

The Role of Marine Data in Advancing Development

UNCLOS

Advances in Governing the Blue World

8th ABLOS Conference, Monaco, 20-22 October 2015

Dr. Tilemachos Bourtzis

PhD on Law of the Sea,
Researcher on Biodiversity Policy and Law Issues, LifeWatchGreece
Program - Hellenic Centre for Marine Research



Presentation Outline

- UNCLOS and Marine Data
- Marine Data in the Sustainable Development Concept
- Effective Data Usage in Development Related Marine Policies
- LifeWatchGreece: A potential case study for a holistic approach to data
- Conclusions



UNCLOS and Marine Data

- The terms “data” and “information” are present in numerous articles of the 1982 United Nations Law of the Sea Convention (UNCLOS)
- According to IOC/IODE:
 - *'Data' are observable, raw 'values' that result from research or monitoring activities;*
 - *The term 'information' is commonly used to mean data that have already been processed and/or interpreted results.*



UNCLOS and Marine Data

References to “data” & “information”

Data:

- EEZ and High Seas living resources conservation and utilization regime (articles 61-62 and 119)
- Continental Shelf geodetic data public communication (article 76)
- the ISA and International Seabed regime (articles 151, 163, 168, 181 Annex III articles 8,13,14,17 and Annex IV article 12)
- Marine Environment Protection regime (articles 200,201 and 244)
- Marine Scientific Research and Marine Technology Transfer regime (articles 249, 268, 277)
- Commission on the Limits of the Continental Shelf (CLCS) operation relating articles (Annex II articles 3 and 4)

Information:

- Usually used in association with “data” but also in standalone references, most notably in article 19(2)(c) defining the content of innocent passage

Information Dissemination Obligations regarding:

- Marine Environment
- Marine Scientific Research & Marine Technology Transfer
- International Seabed regime in Annex III



Activity	Maritime Zone	Data Collection Regulatory Rights	Usual Data Availability	Data Dissemination
Marine Environment Monitoring	National Jurisdiction Zones	Coastal State	Public	Coastal State and Competent International Organizations
	Areas Beyond National Jurisdiction	Flag State	Public	Flag State and Competent International Organizations
Marine Scientific Research	National Jurisdiction Zones	Coastal State & Flag State after Coastal State Consent	Public	Appropriate Channels and Competent International Organizations
	Areas Beyond National Jurisdiction	Flag State	Public	Appropriate Channels and Competent International Organizations
Hydrographic Surveys	Territorial Sea	Coastal State	Public	Coastal State and Competent International Organizations
	Continental Shelf and EEZ	Flag State	Public	Flag State and Competent International Organizations
Military Surveys / Data Gathering	Territorial Sea	Coastal State	Non Public	
	Continental Shelf and EEZ	Flag State	Non Public	
	Areas Beyond National Jurisdiction	Flag State	Non Public	
Exploration and Commercial Research	National Jurisdiction Zones	Coastal State & Flag State after Coastal State Consent	Non Public	
	Areas Beyond National Jurisdiction (High Seas)	Flag State	Non Public	
Exploration, Prospecting and Exploitation	International Sea Bed	Flag State after ISA Consent	Public	ISA

UNCLOS and Marine Data

Contemporary Picture Of Marine Data Collection

- Combined Technology Elements
- Varying Collection Regimes & Data Availability
- Data Used for an Ever Increasing Number Purposes (Environmental, Security, Commercial)



Marine Data in the Sustainable Development Concept

Law of the Sea & Sustainable Development

- Maritime activities have only recently started to be taken into serious account as to their contribution to the full spectrum of Sustainable Development
- Post UNCED ocean references period tended to focus on the environmental aspect of Sustainable Development
- More holistic approaches have been rather sporadic and strongly themed (e.g. SIDS)
- This delay of integration seems to apply reciprocally and a full scale endorsement of Sustainable Development tridimensional approach isn't apparent in Law of the Sea
- After the 2002 Johannesburg Summit the titles of the various reports begin to include the word "sustainable" and direct references to socio-economic parameters



Marine Data in the Sustainable Development Concept

MDGs, SDGs and Ocean Data 1

Millennium Development Goals (MDGs 2000-2015)

- Almost complete absence in the Millennium Development Goals (MDGs 2000-2015)
- Total of 8 Goals, 20 Targets and 60 Indicators
- Only two ocean related Data Based Indicators
 - Indicator 7.4 “Proportion of fish stocks within safe biological limits”
 - Indicator 7.6 “Proportion of terrestrial and marine areas protected”

Sustainable Development Goals (SDGs – 2015-2030):

- 17 Goals
- Goal 14 “Conserve and sustainably use the oceans, seas and marine resources for sustainable development”
- 7 Targets with environmental, economic and social parameters
- Reference to science and data provision in all aspects in order to further advance the oceans sustainable development



Marine Data in the Sustainable Development Concept

MDGs, SDGs
and Ocean
Data 2

- Two main reasons for the eventual change:
 - scientific advancements in knowledge of the ocean-climate interlinkages and their socio-economic implications
 - Mainstreaming of development policies and incorporation on a much broader spectrum of activities – Development of “Blue” Concepts
- 2015 annual United Nations Secretary General Special Report on the Law of the Sea: Central Theme Sustainable Development and application in UNCLOS and Law of the Sea

Effective Data Usage in Development Related Marine Policies

Challenges for data flow and dissemination

- Two identifiable challenges:
 - UNCLOS regimes of data collection and the potential data flow disturbance
 - Effective continuous use of collected data in the formation and application of marine relating policies, with emphasis to the need for their reuse beyond the original collection purpose
- To address these challenges:
 - Emphasis needs to be placed not on the collection but on the storage and management stage
 - Cooperation of substate entities, public and non public, such as research centers and other institutions
- Need for adoption of “data revolution” goal: data access and infrastructure expansion
- Crucial institutional tools: marine (and other) data centers, already identified in UNCLOS Part XIV



Effective Data Usage in Development Related Marine Policies

Data Centers: New Challenges & Approaches

- Evolution from archives to services providers
- New challenges:
 - Need for transparency in data collection
 - Need for adoption of “open data” and “open access” policies
 - Effective management of increasing data flow and “big data” sets
 - Need for the practical availability of data to other maritime space stakeholders



LifeWatchGreece Research Infrastructure

- <http://www.lifewatchgreece.eu/>
- Combined effort by 48 Greek scientific and conservation Institutions (public and private)
- Provision of **potential users (researchers, academia, entrepreneurs and policy makers)** with reliable biodiversity data and information from all biology-related disciplines
- Seat: Hellenic Centre for Marine Research (Institute of Marine Biology, Biotechnology and Aquaculture) in Heraklion, Crete.
- The LWG RI's target is to contribute to the acceleration of international data-driven innovation and discovery by facilitating research data **sharing and exchange, data use and re-use, standards harmonization, and discoverability**, on the field of marine and terrestrial biodiversity



LifeWatchGreece Research Infrastructure

Key Objectives (selection)

- To unite Greek scientific human resources working on biodiversity data and data observatories, within the country and abroad, in order to create a National Excellence LifeWatch Centre.
- To adequately assist environmental managers and policy makers, among others, to adopt the biodiversity concept in their everyday workload and activities.
- To build capacity at the national level through a network of activities, including human potential mobilization, support and promotion of the RI use and enhancing of the organizational development.
- To disseminate information, scientific knowledge and experience gained to the public and to liaise the LWG RI's ideas and practices with the activities of target groups and of the society in total.



LifeWatchGreece Research Infrastructure

Means
(selection)

- The creation of a Digital Depository for biodiversity data,
- The application of Open Code and Open Access Data Policy,
- The application of a Holistic Methodology
- The use of Multidisciplinary Approach



Conclusions

- The role of marine data in the framework of sustainable development appears to be today more enhanced than ever before in the post 1992 period.
- Integration of sustainable development in ocean policy on a global scale as well as the recognition of an ocean specific target in the Sustainable Development Goals of the 2015-2030 period
- Need for stable and unhindered provision of reliable ocean data to support the above mentioned targets
- Crucial factors: the researchers and data providers themselves



Conclusions

- Participation of the public and the private sector will be a deciding factor for the successful application of sustainable ocean policies
- The expansion of already existing and the developing of new repositories for publications and data will be of major importance
- Main elements of the future marine data: transparency in collection, the as much as possible “open access” policy on dissemination and the strengthening of interdisciplinary research and data application in policy
- LifeWatchGreece was developed upon these lines to face the challenges of biodiversity research in Greece, terrestrial and marine





Thank you for your
attention