



# Diet dependent plastic ingestion in Antarctic fur seals *Arctocephalus gazella*

For several decades it has been known that plastic debris in the marine environment can harm marine organisms, both by entanglement and ingestion. The fragmentation of plastics into small persistent particles and the potential chemical hazard from ingesting these particles have heightened the concern regarding the whole marine food chain. The Commission for the Convention of Antarctic Marine Living Resources (CCAMLR) aims for intensified data collection on marine plastic debris in the Antarctic.



**Locations of five research-related Chilean stations.**  
 The blue symbol indicates Guillermo Mann Station, Cape Shirreff, Livingston Island, South Shetland archipelago.

Partners in this project are:

- Instituto Antártico Chileno (INACH) who will cover all logistic costs Punta Arenas – Cape Shirreff
- British Antarctic Survey (BAS) who will collect scat samples on South Georgia

We expect to get scat samples from two locations in 2014.

Austral summer 2014:

- 100 scat samples from South Georgia
- 200 scat samples from Cape Shirreff to be collected by INACH and IMARES

Austral winter 2014:

- 100 scat samples from South Georgia

This proposal concerns a Dutch-Chilean cooperative project aiming to understand the pathway by which Antarctic fur seals *Arctocephalus gazella* ingest plastics and in what quantities. In addition to standard CCAMLR beach litter monitoring at Cape Shirreff, South Shetlands, we will study this by beach debris surveys including micro-plastics in coastal deposits, seal entanglement rates and analysing fur seal scat samples for diet components and plastic debris from Cape Shirreff. Samples from other locations covering a wider spatial range and different diets of fur seals, collected by partners in this project will be included as well.



**Example of a stomach content of a harbour seal** showing several plastic sheets, threads, and two 'stones' possibly industrial slags

In addition to scientific publications, results will be made fully available to CCAMLR to assist in developing its future monitoring of the impact of plastic contamination in the Antarctic.