ADVANCING PRIVATE SECTOR INITIATIVES ON DISASTER RISK REDUCTION

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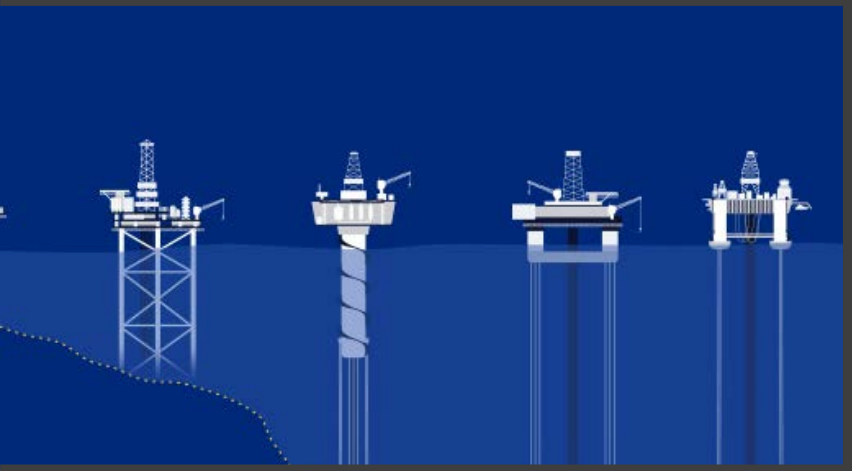


Maritime Sector Strategies to Augment Tsunami Monitoring

MARITIME SECTOR STRATEGIES TO AUGMENT TSUNAMI MONITORING WITH ECONOMIC, SAFETY AND ENVIRONMENTAL CO-BENEFITS

ESBN TASKFORCE ON DISASTER AND CLIMATE RISK REDUCTION

PROJECT PARTNERS

2021 2030 United Nations Decade of Ocean Science for Sustainable Development

University of Stuttgart Germany

SINGAPORE MARITIME INSTITUTE

BMKG

CHINA NAVIGATION

SWIRE

Joint Task Force SMART Subsea Cable Systems

UNITED NATIONS ESCAP Economic and Social Commission for Asia and the Pacific

UN ESCAP Divisions

- **ICT and Disaster Risk Reduction Division (Lead)**
- **Macroeconomic Policy and Financing for Development Division**
- **Transport Division (Maritime focal point)**
- **Trade, Investment and Innovation Division (Sustainable Business and Investment Section)**

OSI Ocean Specialists, Inc.

NEC

OCIMF

UNESCO United Nations Educational, Scientific and Cultural Organization

Intergovernmental Oceanographic Commission

IALA

SCHOOL OF OCEAN AND EARTH SCIENCE AND TECHNOLOGY UNIVERSITY OF HAWAI'I AT MĀNOA

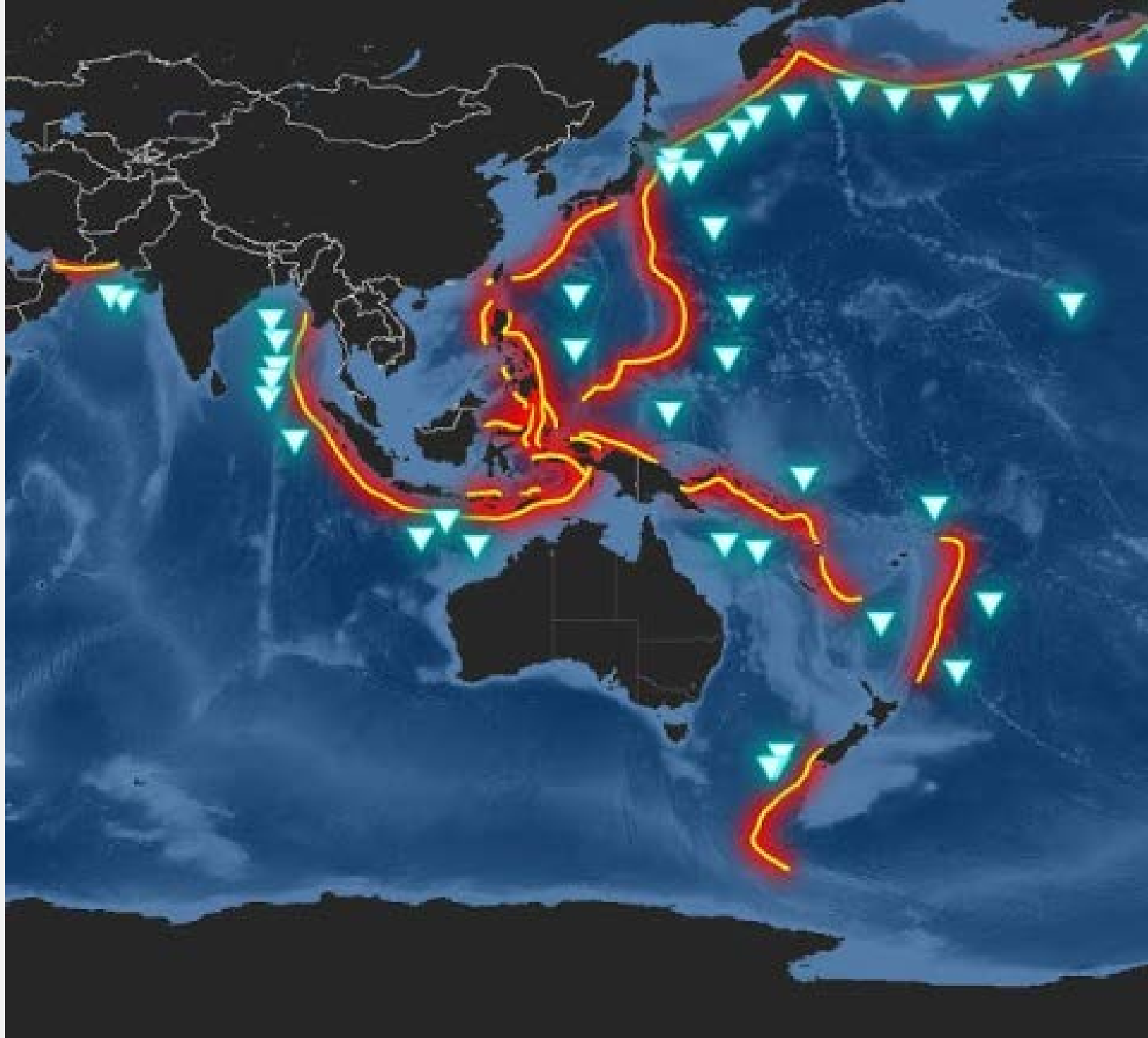
FUGRO

International Cable Protection Committee

NUS National University of Singapore

Why augment tsunami monitoring?

- Reinforce the need for robust, reliable tsunami warning systems (Build Redundancy).



Why augment tsunami monitoring?

- **Vandalism** of ocean observing platforms takes many forms. Surface buoys act as fish aggregation devices, attracting fishing operations to the vicinity of the buoy.

  Vessel impact

  Malicious damage

  Theft

  Detach from moorings

A confluence of all these factors can mean that a country's tsunami early warning system is completely in-operational.

Bathymetric Crowd-sourcing PPP Pilot Project

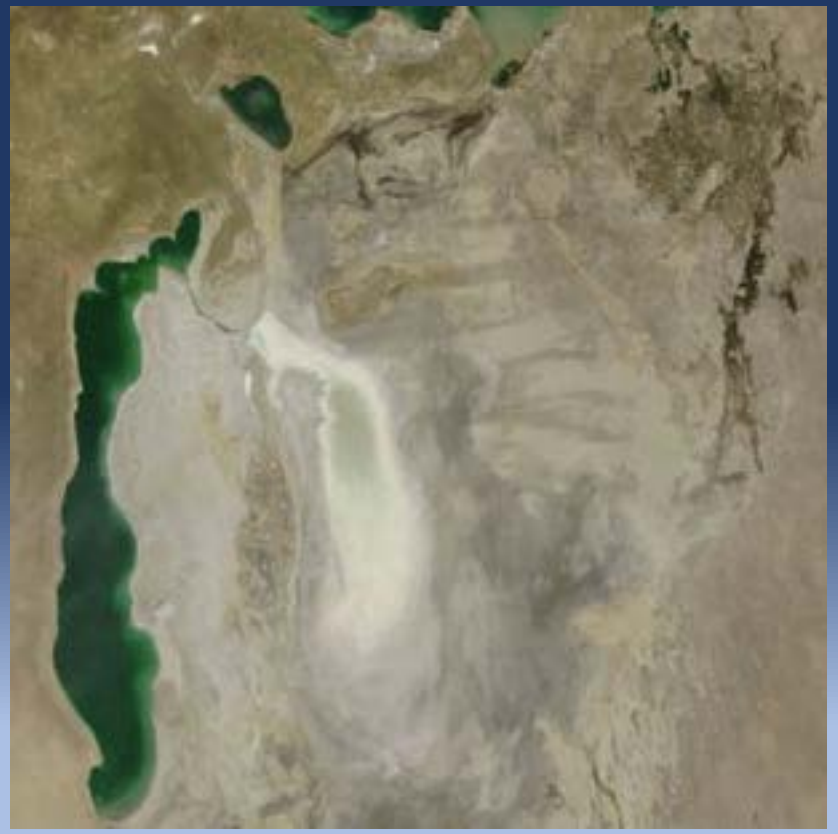
Fugro, introduced an ESBN initiative to undertake Bathymetric (underwater equivalent to hypsometry or topography) undersea mapping via crowd sourcing.

- Accurate and high-resolution bathymetric maps are essential for simulations of tsunami wave inundation along beaches. Bathymetric maps contain information on the depths of landforms below sea level.

Coastal Zone Mapping for more Resilient Infrastructure Pilot (calling on interested countries)

Fugro has undertaken coastal mapping for better understanding how storm surge and tsunami inundation will affect coastal zones, help develop better evacuations plans, and support engineering projects such as sea walls.

South Aral Sea: Bringing Back Blue Infrastructure



Calling on Agribusiness and Hydro-resource companies to work with the public sector.

The Aral Sea was blue infrastructure.

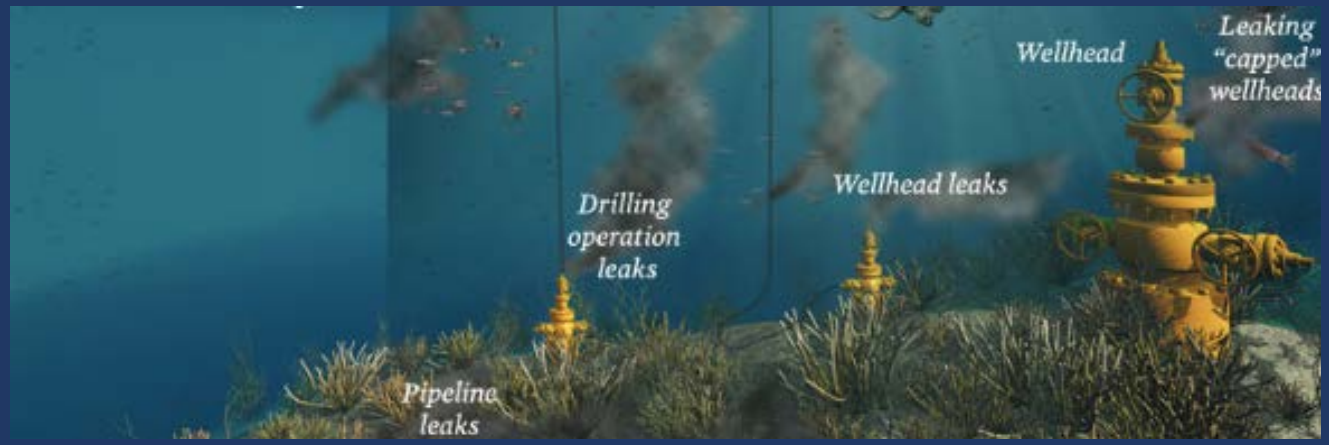
South Aral Sea: Bringing Back Blue Infrastructure

Hydro-resource technologies in the hands of the private sector, can now source water that most likely lies beneath the surface of the dried up Aral basin and be taped to replenish portions of the Aral Sea basin.

These are not aquafers that that wells tap into but other sources of water both brackish and pure as well as self-recharging. These water veins are naturally desalinated, self-replenishing and self-recharging water sources typically found at the depth between 300-800 meters, once extracted provides a perennial output without impacting underground water table.

Each source can produce between 1-4 Million Liters per Day of fresh water. Artificial intelligence (AI) based geomagnetic mapping can find these sources.

Monitoring abandoned fossil fuel infrastructure



The Asia-Pacific region has thousands of abandoned undersea oil wells that need to be mapped monitored.




Strategies on Reducing and Utilizing CO_2 for Cost Effective Business

A Brief Project Introduction

The Textile & Garment sector accounts for a significant proportion of global carbon emissions, estimates range between 6 and 8 per cent of global totals.

The cement industry is responsible for approximately 7 per cent of global anthropogenic carbon emissions.

Together they have large emissions profiles that need to rapidly decarbonize.

Further, in the cement industry for example, technology is available such as using nanofibers to improve fatigue resistance and self-monitoring behavior of concrete.

Examples include:

Resource efficiency activities from energy efficiency, renewable energy, adopting circular economy principles; new environmentally sustainable materials and processes and the phase out of unsustainable and hazardous materials and chemicals;

Sustainable technologies such as machinery and processes that reduce and recycle water and chemical and minimize air pollution; and

CO2 capture and utilization (CCU) innovations where captured CO2 is converted into commercial products (pathways that replace a more carbon-intensive alternative).

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Terima kasih banyak!
cảm ơn bạn
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谢谢
ありがとうございました
고맙습니다
Salamat
多謝
Mahalo nui loa
Thank you
Спасибо большое!