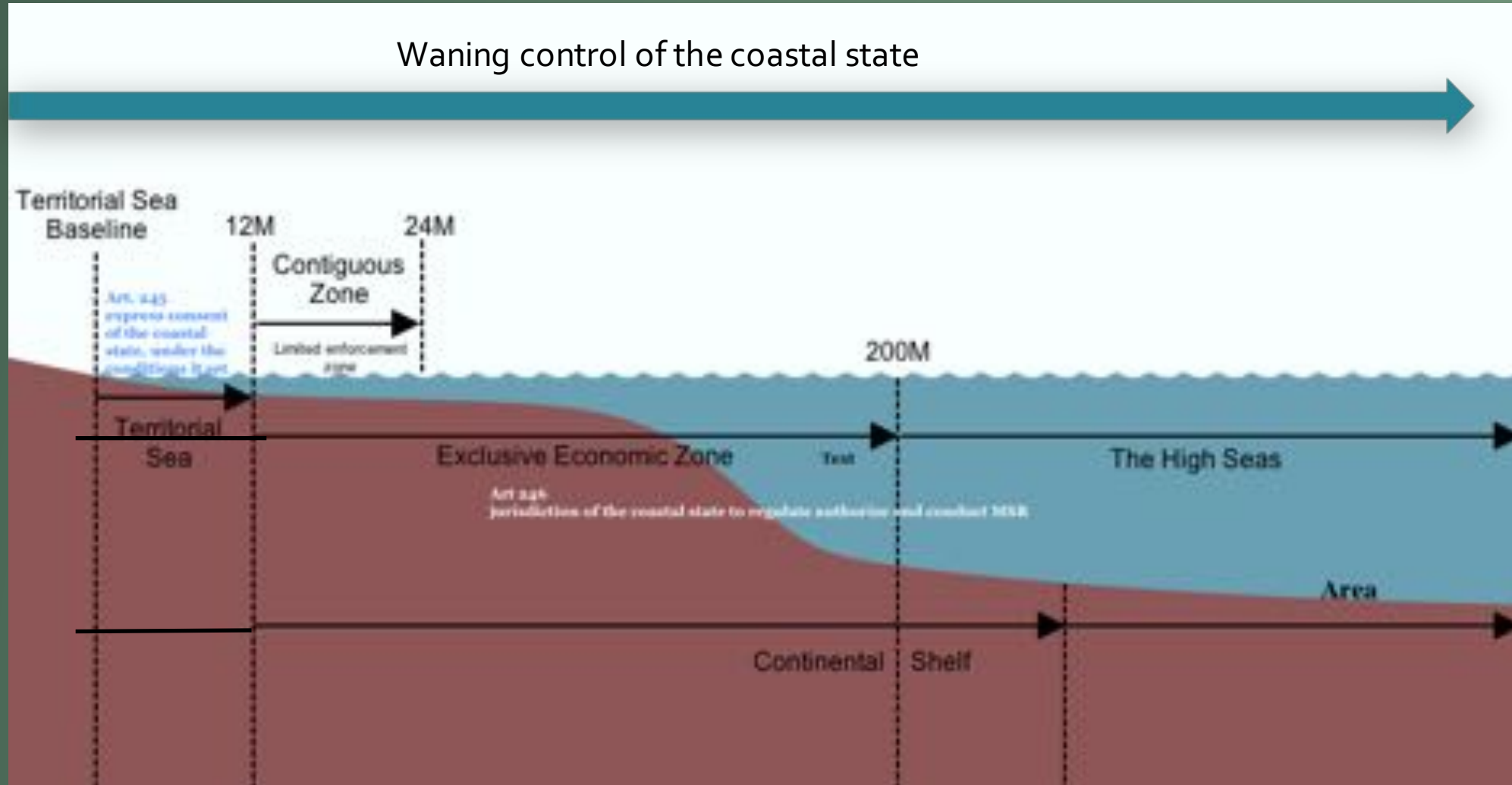
*Guest at the Max Planck Institute Luxembourg

PART XIII of the LOSC - Questions

- A. A thorny issue: The Definition of MSR and its ramifications
- B. Energy and MSR → is it regulated by the LOSC?
- c. The role of the coastal state in the conduct of MSR

Zones under the Jurisdiction of the Coastal State

Waning control of the coastal state



Section I General	Section II Cooperation	Section III Conduct	Section IV Installations and Equipment	Section V Responsibility Liability	Section VI Settlement of Disputes
<p>2 general provisions: right Art. 238 and obligation Art. 239</p>	<p>Promotion of cooperation Art. 242 (BUT not without limitations)</p>	<p>Zonal approach Arts 245, 246, 256, 257</p>	<p>Zonal approach Art. 258</p>	<p>Art 263 The <u>researching State or organization</u> should: -ensure accordance with LOSC</p>	<p>Art. 264 → referral to part XV, sections 1 and 2</p>
<p>4 principles Art. 240</p>	<p>Creation of favourable conditions Art. 243</p>	<p>Other Actors -IOs, Art. 247, -neighbouring, landlocked, geographically disadvantaged states 254</p>	<p>Legal Status Art. 259 : a triple negative</p>	<p>The <u>researching State or organization</u> is liable and responsible for measures contravening LOSC an should provide compensation</p>	<p>Interim measures → pending settlement, activities should not commence or continue without the coastal state's authorization</p>
<p>1 prohibition Art 241</p>	<p>Publication and dissemination of knowledge Art. 244</p>	<p>Procedure Arts 247, 248, 249, 250, 251, 252, 253</p>	<p>Attributes, Conditions -Potentially safety zones Art 260, mandatory identification markings Art. 262 -Non interference Art 261</p>	<p>The <u>researching State or organization</u> is liable and responsible for pollution resulting from MSR</p>	<p>Limitation 297(2) -right or discretion not to authorize -order suspension or cessation in accordance with Art. 253</p>

MSR (NON) Definition and the zonal approach

- **1958 UN Convention on the Continental Shelf:** Art 5(1) the exploration and exploitation of the CS should not “result in any interference with *fundamental* oceanographic or other scientific research carried out with the *intention of open publication*.”

AND Art 5(8): “the coastal State shall not normally withhold its consent if the request is submitted by a qualified institution with a view to **purely scientific research** into the physical or biological characteristics of the continental shelf”

MSR (NON) Definition and the zonal approach

- **1973 UNCLOS III, Third Committee:** “any fundamental or applied research and related experimental work, conducted by States and their juridical and physical persons, as well as by international organizations, which **does not aim directly at industrial exploitation** but is designed to **obtain knowledge** of all aspects of the natural processes and phenomena occurring in the ocean space, on the seabed and subsoil thereof, which is necessary for the peaceful activity of States for the further development of navigation and other”

MSR (NON) Definition and the zonal approach

- **1976 Informal Single Negotiating Text:** “For the purpose of this Convention, ‘marine scientific research’ means any study or related experimental work designed to increase mankind’s knowledge of the marine environment” (art 49)
- **1977 Informal Single Negotiating Text → LOSC Part XIII : NO DEFINITION**

Art 246: Normal circumstances vs Withholding of consent

Normal circumstances: exclusively for peaceful purposes, to increase knowledge for the benefit of all mankind.
Circumstances are considered 'normal' even in the case of lack of diplomatic relations.

Discretion to withhold consent if

1. Is of **direct significance to exploration and exploitation** of living & non-living resources
2. Involves drilling, explosives, harmful substances
3. Involves the construction of **artificial islands, installations or structures**
4. **Inaccurate information** have been provided or there are **outstanding obligations** of the researching party

MSR vs exploration and exploitation

- Art. 56(1)

In the exclusive economic zone, the coastal State has:

- (a) **sovereign rights** for the purpose of exploring and exploiting, conserving and managing the natural resources, whether living or non-living, of the waters superjacent to the sea-bed and of the sea-bed and its subsoil, and with regard to other activities for the **economic exploitation and exploration** of the zone, such *as the production of energy from the water, currents and winds*;
- (b) **jurisdiction** as provided for in the relevant provisions of this Convention with regard to: (i) the establishment and use of artificial islands, installations and structures; **(ii) marine scientific research**; (iii) the protection and preservation of the marine environment; (c) other rights and duties provided for in this Convention.

What MSR is not

- prospecting for and exploration of natural resources
- hydrographic surveys (for enhancing the safety of navigation)
- military activities including military surveys
- activities related to the laying and operation of submarine cables
- environmental monitoring and assessment of marine pollution pursuant to section 4 of Part XII of the Convention
- the collection of marine meteorological data and other routine ocean observations

Jurisdiction- The 3 Ws

Regulatory Authority*

Activity	Territorial sea	EEZ/Continental Shelf	High Seas	The Area	Straits/ASL
Marine scientific research	Coastal State	Coastal State	Flag State	Flag State/ ISBA	Strait State/ Archipelagic State
Hydrographic survey	Coastal State	Flag State	Flag State	Flag State	Strait State/ Archipelagic State
Military survey	Coastal State	EEZ: Flag State; Shelf: coastal State	Flag State	Flag State	Flag State
Operational oceanography	Flag State/ Coastal State	Flag State	Flag State	Flag State	Flag State
Explore/exploit natural resources	Coastal State	Coastal State	Flag State	ISBA	Strait State/ Archipelagic State
Explore/exploit UCH	Coastal State	Flag State	Flag State	Flag State	Strait State/ Archipelagic State

ISBA= International Seabed Authority.

*Captain J. Ashley Roach. Defining Scientific Research: Marine Data Collection. Law, Science & Ocean Management / ed. Myron H. N., Long R., Heidar T. H. and Moore J. N. Martinus Nijhoff Publishers (2007), p. 566.

Different Definition- Different Legal Regimes

4 partite division (A. Roach)

- MSR → furthering of knowledge, consent under normal circumstances
- Surveys → hydrographic, military: safety of navigation high seas freedom beyond the territorial sea
- Operational oceanography → buoys, Argo floats
- Exploration/ exploitation: natural resources, *energy*

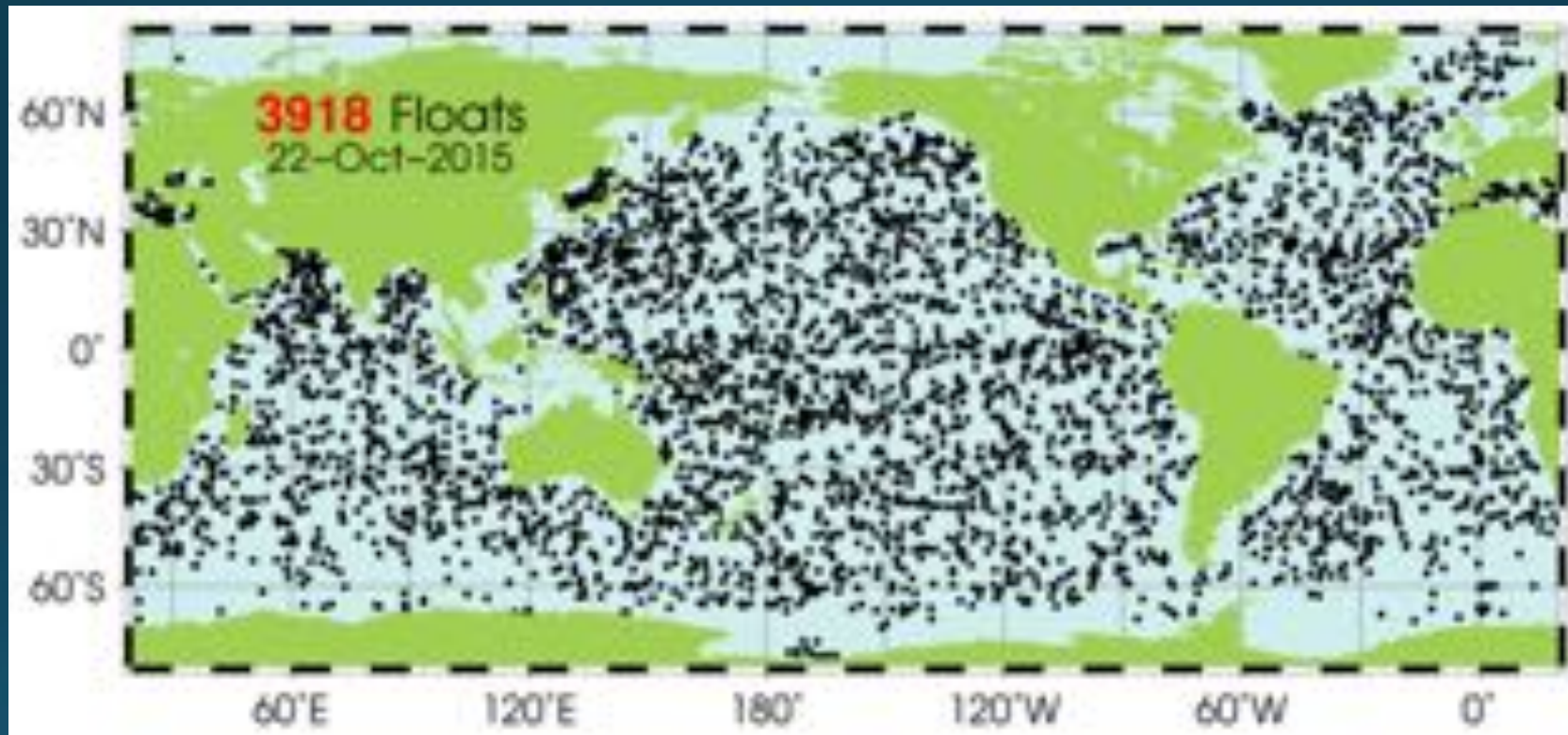
Similarities

- Means usually the same
- Data can be the same

Distinguishing features

The parameters and their intended use is what distinguishes the different forms of data collection

That SIMPLE? The Case of Argo floats



Article 251- A hook to incorporate soft law guidance?

- IOC ABE/LOS soft law to implement Part XIII → Resolution EC-XLI.4 **Guidelines for the Implementation of Resolution XX-6 of the IOC Assembly Regarding the Deployment of Floats in the High Seas within the Framework of the Argo Programme :**

1. In accordance with Resolution XX-6, an IOC Member **State must be informed in advance, through appropriate channels, of the deployment in the high seas of any float within the framework of the Argo Programme ...]** that may enter its EEZ. [...]

3. Whenever an Argo Programme float deployed in the high seas might drift into the EEZ of an IOC Member State that has requested the notification referred to in paragraph 1, the implementer of such Argo Programme float will notify the Argo focal point of the IOC Member State, **by transmitting to it, reasonably in advance of the expected entry of the float into the EEZ,** the following information:

- type of the float deployed, date and geo-coordinates of location where the float was deployed in the high seas; date and geo-coordinates of latest location of the float; contact information of the implementer; parameters and variables being collected by sensors; other information that the implementer might consider of interest; other Argo Programme float information that the coastal State might consider of interest, as specified in the original notification.

How is research with relation to Energy at Sea conducted?

- Can searching for mineral resources be MSR?
- Other forms of energy production:
 - i) Ocean thermal energy
 - ii) Tidal energy
 - iii) Salinity gradient energy
 - iv) Wave energy
 - v) Wind energy

Can they fall under LOSC rules and definition of MSR?

Questions

1. Situ
2. Intention

MSR and Energy at Sea

- Theoretically, it would either be related to exploration and exploitation of resources and thus not MSR, or will fall under 246(5) being of direct significance to the state's exploration and exploitation of resources, so the state could withhold consent.
- Practically, wave, tidal, thermal and offshore wind research is conducted **mostly** in labs and **near shore**, not beyond the territorial sea of a state due to technological constraints (eg cost effective transfer of energy to the shore)

EXAMPLE

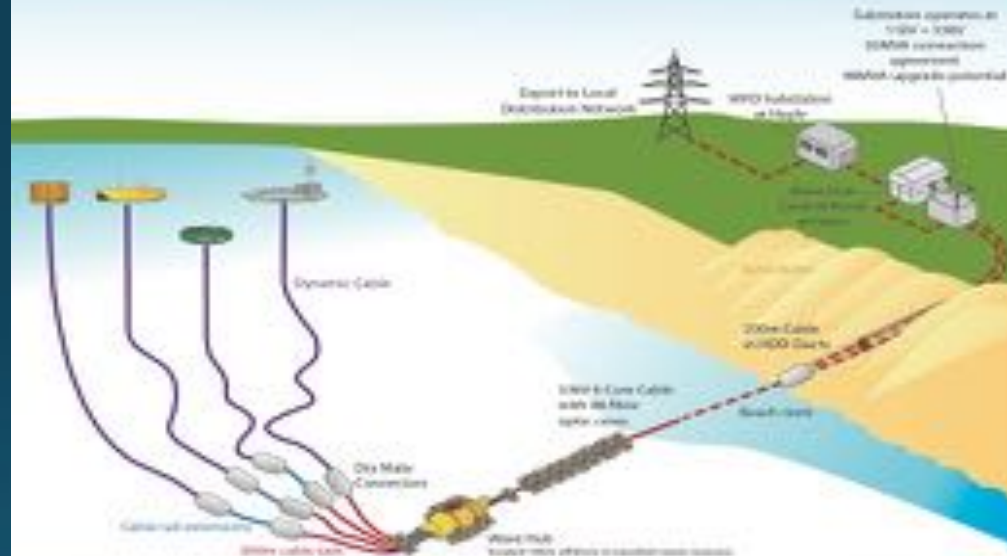
Advancing Offshore Renewable Energy

Wave Hub

Wave Hub is the world's largest and most technologically advanced site for the testing and development of offshore renewable energy technology.

Located 16km offshore in the eastern extremes of the Atlantic Ocean Wave Hub offers:

- Four berths for testing offshore renewable energy technology
- Purpose built, pre-installed, grid connected infrastructure with a 30MW export capacity, upgradable to 40MW
- Fully consented site with a 25 year lease
- Water depths ranging from 48m - 58m
- One of the best wave climates in Europe
- Full remote monitoring via fibre optic connection
- Wave climate monitoring
- Full range of baseline data
- Proximity to a variety of ports and associated facilities
- Access to expert academic institutions specialising in offshore renewables
- Access to funding support
- A dedicated operational team



Wave Hub was funded by the UK Government and the European Regional Development Fund Convergence Programme. It is owned by the Department for Business, Innovation & Skills (BIS) and operated by Wave Hub Ltd, a not for profit company with five key objectives:

- Accelerate and support the development of offshore renewable energy technology
- Drive research and innovation to address the challenges of deploying at large-scale
- Overcome the final hurdles to full commercialisation
- Foster a growing offshore renewables industry in Cornwall and the UK
- Secure the UK's position as a global leader in offshore renewable energy



- The site is leased (25 yrs lease)
- Access to expert academic institutions
- Wave Hub was granted consent in 2007 under Section 36 of the Electricity Act 1989. Wave Hub also has a licence under Section 34 of the Coastal Protection Act 1949 (CPA) and licences under Part II of the Food and Environmental Protection Act (FEPA) 1985 for the installation of Wave Hub, its subsea cable and the stabilisation and protection of the cable by rock armouring.
- Developers coming to Wave Hub need to apply for their own Marine Licence.

Procedure FOR MSR IN the EEZ and CS

I. MSR Request

To: Coastal State for consent (Art. 246) & notification to Neighbouring landlocked and geographically disadvantaged state (Art.254)

When: At least 6 months prior to MSR (Art. 246)
Through: Official Diplomatic Channels (Art. 250)

The request must (arts 248, 249, 252, 253)

1. Contain accurate info re object, means, nature, location, equipment, person(s) in charge and sponsoring institution
2. Make sure that there are no outstanding obligations
3. Undertake to ensure the participation/presence of the coastal state
4. Undertake to provide access of the coastal state to data and samples if requested

I.O: (Art 247) bilateral agreement, approval of detailed project or willing to participate

II. MSR Response from the Coastal State Stage

Under normal circumstances:
-Consent 246(3)
-Implied consent 6 months after request (Art. 252)

In cases of exploration and exploitation, drilling, introducing potentially harmful substances (Art. 246(5)):
Discretion to grant consent

Implied consent does not apply if the coastal state within 4 months of the request:
- has withheld consent
-outstanding obligations
-manifestly evident divergence of goals of the project and facts
OR
-demands further info

III. MSR Conduct

The researching state of IO **must** (Art. 249)
-Provide preliminary reports
-Inform of any major change

The coastal state can suspend or cease the MSR if it is not conducted in accordance with the info received (art. 248) or it does not comply with its obligations (art. 249)→ **IF** rectified within a reasonable period of time the coastal state **SHALL** allow resumption of MSR

IV. After MSR Completion

In all cases (Art. 249)
-provide final results and conclusions to the coastal state
-if requested provide assessment of data, samples, results, or assistance to their assessment/interpretation
-remove installations/equipment unless otherwise agreed

AND ensure that the results are made internationally, available **UNLESS** in cases of withholding of consent, prior agreement of the coastal state is required

The Problem of coherence of procedures

- The need for an MSR office in every state
- Problems that arise especially for researchers
- Resulting in “thickening” or “creeping” of coastal state jurisdiction

Domestic Legislations and Empirical studies

- **1989**- National Legislation, Regulations and Supplementary Documents on Marine Scientific Research in Areas Under National Jurisdiction
- **2009**- Practice of IOC Member States in the Fields of Marine Scientific Research and Transfer of Marine Technology-
- HELCOM (**2015**), BALSAM Project 2013-2015: Report on Procedures for Granting Permits for Monitoring and Research Activities in the Baltic

The Procedure in Greece

- No official domestic legal act regulating the process
- Note Verbale of the 31st January 1978:

Step A: Request through foreign embassy to D1 Directorate of the Hellenic Ministry of Foreign Affairs 2 months prior to the proposed commencement of the project

Step B: Assessment by an informal Committee, the Committee for the Licensing of Marine Scientific Research, which operates since 1977 under the supervision of D1 Directorate.

Step C: The CLMSR advises the Minister of Foreign Affairs who makes the final call.

STANDARD REQUIREMENTS

- a) in case of discovery of antiquities port state authorities should immediately be notified;
- b) the Hydrographic Agency of the Greek Navy and the Coastguard should be duly notified 72 hours prior to the commencement of the project
- c) during the conduct of the research there should be communication with the Hydrographic Agency via all the usual means. In case the AIS is closed, the vessel should notify the competent authorities every 8 hours.
- d) Within 6 months from the end of the research, all the raw data should be sent to the Hellenic Centre for Marine Research and the Hydrographic Agency.

FREQUENT ADDITION

- A representative of the Hellenic Centre for Marine Research or of the Ministry of Culture (for the preservation of underwater culture heritage) can be on board.

US Procedure+ Definition of MSR

- The USA MSR policy is formulated and implemented by the Office of Ocean and Polar Affairs (OPA) within the Department's Bureau of Oceans and International Environmental and Scientific Affairs (OES)
- The process is very transparent and easily accessible to the wider public

MSR Requests to the USA

U.S. Department of State
Marine Science Research Application Tracking System

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Provide search criteria using the form below.

Cruise Number:
Chief Scientist: All Chief Scientists Platform Name: Select...
Platform Operator: All Platform Operators Coastal State: All Coastal States
Start and/or End Date between: 1/1/1990 AND 1/1/2015

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Search Results

Total Applications Returned: 3991

Cruise Name	Cruise Number	Start Date	End Date
R01-14-Ogona	U2014-030	7/5/2014	8/7/2014
ARACON Arctic Science Cruise 2014	U2014-013	7/29/2014	9/21/2014
KR14-Rodona	U2014-005	5/28/2014	6/30/2014
W.E. RICKER 13-13	U2013-036	3/6/2014	3/21/2014
Everto (Rio Trench Mooring)	U2013-032	12/6/2013	12/13/2013
MR13-Sakamoto	U2013-018	8/8/2013	8/27/2013
ARACON Arctic Science Cruise 2013	U2013-012	8/18/2013	10/16/2013
Canek29	U2013-011	6/11/2013	7/4/2013
R/V SARMIENTO DE GAMBOA - NORCARIBE Cruise	U2013-009	4/23/2013	5/28/2013
R/V METEOR cruise MM	U2012-027	3/13/2013	3/26/2013
The Fifth Chinese Arctic Scientific Expedition	U2012-020	7/18/2012	9/19/2012
R/V ARACON	U2012-017	7/24/2012	7/29/2012
Canek26	U2012-010	6/29/2012	7/14/2012

Conclusions and Proposals

- clearer definition, elaboration of soft codes (eg IOC)
- Streamlining of procedures, MSR
- Cooperative frameworks