Regular process for global reporting and assessment of the state of the marine environment, including socioeconomic aspects

World Ocean Assessment I

Presentation by the Group of Experts of the Regular Process
What we shall cover

• Reminder of why we have a Regular Process and how it has been organized
• What are the main conclusions?
• What are the knowledge gaps and the capacity-building gaps that have been identified?
What business does not check on the state of 7/10ths of its assets?

2002 World Summit on Sustainable Development recommended a “Regular process for global reporting and assessment of the state of the marine environment, including socioeconomic aspects”

The UN General Assembly consequently agreed on a process to produce:

• an integrated assessment of the ocean
• agreed priority cross-cutting thematic issues such as food security
• a baseline for future global assessments.
How has it been organized?

- Ad Hoc Working Group of the Whole
  - Terms of Reference and Working Methods
  - Outline of the first global integrated assessment
  - Guidance for contributors
- Group of Experts of the Regular Process
- Pool of Experts
- Secretariat – DOALOS
- Website
- Trust Fund
A. Manifold problems linked to climate change and linked issues
B. Marine biota – higher mortality, lower reproductive success
C. Food security and safety is at risk
D. Biodiversity hotspots are magnets for human activities
E. Increased and conflicting demands for ocean space
10 Main Themes (2)

F. Excessive inputs of harmful material
G. Cumulative impacts are key issue
H. Uneven distribution of benefits from the ocean
I. Integrated management is essential – and that needs more and better information
J. Lack of knowledge about integration should not lead to delay in implementing known solutions
A. Climate Change

Changes:
Sea-surface temperature; sea-level rise; salinity; stratification; circulation; storms; as well as acidification; UV radiation

Implications:
Seasonal life-cycles; loss of sea ice; plankton; fish-stock distribution; seaweeds; shellfish productivity; low-lying coasts; coral reefs; submarine cables; eutrophication problems; Arctic shipping
B. Marine biota

Challenges
- Higher mortality – less successful reproduction
- Over-fishing
- Changes in breeding and nursery areas
- Bycatch
- Hazardous substances and eutrophication
- Noise
- Recreational fisheries

Implications
- Food security
- Species structure of highly productive areas
C. Food security and safety

1. Importance of sea-based food
2. Importance of livelihoods
3. Importance of small-scale fisheries
4. Significance of aquaculture and fish-stock propagation
5. Compromised food safety
6. Problems of subsidies
7. Role of women
8. Importance of food safety
D. Patterns of biodiversity

Patterns of marine biodiversity
Importance of temperature
Significance of capture fisheries
Lack of knowledge

Implications
• Biodiversity hotspots and ecosystem services
• Biodiversity hotspots and economic activities
E. Use of ocean space

Challenges
Population and urbanization; aquaculture and marine ranching; cables and pipelines; offshore hydrocarbons; offshore mining; offshore renewable energy; fisheries management areas; marine protected areas

Implications
Too many demands to meet them all
Need to develop ways of managing them
F. Inputs of harmful material

Challenges
Land-based inputs (sewage; fertilisers; hydrocarbons; heavy metals; persistent organic pollutants; endocrine disruptors); solid waste disposal; marine debris; shipping; offshore hydrocarbon industries; offshore mining

Implications
Human health; food safety; food security; marine biodiversity
G. Cumulative impacts

Fisheries, demand for ocean space, inputs of harmful materials, noise, non-native species have a cumulative effect:

In all main marine regions
In the open ocean
On top predators
On vulnerable habitats – corals reefs, mangroves, kelp forests and seagrass meadows, seamounts, salt marshes, estuaries
On tourism and cultural values
H. Distribution of ocean benefits

1. Changes in fish and seafood: lower consumption in poorer areas: diversion to richer areas
2. Employment and income from fisheries
3. Maritime transport
4. Changes in universal benefits
5. Offshore energy
6. Tourism
7. Offshore mining
8. Marine genetic material
There are constraints in assessing only the oceans.

But

We have reached the end of the time when human impacts are small in relation to the vastness of the ocean.

Many interactions (e.g., sewage, ship pollution, plastic debris, excessive nutrient inputs, overfishing, acidification) emphasise the problems caused by the absence of integrated management.

I. Integrated management
Some problems – such as those flowing from climate change and acidification – can only be dealt with at a global level.

Many problems have more local causes and are only global problems because they occur in many places.

Known solutions exist for many of these locally caused problems.

Not implementing those solutions imposes environmental, social and economic costs.
Information gaps

1. Physical structure of the ocean
2. Waters of the ocean
3. Biota of the ocean
4. Human interactions:
   Shipping, land-based inputs, offshore hydrocarbons, solid waste disposal, marine debris, ICZM, cultural values
Capacity-building 1

- Effective management of human impacts on the ocean requires good, consistent knowledge.
- Filling the knowledge gaps and applying that knowledge in management requires:
  - The *material* - research vessels, scientific equipment, remote observation systems, etc.
  - The *personnel* - experts with the training and skill to operate the equipment, analyze the results and translate them into effective policies.
  - The resources to support all this.
Capacity-building 2

- How to promote dialogue between managers and scientists?
  - Need to explain and show relevance
- Framework for integration
  - How to standardize? How to compare?
- How to measure overall progress?
  - How to link different fields?
- More linkage to socioeconomic aspects
  - What difference does it make to people?