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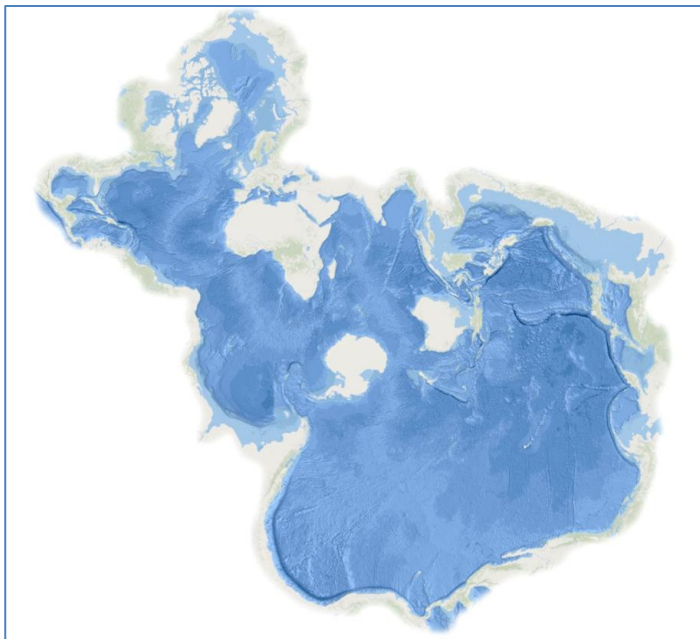
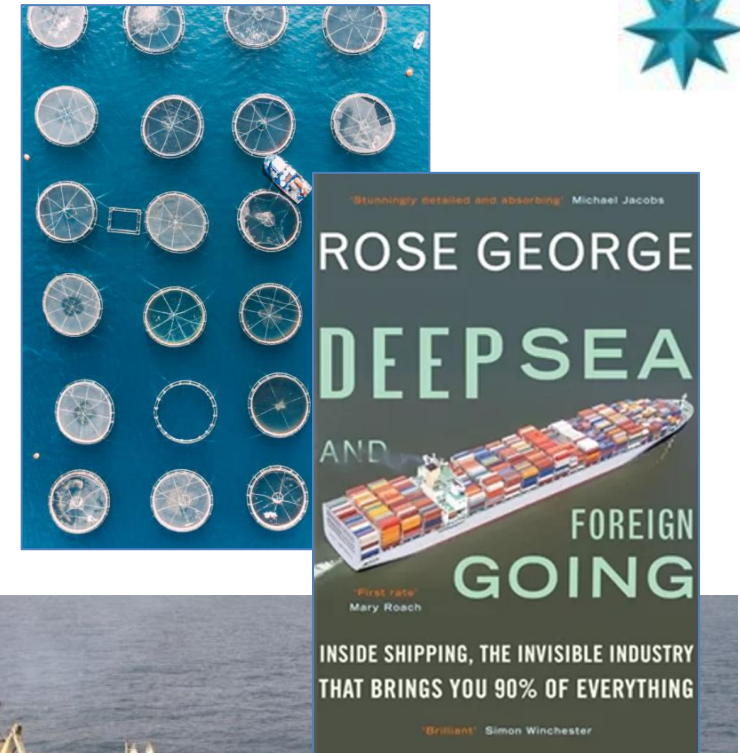


NLA INTERNATIONAL

MRE and the Blue Economy

ADB Emerging Areas Knowledge Series

8 November 2024



Oceans in crisis?



Overfishing drains oceans of its life

By Kim Pham · Apr 12, 2021 · 0



SEASPIRACY

Seaspiracy

2021 | 15 | 1h 30m | Documentaries

Passionate about ocean life, a filmmaker sets out to document the harm that humans do to marine species — and uncovers alarming global corruption.

current global fishing practices.

Article | Open Access | Published: 29 October 2019

New elevation data triple estimates of global vulnerability to sea-level rise and coastal flooding

Scott A. Kulp & Benjamin H. Strauss

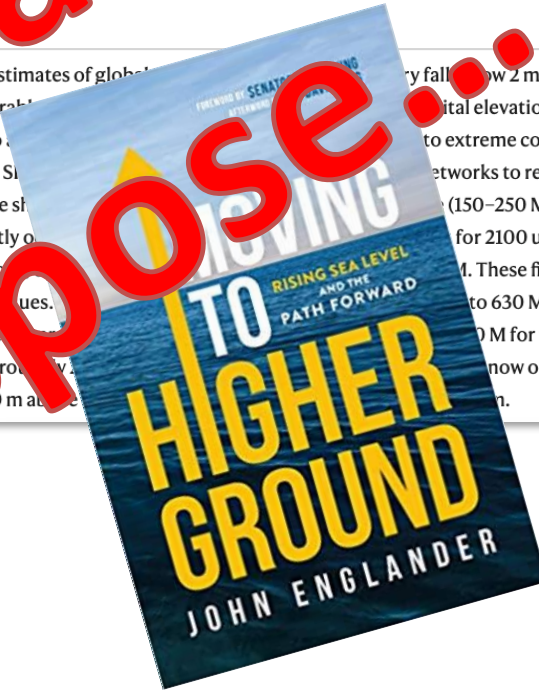
Nature Communications 10, Article number: 4844 (2019) | [View this article](#)

513k Accesses | 107 Citations | 29 Altmetrics

An Author Correction to this article was published on 12 December 2019

The article has been peer reviewed

Most estimates of global coastal vulnerability to sea-level rise are based on a digital elevation model (DEM) used to estimate coastal water levels, but this approach is limited by the accuracy of the DEM. Here we show that new elevation data from satellite altimetry (150–250 M, 90% CI) currently used to estimate coastal vulnerability are likely to be overestimated by up to 2 m. These figures triple SRTM-based estimates. For 2100 under low carbon emissions, the number of people living on land below 10 m for mid-century, the number of people who now occupy land less than 10 m above sea level is tripled.

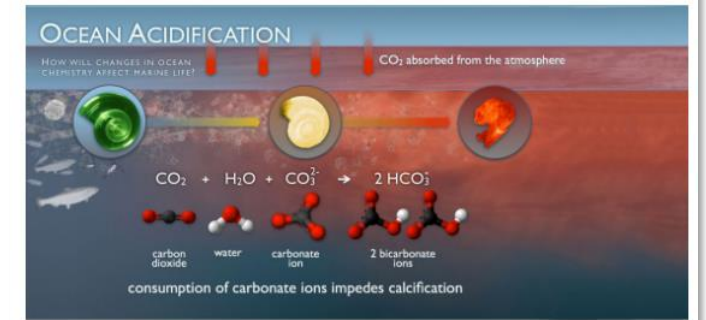


Ocean acidification

Education | ocean acidification education

+ Share This

In the 200-plus years since the industrial revolution began, the concentration of carbon dioxide (CO₂) in the atmosphere has increased due to human actions. During this time, the pH of surface ocean waters has fallen by 0.1 pH units. This might not sound like much, but the pH scale is logarithmic, so this change represents approximately a 30 percent increase in acidity.



Intergovernmental Oceanographic Commission

Ocean Acidification – the threat and its status

Dr Kirsten Isensee, Programme Specialist, IOC-UNESCO

A SUSTAINABLE BLUE ECONOMY:

Restores, protects and maintains the diversity, productivity, resilience, core functions, and intrinsic value of marine ecosystems — the natural capital upon which its prosperity depends.

Is based on clean technologies, renewable energy, and circular material flows to secure economic and social stability over time, while keeping within the limits of one planet.

Provides social and economic benefits for current and future generations by contributing to food security, poverty eradication, livelihoods, income, employment, health, safety, equity, and political stability.



Blue economy can only thrive with joined-up action, say experts

08 September 2020 News

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Countrywide policies that cut across all sectors are critical for the success of ocean-based economies in the Commonwealth.

Countrywide policies that cut across all sectors are critical for the success of ocean-based economies in the Commonwealth.

“A sustainable blue economy requires bringing together various sub-sectors to work in an integrated way to achieve effectiveness and efficiency in delivery of service to the people...”

Floating Solar, Offshore Wind, Marine Aquaculture, Reefs, Renewable Energy, and Ecotourism for Ecosystem Services (FLOWS)

MARES - Marine Aquaculture, Renewable Energy, Reefs & Ecotourism for Ecosystem Services



A paradigm shift from the extant unsustainable, linear extractive approach to higher value, regenerative marine industries tailored for individual island states and their sea spaces

- Using marine renewable energy to make hydrogen and alternative fuels (ammonia, methanol, ethanol)
- Creating export market for the hydrogen, accelerating global green hydrogen development
- Using the fuels locally for transport and industry
- Using the energy locally to accelerate nature-based defences and marine aquaculture for domestic and export markets while regenerating the ocean surrounding the infrastructure whilst
- Attracting high value tourism to see & support ocean regeneration



FLAWS = a long-term Blue Economy programme



10-20-30 years

Viable business models

Enabling legislation & governance

- OTEC
- Solar
- Other renewable energy
- Offshore infrastructure
- Pilot, IOC, FOC
- Scalability
- Bespoke

Zero carbon energy ('power to X')

Regenerative legislation & investment

- Island power grid
- Extant economy/MSMEs
- Ecotourism
- Training & capacity building
- Advanced fisheries
- Mari-aquaculture
- Coastal restoration

- Alternative fuels for island economy
- Water & food security
- Green marine exportable 'crops'
- Digital MSME companies
- Vibrant sustainable coastal zones

Environment & socio-economic balance



Linear, extractive & unsustainable

Scalable, circular, regenerative



To recap

We must move from 'take, make and dispose' to regenerative, circular, multifunction blue economies built on clean, renewable energy.

The technologies exist; they have been piloted and proven; they must be scaled to achieve effective blue economies.

The barriers are culture, investment and risk. We need ambitious integrated planning and investment in our sea spaces. Let's do it!