International Antarctic Zone (iAnZone) focus areas and goals

iAnZone was conceived in the early 1990s as a sequence of informal biennial meetings of Southern Ocean researchers, primarily physical oceanographers, interested in understanding the Southern Ocean and its role in climate. Accorded status as a SCOR Affiliated Programme in early 1997, iAnZone's goal is to advance our understanding of climate-relevant processes within that region of the Southern Ocean poleward of the Antarctic Circumpolar Current. Additional affiliation to SCAR will be considered by SCAR's executive in autumn 2004. iAnZone (1) provides for exchange of ideas, plans, results and data; (2) identifies, develops and coordinates research projects consistent with our goal; (3) facilitates coordination among Antarctic and global climate programmes, and among other Southern Ocean programmes; and (4) advises on the development of appropriate observing systems, datasets and modelling strategies needed to assess the scales and mechanisms of climate variability in the Antarctic Zone.

Geographically, iAnZone projects have been undertaken in various locations in the Antarctic Zone (between the Southern Boundary of the Antarctic Circumpolar Current and the continent). Ice Station Weddell was in the southwest Weddell Sea studying processes of dense water formation and down-slope flows. AnzFlux was located in the region of Maud Rise and studied ocean-ice and ocean-atmosphere fluxes and upper ocean turbulent mixing processes. DOVETAIL (Deep Ocean Ventilation Through Antarctic Intermediate Layers) studied the region of the Weddell-Scotia Confluence in the northern Weddell and southern Scotia Seas to determine the processes involved in the outflow of Weddell Sea Deep Water. These three projects are now concluded. Two projects are currently ongoing. AnSlope is studying deep water formation and export in the Ross Sea. Ice Station Polarstern (ISPOL) will be a drift station in late 2004 from *Polarstern* in the western Weddell Sea. It will study spring ocean and sea ice conditions in the region of the continental slope.

Our future project, now in the planning phase, will be SASSI (Synoptic Antarctic Shelf-Slope Interactions). This will be undertaken in 2007-2008 and will be circumpolar. It is intended as the iAnZone contribution to International Polar Year (IPY). This centres around a series of 'hedgehog' sections radiating outward from Antarctica across the continental shelf and slope, to be occupied simultaneously during the period January-March 2008. It also includes moored arrays on these sections, where possible, to obtain winter data. The second primary part of SASSI is to deploy in the sea-ice zone around Antarctica under-ice floats (analogous to Argo floats) and the associated sound sources needed to track them.

Typically, iAnZone projects entail some or all of the following techniques: CTD sections, tracer surveys (e.g. CFCs, O18), shipborne and lowered ADCPs, moored current meter arrays, turbulence measurements, air-sea flux measurements, ocean-ice flux measurements, numerical model development and analysis. Geochemical and biological studies are often undertaken during the same cruises but are not coordinated by iAnZone.

The Steering Committee is currently chaired by Dr Karen J. Heywood (School of Environmental Sciences, University of East Anglia, UK). Steering committee members currently represent the UK, US, Germany, Italy, Russia, Japan, Finland, Brazil, New Zealand, China and Australia. However all iAnZone biennial meetings and project planning workshops are open to all, and anyone may sign up to the iAnZone mailing list. The next (9^{th}) biennial meeting will be held in October 2005 in Venice, in association with the IPAB meeting, ISPOL workshop and conference on the Oceanography of the Ross Sea. Further information can be found on the iAnZone website:
http://www.ldeo.columbia.edu/res/fac/physocean/ianzone/