

iAOOS-Norway: Closing the loop

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Project summary

iAOOS-Norway: Closing the loop is a contribution to an integrated Arctic Ocean Observing System, iAOOS. It builds on, and supplements, other ongoing components of iAOOS such as NABOS and DAMOCLES. iAOOS-Norway will contribute a share to iAOOS through building on pieces of an ocean-atmosphere-cryosphere-biosphere observing system already in place in Norway (funded through a variety of sources), and broadening this system, geographically, technologically and in scope, for the IPY. iAOOS-Norway will monitor the heat and freshwater pathways in the arctic and subarctic, with particular emphasis on the upstream and downstream conditions. It will monitor biological activity, sea ice changes, heat advection and buoyancy changes in the Arctic proper. It will make a systematic effort to quantify the flux and divergence of freshwater from the sea ice and river runoff in the Arctic towards the deep boundary currents of the North Atlantic. It represents the largest Norwegian collaborative effort to date for systematic monitoring of our marine climate, involving three governmental agencies and three universities. The project will, in collaboration with the US NABOS, the EU DAMOCLES and other proposed international iAOOS components, close the Arctic oceanic loop. iAOOS-Norway will provide new data for use in operational mode, where in situ and remote sensing data are merged with models to provide dynamically consistent data products and forecasts. It will improve the usage of observations in operational nowcasting and forecasting of the state of the ocean and sea ice. iAOOS International and iAOOS-Norway acknowledge the value of a well-functioning, well-connected data banking system for IPY, and plan to build on the already funded and designed system of DAMOCLES. Lastly, the project acknowledges the potential wider impact of IPY, and place great emphasis on outreach, and plan a range of activities to get the general public, and a new generation of polar scientists, involved.