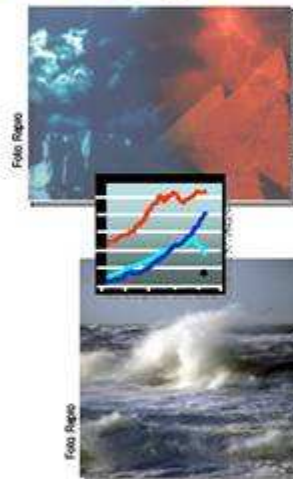


*Roundtable on the Development of an Indonesian Chamber for Delta Alliance
Gran Melia Hotel, Legian Room, Jakarta, June 29, 2009*



* With contributions of Prof. Dr. Wahyoe S. Hantoro (LIPI) and Dr. Heru Santoso (CIFOR)

ICoMar (Founded in 2002)



Global, regional, national and local changes

Humanity is now in an unprecedented and extraordinary position. Never have in human history that life sustaining environment on earth rapidly changed in just one generation. Most of the changes are attributed to human activities. Less ecologically balanced economic and technological activities contributed to the rapid changes and can potentially raise conflicts through physical, biological and social interactions, into which the understanding of their processes are still in the early stage. While changes are continuing, the impact of such changes has been overlooked and continued to threaten exponentially the well-being of coming generations.

The new millennium is typified by the immense changes of economic life and global industries along with the ever increasing competition among nations. A variety of potential threats related to global, regional and local climatic changes are also coming into their existence. Fast and uncertain changes in national and local life have also highlighted the millennium change. Democratization and regional autonomy require a wise approach on its own. Objective and knowledge-based input and guidance may facilitate in drawing national and local policies and in exercising the best management practices, which involve the social dynamics in relation to the access of natural resources and their impacts to the environmental changes.

Environment as well as coastal and ocean resources management take the strategic position in the country due to its geographic setting of the Indonesian archipelago with more than two third of sea coverage. A great number of problems and conflicts have arisen due to superimposing human-driven and nature-driven processes, both from concealed and million years scale until the unexpected and instantaneous ones and from microscopic to kilometers scales.

Context of ICoMar

The complexities of the problems and vulnerability of coastal and ocean regions, particularly in the tropical areas, are deeply rooted down in human behavior as a result of poverty, ignorance and human greed. Such a complexity becomes more with the interference of processes of the earth, both as a result of the unavoidable natural tendency and because of direct or indirect response of the earth balancing processes in seconds to hundred of years scale. Hence a knowledge-based and integrated non-sectional approach is required to provide the total solution in both short- and long-term.

Our Vision

A knowledge-based and wealthy society, harmoniously live with the environment and sustainably use the natural resources for their own life and future generations.

Our mission

- To provide knowledge-based strategic solutions in both short- and long-term to coastal and ocean resources management through integrated, transdisciplinary and cross sectoral approach.
- To facilitate an equal standing in scientific and technical capabilities of internal and external partners through the development strategic alliances.



Research program

- Global and sea level changes and their impacts to the coastal and ocean ecosystems
- Dynamics of coastal and ocean circulation
- Mutual impacts of land-based activities to the coastal areas
- Social dynamics and their impacts to the ecological integrity of the coastal and ocean regions
- Management and governance system within the framework of the regional autonomy and their impacts to the natural resources and environment



Research project

With the ICoMar vision and mission in mind, East Kalimantan waters and its Mahakam Delta as a focus area is selected as a pilot project. The project is therefore coined as the Mahakam Expedition (MAHEX). The selection of this project is based on the complexity and the scale of the problems as well as the existing knowledge already owned by the internal and external partners who have expressed their interests to join in this integrated project. The project area covers from the Mahakam Catchment area until the coastal and the Strait of Makassar waters, the Mangkalihat Peninsula and around the Benzu Delta.



Who are we ?

The ICoMar Consortium is supported by six major and outstanding research institutions and universities in Indonesia (LIPI - Indonesian Institute of Sciences, BAKHTAM - National Coordinating Agency for Mapping and Surveys, LAPAN - National Institute for Space and Aeronautics, DESDM - Agency for Research and Development, Ministry of Energy and Mineral Resources, ITB - Bandung Institute of Technology, and UNMUL - Mulawarman University, Samarinda, East Kalimantan). ICoMar represents a broad spectrum of research and education and developmental sectors, from basic through strategic to applied researches. It has developed a strategic partnership with WOTRO - NWO and KANAW, two scientific and internationally acknowledged institutions which coordinate and facilitate more than 10 research institutions and universities in the Netherlands, to execute the MAHEX jointly.

Further contact

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ICoMar invites you..

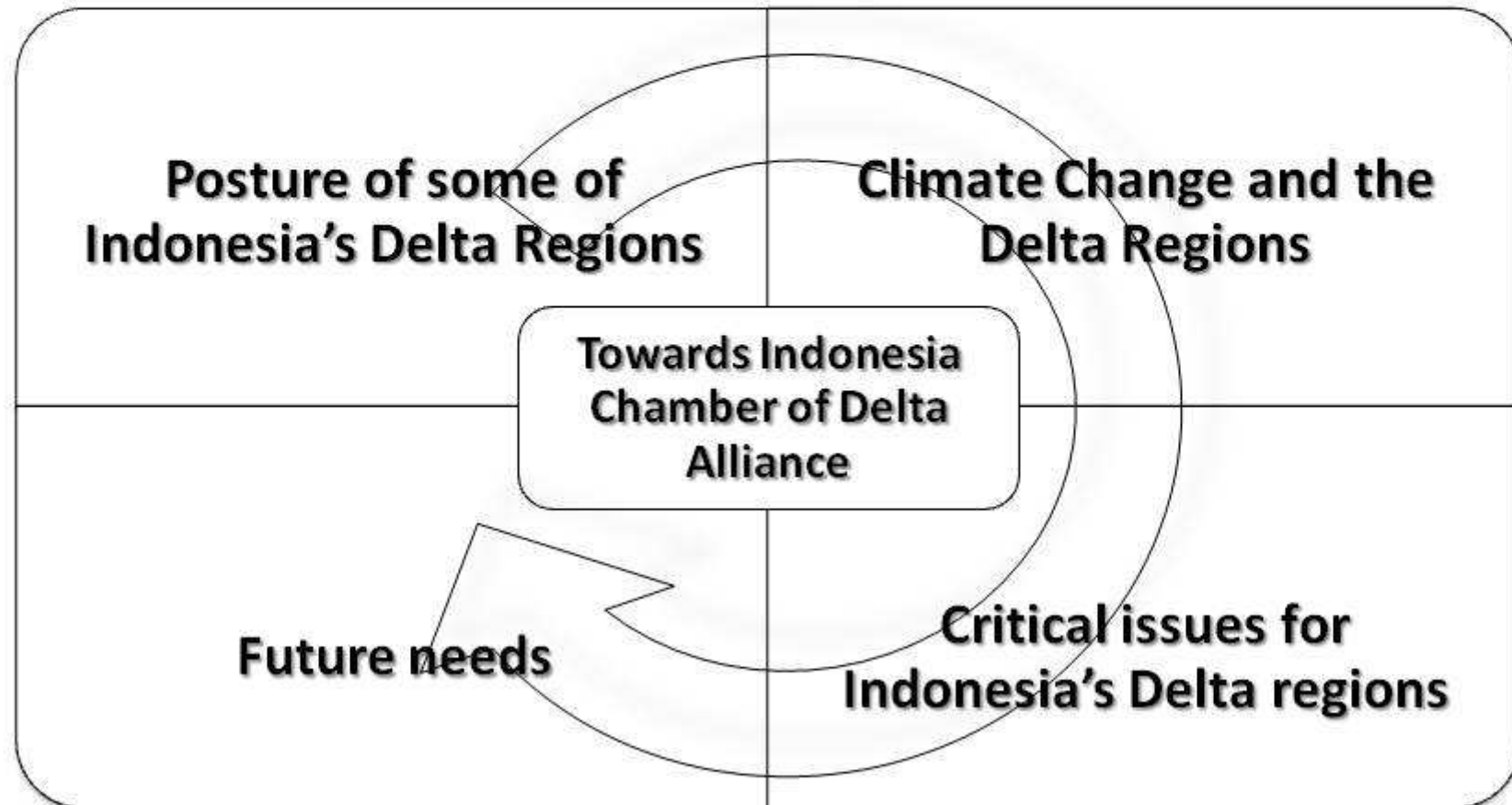
The integrated research in East Kalimantan and Mahakam Delta as its landmark, invites a wider scale and more parties to participate in the ICoMar initiative. The synergy developed from such a collaboration will not only bring to a more efficient use of resources and the effectiveness of this integrated project, but also provide benefits towards equal standing of the competence and human resources through the provision of opportunities to be involved in the international research program. Other benefit is the establishment of strategic partnership and access for those who are involved to the data, information and research facilities needed for the institutional building, both local and national.



Objectives of Delta Alliance Meetings in Indonesia



Talk outline



Delta in Indonesia (1/2)

(Delta ecosystem goods and services)

Rich in biodiversity:	<ul style="list-style-type: none">• habitat of a mix of land and marine species including medicinal plants, wood, exotic species, etc.
Regulating sedimentation:	<ul style="list-style-type: none">• interaction of sea wave and river current
Hosting specific land and marine ecosystem:	<ul style="list-style-type: none">• lagoon, barrier islands, swamp/wetland, etc.
Regulating hydrology:	<ul style="list-style-type: none">• seasonal flood, flood plain, tides
Supporting livelihood and socioeconomic activities:	<ul style="list-style-type: none">• fish farming, agriculture, water transport, recreation
Carbon pool:	<ul style="list-style-type: none">• mangrove fields

Delta in Indonesia (2/2)

Delta as a living place of societies

1. Many cities are located in deltas with different demographic and natural resource dependency characteristics

- Jakarta: high population, service city, some societies still directly dependent on natural resources for agriculture, etc.
- Mahakam: oil and gas, shrimp ponds
- Musi: fisheries, rice cultivation, fish ponds

2. Many livelihood are provided by and socioeconomic activities are concentrated in deltas

Current threats

in line with socio-economic growth

Ecosystem degradation:	<ul style="list-style-type: none">• land cover change, water pollution,
Fires	<ul style="list-style-type: none">• especially on peatland, due to land mismanagement
Disastrous	<ul style="list-style-type: none">• (damaging) flood
Saline water intrusion	<ul style="list-style-type: none">• affecting quality of water, buildings and other infrastructures
Subsidence	<ul style="list-style-type: none">• in particular as a result of over exploitation of groundwater

Delta and Climate Change

Carbon pool:

- mitigative capacity of peatland to hold and absorb CO₂ if well managed

Impacted by climate change

- Sea level rise, more storm surges and floods that could damage ports, houses and other infrastructures
- Ecosystem change / damage (eg. soil erosion, fires) could cause loss or reduced provision of ecosystem goods and services

Thus Delta, coastal lowland and islands ...



Most prolific and productive part of the earth

- Oil and gas
- Fisheries
- Forestry and plantation
- Most extensive and intensive exploitation



Where most of the world's big and mega cities are

- Flat and provide most of human basic amenities like water, food and energy
- Migration and urbanization



Prone to disasters (natural and man made) and crisis

- Tsunami
- Sea level rise
- Hurricane and storm surges
- Global climatic changes
- Floods
- Biodiversity loss



Locus where stakeholders conflicts are

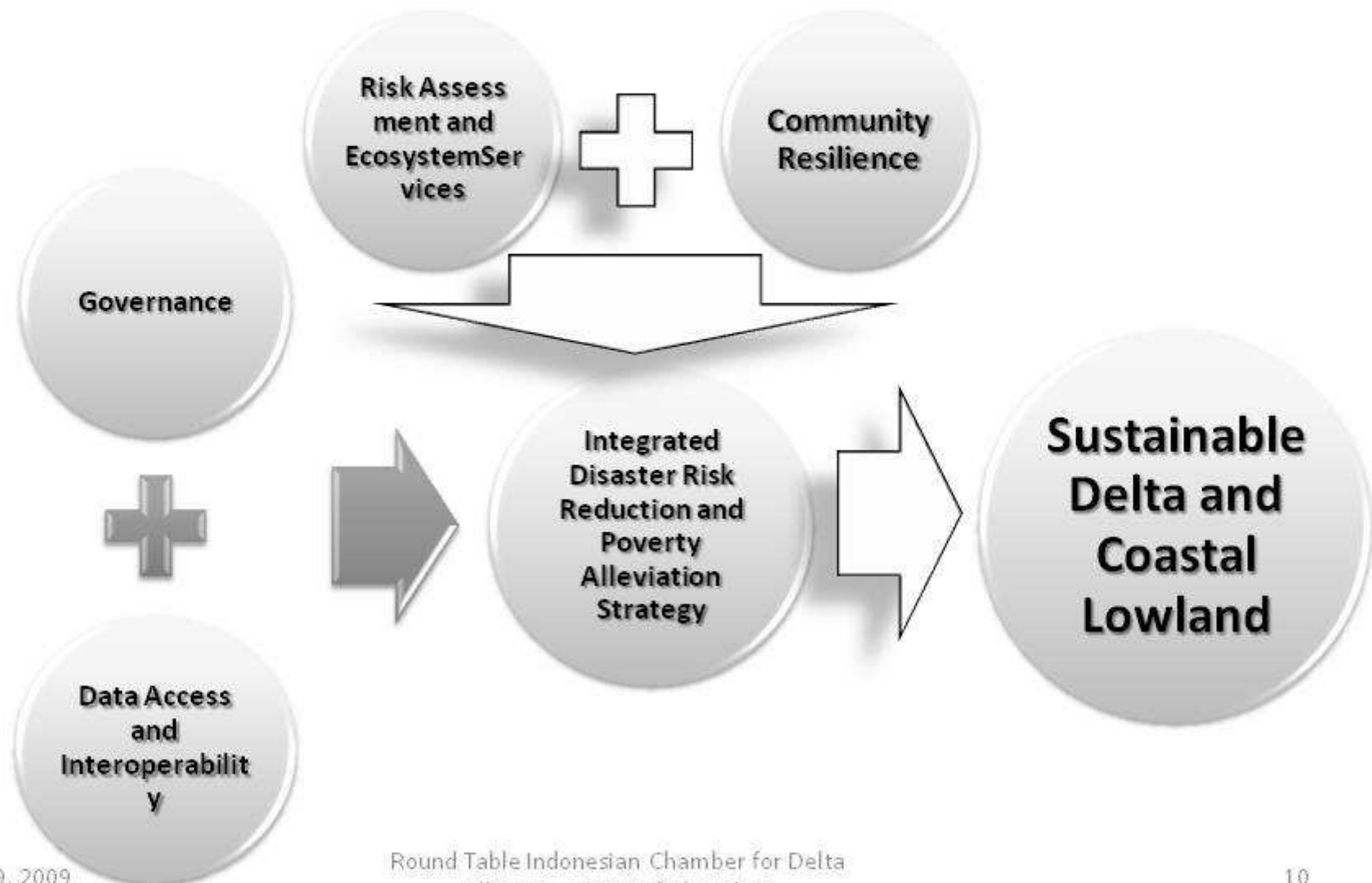
- Land dispute
- Resource based conflicts
- Borderland conflicts



Thus:

- Local problems
- National interest
- Global significance

Delta Issues



Delta Issues

Governance

Authority and legal system

- Devolution of authorities
- Central – local regulation mismatch and conflicts

Spatial planning and land tenure system

- Lack of ecosystem based spatial planning
- Law enforcement on agreed spatial planning
- Land conversion beyond its bearing capacity

Stakeholders conflicts of different natural resources exploitation

Migration policy/urbanisation

Delta Issues

Data access and interoperability

- **Poor data storage and exchange system**
- **No agreed data archive/repositories**
- **Little data assimilation on land, water and environmental services**
 - **Watersheds and river basin systems**
 - **Upstream – downstream interaction**
 - **Coastal zones**

Delta Issues

Risk Assessments and ecosystem services

- Vulnerability assessment
- Detailed vs first approximation risk assessments
- Valuation of ecosystem services and strategic environmental assessment

Community Resilience

- National and local Delta platform
- Resilient community livelihood
- Engaging national and international media
- Maintaining community awareness

Delta Issues

Integrated Disaster Risk Reduction and Poverty Alleviation Strategy

- Risk assessments and national awareness and adaptation planning
- Linking risk, poverty and climate change
- Warning system data requirements and forecasting
- Coordination
 - Effective web site
 - Inter-delta coordination
 - Access to key information (e.g. real - practical action info)
 - Performance monitoring

Delta Issues

Sustainable Delta and Coastal Lowland

- Donors/legacy systems
- Optimisation of national resources vs regional requirements (coordination)
- Mission oriented research and implement technological developments
- Multi-purpose/multi-hazard
- Sharing knowledge, capabilities, practices
- Community awareness
- More strategic planning

Needs

Governance

- **Ecosystem Based Adaptation (EBA)**
 - Adaptation measures or policies that harness ecosystem services for adapting society to climate change
- **Disaster Risk Reduction (DRR) and poverty alleviation**
 - Actions to reduce potential damage or harm to society and ecosystem caused by natural disturbances or events
- **Intra and inter delta harmonization and synergies**
- **Multihazards and multipurpose platforms**
- **Exchange of best practices**

Data access and interoperability

- **Data assimilation**
- **Data storage and retrieval**
- **Key information access**

Risk assessment and ecosystem services

- **Vulnerability assessment**
- **Risk assessment and adaptation**
- **Disaster multistakeholders preparedness system**
- **Valuation of ecosystem services**

Towards Indonesia Chamber of Delta Alliance

Awareness and capacity building

- Shared vision of
 - mainstreaming EBA and DRR (+ poverty alleviation and climate change adaptation) in the development plan
- Public and stakeholders education and awareness
- Best practices exchanges

Simple and action oriented Chamber

- Clear mandate, delegation of authority and responsibility
- Open ended and inclusive Chamber
- Involve as proper as possible stakeholders
 - Policy makers, Scientific community, Practical Community, Business Community, NGOs, Media
- Encourage interactions

Concluding remarks

Climate change is an additional stress to already stressful delta ecosystem

A new paradigm in delta and coastal lowland management is required which integrates **EBA and DRR** (+ poverty alleviation) in the mainstreamed development plan

An open ended, inclusive and multistakeholders **Indonesia Chamber of Delta Alliance** is needed to foster the sustainable Development of fragile Delta environment and the society in need

Thank you ...

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