



# Can science forge a tight alliance for a sustainable South China Sea?

*Liana Talaue McManus*

*UNEP GEF Project Coordinator*

*"Addressing Marine Plastics: A Systemic Approach"*

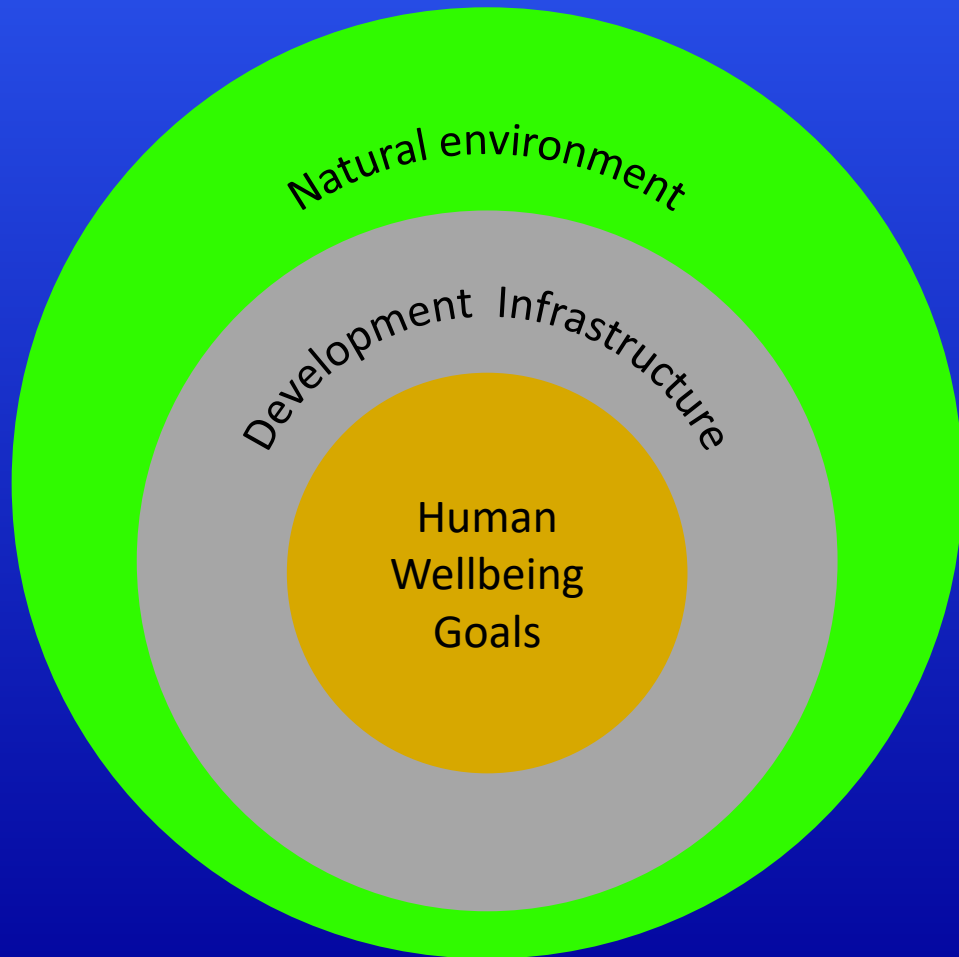
# Entering the Century of the Environment:

## A New Social Contract for Science

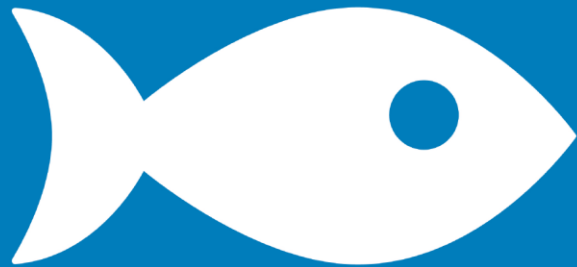
*(Lubchenco 1998)*

The whole system of **science, society and nature** is evolving in fundamental ways that cause us to rethink the way science is deployed to help people cope with a changing world. **Scientists should be leading the dialogue on scientific priorities, new institutional arrangements, and improved mechanisms to disseminate and utilize knowledge more quickly.**

# Sustainable Development Goals (SDGs), 2015-2030

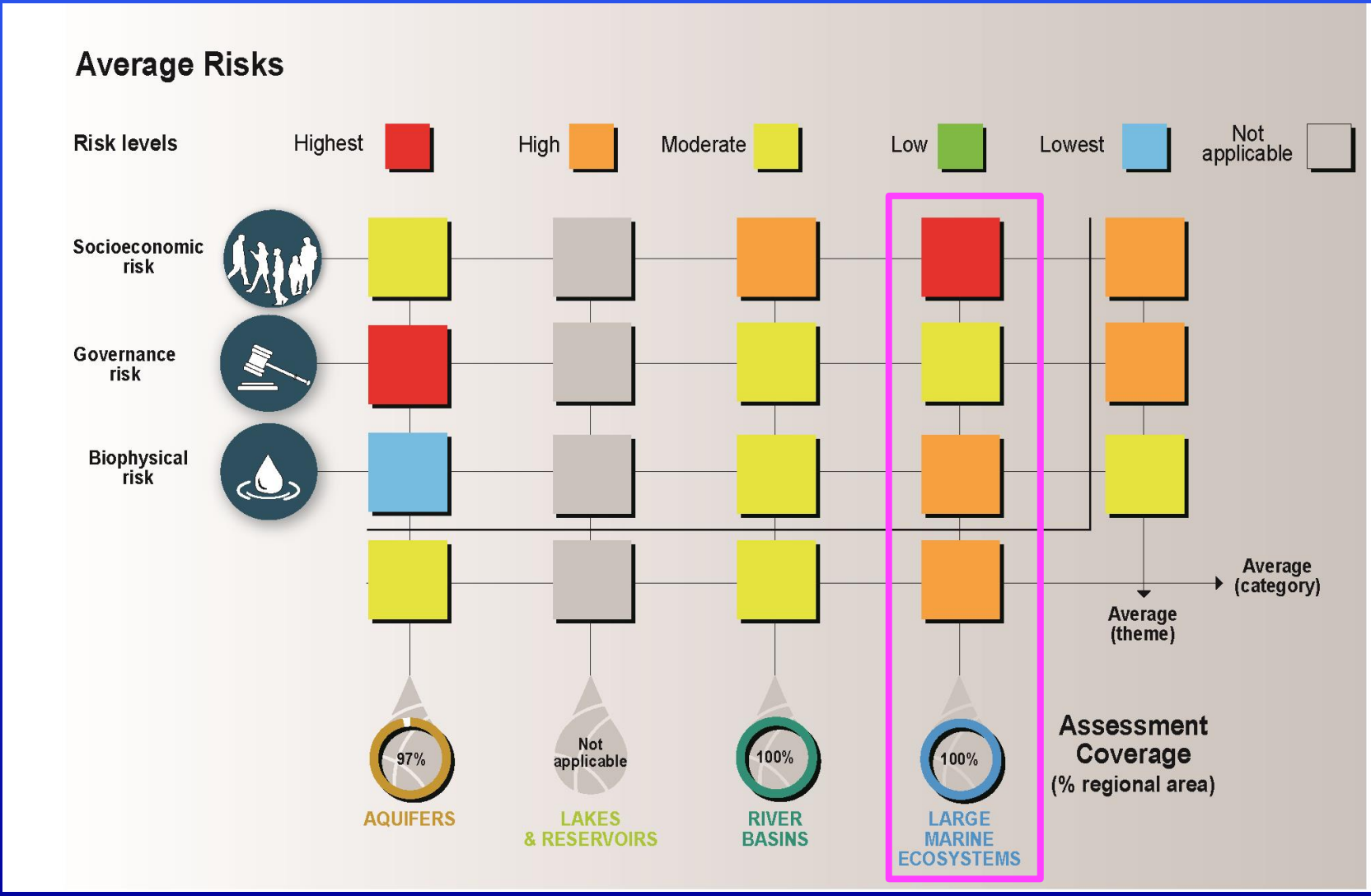
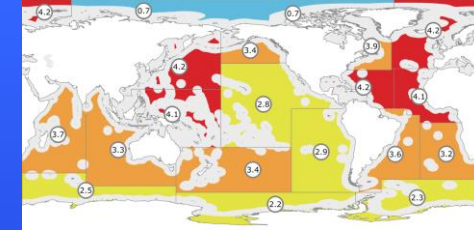


# 14 LIFE BELOW WATER



- 2025: Prevent/ reduce **marine pollution** in all forms
- 2020: Manage and protect **coastal and marine ecosystems**
- Mitigate **ocean acidification**
- 2020: Regulate **harvesting** and end illegal, unreported fishing, and all destructive practices
- 2020: Conserve at least **10% of coastal and marine areas**
- 2020: **Prohibit subsidies** that contribute to over- and IUU fishing

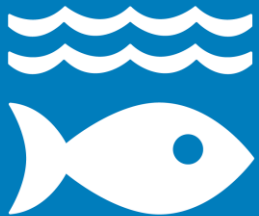
Southeast Asia: Large marine ecosystems including the SCS are at high risk, and the open ocean area is at highest risk



Large Marine Ecosystems (LMEs) in SE Asia = 15% of total LME area of 86M km<sup>2</sup> :

- LME 34: Bay of Bengal 3 657 502 km<sup>2</sup>
- LME 35: Gulf of Thailand 391 665 km<sup>2</sup>
- LME 36: South China Sea 5 660 985 km<sup>2</sup>**
- LME 37: Sulu-Celebes Sea: 1 015 737 km<sup>2</sup>
- LME 38: Indonesian Sea: 2 289 597 km<sup>2</sup>

**14** LIFE  
BELOW WATER



Theme	Target	State in the South China Sea <i>(2010, 2030, 2050)</i>
Marine pollution	By 2025, prevent and reduce all kinds of pollution	<ul style="list-style-type: none"> <li>➤ High levels of nitrogen pollution</li> <li>➤ Accounts for 14% of global micro- and macro- plastics leakage to environment</li> </ul>
Marine protected areas	By 2020, conserve at least 10% of coastal and marine areas	<ul style="list-style-type: none"> <li>➤ Has only 3% of its coastal &amp; marine area protected</li> <li>➤ By 2030, 26% of coral cover projected to be threatened by global warming and acidification</li> </ul>
Overfishing	By 2020, end overfishing, illegal, unreported, and unregulated fishing.	<ul style="list-style-type: none"> <li>➤ 40% of the stocks are collapsed or overexploited</li> </ul>

## SDG Goal

## State in the SCS (2010)



- 270 million people live within 100 km from coast; 50% in rural areas
- About 38 million live below national poverty lines , pre-covid



- Seafood contributes nearly 30%, on average (or 24 – 54%) of dietary animal protein.



**What must scientists  
do?**



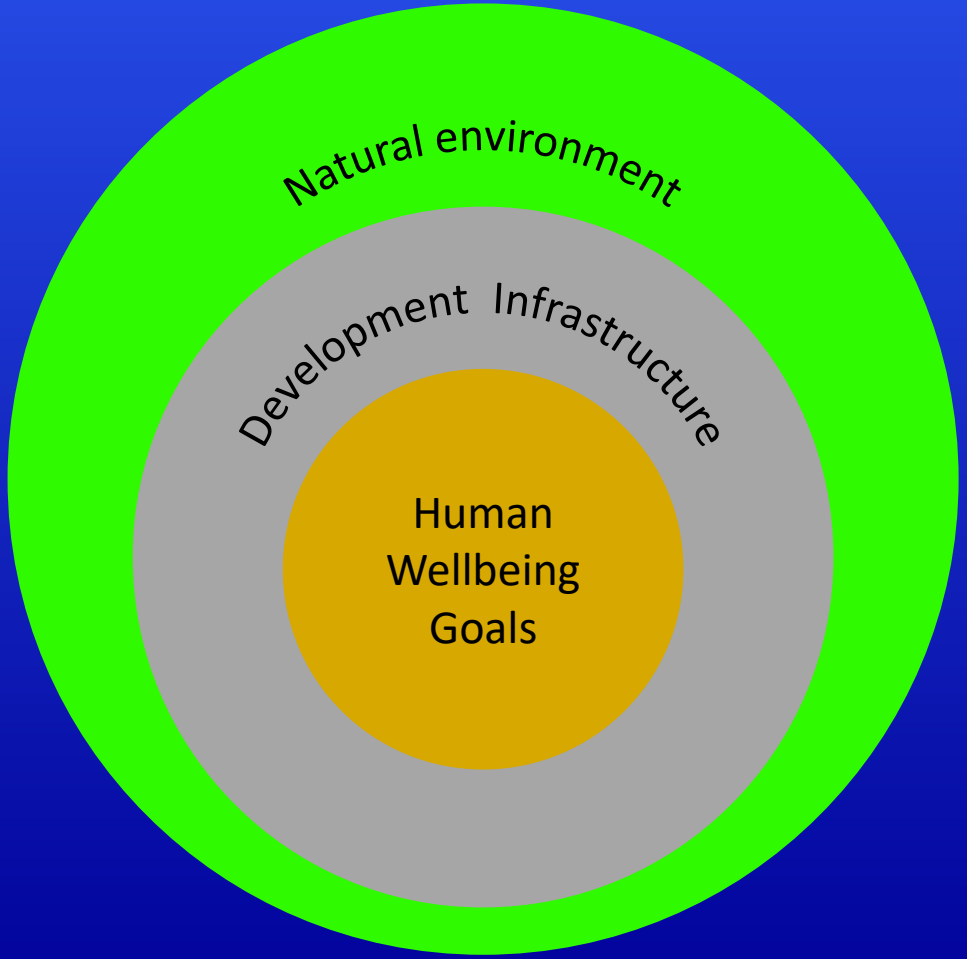
# ASEAN Cooperative Programmes in Marine Science (1980-2000): Foundational

Programme	Target/s	Legacy
ASEAN Canada (1984 – 1988; 1991 – 1999)	<ul style="list-style-type: none"> <li>Marine pollution and Red Tides</li> </ul>	ASEAN-wide Harmful Algal Bloom Monitoring Network
ASEAN Australia Living Coastal Resources Project (1984 – 1989; 1990 – 1994)	Assessment of coral reefs, mangroves and seagrasses	ASEAN-wide Coral Reef Monitoring Programme with comparable survey methods, and database
ASEAN US Coastal Resources Management Project (1986 – 1992)	<ul style="list-style-type: none"> <li>Increase awareness of policy makers of trends in depleting coastal resources</li> <li>Heightened attention to importance of sound coastal management policy</li> </ul>	Mainstream use of Integrated Coastal Resources Management

# Institution- and Coalition Building

<p>Global Environment Facility</p>	<p>➤ Reversing Environmental Degradation Trends in the SCS and Gulf of Thailand (2001- 2014), with UNEP</p>	<ul style="list-style-type: none"> <li>▪ Implementing a Strategic Action Programme through National Action Plans</li> <li>▪ Establishing regional system of fish refugia</li> </ul>
	<p>➤ Prevention and Management of Marine Pollution in the East Asian Seas, with UNDP (1993 – 1998; 1999-2007; 2007-2017)</p>	<ul style="list-style-type: none"> <li>▪ Establishment of a self-sustaining intergovernmental partnership (PEMSEA)</li> <li>▪ Implement the Sustainable Development Strategy for the Seas of the East Asian Seas</li> </ul>
<p>Confidence-building Measures</p>	<p>Managing Potential Conflicts (1995, 1996)</p>	<p>Scientists and Foreign Affairs Experts discuss environmental issues and their mitigation in round-table workshops</p>
<p>Bilateral arrangements</p>	<p>Vietnam-Philippines Joint Oceanographic Marine Scientific Research Expeditions (JOMSRE) (1996 – 2007); 4 expeditions</p>	<p>Science for Diplomacy; an effort to transform SCS into a peaceful and prosperous sea and to diffuse tension; covered marine biodiversity, geology and pollution</p>

# Transformative science to sustain the South China Sea



<b>13</b> CLIMATE ACTION 	<b>14</b> LIFE BELOW WATER 	<b>15</b> LIFE ON LAND 
------------------------------	--------------------------------	----------------------------

<b>2</b> ZERO HUNGER 	<b>6</b> CLEAN WATER AND SANITATION 	<b>7</b> AFFORDABLE AND CLEAN ENERGY 	<b>8</b> DECENT WORK AND ECONOMIC GROWTH 
--------------------------	---	--	--

<b>1</b> NO POVERTY 	<b>3</b> GOOD HEALTH AND WELL-BEING 	<b>4</b> QUALITY EDUCATION 
<b>5</b> GENDER EQUALITY 	<b>10</b> REDUCED INEQUALITIES 	<b>16</b> PEACE, JUSTICE AND STRONG INSTITUTIONS 

<b>9</b> INDUSTRY, INNOVATION AND INFRASTRUCTURE 	<b>11</b> SUSTAINABLE CITIES AND COMMUNITIES 	<b>12</b> RESPONSIBLE CONSUMPTION AND PRODUCTION 	<b>17</b> PARTNERSHIPS FOR THE GOALS 
--	--	--	--

# Transformative science to sustain the SCS





*Salamat!*  
*(Thank you)*