

***EU SEAFLOOR AND WATER COLUMN OBSERVATORIES  
CHALLENGES AND OPPORTUNITIES TOWARDS INTEGRATION***

*EMSO ERIC ALL REGIONS WORKSHOP*

## Arctic Observatory FRAM

a modern vision of integrated underwater infrastructure in the polar environment

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### ABSTRACT

The Arctic Observatory FRAM (**FR**ontiers in **AR**ctic **MAR**ine **M**onitoring) targets a modern vision of integrated underwater infrastructure in the polar environment. Since 2014 this modular observatory is being build up in Fram-Strait and the Central Arctic by the Alfred Wegener Institute for Polar and Marine Research (AWI) to become a major research infrastructure of the Earth and Environment research field of the Helmholtz Association. FRAM enhances sustainable knowledge of the remote and harsh Arctic environment for science, society and maritime economy as it enables truly year round multidisciplinary observations from sea ice to the deep sea. Cutting edge mobile and fixed sensor platforms and technologies like e.g. ROV's, AUV's, under water robotics, and moorings are being (further) developed and used in combination with ship based instruments to record various essential ocean variables to improve our understanding of the Arctic Ocean, it's essential processes, and how they are being impacted by continued warming and decreasing sea ice extend. Field data are being cross validated by satellite observations and used to improve model simulations. Data will be made freely available to the public via the AWI data portal.