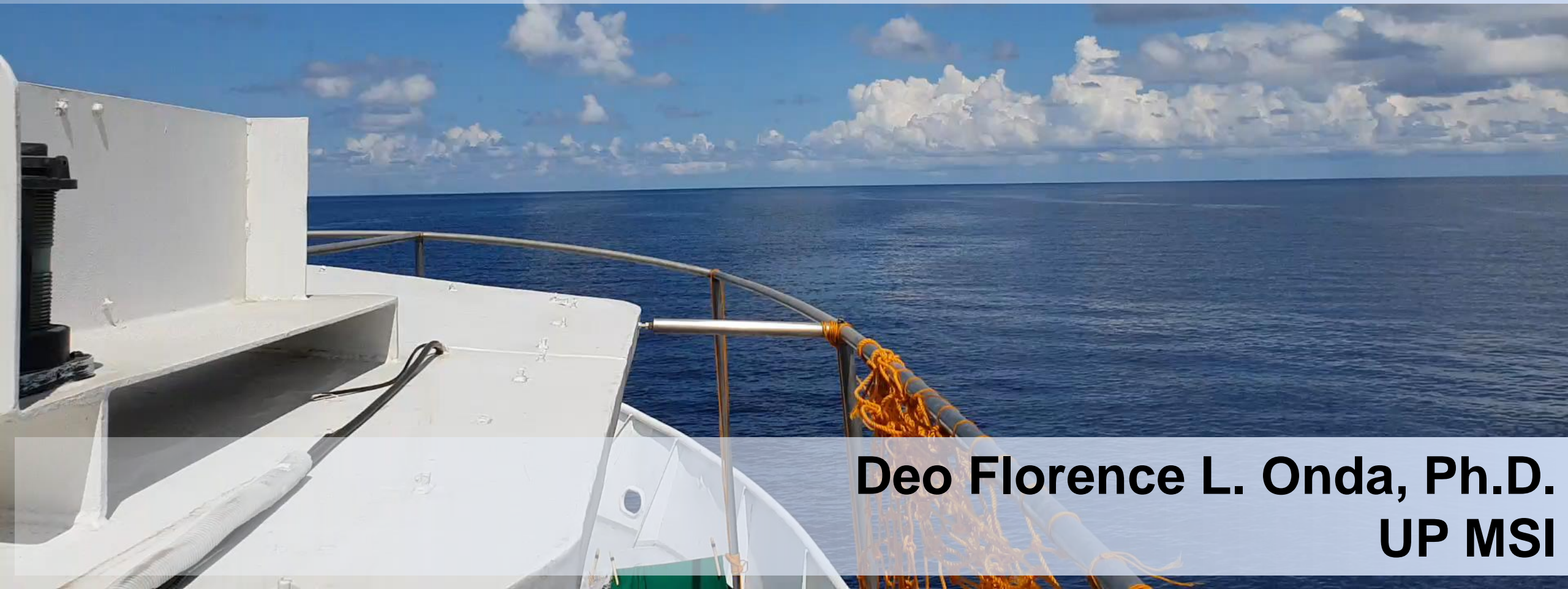


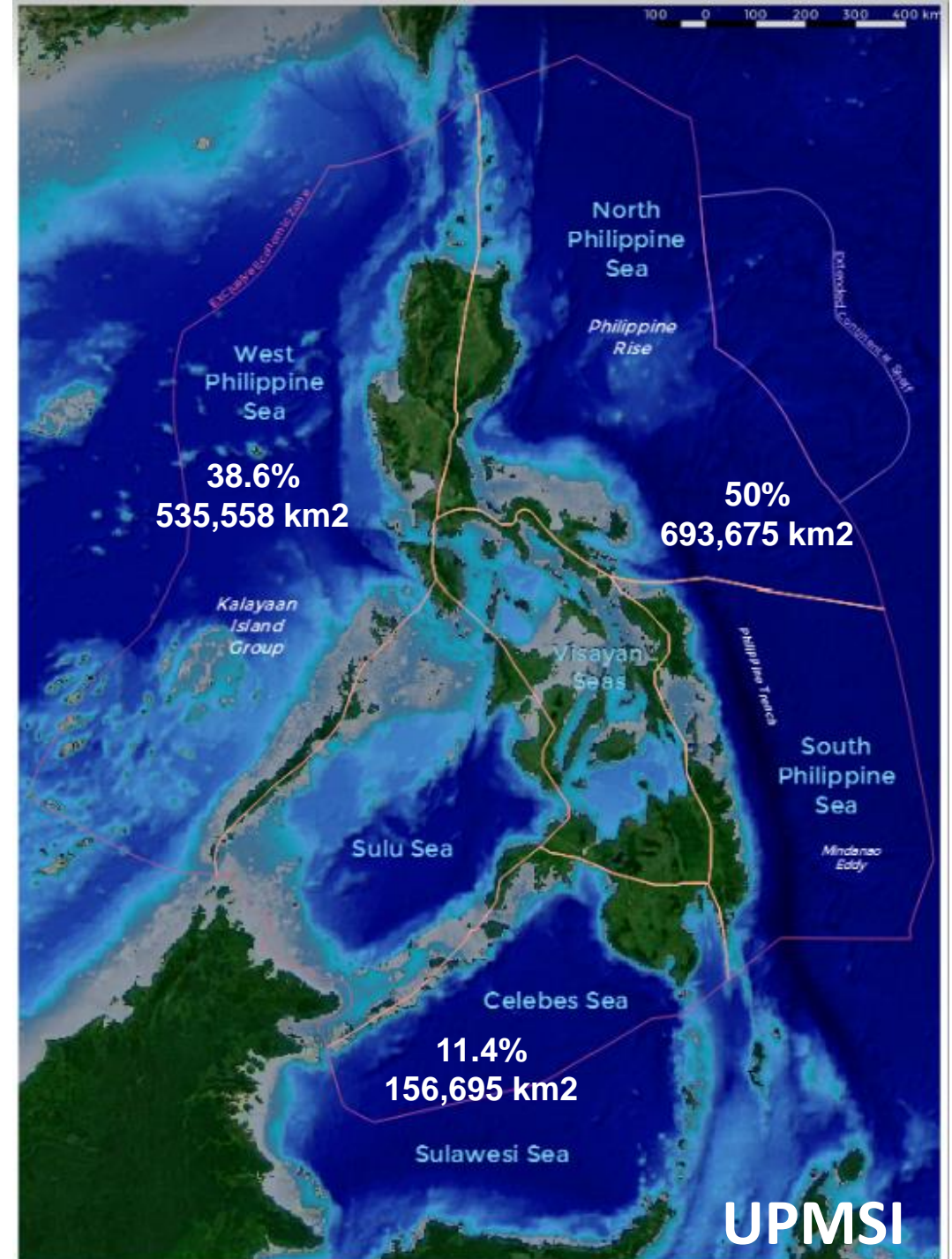
The 4th Phase: New challenges in WPS



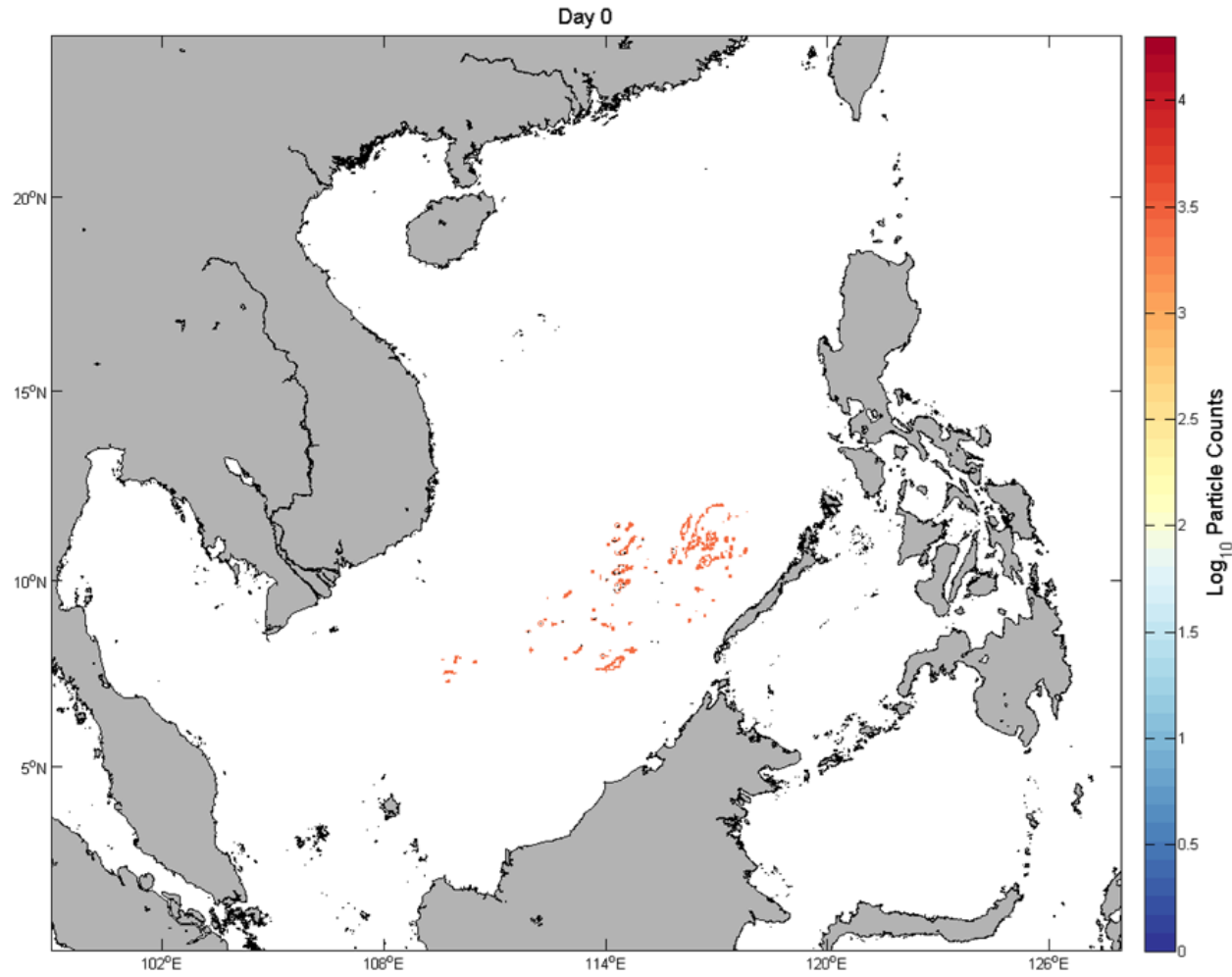
**Deo Florence L. Onda, Ph.D.
UP MSI**

WPS (~40%): From
Batanes to Batangas to
Kalayaan to Balabac

- High biodiversity
- Rich fishing grounds
- Diverse ecological resources



KIG: ecological roles and connectivity



Important larval
sources in the SCS.

(Villanoy et al., *In prep*)

China's activities

- Poaching and illegal harvesting
- Overfishing and illegal practices
- Artificial island building
- Unregulated MSRs

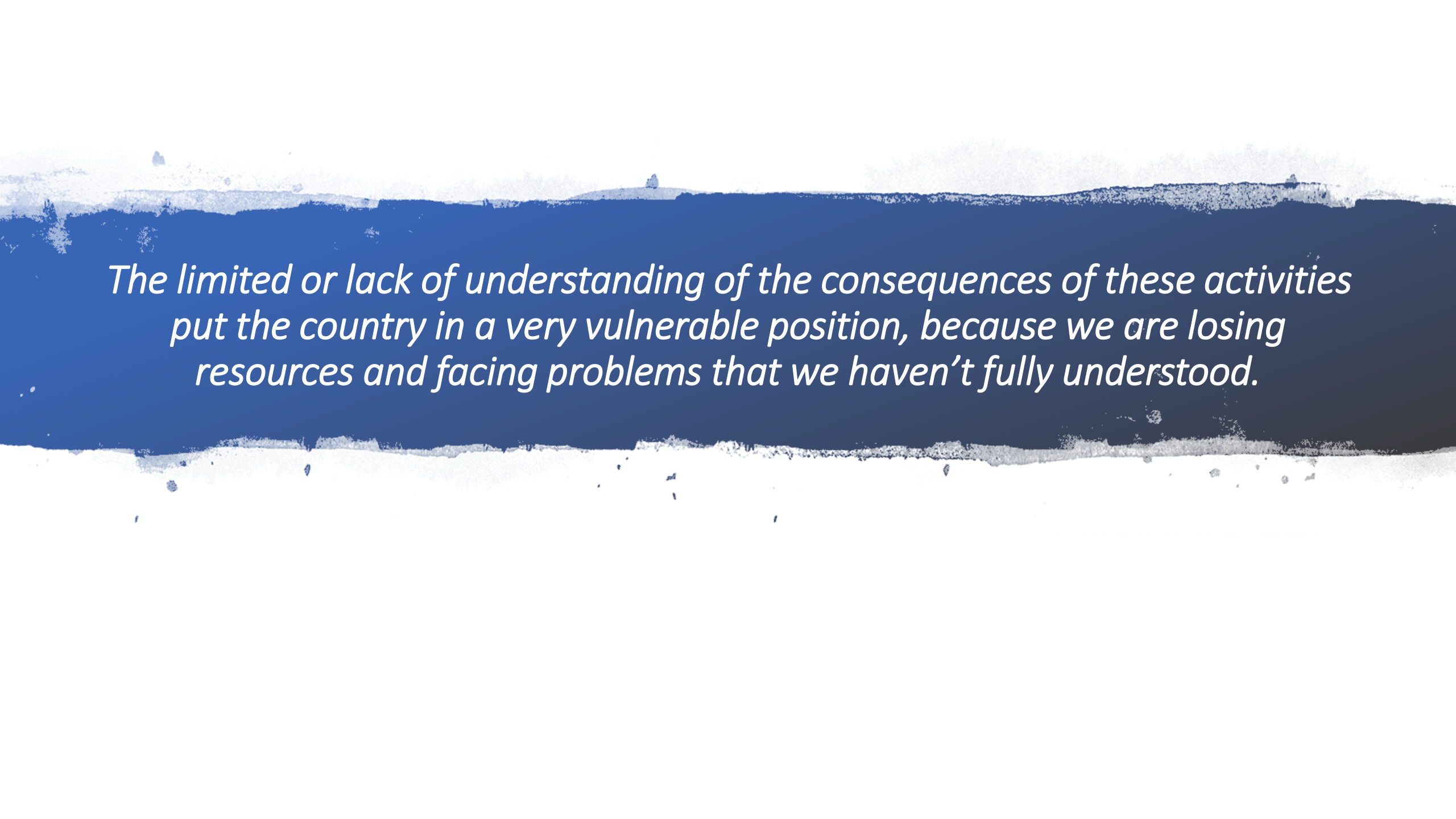
*Effects and implications of destruction:
we can **speculate** but not **quantify***

Limited Research/Access

8 major expeditions (1-2 weeks) in the past 26 years

- *How much?*
- *To what extent? When? How?*
- *Implications and impacts*





The limited or lack of understanding of the consequences of these activities put the country in a very vulnerable position, because we are losing resources and facing problems that we haven't fully understood.



Challenges

- Capacity for ocean research remains limited
- Science is not priority
- Funding for expeditions and research
- Expertise
- Lack of long-term foresight and plans for research and development in the area

China's stake

- China understands very well the full potential of the area for food, medicines, biotechnological/ medical resources, ocean energy, rare metals, etc.



New research stations come into operation on Nansha Islands

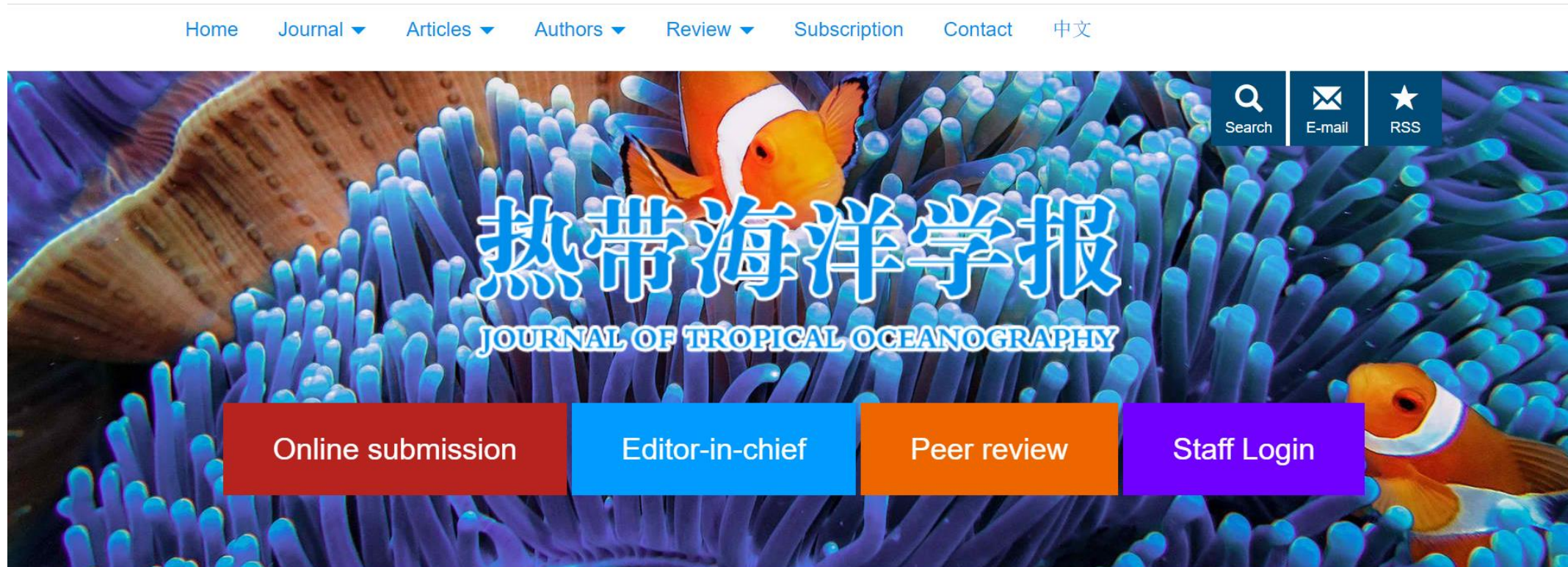
Source: Xinhua | 2020-03-20 16:29:11 | Editor: huaxia

Total of 3 stations; Meiji Reef station (2018), Yongshu Station, Zhubi station

Operated by the Chinese Academy of Science - Integrated Research Center for Islands and Reefs (CAS – IRCIR)

“An offshore experimental base by the CAS to solve science and technology problems on the ecological environment, *resource utilization* and *sustainable development* of the South China Sea.”

“support studies on *ecology, geology, environments, materials and marine energy utilization in the tropical marine environment.*”



Systematic exploitation and utilization of the resources in the WPS and SCS.

China's food basket

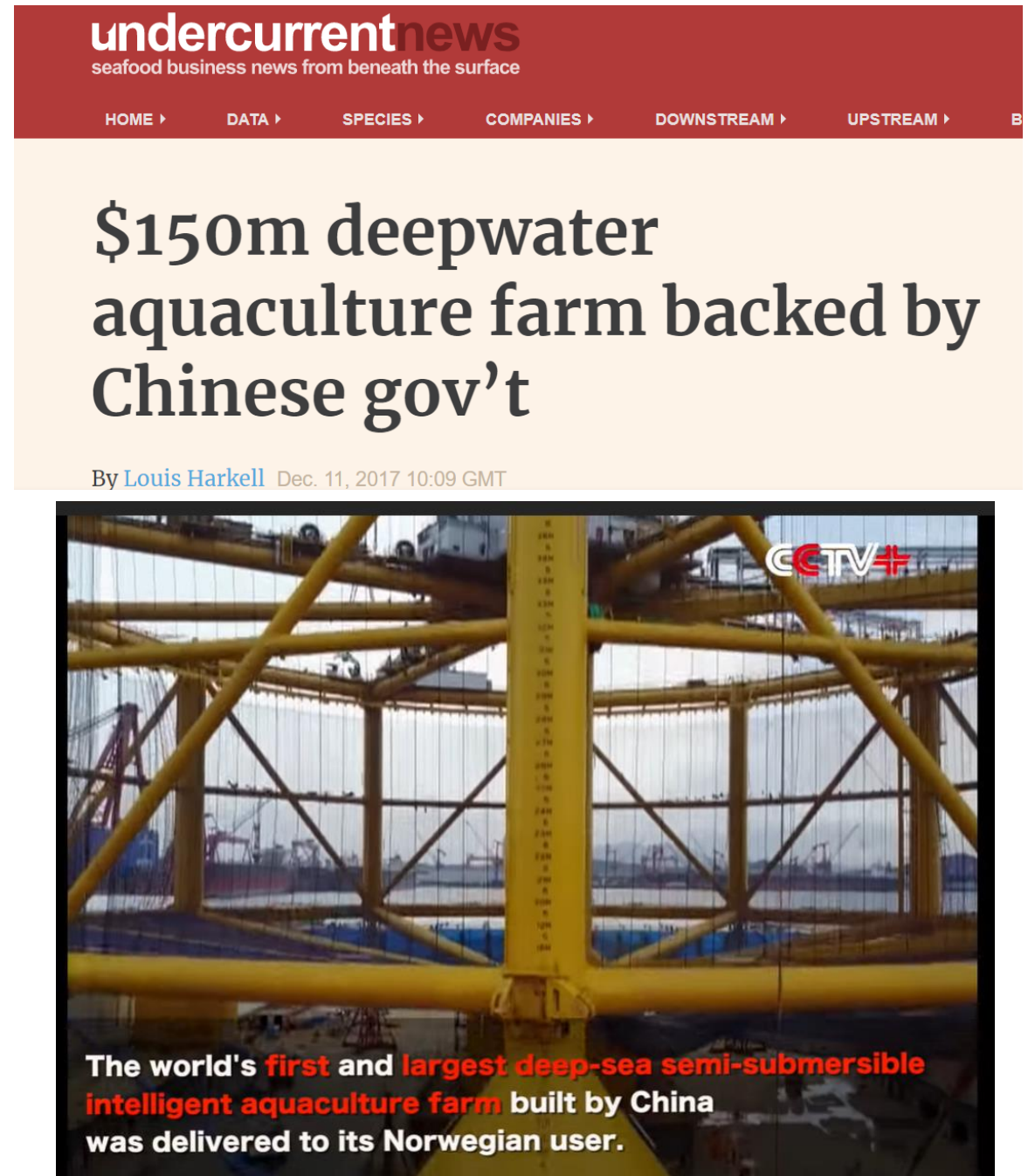
Development of offshore mariculture technologies

- Potential for fish farming in KIG
- Seaweed farming
- Sea urchin and other high value products

Unregulated MSR activities as a threat

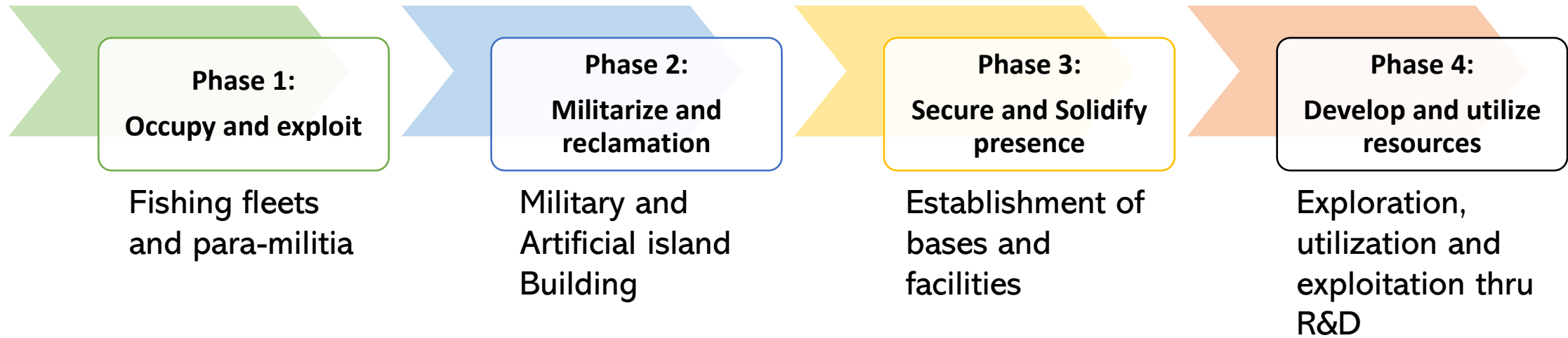
Research and scientific information as a form security issue

Disenfranchisement of Filipinos



[CCTV Video News Agency](#)

Phases of Chinese Aggression



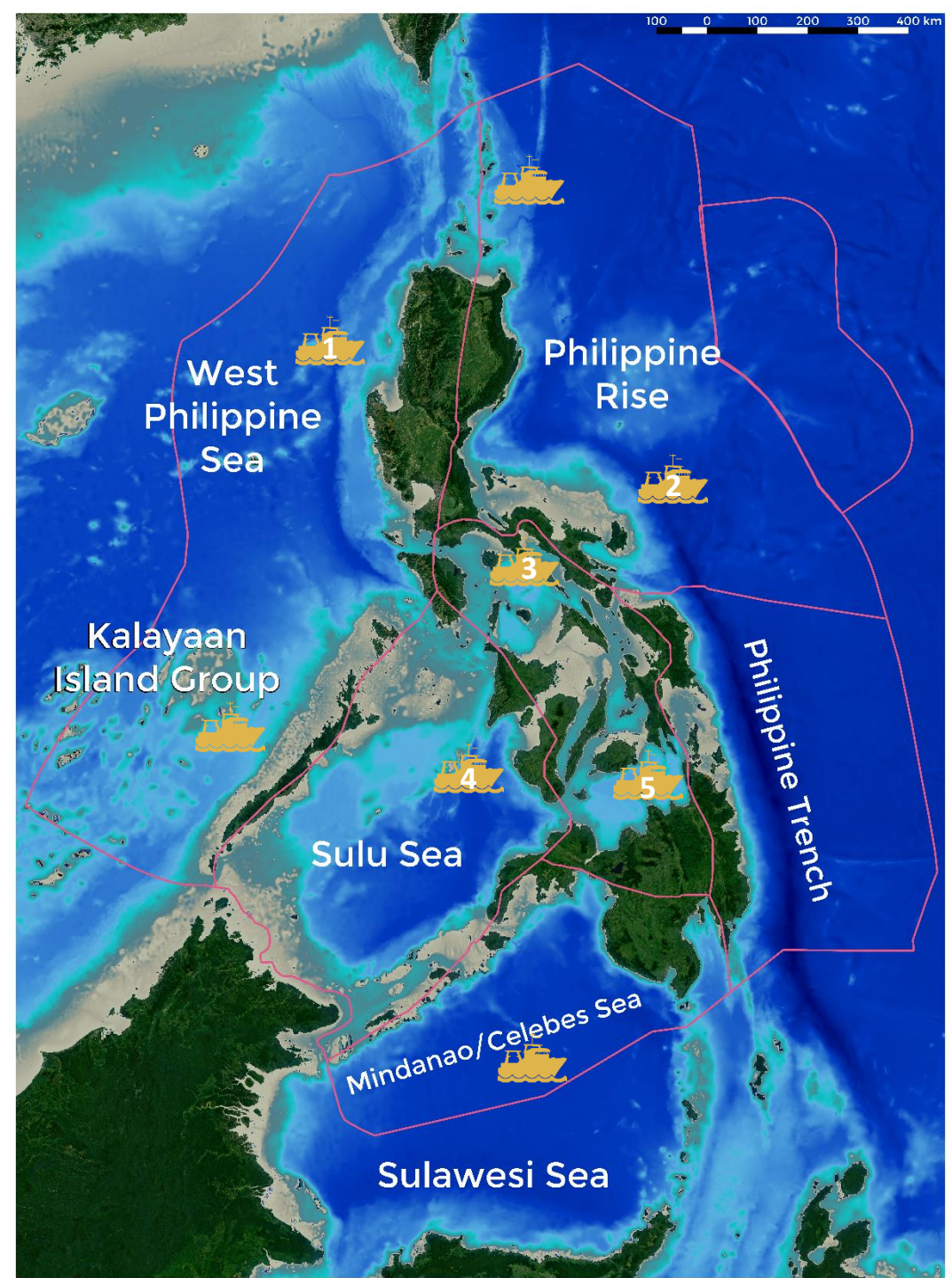


Challenges

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National Academic Research Fleet (NARF)

- BRP *Gregorio Velasquez* (PN)
- RV *Kasarinlan* (UP MSI)
- 4 more research vessels by 2021 (UPMSI)



Climate
scientists

Marine
geologists

Chemists and
Biotech experts

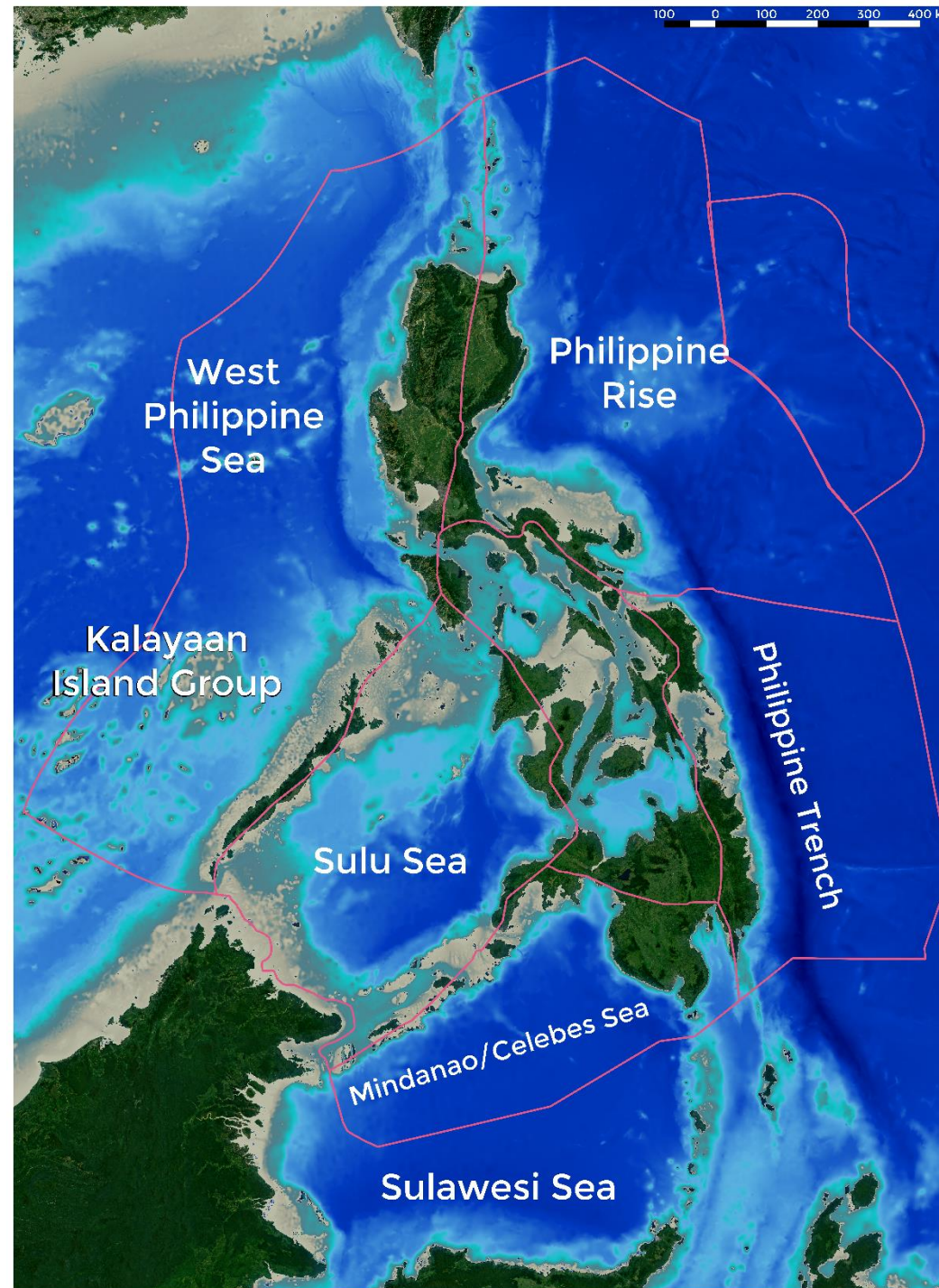
Oceanographers

Biologists

Social
Scientists

Science-based managers
and policy makers

Many more....



Law experts on
seas

Marine
engineers

Maritime
experts

Economists
and strategists

Educators and
researchers

Philippines in a sea
of opportunities!

**“Don’t give up the fight on
West Philippine Sea, don’t give
up on Filipinos...”**

-Dr. Edgardo Gomez
National Scientist

