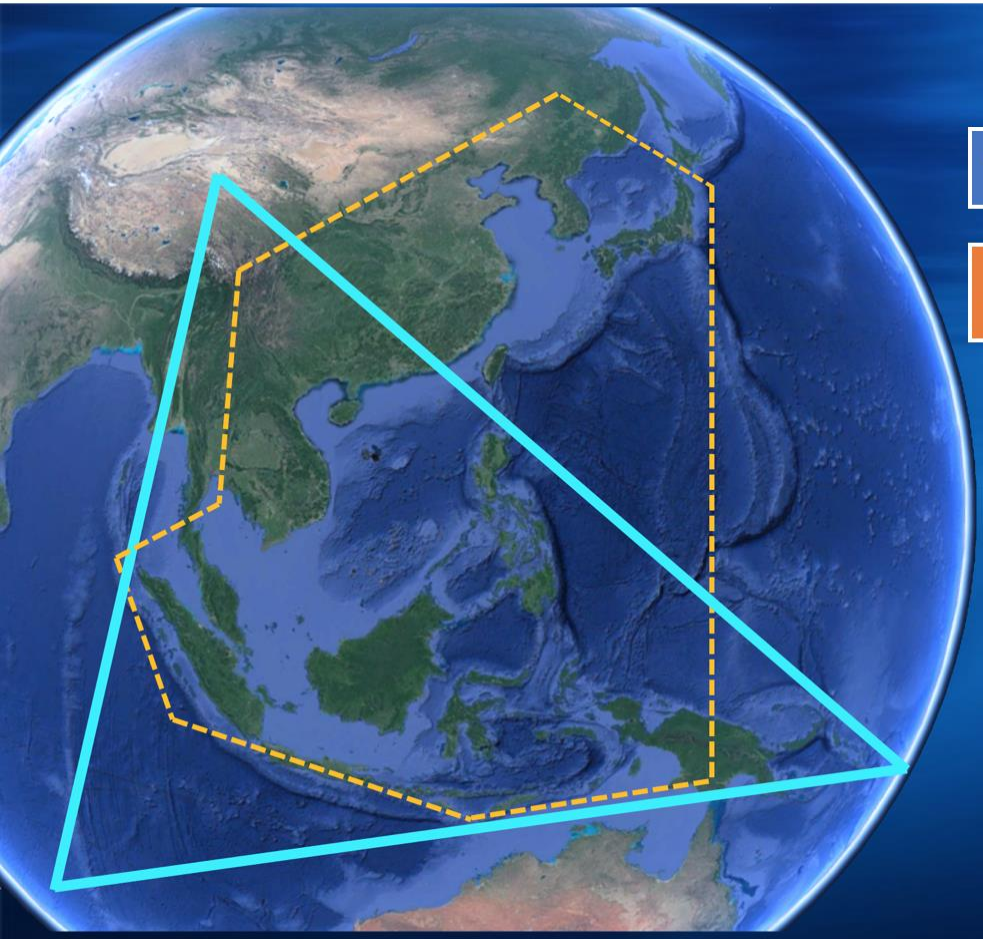
EAS CONGRESS 2018
THE EAST ASIAN SEAS CONGRESS
27-30 November 2018
Iloilo Convention Center
PHILIPPINES

THE BLUE CARBON PROJECT

TRACK 1: CLIMATE CHANGE AND BLUE CARBON

SESSION 3

Climate Change Mitigation? Blue Carbon is Nature's Way To Do It



The BLUE CARBON TRIANGLE
in the SEAS OF EAST ASIA

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THE BLUE CARBON PROJECT

Why this session?

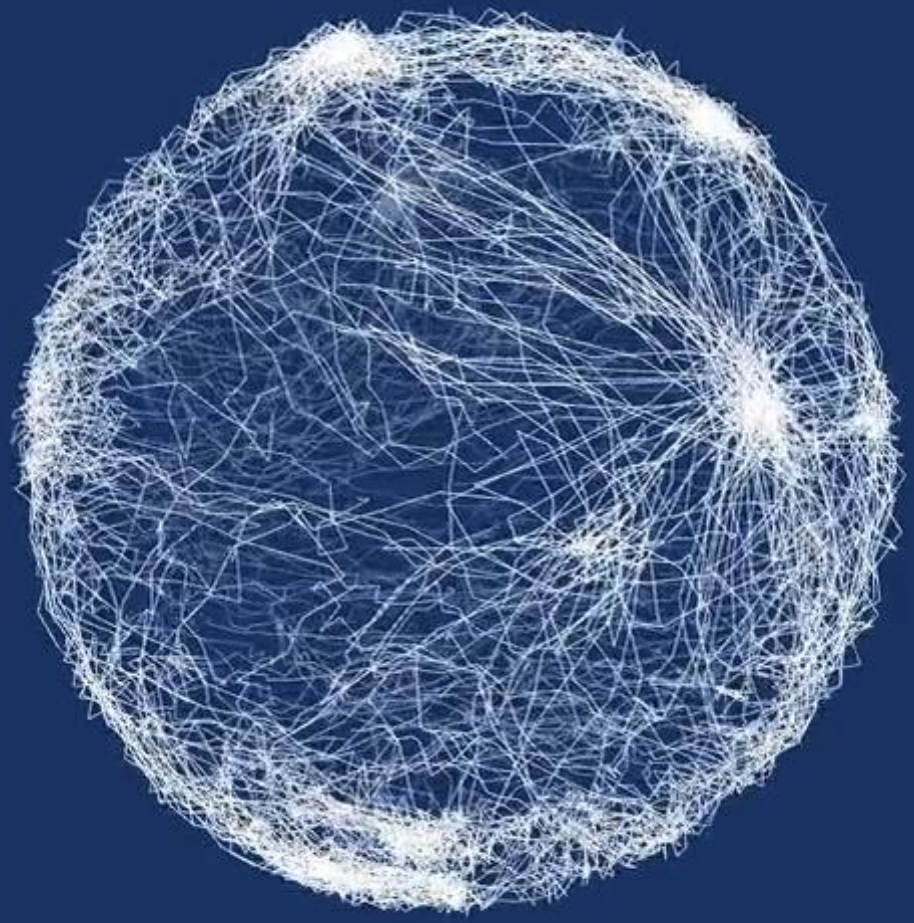
I. To introduce Blue Carbon as an ecosystem service & nature's way of mitigating climate change impacts

II. With that understanding, to know how to respond

III. To offer a great opportunity to share information, highlight gaps in knowledge & management, & build partnerships

IV. To help develop a Blue Carbon Strategy for the East Asian Seas

The global initiative that first focused the world's attention to 'blue carbon'…



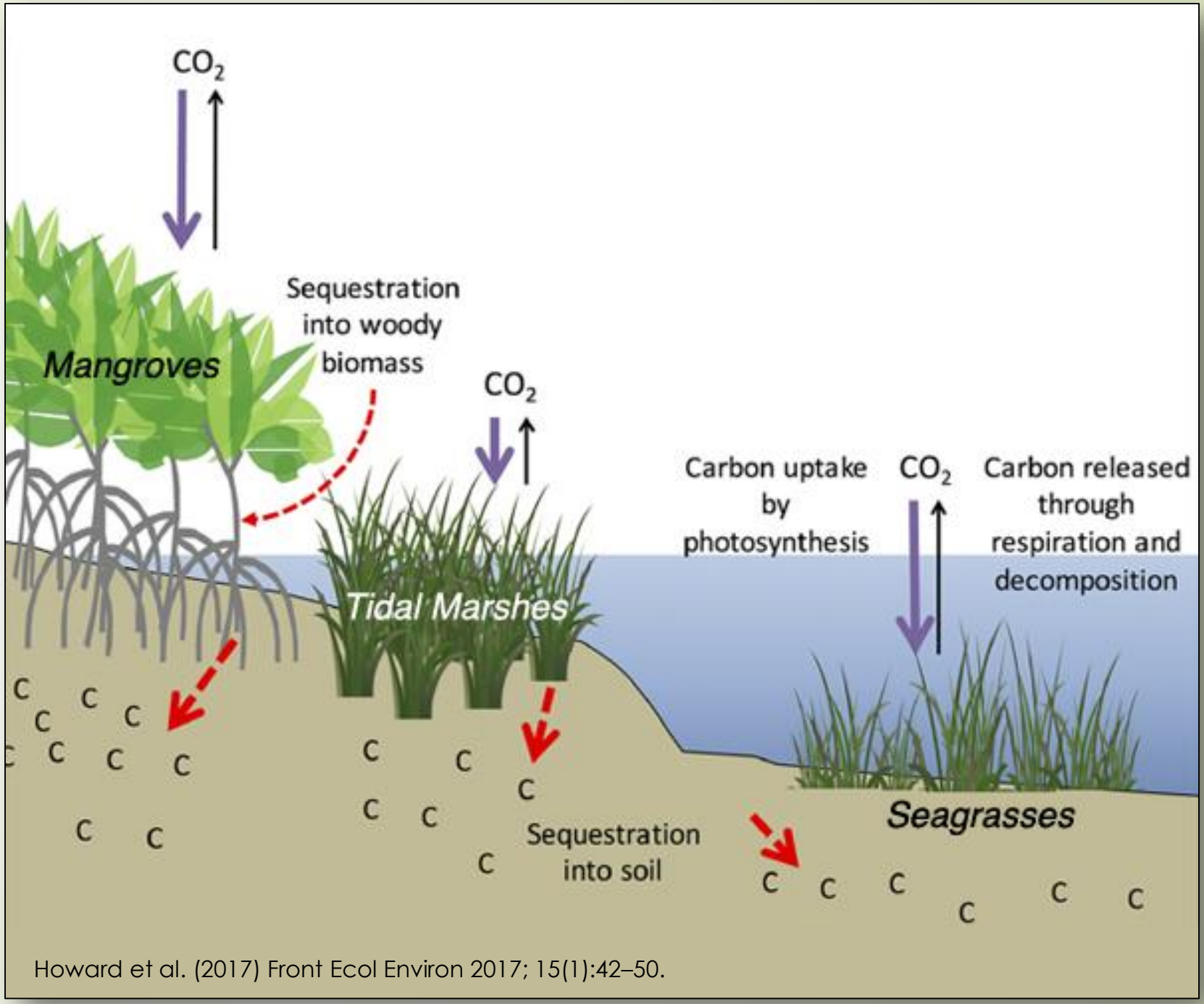
COP15
COPENHAGEN
UNITED NATIONS CLIMATE CHANGE CONFERENCE 2009

"…when healthy, mangrove forests, saltwater marshlands & seagrass meadows are extremely effective at storing atmospheric CO_2, thereby mitigating climate change"

UNEP-IUCN 2009

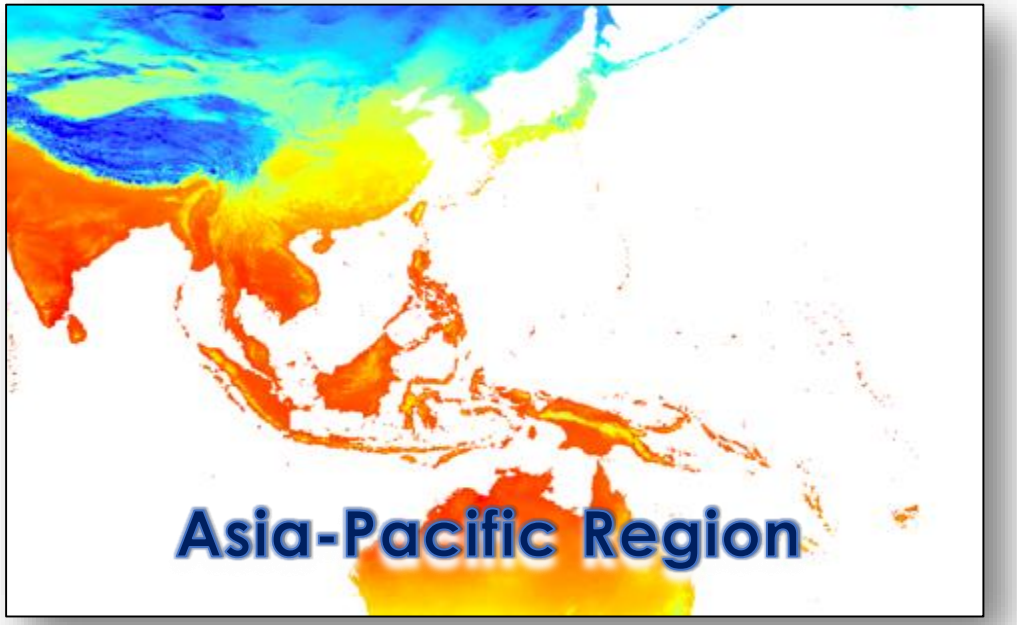
HOW?

The Blue Carbon Ecosystems sequester carbon from the atmosphere & lock them in their biomass & sediments for long periods, thereby mitigating climate change



Howard et al. (2017) Front Ecol Environ 2017; 15(1):42–50.

Asia-Pacific & Climate Change



Average annual temperatures - likely to increase across AP by ca. 1°C through 2030, & the rest of the 21st century.[1]

Net precipitation rates - will increase across the region in the next 20 years, but with local decreases varying spatially & temporally.[2]

Sea level - continue to rise, but rates will vary across the region. By end of the 21st century, it is projected to rise by ca. 30-40 cm.[4]

AP countries are most vulnerable to CC due to their location & geo-physical features

CC can virtually derail the region's growth & economic development

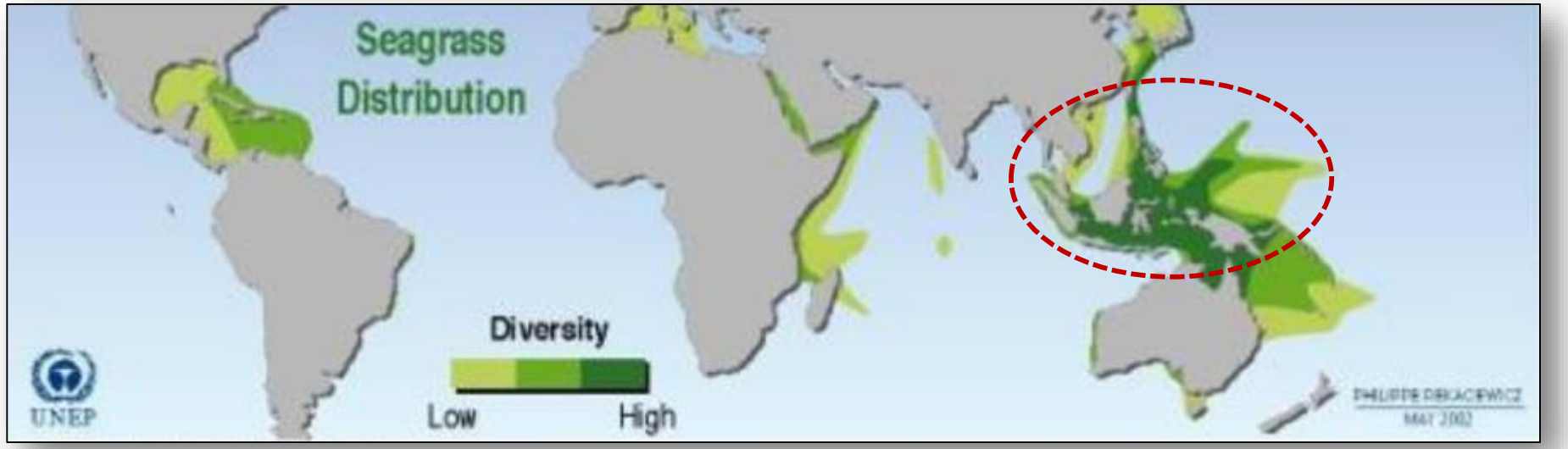
AP is largely unprepared to cope with CC but has natural means to mitigate its impacts

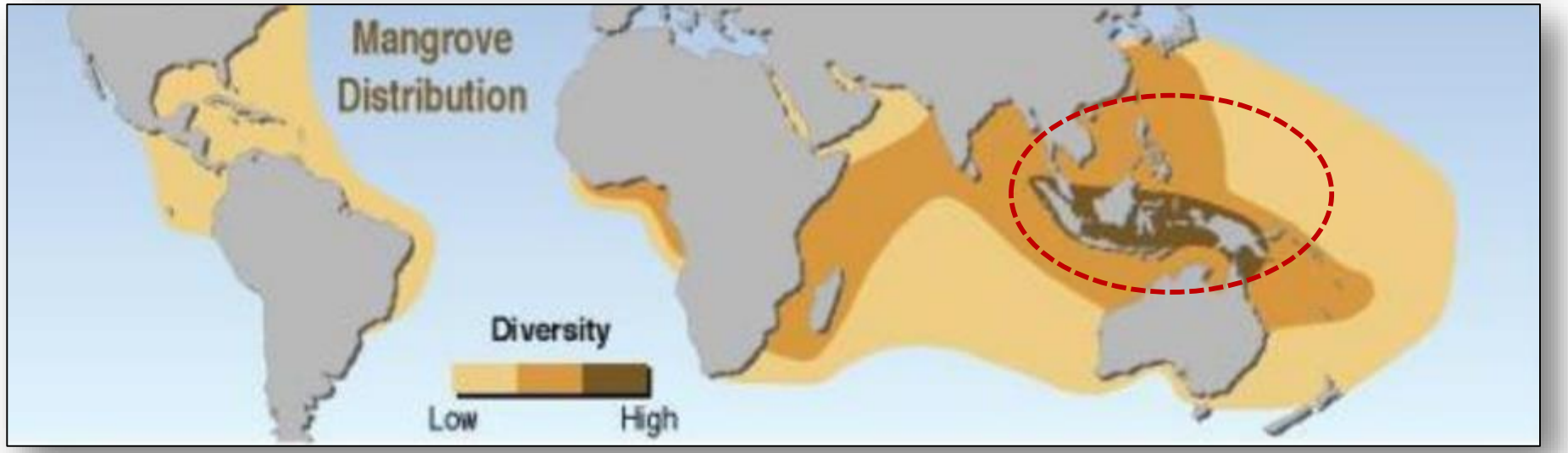
AP is losing a natural resource that remains largely untapped to mitigate CC - the *Blue Carbon Ecosystems*

Highest diversity…..highest rates of loss

The Seas of East & South Asia, & the CTI regions, have the highest generic richness & diversity of the coastal Blue Carbon Ecosystems - *seagrasses & mangroves…*

…but these regions also have the highest rates of loss of these ecosystems



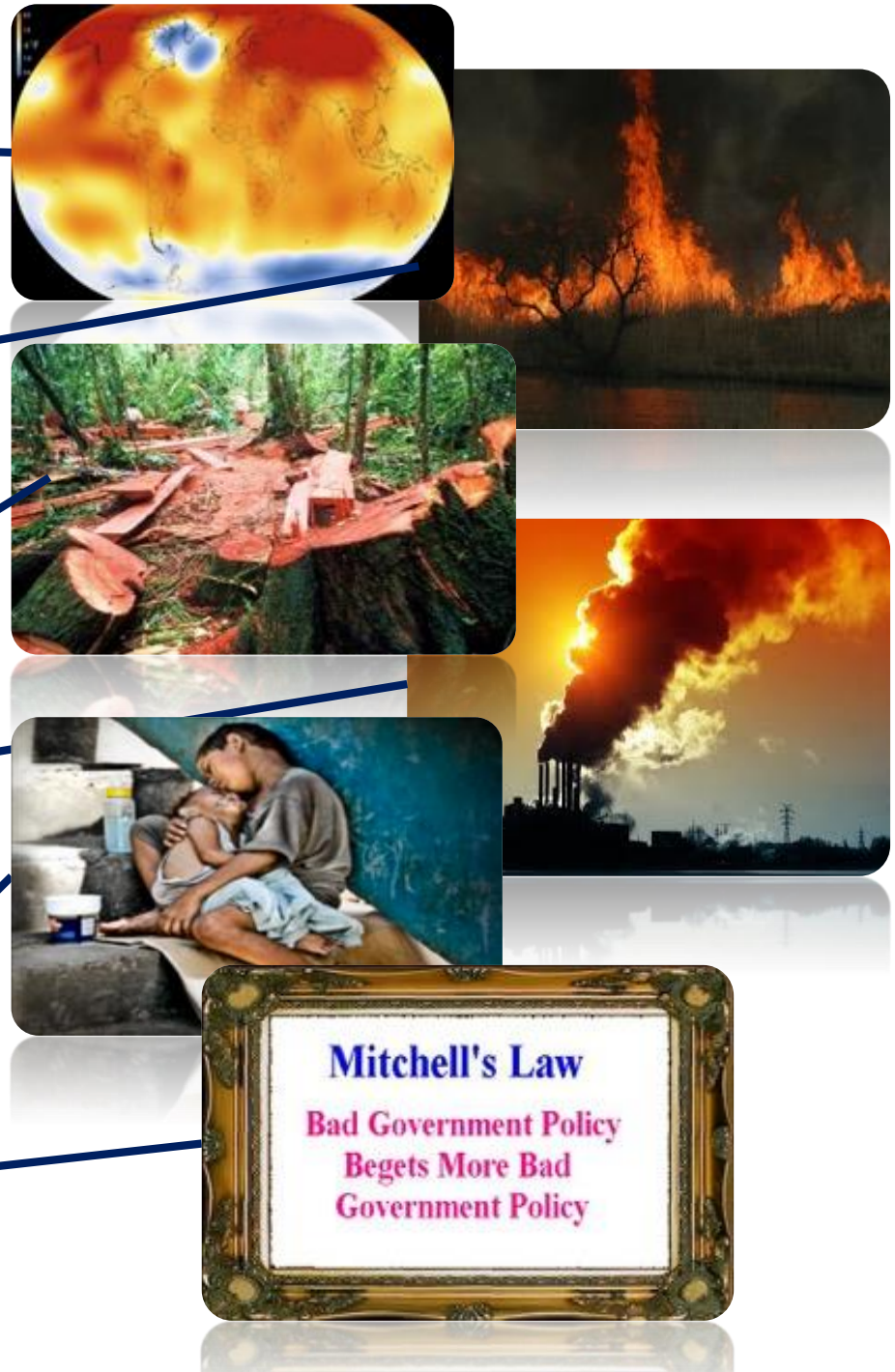


Blue Carbon Risk Factors

The drivers!

Modified from ABO2 2015

- Climate Change
- Habitat Change
- Overexploitation
- Pollution
- Poverty
- "Bad" Policies



Loss of BC ecosystems means a great loss of a natural resource useful in climate change mitigation & adaptation

Area and potential carbon stocks of the Blue Carbon Triangle

Country	Seagrass Area, ha	Mangrove Area, ha	Sg C stock, TgC	Mg C stock, PgC	Global rate of loss, ha/yr
Brunei Darussalam	150	18,000	0.02	0.02	Seagrass: 11,000[1] Mangroves: 150,000[2] Blue Carbon habitats: 50% of global extent over the last century & current losses of 800,000[3]
Cambodia	32,490	50,000	4.0	0.05	
Indonesia	881,290	3,301,847	105.3	3.15	
Malaysia	1,630	597,378	0.2	0.57	
Myanmar	430	299,000	0.05	0.29	
Papua New Guinea	450,000	550,000	53.8	0.53	
Philippines	27,262	356,000	3.3	0.34	
Singapore	30	1,000	0.01	0.001	
Solomon Islands	10,000	56,100	1.2	0.06	
Thailand	14,850	240,000	1.8	0.23	
Timor Leste	3,466	2,000	0.4	0.002	
Viet Nam	15,740	270,000	1.9	0.26	
TOTAL	**1,437,338**	**5,741,325**	**171.98**	**5.503**	
% OF GLOBAL	**2.4[4]**	**40[5]**	**2.7[6]**	**28[7]**	

Basal figures used from: [1]Waycott et al. 2009; [2]FAO 2018; [3]Davidson et al. 2018; [4]Duarte et al. 2005; [5]Spalding et al. 2010; [6]Fourqurean et al 2012; [7]Alongi et al. 2015

WHAT DO WE DO IN THE NEXT 4 HOURS?

Time	OUR SESSION ACTIVITIES
1300-1330	Registration & Ingress of Exhibits, Posters (With running video as guests are seated)
1330-1445	**Opening Presentations**
1330-1345	Welcome & Opening Address
1345-1405	The *Blue*CARES Project & the EAS Initiative (by Professor Kazuo Nadaoka, Chief Technical Adviser, The Blue Carbon Project & Professor Tokyo Tech, Japan)
1405-1425	The IAM*Blue*CECAM Program & Philippine Coastal Sustainability (by Dr. Ariel C. Blanco, Program Leader, The IAM*Blue*CECAM Program & Assoc. Professor, University of the Philippines)
1425-1445	The 'Blue Carbon Triangle': A New Concept in Regional Climate Change Mitigation and Adaptation (by Dr. Miguel D. Fortes, Blue Carbon Specialist & Professor (ret), University of the Philippines)
1445-1620	**Panel presentations & discussions: Towards a Blue Carbon Strategy** **(Along their lines of expertise, panelists will lead the discussion to answer the key questions (KQs) in developing a Blue Carbon Strategy;**
1445-1455	**Panel Discussion: Introductory Presentation** (by Dr. Ariel C. Blanco)
1455-1510	KQ1: How do we characterize the flux of blue carbon in Philippine coastal waters? (Panelists: Dr. Marilou SD McGlone & Dr. Caroline Jaraula)
1510-1525	KQ2: How do we manage the key factors that influence the blue carbon stock in the East Asian Seas? (Panelists: Professor Kazuo Nadaoka & Dr. Ariel Blanco)
1530-1545	BREAK
1550-1605	KQ3: How do we link blue carbon with coastal ecosystem conservation? (Panelists: Ms. Giannina Albano and Dr. Miguel D. Fortes)
1605-1620	KQ4: Is it cost effective to invest in blue carbon conservation to reduce climate change impacts? (Panelists: Mr. Joji Shiraishi and Engr. Raquel Francisco)
1620-1720	OPEN FORUM: Towards a Blue Carbon Strategy for the East Asian Seas (Moderator: Dr. Miguel D. Fortes)
1720-1745	RECAP & CLOSING (by: Professor Kazuo Nadaoka)

Our future Earth?