KPH Southern Ocean

Bouvetøya tokt

24 dager i mars 2027

Cape Town

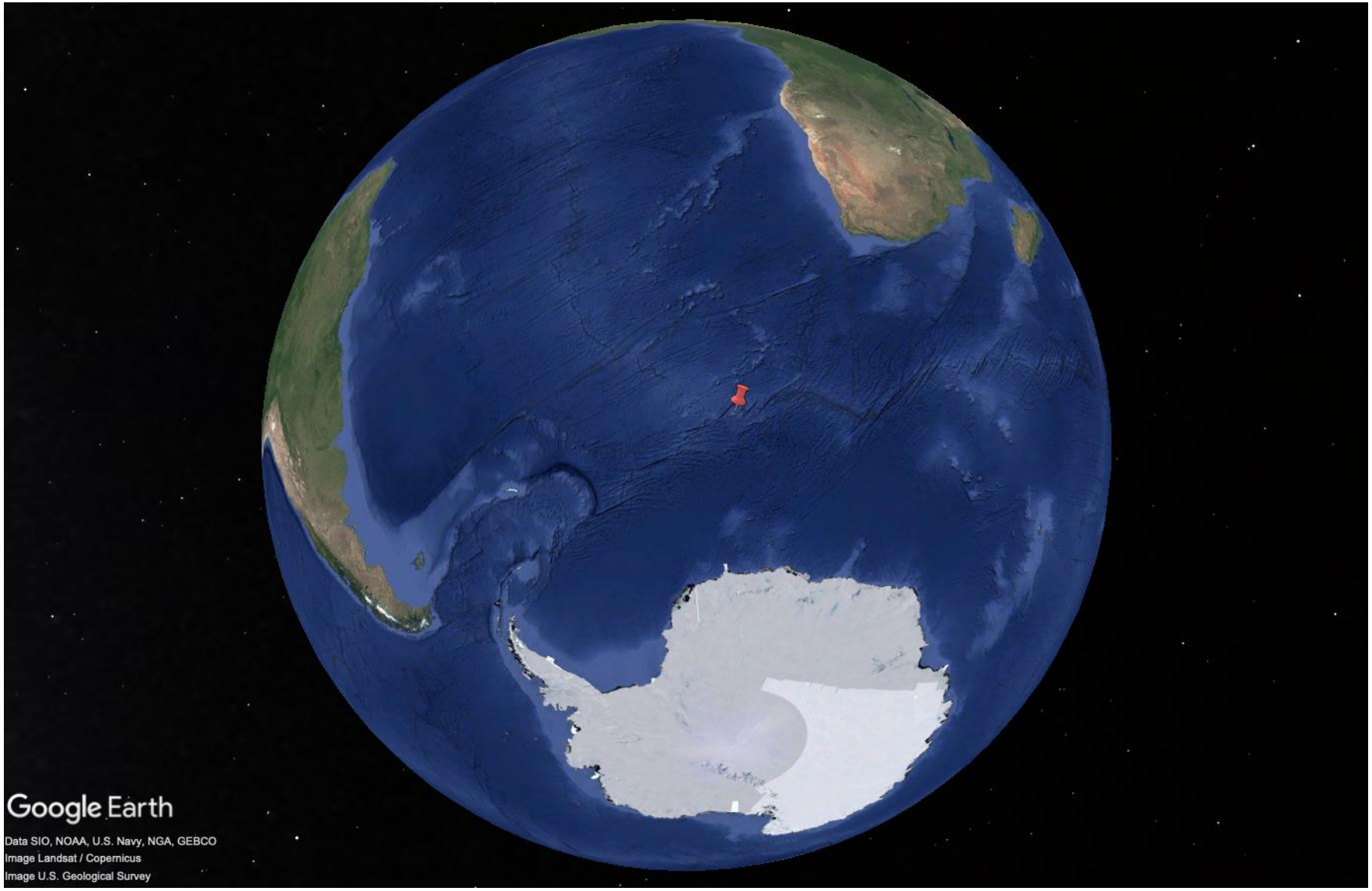
Bouvet Island

King Haakon VII Sea

3,000 km

RV Kronprins Haakon

Bouvetøya = the island furthest away from any land



Angelika Renner (IMR)

Photos collected by Angelika Renner (IMR)

BOUVECO: Disentangling land-coast-ocean connections at Bouvetøya, the most remote marine ecosystem hotspot in the Southern Ocean

The Research Council of Norway

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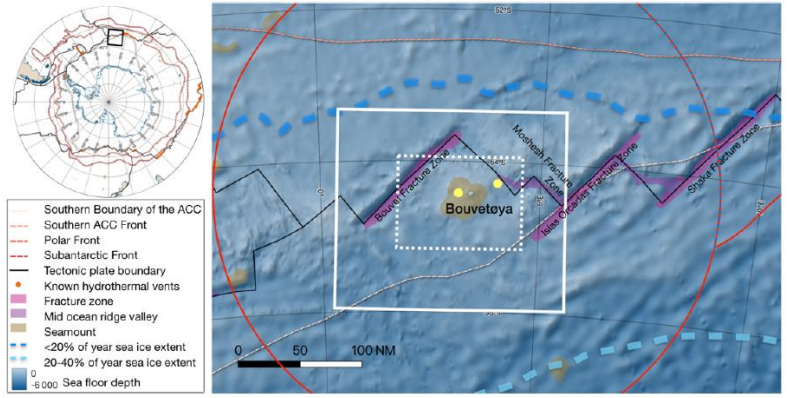
***Aim of BOUVECO**: understand the drivers which allow the ecosystem around Bouvetøya to thrive, providing a baseline understanding to enable assessment and quantification of the pressures on this ecosystem through climate change and possible future resource extraction*



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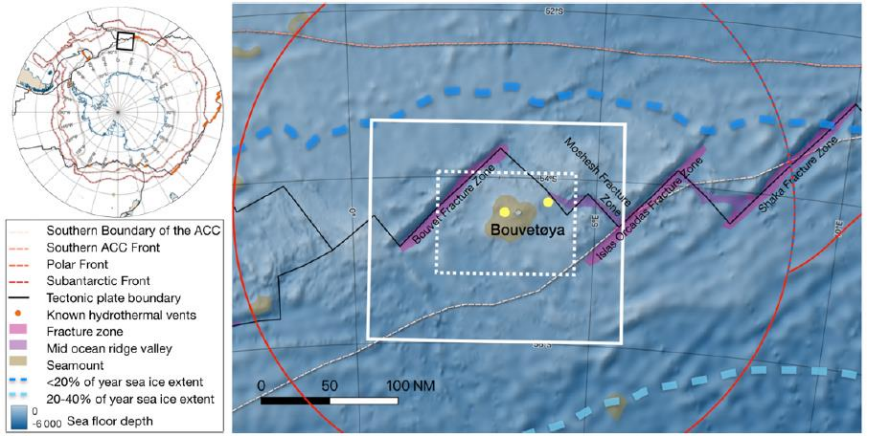
WP1 role of ocean dynamics and glacial meltwater from land-ice and icebergs in providing nutrient sources and pathways and promoting retention on the shelf to support primary production around Bouvetoya.

WP2 Biological and biogeochemical processes from the surface ocean to the seafloor that drive biological productivity and deep export around Bouvetoya.

WP3, spatial and seasonal analyses of zooplankton (mainly Antarctic krill) and top predator distribution and movement patterns using active and passive acoustics, krill trawls and zooplankton nets, and historical data of land-breeding predators.

WP4 will provide historical context to research and activities around Bouvetoya.



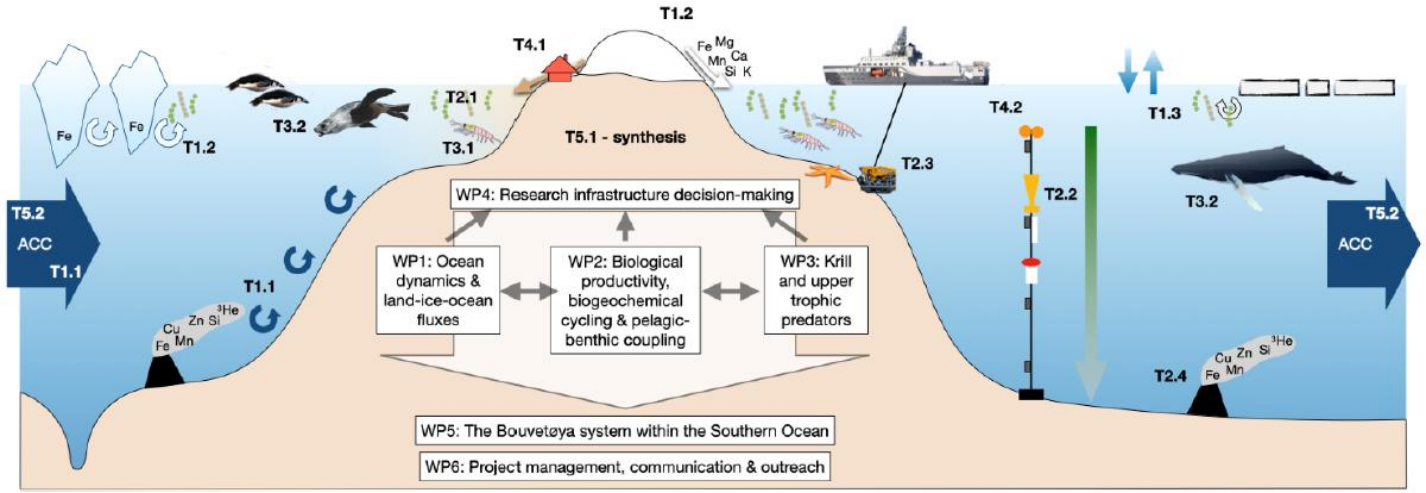
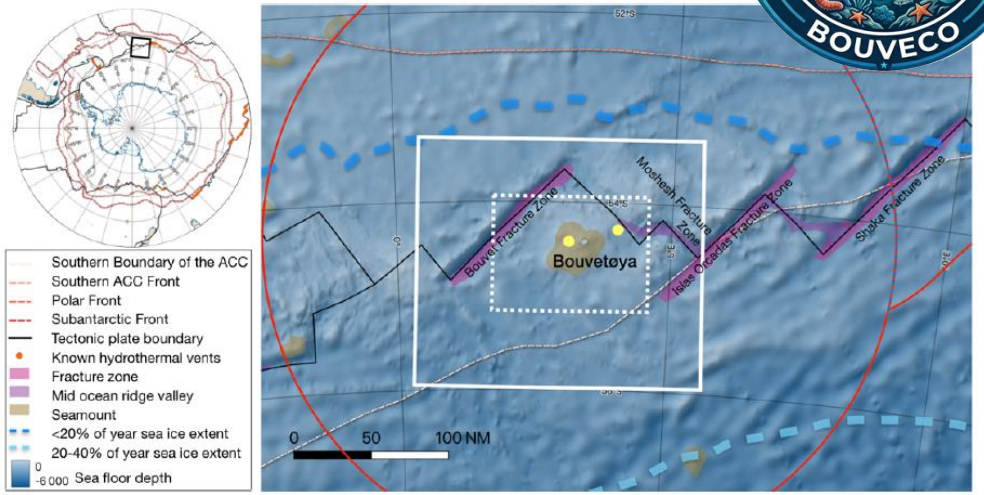


Figure 2: Diagram of processes to be studied in BOUVECO and work package structure and connections.

BOUVECO: Disentangling land-coast-ocean connections at Bouvetøya, the most remote marine ecosystem hotspot in the Southern Ocean

1. Deploy 2 moorings (including accoustic devices + 1 sediment trap)
2. Marine mammals and seabirds observations
3. Physical oceanography (CTDs, autonomous devices, turbulence)
4. Phytoplankton and BGC cycles (water samples, autonomous devices)
5. Zooplankton and krill (nets + echo-sounder)
6. ROV (benthos work)
7. Geology (hydrothermal vents and BGC cycles)
8. Trace metals (Fe and others)
9. Satellite Lagrangian analyses
10. Communication



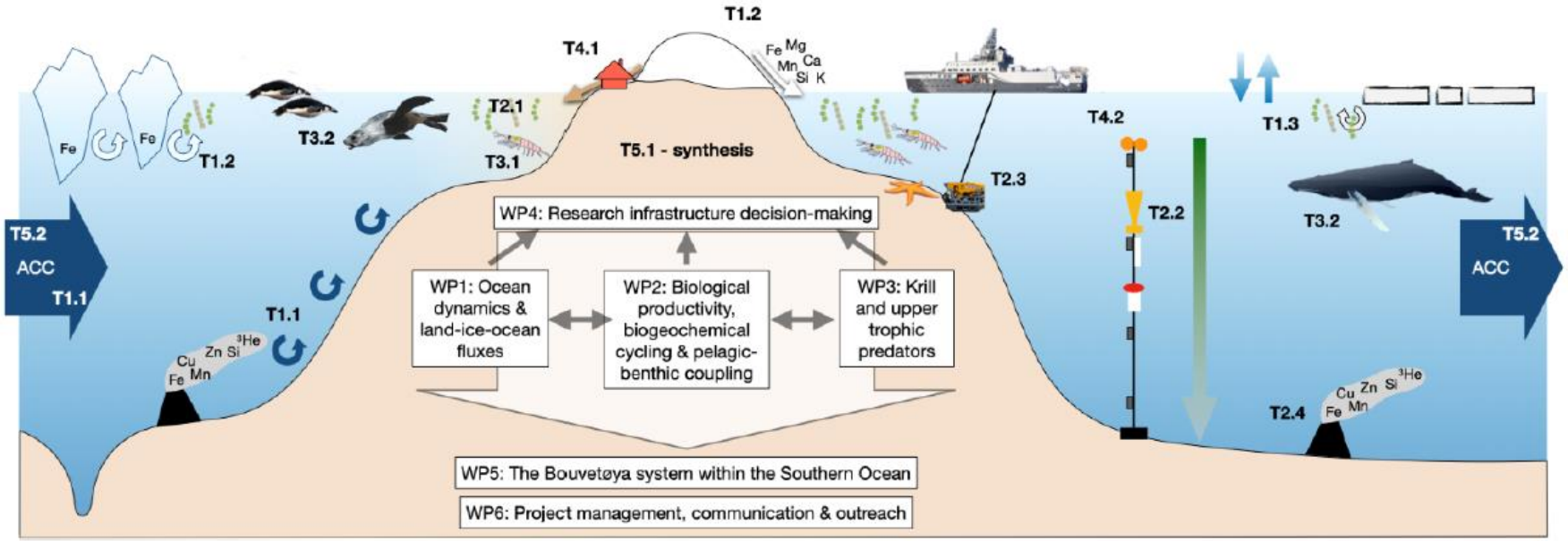


Figure 2: *Diagram of processes to be studied in BOUVECO and work package structure and connections.*