

## **Antarctic Krill and Ecosystem Studies**

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### **Project summary**

This project is part of the CCAMLR organised survey to map the abundance of Antarctic krill (*Euphausia superba*) acoustically. R/V G.O.Sars will be used as a platform to study the pelagic marine resources in the Bouvetøy area (20° W - 10° E and 50 -60° S) in Dec07-Feb08; evaluate the links between the krill resources and Bouvet based mammals; study krill biology and ecology; establish TS for krill and icefish; compare aggregations and abundance of krill and plankton relative to hydrography in Antarctica and Nordic Seas. The krill abundance was estimated at 44 million tons in area 48.1-5 in a CCAMLR organised survey in 2000. Later studies of the behaviour and Target Strength (TS) of krill have indicated that the biomass might be in the order of 109-192 million tons. Therefore TS investigations have the highest priority by CCAMLR. Based on the estimate of 44 million tons krill, CCAMLR has set a TAC of 4 million tons. The level of this fishery has in later years varied between 100-150 000 tons per year. However, more nations are now interested in joining this fishery so the catches are expected to increase. The Norwegian vessel Saga Sea intend to catch 100 000 tons krill during the 2006/07 season. Saga Sea will fish commercially for krill during IPY and is equipped with scientific echo sounders. It will be used to study krill swarms in the fishing areas in the Scotia Sea. The hydrographic characteristics in the Bouvetøy area will be monitored and modelled to establish the physical frame for exploring the variability of the biological production. The survey will be carried out in cooperation with the South African- Norwegian Polar Institute (NPI) program on Bouvetøya that studies land based krill predators. Bouvetøya area was not part of the krill survey in 2000. Until now the krill and fish resources have not been mapped and evaluated in this area. The work is organised in 6 scientific WPs.