

Law and the Future Ocean

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- **Kiel Cluster of Excellence “The Future Ocean”**

- a unique research group in Germany made up of more than 140 scientists from six faculties of the Christian-Albrechts-University at Kiel (CAU), the Institute of Marine Sciences (IFM-GEOMAR), the Institute for World Economy (IfW) and the Muthesius University of Fine Arts
- funding provided within the scope of the “excellence initiative” of the German Research Foundation on behalf of the German government and the federal States of Germany until October 2012
 - in total, 37 excellence clusters were funded which each received an average of € 31.8 millions

The Future Ocean



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**Greenhouse
Oceans**

**Resources
& Risks**

**A1:
Ocean Acidification**

**B1:
Fisheries &
Over-fishing**

**A2:
Seafloor Warming**

**B2:
Marine Medicine**

**A3:
Oceanic CO₂-uptake**

**B3:
Seafloor
Resources**

**A4:
Ocean Circulation**

**School of Ocean
Sciences**

Public Outreach

**A5:
CO₂ Sequestration**

**B4:
Submarine
Hazards**

**A6:
Marine Aerosol**

**B5:
Sea-level Rise and
Coasts at Risk**

**A7:
Valuing the Ocean**

**B6:
Law of the Sea**

**Transfer to
Application**

Research Platforms

**P1:
Numerical
simulation**

**P2:
Isotope
Analysis**

**P3:
Molecular
Technology**

**P4:
Ocean
Observatories**

- 13 research groups established
- interdisciplinary cooperation
- administrative support by central Cluster office (incl. technology transfer)
- "Future Ocean" Exhibition

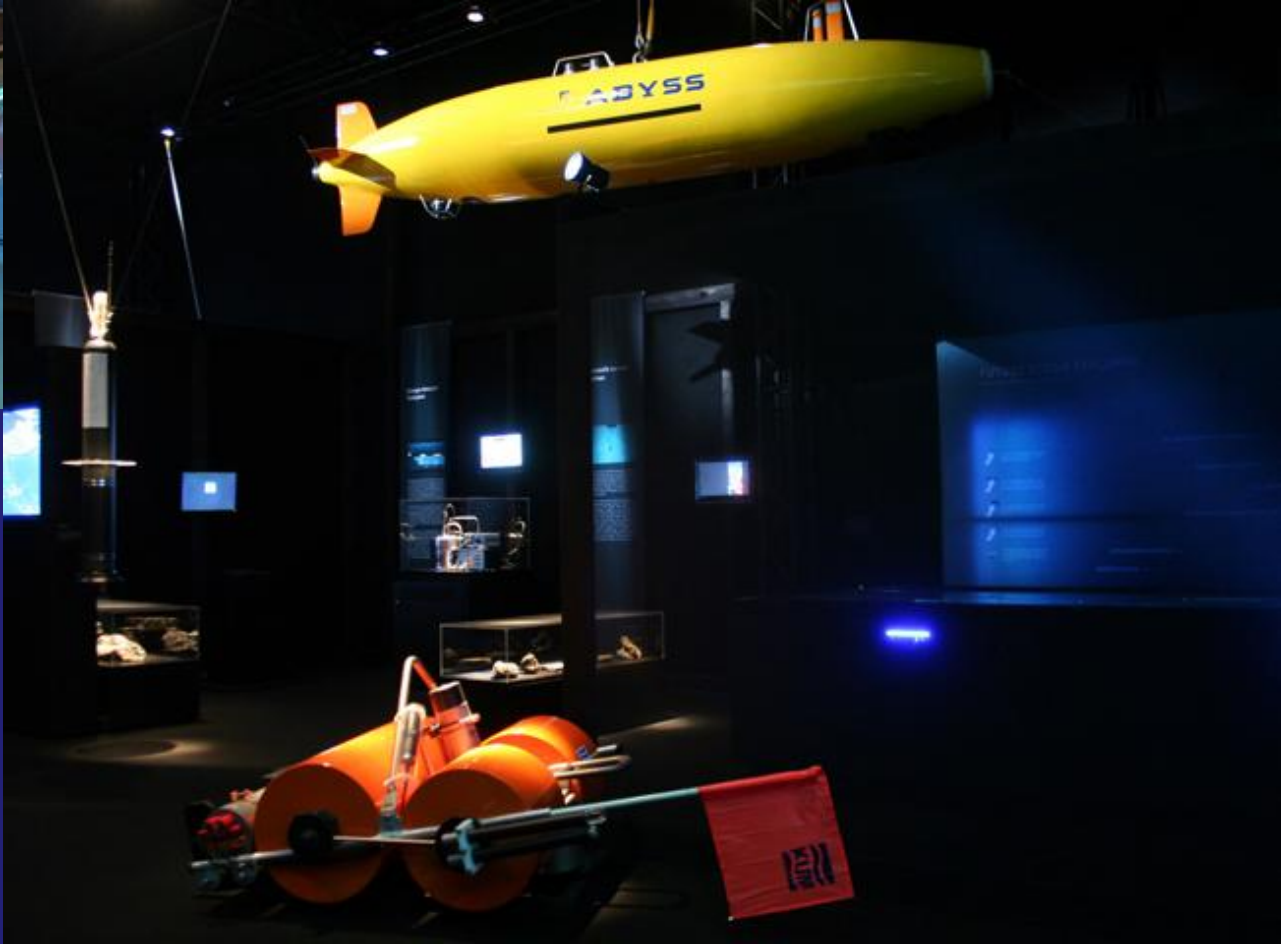
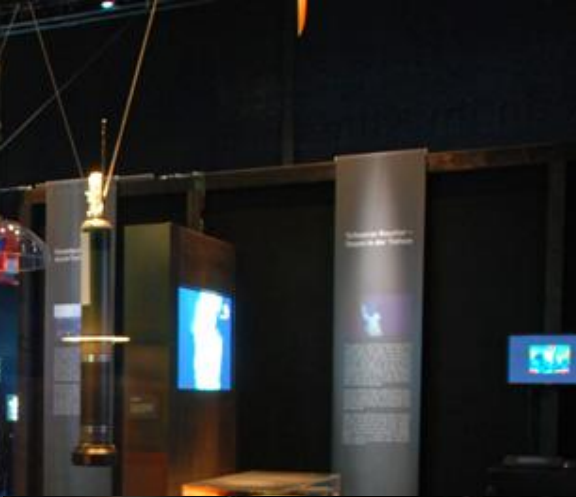


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November 11, 2010



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- despite the financial crisis, continuation of the Initiative for Excellence was agreed upon in 2008/2009
- funding volume will be increased by 30% to approximately €2.7 billion until 2017; decision on the new and follow-up applications will be taken by summer 2012 at the latest
- re-application possible and, if desired, necessary
- currently, work on phase II Cluster in Kiel under way
 - selection of outline proposals (already submitted) until March 2011; those selected will be invited to submit full proposals; comparative evaluation of full proposals until Summer 2012

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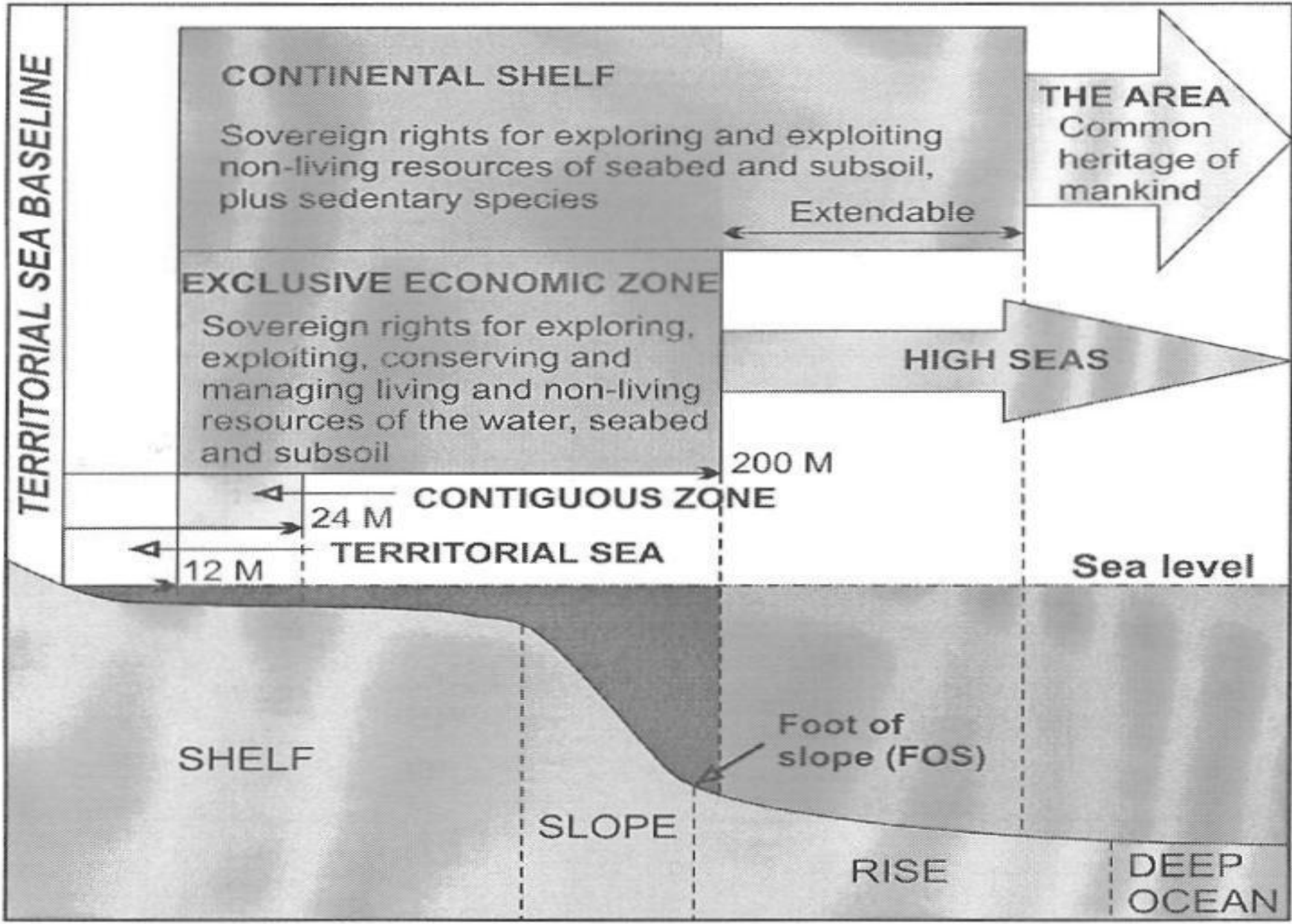
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- more information on the “Future Ocean” available at: <http://www.ozean-der-zukunft.de/english/>



- **Maritime zones under the international law of the sea**

- in contrast to maritime law, the international law of the sea does not belong to the body of private law, but instead represents a territory and usage-oriented branch of public international law; it is primarily codified in the 1982 United Nations Convention on the Law of the Sea (“Constitution for the Oceans”)
- subject matter includes, on the one hand, the different maritime spaces, zones and boundaries—that is, the legal provisions which define and divide the oceans, the seabed and the subsoil thereof
- on the other hand, the international law of the sea also contains the regimes concerning marine scientific research as well as uses and protection of the ocean and its resources





- **Maritime territory**

- The internal waters, the territorial sea and the archipelagic waters make up the maritime segment of State territory. These zones are all subject to the sovereignty of the coastal State. The sovereignty extends both to the airspace over the maritime territory as well as to the seabed and subsoil. However, the nature and extent of sovereignty above and below the sea in regard to internal waters and the territorial sea differ significantly.



- **Zones of functional jurisdiction**

- The so-called zones of functional sovereignty—the exclusive economic zone (EEZ) and the continental shelf—are connected to the seaward side of the maritime territory. Within these zones, the coastal State exercises individual sovereign rights and jurisdiction with regard to the utilization of the marine (living and non-living) resources and the protection of the marine environment. These attributions, however, remain beneath the threshold for the transfer of territorial sovereignty. The EEZ and the continental shelf are therefore not part of State territory, but are instead simultaneously an „in-between“ form of both territory and no-man’s land.



- **Common Spaces**

- The high seas and the Area do not belong to any State's territory and may not be subjected to any State's sovereignty or jurisdiction. Rather, their utilization is open to all States – without being subject to any kind permission. Unlike the high seas, the Area, i.e. the seabed and ocean floor beyond the limits of national jurisdiction was declared the common heritage of mankind and put under the administration of an international organization, the International Seabed Authority (ISA). According to the LOS Convention, all rights in the resources of the Area are vested in mankind as a whole, on whose behalf the Authority shall act. Thus, the mineral resources of the deep seabed may only be alienated in accordance with Part XI UNCLOS and the rules, regulations and procedures adopted by the Authority.



- **Deep Seabed Mining**

- extremely complex legal regime which immediately met with resistance on the part of the industrialized countries
- main feature: financial and other economic benefits resulting from activities in the Area shall be shared (so-called benefit sharing); the ISA is responsible for this
- LOS Convention was only able to enter into force after the provisions governing deep seabed mining were significantly modified in the 1994 Implementation Agreement



- from the point of view of the industrialized countries the following factors were particularly problematic:
 - provisions regarding obligatory technology transfer and their incompatibility with intellectual property law
 - investments made prior to the adoption of UNCLOS were not protected
 - reservation of areas for exploitation by the Enterprise and developing countries
 - the LOS Convention foresees that the ISA directly participates in deep seabed mining; to this end the so-called Enterprise shall be founded as the ISBA's "mining division" (which has not yet occurred)



- basis for deep seabed mining is the requirement of official permission for all activities in the Area (= exploration and exploitation of the non-living resources)
 - only the general search for mineral resources (prospecting), which is considered a precursor to exploration, does not require permission, and must merely be reported to the ISA with the corresponding declaration that UNCLOS requirements on exclusively peaceful use and marine conservation are upheld
- authorizations are granted as part of the conclusion of contracts formed on the basis of work plans presented by applicants (= States Parties, State enterprises or natural or juridical persons which possess the nationality of States Parties or are effectively controlled by them or their nationals)



- work plans are evaluated by the Legal and Technical Commission of the ISA
 - every work plan must contain two fields with prospectively equal commercial potential
 - if the ISA accepts a work plan on recommendation of the Council and concludes a contract with the applicant for the exploration or exploitation of one or both fields, the second field will be designated as a “reserved field” over which the Enterprise (as soon as it becomes active) has priority; if the Enterprise does not present a work plan for this second field within 15 years, the applicant can also submit a work plan for the second field

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- note that the obligation of contracting parties to finance one of the Enterprise's mining sites has been dropped with the Implementation Agreement
- the requirements for the basic financial conditions upon which contracts are based have been notably simplified; fees for reviewing applications upon acceptance of a work plan were reduced from \$500,000.00 to \$250,000.00



- **New Uses of the Oceans**

- “new uses of the oceans” refers to ocean uses which have been addressed only recently by relevant international law of the sea actors and instruments
 - amongst these “new uses” are, inter alia
 - exploration and exploitation of gas hydrates
 - ocean iron fertilization and other climate engineering techniques

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- CO₂ sequestration
- sustainable management and conservation of the marine genetic resources located within and beyond areas of national jurisdiction
- deployment of Autonomous Underwater Vehicles (AUVs), in particular Drifter and Glider

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- Main legal challenges:
 - What regime is applicable/suitable?
 - How to provide for a sustainable application of these new technologies?
 - How to address the interdependency between the law of the sea and the law governing climate protection?
 - in any event: interdisciplinary collaboration is mandatory!