

Updating the Transboundary Diagnostic Analysis (TDA) and Strategic Action Plan (SAP) for the South China Sea

Process and content:
For discussion

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Outline

1. What is a **transboundary** environmental problem?
2. What is a **TDA-SAP process**?
3. What is our **history** in using a TDA-SAP for the South China Sea?
4. Why do we need to **update** the TDA and SAP now?
5. What are our **options** for a **process** of updating?
6. What **data and information** are needed?
7. What **possible next steps** to make?

1. What is a **transboundary** environmental problem? Spatial scale = **2 or more countries; global**

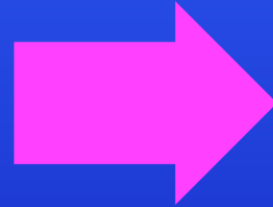
- A. **Migratory species** (e.g. turtles, marine mammals, fish stocks)
- B. **Areas where important species or resources** are found, i.e. straddles 2 or more countries (including aquifers, lakes & rivers)
- C. **Areas whose environmental status** will have transboundary consequences, even if found wholly in a single country's jurisdiction
- D. **Risks or threats** that may cross national boundaries
- E. **Global significance** – planetary boundaries for species, ecosystems and **nutrients** that need to be maintained for the provisioning of regional or global ecological goods and services
- F. **Aggregated common national concerns that are of a magnitude that would take regional or global significance**

2. What is a TDA-SAP process?

TDA

*Transboundary
=spatial scale
Objective
Inclusive*

- Identify & prioritise transboundary environmental problems (2 or more countries)
- Examine environmental impacts & socioeconomic consequences
- Analyse immediate, underlying and root causes of each TB problem



SAP

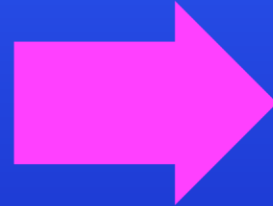
*Negotiated policy
document
Endorsed by
governments*

- Distinguishes actions addressing transboundary problems and which can potentially yield global benefits; from actions with purely national benefits
- Establishes clear priority for actions, especially those that can address root causes

3. History: Pioneer Projects

TDA

*Transboundary
=spatial scale
Objective
Inclusive*



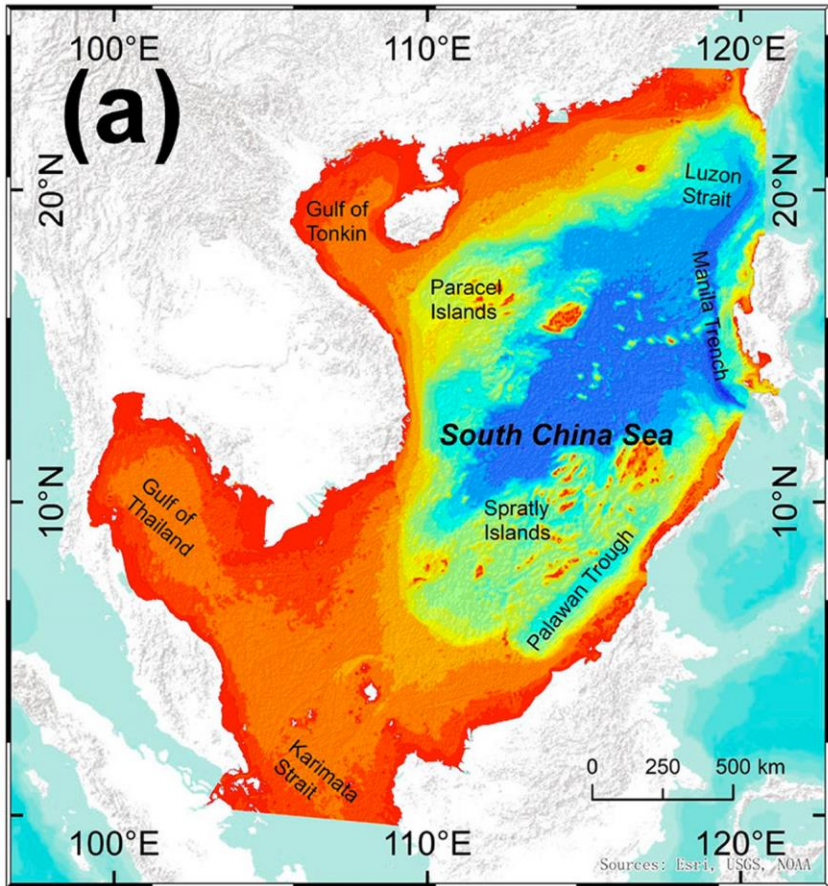
SAP

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document
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- **1997-1999**
- Country Reports by 7 National Committees of
- National Coordinators weighted environmental issues
- Major Issues: (1)Habitat loss & degradation; (2) Fisheries overexploitation in GOT; (3) Land-based pollution

- **1998-2000** for SAP formulation
- Basis for GEF South China Project “Reversing Environmental Degradation Trends in the South China Sea and the Gulf of Thailand”
- **Implemented 2002-2009, addressed 3 major issues identified by the TDA**
- **SAP Projects 2013, 2016**

3. History: GEF relevant projects in the SCS-GOT (16 GEF projects = national, regional, global) [IWLearn Database]



Regional Activity/ Project	Inclusive dates	GEF Agency
1. Prevention and Management of Marine Pollution in the East Asian Seas	1993-1999	UNDP/ IMO
2. GEF Preparatory Activity: TDA-SAP	1997-2000	UNEP Regional
3. Building Partnerships for the Environmental Protection and Management of the East Asian Seas	1999-2016	UNDP PEMSEA
4. Reversing Environmental Degradation Trends in the SCS and GOT (SAP)	2002-2009	UNEP Regional
5. East Asian Seas Region: Development and Implementation of Public Private Partnerships in Environmental Investments	2004-2009	UNDP PEMSEA
6. Implementation of Sustainable Development Strategy for the Seas of East Asia	2007-2012	UNDP PEMSEA
7. Implementing the Strategic Action Programme for the South China Sea	2013 -	UNEP
8. Establishment and Operation of a Regional System of Fisheries Refugia in the South China Sea and Gulf of Thailand	2016 -	UNEP/ SEAFDEC

4. Why do we need to update the TDA and SAP now?

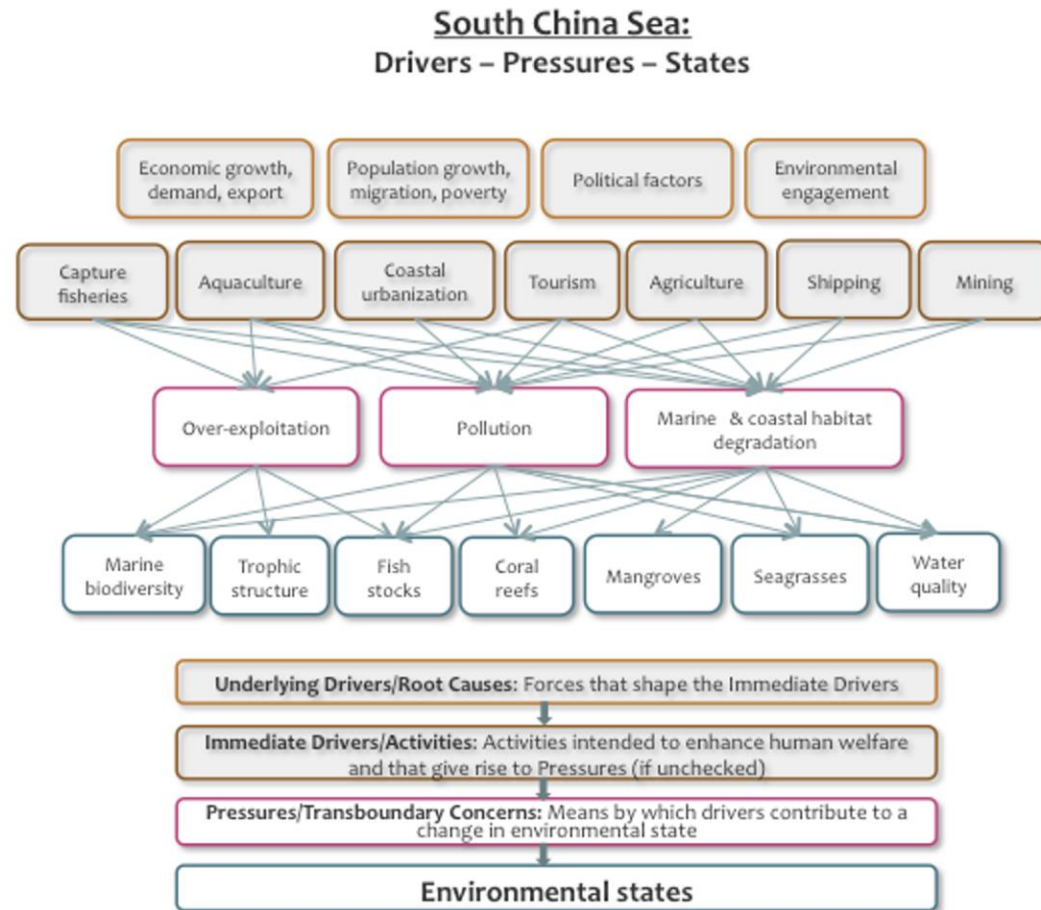
TDA	Regional/ Global Commitments	Organizing Concepts	Quality of data; spatial information
1997 - 2000	<ul style="list-style-type: none"> • RAMSAR Convention, 1971 • MARPOL 73/78 Convention • Rio Declaration on Environment and Development, 1992 • Convention on Biological Diversity (CBD), 1992 • UN Convention on the Law of the Sea (UNCLOS), 1994 • Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA), 1995 • UN Agreement on Straddling Fish Stocks and Highly Migratory Fish Stocks, 1995 	<ul style="list-style-type: none"> • Watershed scale (subnational); ridge to reef • Participatory approach of engagement at national and regional scales • Transboundary Issues <ul style="list-style-type: none"> ▪ Habitat modification & degradation ▪ Overexploitation of fishery resources ▪ Pollution 	<p>Generally FAIR</p>

4. Need for updated TDA-SAP (con't)

TDA	Regional/ Global Commitments	Organizing Concepts	Quality/ Public access for determination
2024 –	<ul style="list-style-type: none"> • Sustainable Development Goals Development Agenda, 2015 to 2030 • UN Framework Convention on Climate Change, 1994; Paris Agreement, 2016; Global Stocktake, 2023 • Kunming-Montreal Global Biodiversity Framework, 2022 • Global Plastics Treaty, exp Nov. 2024 • Nutrient Agreements: Colombo Declaration on Sustainable Nitrogen Management, 2019 • UNEA 4.14/ 5 Resolutions on Sustainable Nitrogen Management, 2019, 2022 • Treaty of the High Seas (Biodiversity Beyond National Jurisdiction = BBNJ), 2024 • COBSEA Strategic Action Programme Directions, 2023-2027 	<ul style="list-style-type: none"> • Watershed scale (subnational); ridge to reef • Knowledge Co-Production approach • Planetary boundaries • Indicator-based assessments of RISKS to ecosystems, people and blue economy-based livelihoods • Development-based Scenarios of Risk Mitigation 	<ul style="list-style-type: none"> • Empirical case studies – site scale • Development plans – subnational, national • National commitments to Regional/ Global commitments • National statistical databases • Regional databases • Global databases • Global modeled data
2000-2024	<ul style="list-style-type: none"> ➤ Drivers of environmental change have been modified over 25-year period; ranking changes? 		

5. Data and information needs

GEF Guidance (2006)



5. Data and information needs

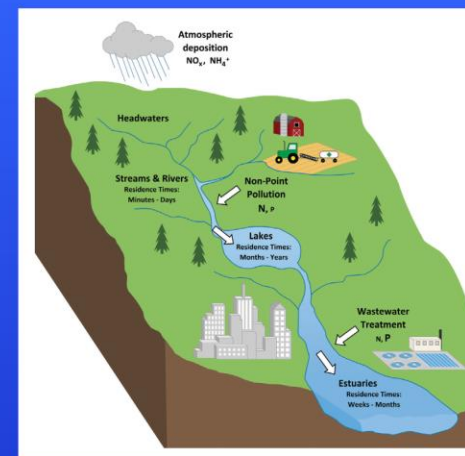
[Every data point can be located in space and time on a map!]

- What do we wish to assess
- Scale/s and methods of assessment
- Methods and data support go hand in hand
- Numerical data: Indicators of increasing risk
- Non-numerical data: Provides context of numerical data
- How development scenarios can change risk patterns

Globalized trade



A Watershed Unit

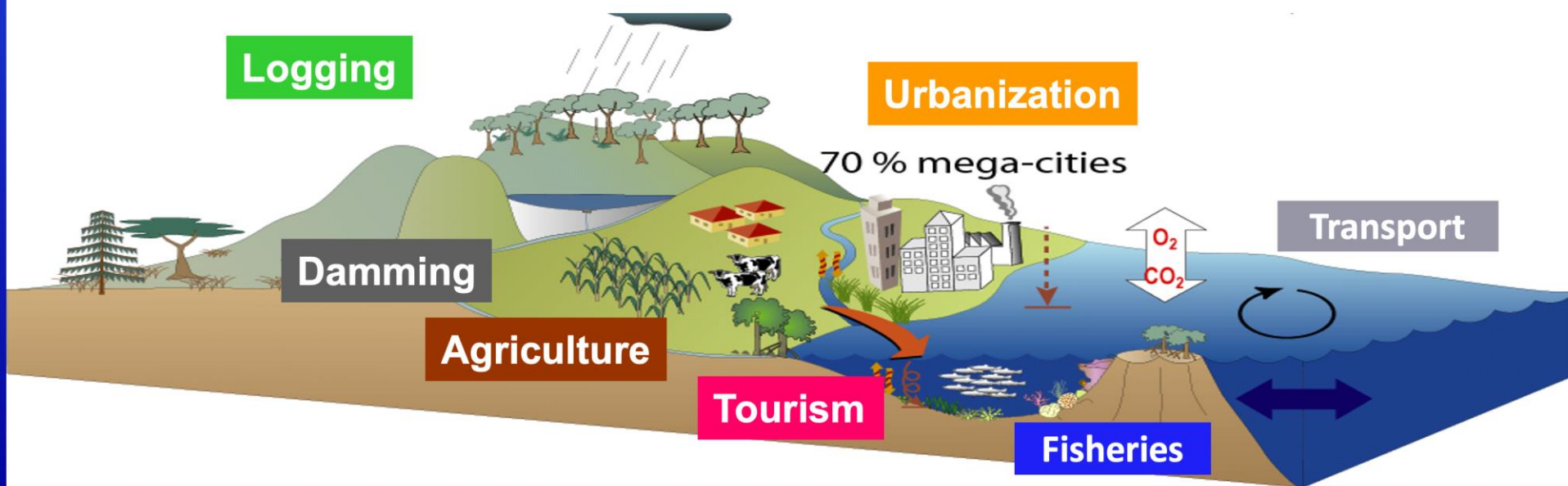


Climate Change



Anthropogenic changes

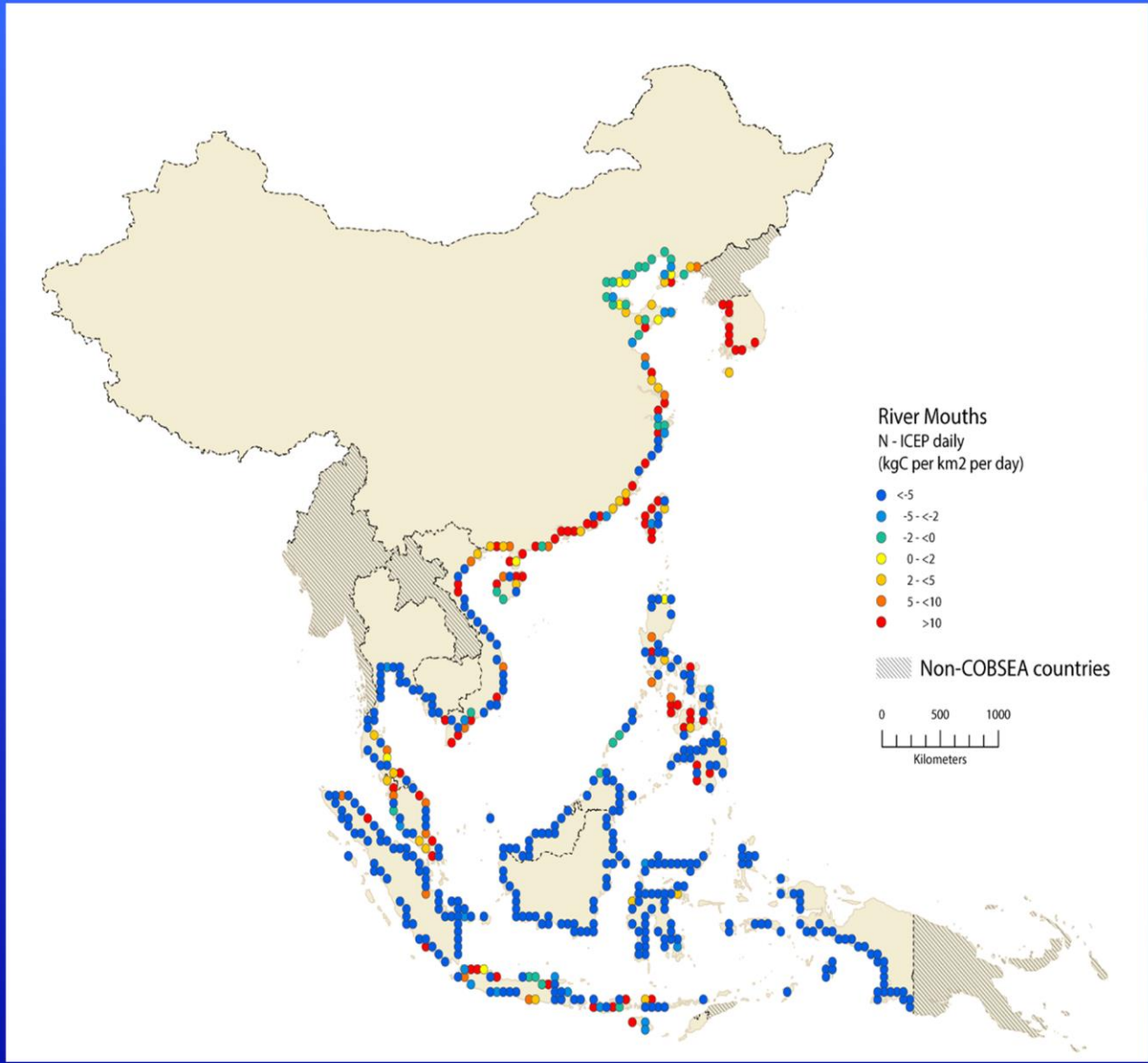
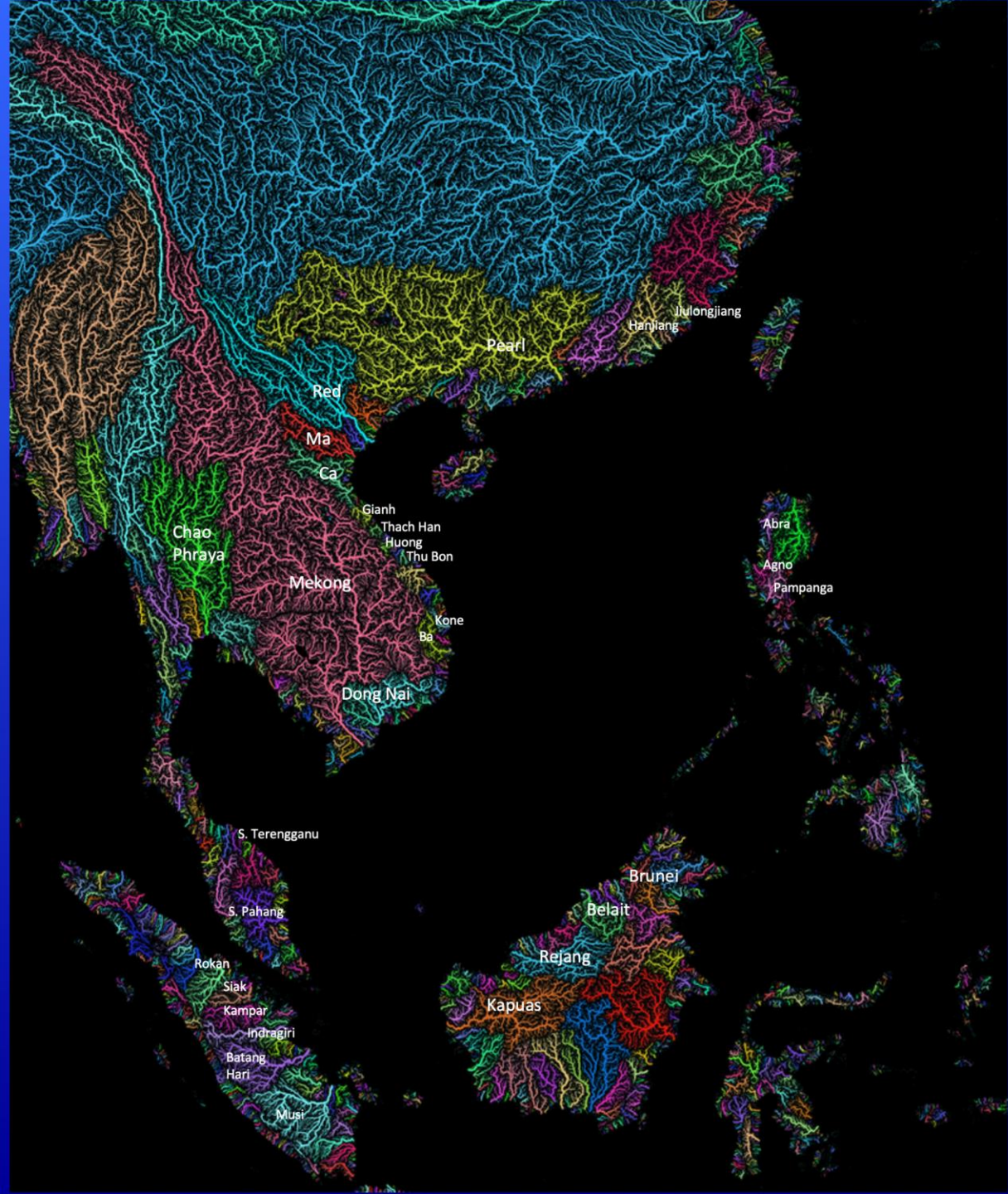
Natural Variability



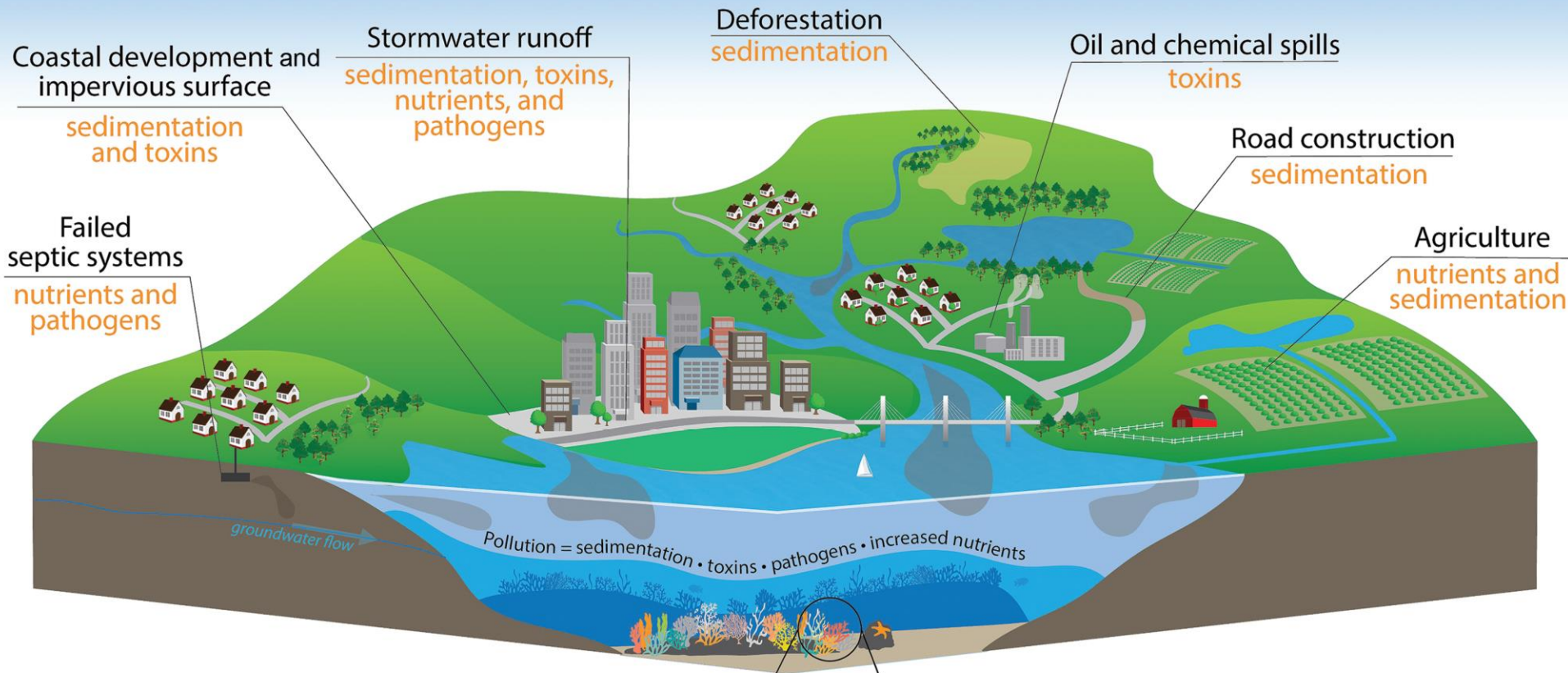
Source to sea (Watershed) approach



Blue Economy Sectors



River mouths in the COBSEA region with **Indices of Coastal Eutrophication Potential** using modeled data for year 2000 (UNEP/ McManus et al. 2022)
Data source: Mayorga et al. 2010, potential to obtain 2020 update



TDA 2000:

- Habitat modification & degradation
- Overexploitation of fishery resources
- Pollution

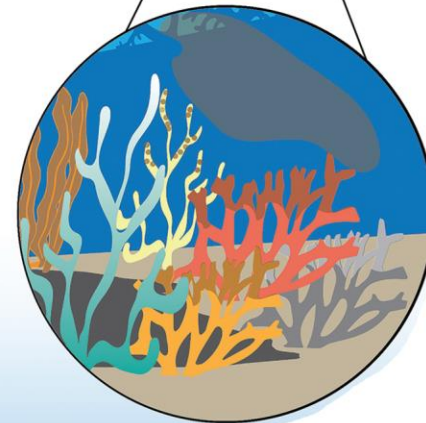
SAP 2000, 2008, 2013

- Habitat areas
- Fish refugia
- Ecosystem valuation

POLLUTION

sedimentation
toxins
pathogens
increased nutrients

- causes** disease and mortality
- disrupts** ecological functions
- changes** dynamics and feeding behaviours
- prevents** coral growth and reproduction



We can identify **watersheds and ASSOCIATED habitats, with decent data**, and assess current environmental states in an INTEGRATED manner:

- How does pollution (nutrients, plastics, pathogens, sediments), overexploitation, and modification, change coastal ecosystems?
- If we change immediate drivers (reduce pollution, reduce exploitation), can we improve ecosystem health and protect biodiversity?
- If we DO NOT change any of the drivers, what do we stand to lose? Livelihoods of the blue economy? Impacts on human wellbeing, including women and children?

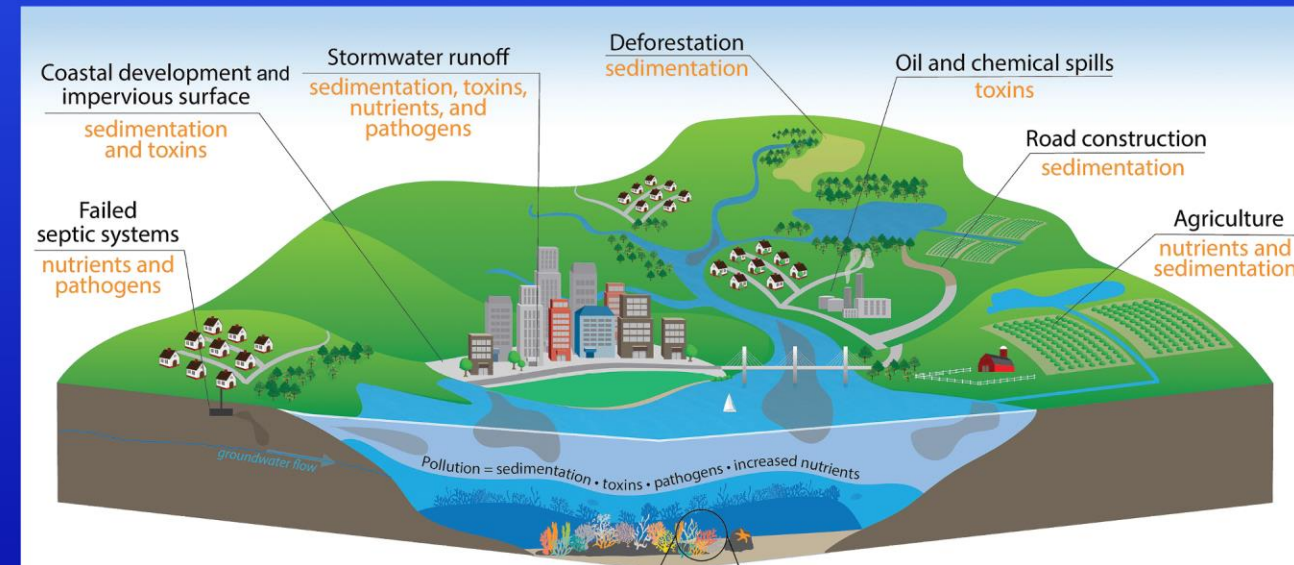
➤ **Can we incorporate available data, empirical and modeled, in our TDA at watershed (landscape)/seascape scale, along with governance?**

➤ What policies would be needed to change the root causes of the drivers to improve ecosystem health?

➤ What is the likelihood to institute policy to transform and protect ecosystems?

➤ **Can we include these policy gaps as targets of our SAP?**

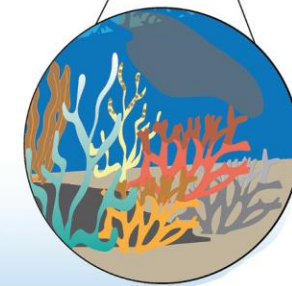
➤ **Can we include scenarios of actions in our SAP?**

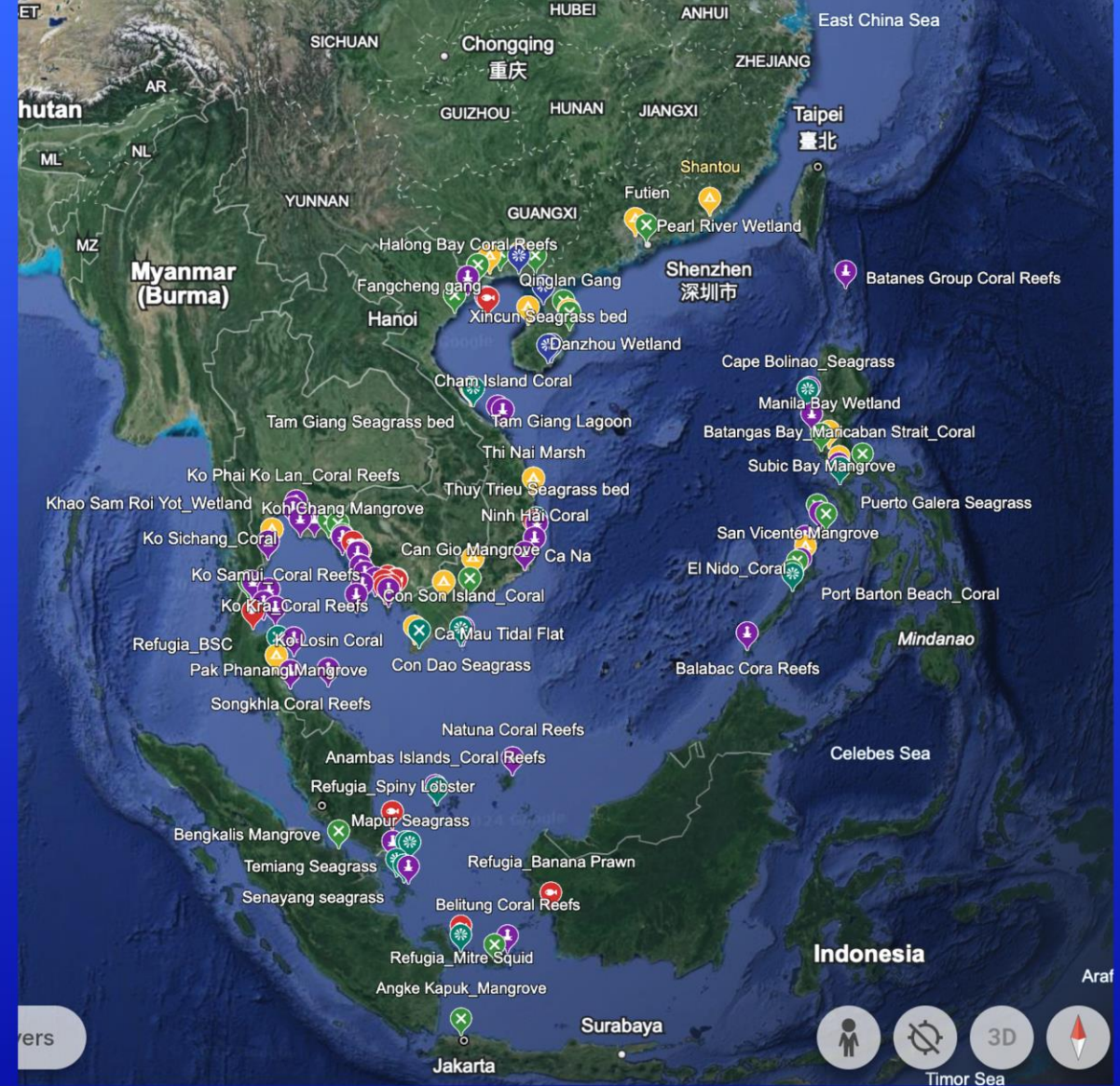
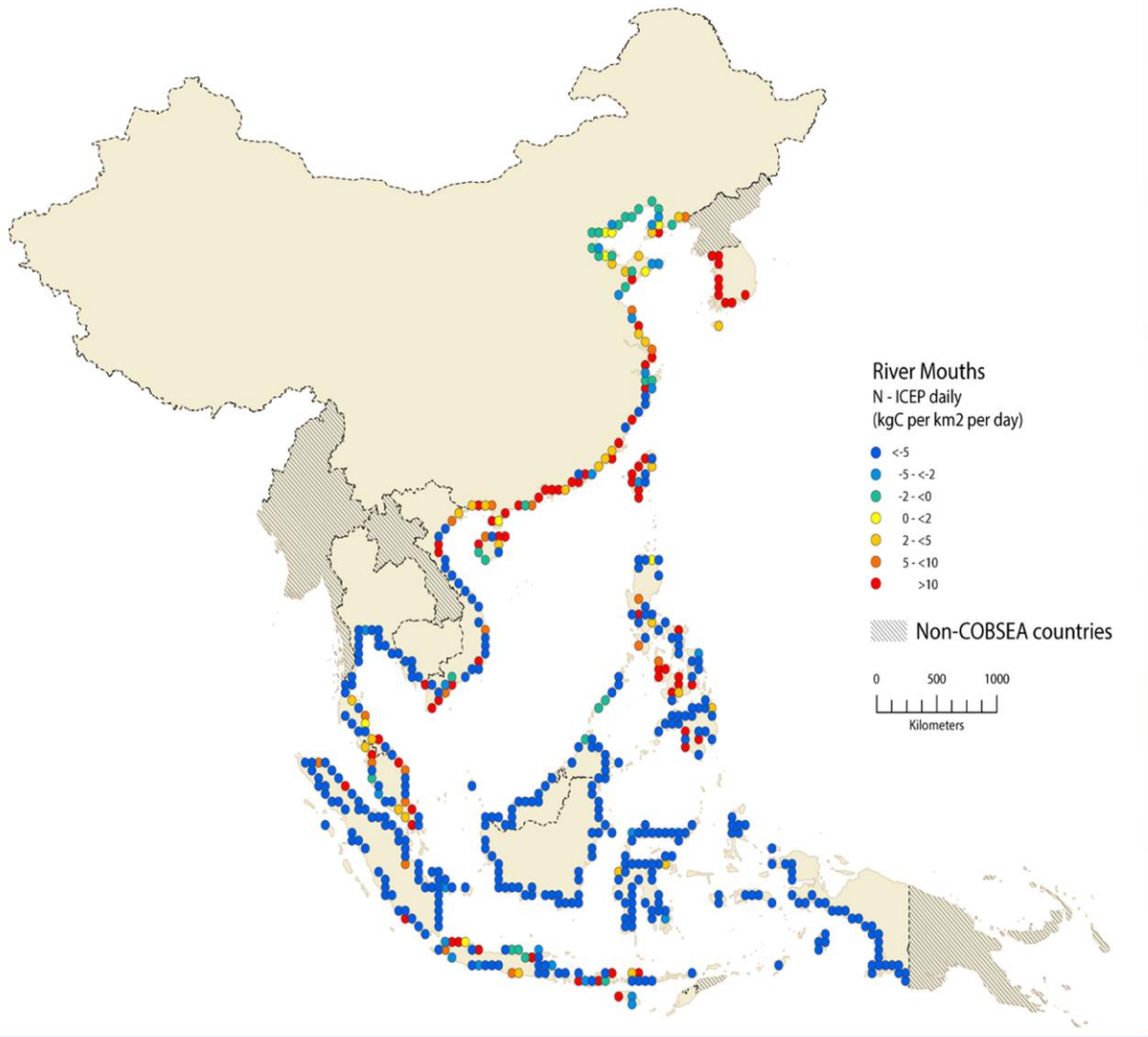


POLLUTION
sedimentation
toxins
pathogens
increased nutrients



causes disease and mortality
disrupts ecological functions
changes dynamics and feeding behaviours
prevents coral growth and reproduction





Governance
Scenarios

Pollutants,
Resource extraction
Population, Climate
Land use

Ecosystem health:
Function /
biodiversity

Impacts on Blue Economy & Human Wellbeing
(disaggreg to show impacts on women and children)

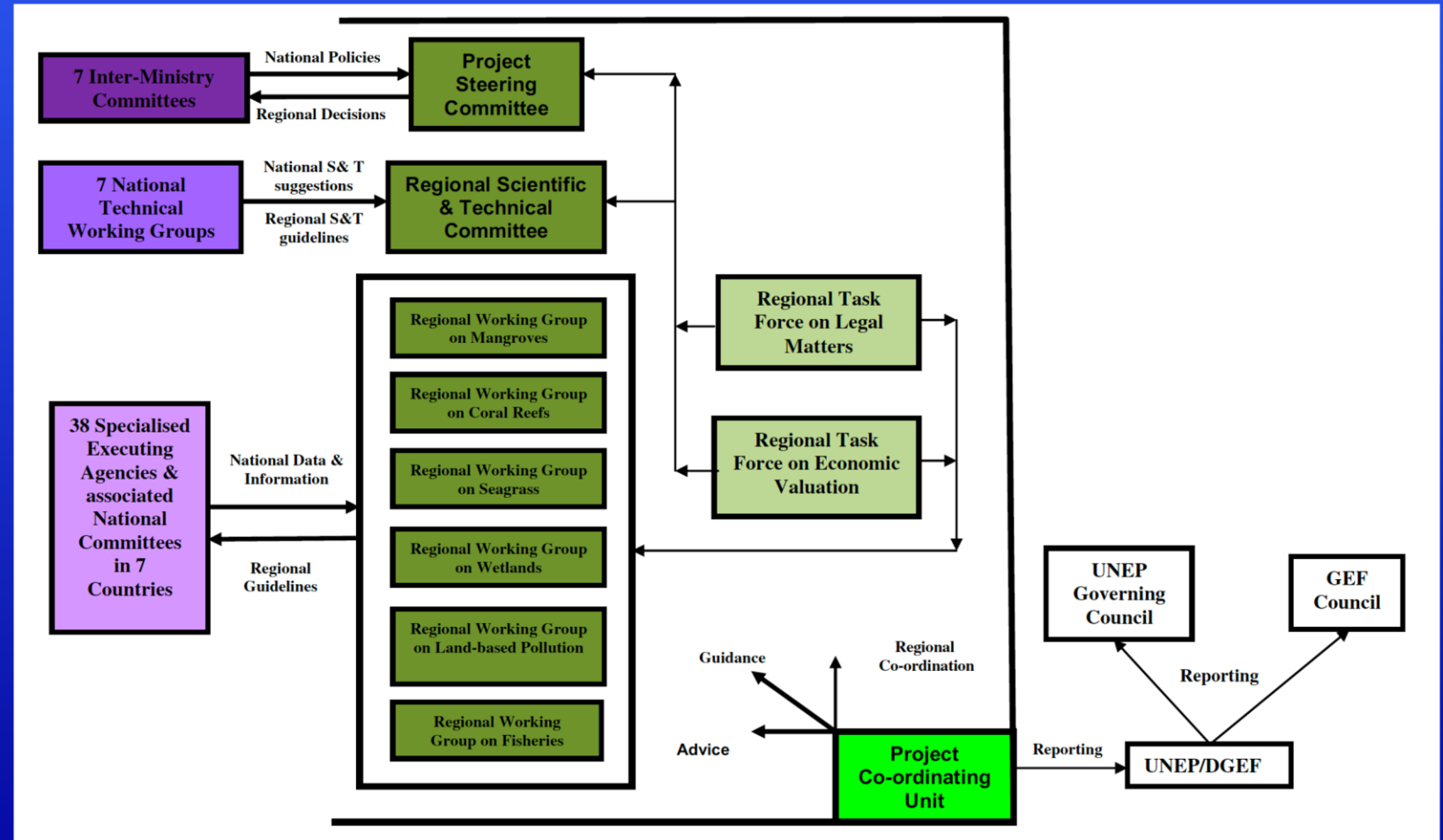
6. How do we update?

History: Legacy project management framework

“Reversing Environmental Degradation Trends in the South China Sea and the Gulf of Thailand, 2002-2009”

Objectives:

- Improved regional coordination of the management of the South China Sea marine and coastal environment
- Improved national management of marine and coastal habitats
- Improved integration of fisheries and biodiversity management in the GOT



Management Framework, GEF SCS Project, 2009 (Pernetta and Jiang, 2013)

6. Options for how: 2006 GEF Guidance

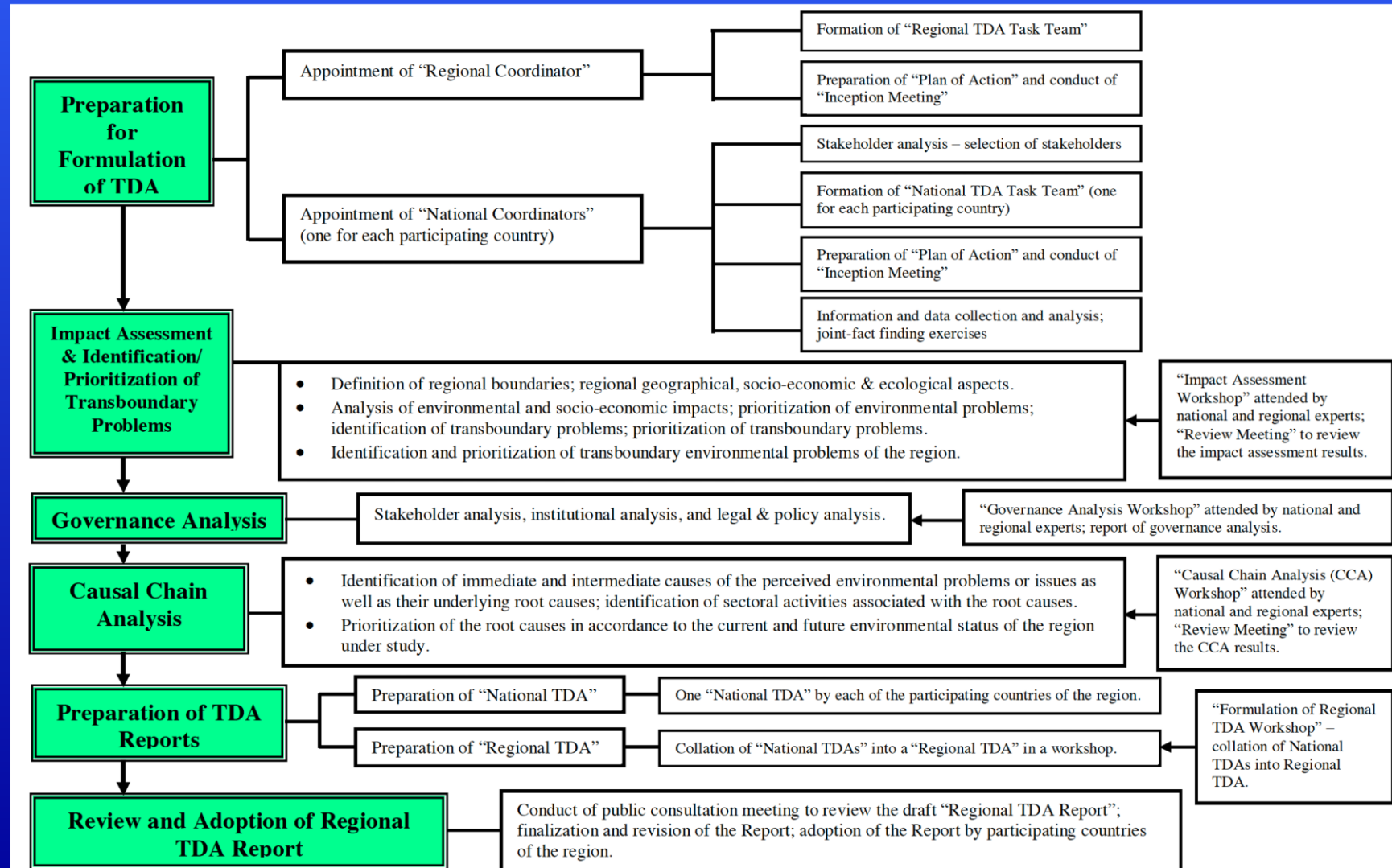


Figure 2. Process for preparation of the Transboundary Diagnostic Analysis (TDA)

6. Potential for integrated assessment or variant based on data availability

- We use existing working groups/ committees
- Knowledge-sharing workshops, using maps, lots of maps
 - ✓ Data assembly
 - ✓ Methods of integrated environmental assessments for National TDAs
 - ✓ Thematic integration: Thematic TDA using National TDAs and published studies
 - Risks from Pollution
 - Risks from Overexploitation of fishery resources
 - Risks on Blue Economy, food security
- Sharing governance/ policy scenarios that can decrease/ increase Risks
- SAP Priorities

We need a workplan to deliver an updated
TDA and SAP for the SCS-GOT
(for endorsement by 2026 IGM Meeting)

Let's discuss!

