



**Global Forum on Electric Mobility  
&  
Conference on Sustainable Human Settlements**

**Sustainable Human Settlements in Coastal Cities  
Associated with events of Rio+20  
Dr. Awni Behnam  
President  
International Ocean Institute  
18 June 2012**

***“if before, you saw the sea and the sea floor as a continuation of the land, you now see the land as a continuation of the sea.”  
(Elisabeth Mann Borgese, The Oceanic Circle)***



We can identify three over arching and critical challenges namely Climate Change, Security and Global Economic and Financial Crisis. The convergence of these three separate yet interconnected factors in time and space has created the proverbial *Perfect Storm*.



© Barcroft Media

## Defining the *Blue economy*

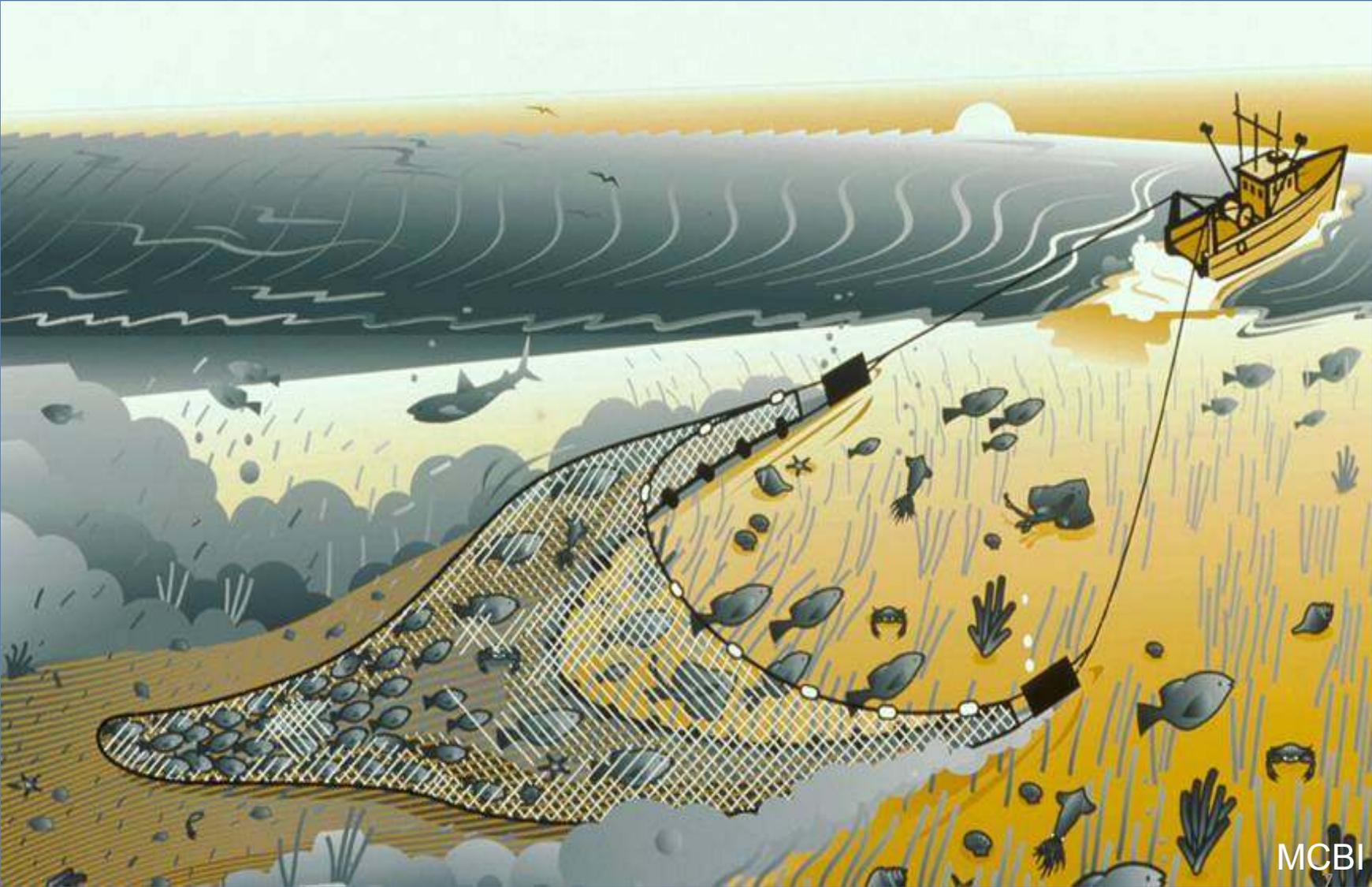
“Living with the ocean and  
from the ocean and  
in a sustainable relationship”.

A. Behnam, IOI

- Regrettably, however, the human impact on the ocean through use and exploitation has been destructive and unconscionable because humans have taken for granted the sustainability of the ocean. In so doing, and despite decades of efforts to evolve an adequate governance regime, the ocean's fragile ecosystem is being systematically destroyed.



# Bottom Trawling



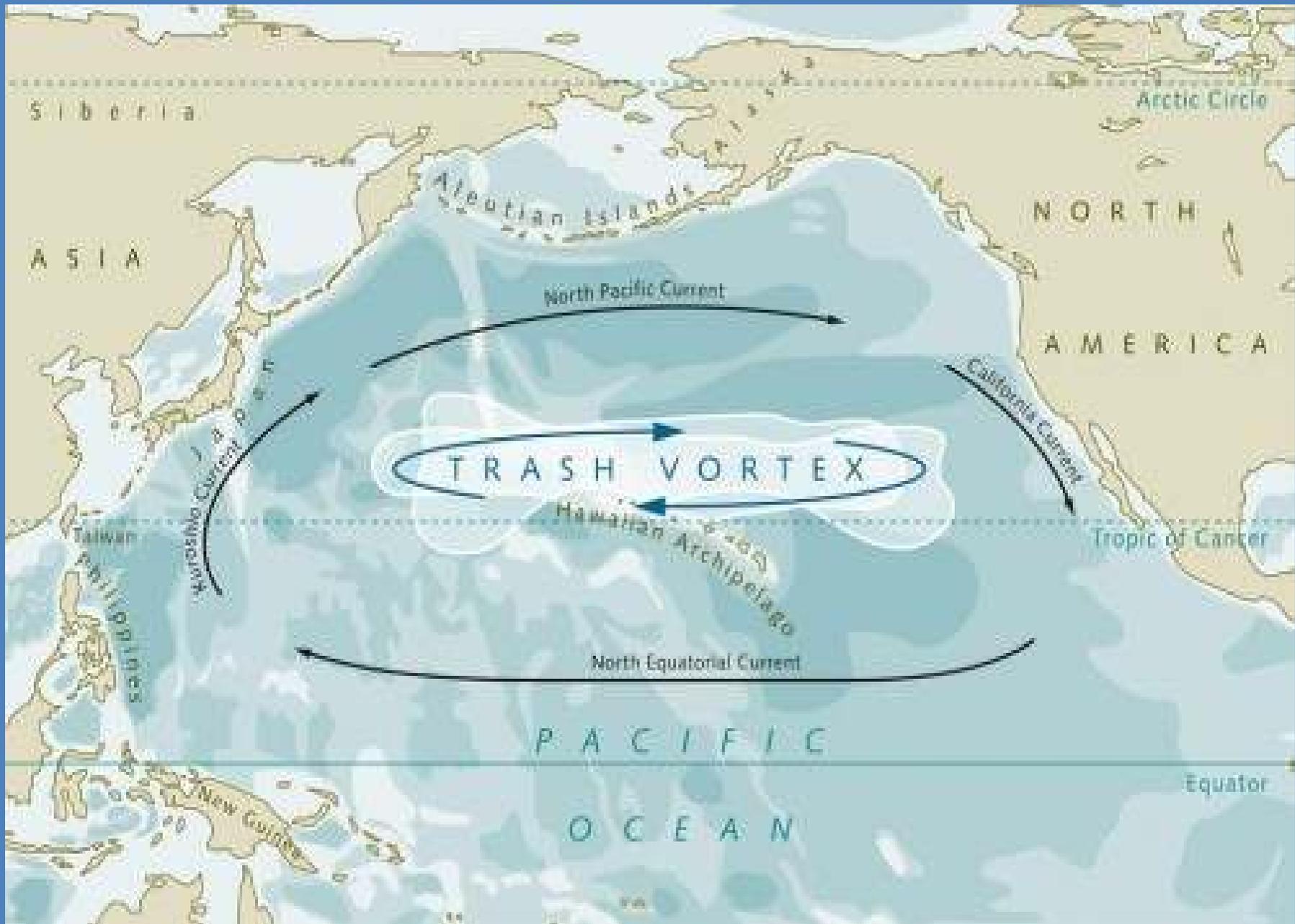




# How to destroy Bio-Diversity.

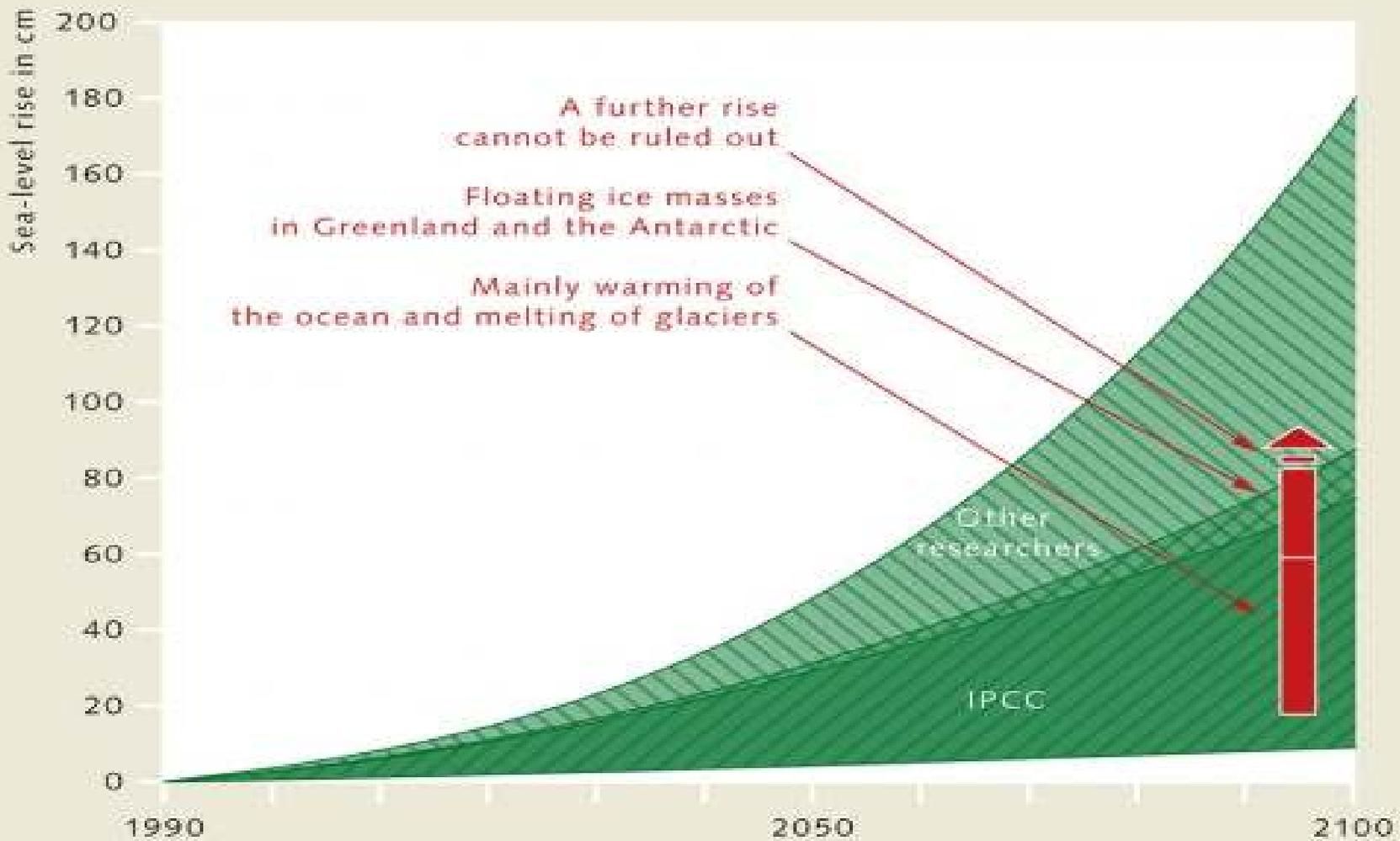


And Life itself.



UN Secretary General, Mr. BAN Ki-moon, on 3 October 2011 issued a message on World Habitat Day stating: *“Rising sea levels are a major impact of climate change and an urgent concern. Sixty million people now live within one meter of sea level. By the end of the century, that number will jump to 130 million. Major coastal cities – such as Cairo, New York, Karachi, Calcutta, Belem, New Orleans, Shanghai, Tokyo, Lagos, Miami and Amsterdam - could face serious threats from storm surges. The nexus between urbanization and climate change is real and potentially deadly.”*





Effects of sea-level rise on natural coastal systems		Possible protective/adaptive measures	Relative costs
1. Flooding of low-lying areas and resultant damage	a) Storm tides b) Backwater in estuaries	1. Dykes and flood barriers [P] 2. Artificial dwelling mounds, flood-proof building (standards) [A] 3. Identification of risk zones [A/R] 4. Adapted land-use and landscape planning [A/R]	1. Very high (construction, maintenance) 2. Medium to high 3. Very low (one-off) 4. Medium (recurrent)
2. Loss of or changes to coastal wetlands		5. Adapted land development planning [A/R] 6. Dyke relocation [A/R] 7. Foreshore reclamation [P/A] 8. Beach nourishment, sediment protection [P]	5. Low to medium (ongoing) 6. Very high (one-off) 7. High (recurrent) 8. Medium/low (ongoing)
3. Direct and indirect morphological changes, particularly erosion of beaches and bluffs		9. Construction of groynes, bank protection, sea walls [P] 10. Beach nourishment, dune protection [P] 11. Underwater reefs, breakwaters [P] 12. Development-free zones [R]	9. Medium to high (construction) 10. Medium/low (ongoing) 11. Medium to high (construction) 12. Low to high (one-off)
4. Intrusion of saltwater	a) into surface water b) into ground water	13. Dams and tide gates to prevent influx of saltwater [P] 14. Adapted/reduced withdrawal of water [A/R] 15. Pumping in of freshwater [P] 16. Adapted withdrawal of water [A/R]	13. High (construction, maintenance) 14. Low (ongoing) 15. Medium (recurrent) 16. Low (permanent)
5. Higher (ground)water levels and limited soil drainage		17. Soil/land drainage improvement [P] 18. Construction of pumping stations [P] 19. Altered land use [A] 20. Designation of flood areas/high risk areas [A/R]	17. High (ongoing) 18. Very high (construction, maintenance) 19. Low (permanent) 20. Very low (recurrent)



2004 Indian Ocean Tsunamis caused more than 300,000 casualties Indonesia, Sri Lanka, Thailand, Myanmar, Bangladesh, the Maldives, Seychelles and beyond to Kenya and Somalia died from this Tsunami disaster



**Tsunami Warning and Full-Scale Evacuation Drills**  
**Pacific Wave Exercise 06 on 17<sup>th</sup> May 2006**  
**Andaman Wave 07 on 25<sup>th</sup> July 2007**

# From Challenges to Opportunities

- one must not depart from those moral and ethical principles of UNCLOS, as are the respect for the Common Heritage of humankind and the resolution of conflicts through cooperation and friendly persuasion. At the same time the plight of developing and least developed countries must be part of the equation. The future *Blue Economy* must not be based on the greed of the new age globalization but on partnership and win-win concept.

## Interrelated layers of capacity development needs and instruments

### INDIVIDUAL LAYER

**Capacity developed through:** Human resources development, training, training of trainers.



### INSTITUTIONAL LAYER

**Capacity developed through:** Support to organizational and planning entities (public and private) in charge of oceans and coasts policies; support to formulation and implementation of legislation; inter-ministerial coordination; research and training capacity on development issues, etc.



### SOCIETAL LAYER

**Capacity development through:** Dissemination, awareness, advocacy and social mobilization of oceans and coasts issues; consensus building and participation; access to knowledge technology and information.





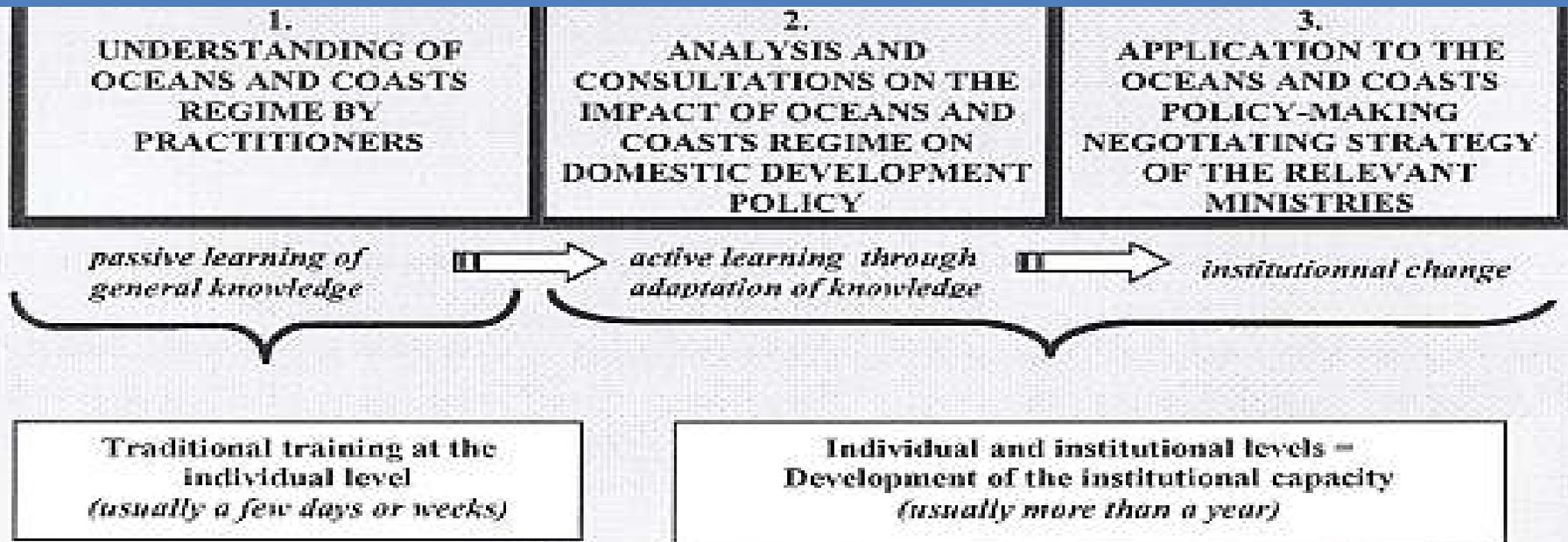


- the four corner stones of any economic policy: Investment, and that is investment beyond Foreign Direct Investment (FDI), Innovation, where traditional practices meet up with modern technology and advance science, Institution Building, where capacity development is human based and finally Inclusiveness, where all stakeholders are part of decision-making.

# Elements of a new ocean coast strategy

- **Conformity of short-term action with long-term strategy**
- **the individual layer.**
- **National and international measures**
- **The political and economic decision making**
- **Demonstrating Commitments**
- **the institutional layer.**
- **Partnership**
- **role for the productive layer.**
- **Mobilizing national and international public opinion – the societal layer - Inclusiveness.**

# From individual training on ocean governance to upgrading ocean governance institutional capacity: Three stages (a)



(a) Inspired by the "action research and action learning" concepts developed by Lichia Yiu and Raymond Sanier.

# How well are we doing

## Report Card: Biodiversity and MPAs

Extent of Efforts				Extent of Progress				Timing – Goals Reached		
Low	Medium	High	Data Unavailable	Low	Medium	High	Data Unavailable	On Time	Some Delay	Significant Delay
	✓			✓						✓

## Report Card: Coordination of UN Activities on Oceans

Extent of Efforts				Extent of Progress				Timing – Goals Reached		
Low	Medium	High	Data Unavailable	Low	Medium	High	Data Unavailable	On Time	Some Delay	Significant Delay
✓				✓				✓		

- Biliana Cicin Sain, etall, 2011. Oceans at Rio+20. How well Are We Doing on the Major Commitments from the1992 Earth Summit and the 2002 World Summit on Sustainable development? Global Ocean Forum.

# Marine Spatial Planning



The public process of analyzing and allocating the spatial and temporal distribution of human activities in marine areas to achieve ecological, economic, and social objectives that are usually specified through a political process.

*Ehler & Douvère  
Visions for a Sea Change  
UNESCO International Workshop on Marine Spatial  
Planning, 2006*

# Capacity Development



# International Ocean Institute

It operates through the activities of its Headquarters in Malta and 22 Operational Centers and 7 Focal Points in 27 countries world-wide;



**UN Conference on Sustainable Development  
Rio +20  
June 4-6, 2012**

**Lets give a voice to the Ocean  
Lets meet the challenges of the Blue Economy**



Thank you