



Sains untuk Optimalisasi Potensi Kelautan Indonesia: Blue Carbon dan Blue Economy

Daniel Murdiyarso
Akademi Ilmu Pengetahuan Indonesia

BLUE CARBON SUMMIT

17-18 July 2018 | The National Library of Indonesia, Jakarta



BLUE CARBON SUMMIT

17-18 July 2018

| The National Library of Indonesia, Jakarta



BLUE
CARBON
SUMMIT

17-18 JULY 2018

THE NATIONAL LIBRARY OF INDONESIA

JAKARTA

www.bluecarbonsummit.id

021-111-1111

#BlueCarbonSummit

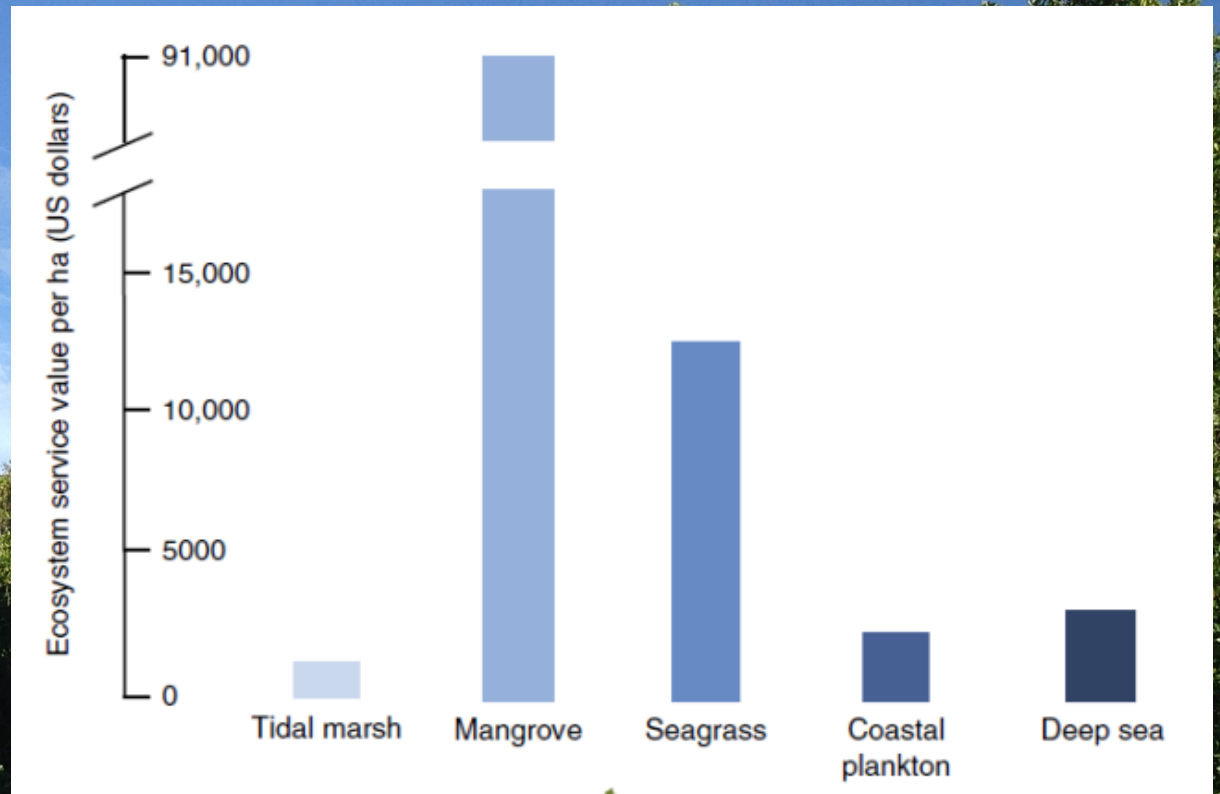
Creating blue carbon opportunities in the maritime archipelago Indonesia

Daniel Murdiyarso¹, Endang Sukara², Jatna Supriatna², Alan Koropitan³, Sonny Mumbunan³, Berry Juliandi³ and Jamaluddin Jompa³

- ¹ Center for International Forestry Research
² Indonesian Academy of Science
³ Indonesian Young Academy of Sciences

Key messages

- Preserving intact ecosystems is financially more effective than restoring degraded ones. We therefore propose a moratorium on further conversion of mangroves. By doing so, there is the potential to generate \$3 billion (USD) in abatement costs annually.
- A science-backed plan, including mapping, for restoring priority degraded blue carbon ecosystems will build climate change resilience and improve livelihoods.
- Activating the existing regulatory framework and its governance at provincial level is essential to meet national low carbon development goals and align with global agenda.
- Opportunities for funding restoration include public and private partnerships, and new innovative finance solutions. Income from the blue economy (fishing, shipping and ecotourism) in productive zones could also contribute to restoration.



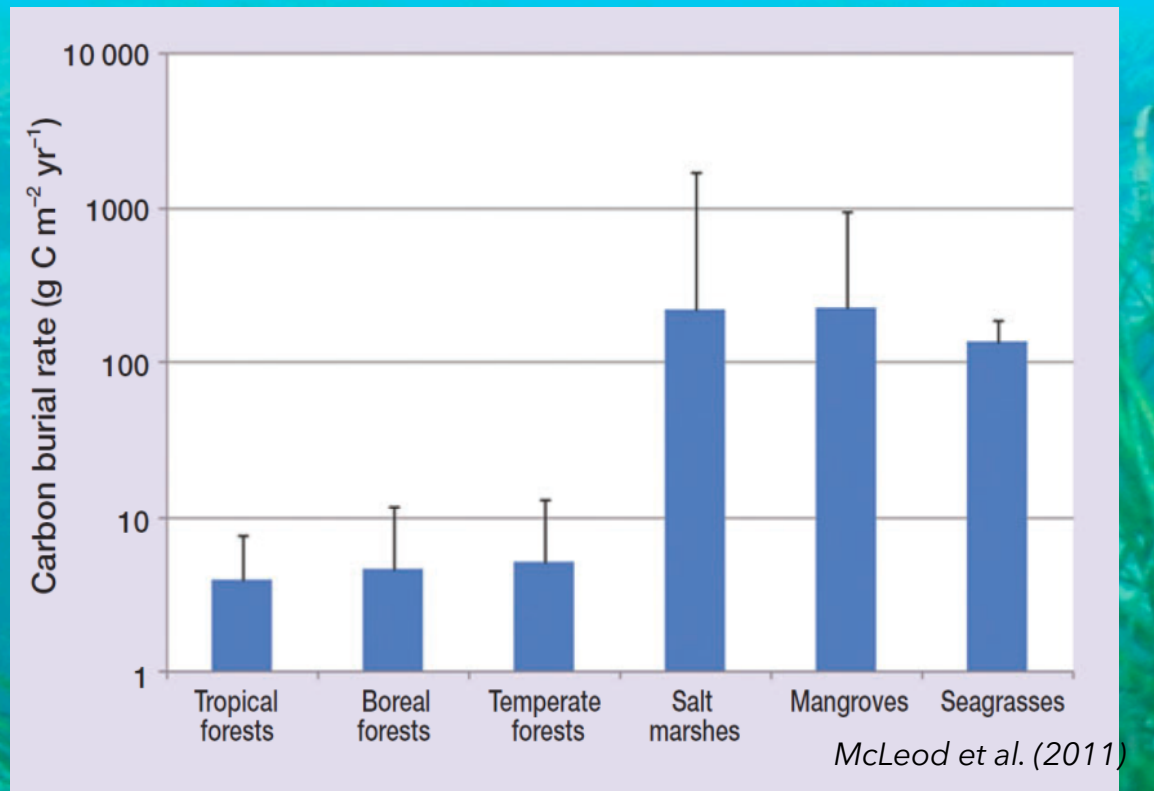
Mangroves

3.14
billion t C

6%
deforestation

200
million tCO₂

30%
emission



Seagrass

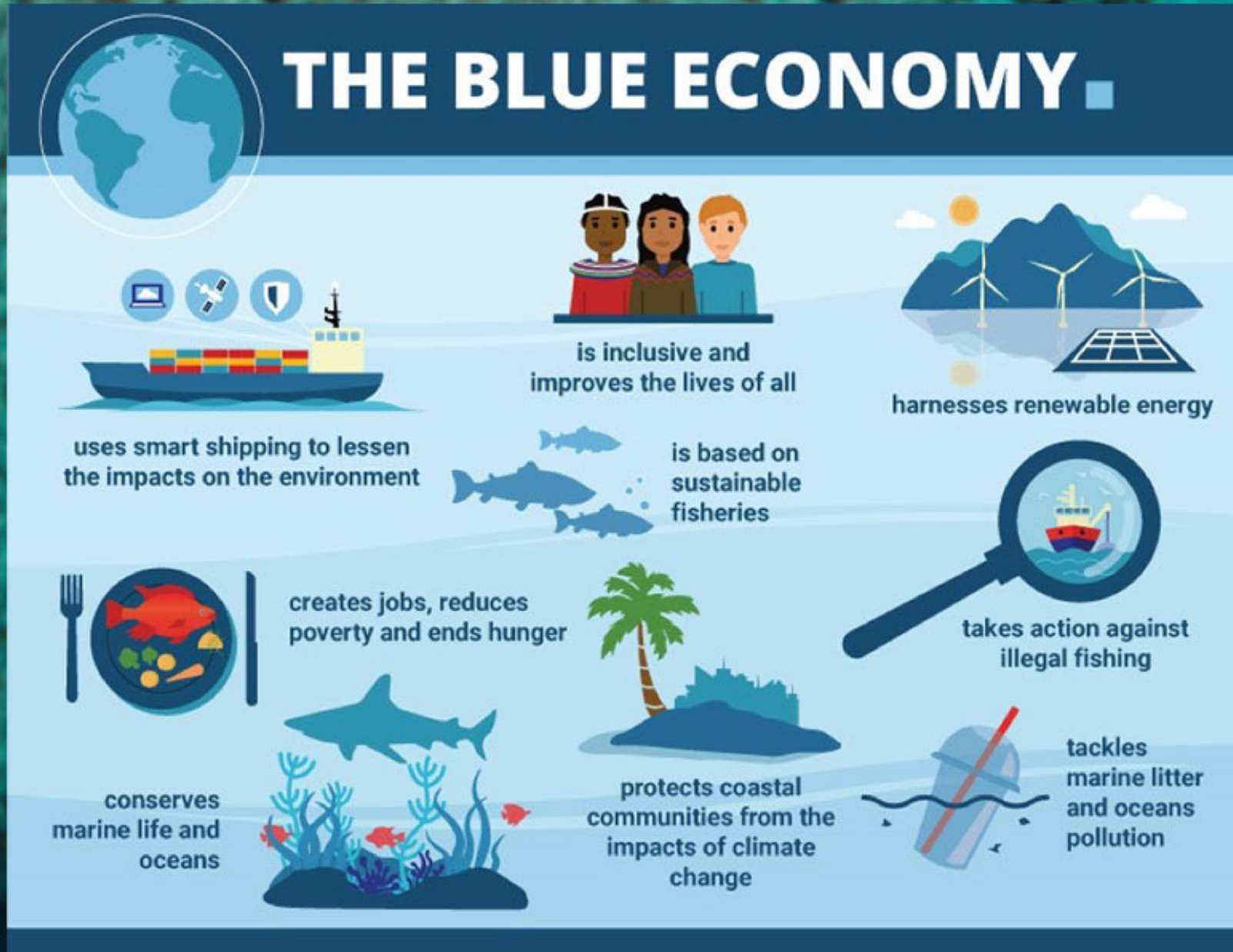
200
ton/ha

300
kha

Sustainable of ocean resources for economic growth, improved livelihoods and jobs, and ocean ecosystem health.

Blue economy includes tourism, fisheries, aquaculture, and maritime transport

(The World Bank, 2022)



Ocean economy

Indicator	Available Information (as of 2017)
Land area ¹	1,811,570 km ²
Sea area ²	270,550 km ²
Coastline ²	95,181 km
Population ²	263,991,379
Coastal population ²	166.21 million (projected)
Ocean economy ²	US\$182.5 billion (in 2015)
Employment in ocean economy ²	5.11% of the total employment (in 2013)
Valuation of coastal and marine ecosystem services ²	US\$ 411.9 billion
Marine protected area (percentage of territorial waters) ¹	5.8%
Percentage of coastline with ICM ²	48.54%
Ocean health index (OHI) ³	65 – ranked at 145 among 212 countries
Gross domestic product ¹ (GDP, in constant 2010 US\$ prices)	US\$1,090,459,494,378.56 (in 2017)
Human development index (HDI) ⁴	0.694—medium human development category—positioning Indonesia at 116 out of 189 countries and territories.
Gross national income (GNI) per capita ⁴ (at 2011 PPP prices)	US\$10,846
Access to safely managed water supply ¹	No data
Access to safely managed sanitation ¹	No data

Sustainable fisheries

- 8 juta ton (2020)
- Kedua terbesar setelah China
- Devisa US\$ 27 milyar
- Lapangan kerja 7 juta



Shipping industry

500 million cargo traffic



Energy

- Energi baru dan terbarukan (EBT)
- Arus
- Gelombang
- Angin





Plastic wastes