



# SOUTHERN OCEAN SENTINEL

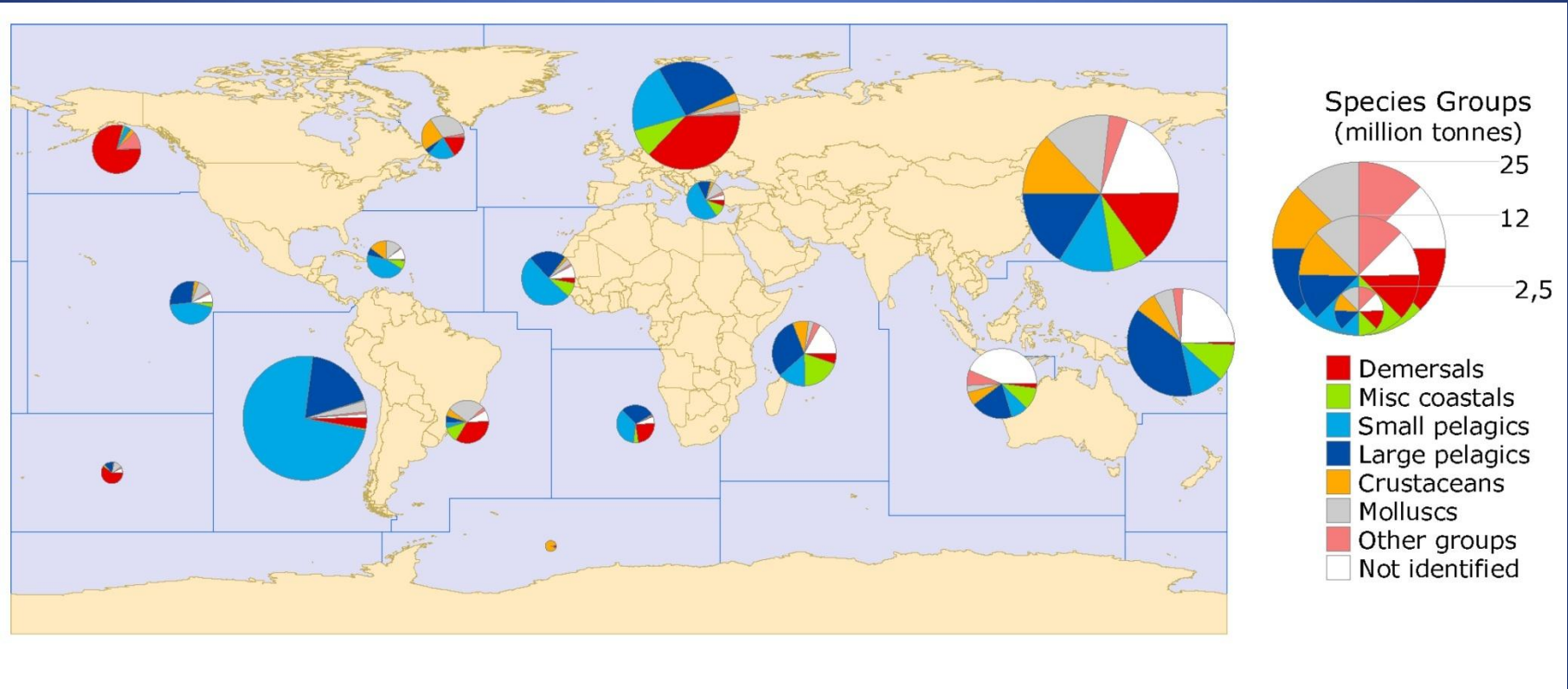
AN INTERNATIONAL PROGRAM TO ASSESS CLIMATE  
CHANGE IMPACTS ON MARINE ECOSYSTEMS



Report available at:

<http://www.aad.gov.au/default.asp?casid=35088>

# The Southern Ocean has the least ongoing exploitation and coastal impacts compared to other ecosystems



# Mission

- The *Southern Ocean Sentinel* will be an international multidisciplinary scientific effort to provide early warning of climate change impacts on global marine and other ecosystems based on Southern Ocean ecosystem indicators and assessments of climate change impacts in the region.
- Key linkages
  - Project under the IMBER program – Integrating Climate and Ecosystem Dynamics (ICED) in the Southern Ocean
  - Drawing on observations from the Southern Ocean Observing System (SOOS)

# Objectives

- The Southern Ocean Sentinel will provide information on the impacts of climate change in the Southern Ocean and will:
  - establish and utilise methods, including models, for predicting imminent and future change in Southern Ocean ecosystems, locally, regionally and synoptically;
  - develop methods and use Southern Ocean ecosystem indicators as early-warning signals for triggering advance planning and response actions in other global regions;
  - develop an active, adaptive long-term field program to measure early warning indicators and associated parameters for use in the predictive models; and
  - present outcomes (e.g. system assessments), and synthesise, review and regularly update predictions.



A possible design  
for international  
collaboration in  
measuring climate  
change impacts  
on Southern  
Ocean  
ecosystems

