"Coastal Zones 21st Century Challenges" Working Group Abstract No. 2433: "Coastal Zones: 21st Century Myths and Challenges"

20 years have passed since the Rio Earth Summit in 1992. 20 years of efforts to better understand, inform, and improve the relationships between our societies and our planet's coastal zones. These efforts have crystallized into tangible outcomes in the forms of improvements in environmental culture and international agreements upheld by national and transnational coastal zone plans, protocols, and conventions. While moving forward with these national and international efforts, we realize that the balance between development and stewardship is still broken, and many more efforts are needed to create a harmonious relationship between the use of knowledge in society and our planet's coastal zones. Through the active participation of 115 researchers from 30 countries, a baseline document has been created in order to participate in the construction of the "focused political document" for the Rio+20 outcomes.

The general concluding comment of our Rio+20 baseline document is:

"The challenges we face in coastal zones are mostly anthropogenic or amplified by human activities that clearly transgress reasonable limits. Any initiative to truly help society progress sustainably must integrate the limits of the planet and be co-constructed with the affected communities."

> If we deeply understand these words, one questions appears: "Do we, through the activities of our societies, fit into the proposed solution?"

The answer is

Challenges Impacting

Malnutrition; hunger;

freshwater availability; Wars and other violent conflicts; Lack of education;

Climate change and its consequences; Over-exploitation of marine living resources; Toxins in fish and shellfish, and pathogens such as cholera and hepatitis, are threats to human health; Population growth; Global economic crises...etc

Challenges from Pollution and Climate Change:

Oceanic temperature warming and PH change towards acidification; Decreasing oxygen levels leading to dead zones, species extirpation, and noxious gas emissions; Seawater intrusion in coastal aquifers; Coastal and sea pollution caused by wastewaters and solid wastes that have been treated ineffectively or not at all Pollution by toxic waste...etc

Challenges in Policy:

the

Harmonize the interests of coastal environment users, including local community members, coastal municipalities, regional and/or inter-municipal planning, national, transnational, and

> we do international stakeholders, through the continuous improvement of economic-legislative instruments and

elaboration and implementation of coordinated strategies for the use of natural, social, cultural, and institutional resources; Rethink economic growth and the flows of energy and materials; Preserve 100% of the areas where the indigenous peoples of the coasts remain, including the Saami, Chukchi, Siberian Yupiaq and many others; Integrate research and education into the decision making process; Make information readily and decision-making; Protect natural and cultural resources easily accessible to facilitate informed we do and international, while keeping coastal at all levels: local, regional, national, communities safe; Monitor and control the coastal and littoral maritime traffic,

hazards of oil pollution, chemical transport, industrial activity, and the related collision, GIS reduction, and technical failures; Introduce policies that: make change trends mandatory, protect existing coastal habitats and ecological functions, recover the fishing stocks, and prevent illegal and habitat-destructive fishing; Prevent over-population in developing regions

...If we continue: against; Take into account the

Lives of Coastal Zone Residents:

Go! **Economy and** Development Models: The model of development based on infinite economic

growth

Challenges in Research: Generate an information baseline

...BUT

if we have the courage,

can reverse these inertias and we will...

of coastal ecological and social processes that researchers can measure

> social and human dimensions of uncertainty; Study in greater depth the interconnectedness of natural

systems to better understand how to sustain coastal and oceanic health Conduct research in support of management on multiple

spatial and temporal scales

environmental

can the socio-economic

structure respond to international competitiveness? A trade-off between the economy and

needs

to be questioned:

general

and

To what degree do

activities on coastal

areas facilitate

development and

what manner of

development is;

currently needed?

Can development

be based on sustainability

how

the environment exists; industries destructive How have to be challenged and held accountable for their can we social and

consequences... move respectfully in this positive direction?

Governance, Global/Local Articulation:

The efforts cannot only come from local governments and communities; The challenges are global in nature; UN Ocean should be supplemented by other trans-governmental and non-governmental networks as additional forms of governance; Maritime Basins (IPMB) should contribute to providing governance systems with common and reliable information and promote coherent responses from these systems; Build strong connections between transboundary maritime basins related to large marine ecosystems and maritime regions of the world; Apply a deliberative approach that concentrates on managing emerging challenges and linking all spatial and temporal scales...etc

Tzanatos, Jean-Paul Vanderlinden, Liette Vasseur, Kristina Veidemane, Chloé Vlassopoulou, Witold Wacławik-Narbutt et al.

...etc

Collaborative Policy Making: The instruments for the implementation of integrated coastal zone management are: an integrated approach to coastal land and marine spatial planning, cross-sectoral and multiregional agreements, public participation, effective cross-border consultation system, monitoring and assessment of socio-economical and ecological changes and trends, comprehensive analysis of sustainable development indicators, financial and legal mechanisms for ICZM implementation, and connected and collaborative decision-making between all administrative levels from global to local; Move from the theoretical framework into realizing the necessary actions!

> THE MOST VITAL ACTIONS WE MUST TAKE ARE THOSE THAT REVERSE NEGATIVE INERTIAS AND, PLEASE, BE COURAGEOUS: MANY THANKS

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