

13th Japanese-German Symposium

## Marine Research The Importance of Oceans for Climate and Mankind

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### The Ecosystem Approach in Marine Fisheries and Biodiversity Law

*Prof. Dr. Detlef Czybulka,  
University of Rostock, Germany*

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### Outline

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- I. Introduction
- II. Marine Ecosystem Approaches in international law
  1. In marine Fisheries Law?
  2. In Biodiversity Law
  3. EA and the Precautionary Principle
- III. Characteristic elements of the EA
- IV. Excursus – Conceptions of Environmental Ethics –
- V. Conclusions

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### Introduction – Human impacts to the world's oceans

Halpern et al., Science Vol. 319 (2008).

Very Low Impact (<1.4)	Medium Impact (4.95-8.47)	High Impact (12-15.52)
Low Impact (1.4-4.95)	Medium High Impact (8.47-12)	Very High Impact (>15.52)

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### Introduction – Demersal destructive fishing

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### Introduction – Non-Destructive but High-Bycatch Fishing

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### Introduction - Marine fish landings in domestic and foreign ports (in thousand tonnes)

OECD Factbook 2007

Year	Japan (thousand tonnes)	EU 15 total (thousand tonnes)
1995	7450	6920
1999	5311	5775
2000	5002	5967
2001	4814	5734
2002	4495	5474
2003	4743	4395
2004	4515	3850

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## Marine Ecosystem Approaches (I)

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### International Law at global level:

LOSC	Art. 56 iii), Art. 192, Art. 194 (5); Art. 61 et seqq.: TAC, MSY
SFSA	Precautionary Principle, Reference points
FAO	Code of Conduct for Responsible Fisheries
CBD	Art. 8 a) In-situ Conservation, Territorial Sea and EEZ

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## Marine Ecosystem Approaches (II)

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### International Law at regional level:

- Convention on the Protection of the Marine Environment of the Baltic Sea (Helsinki Convention), Art. 15
- Convention on the Protection of the Marine Environment of the North East Atlantic (OSPAR), Art. 2, Annex V – Art. 2
- Convention on the Protection of the Black Sea against Pollution
- Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention)  
[Pollution-orientated -> Protocols]

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## Marine Ecosystem Approaches (III)

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### Definitions and Requirements

- Precautionary Principle as a central part of EA
- Integrated management of human activities including fisheries
- Maintenance of ecosystem integrity

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## Characteristic Elements of the EA (I)

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### “Twelve Principles” or four elements?

1. Habitat- and Species- oriented System/ Network of Marine Protected Areas (MPAs)
2. Protection of species by means of both regimes (Fisheries, Nature Conservation).  
Problems to be solved: Discard, By-catch of non-target species, birds, marine mammals (see excursus)
3. Setting precise objectives for environmental quality
4. Comprehensive assessment of human activities including restrictions and mitigation measures

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## Characteristic Elements of the EA (II)

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### Practical Examples

- OSPAR Ecosystem Approach; Joint Ministerial Meeting of the Helsinki and OSPAR Commissions (JMM)
- MPAs created by the Habitats and Bird Directives – a success?
- Protocol concerning Special Protected Areas and Biological Diversity in the Mediterranean (Barcelona)

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## Excursus – Conceptions of Environmental Ethics (I)

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von der Pflichten: Ist die biologische Vielfalt noch zu retten? Dritter Wärmeländer Naturschutzrechtstag, 2002



### Environmental Ethics (II) Independent Aspirations of Entities

	Self-generation	Self-development	Self-preservation	Interests
humans	xxxx(x)	xxxxxx	xxxxxx	yes
higher wild animal	xxxxxxx	xxxx	xxxx	yes
higher domestic animals	xxxx(xx)	xx(xx)	xx(xx)	yes
wild animals	xxxxxxx	xx	xx	yes
wild plants	xxxxxxx	x	x	yes
cultivated plants	xxx(xxx)	(x)	(x)	yes
stone/water	-	-	-	no
species	-	-	-	no
ecosystem	?	?	-	no
biosphere	?	?	-	no
computer	-	(x)	(x)	no



### Conclusions

- Application of an EA to marine fisheries is indispensable
- Harmonisation of the different approaches in the LOSC, the SFSA and the CBD is needed
- Application of effective instruments is crucial for the restoration of marine fish stocks and conservation of marine biodiversity (e.g. network of MPAs)



### The Ecosystem Approach in Marine Fisheries and Biodiversity Law

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