

Annex: Environmental Domains Analysis for the Antarctic continent

Version 2.0, 2007

Environmental geographic frameworks are methods of classifying or organising subsets of environmental and geographic characteristics such as different types of ecosystem, habitat, geographic area, terrain, geology, and climate into environmental or geographic regions. Each region is distinctive or in some way different from other regions but some might have characteristics in common.

Environmental Domains Analysis (EDA) has been used, at the scale of the Antarctic continent, to classify a sub-sample of over 13 million 1000m pixels from eight underlying data layers, into 21 Environments (also known as "Environmental Domains"). The classification presented here is the best that can be achieved by this process using currently available climate, slope, land cover and geological data.

The 21 different Environments in Table 1 and Figure 1 represent 21 different environmental-geographic regions that fit together into a logical, integrated and complete system of regions representing Antarctica as a whole. This provides the fundamental scientific basis for the systematic environmental-geographic framework for protected areas as envisaged in, and consistent with, Article 3(2).

A full description of these Environments, individual maps of them (as well as further details on the project background, data layers and the classification process itself) are contained in the technical report by Morgan and others (2007).

The spatial classification of Antarctica into 21 Environmental Domains is presented in the attached figure.

Reference

Morgan F, Barker G, Briggs C, Price R and Keys H. 2007. Environmental Domains of Antarctica Version 2.0 Final Report, Manaaki Whenua Landcare Research New Zealand Ltd, 89 pages.

II. RESOLUTIONS

Table 1 – Descriptions of Environments in Version 2.0 of Environmental Domains Analysis for the Antarctic continent, including type examples

Alphabet label	EDA Type Environments and extended descriptors
A	Antarctic Peninsula northern geologic
B	Antarctic Peninsula mid-northern latitudes geologic
C	Antarctic Peninsula southern geologic
D	East Antarctic coastal geologic (e.g. Vestfold, Bunger, Wilson hills)
E	Antarctic Peninsula, Alexander and other islands main ice fields and glaciers
F	Larsen Ice Shelf (also includes Prince Gustav and other northern peninsula ice shelf remnants)
G	Antarctic Peninsula offshore islands (e.g. most of Deception Island)
H	East Antarctic low latitude glacier tongues (e.g. Mertz, Rennick)
I	East Antarctic ice shelves (e.g. Fimbulisen, Amery, Shackleton, Cook, Moubray Bay)
J	Southern latitude coastal fringe ice shelves and floating glaciers (e.g. Pine Island, Thwaites, Getz, Drygalski)
K	Northern latitude ice shelves (e.g. Wordie, George VI, Wilkins, Abbot, Riser-Larsenisen, Nansen)
L	Continental coastal-zone ice sheet
M	Continental mid-latitude sloping ice (e.g. Ellsworth & Coats lands, upper Lambert GI, northern Berkner & Thurston islands)
N	East Antarctic inland ice sheet
O	West Antarctic Ice Sheet (also includes inland Coats Land, Taylor Dome, Ross Island ice cap)
P	Ross and Ronne-Filchner ice shelves
Q	East Antarctic high interior ice sheet
R	Transantarctic Mountains geologic (Shackleton Range to Cook Mountains)
S	McMurdo - South Victoria Land geologic (also includes Ellsworth, Werner etc mountains)
T	Inland continental geologic (Dronning Maud, MacRobertson, Victoria, Oates lands, Ford Range)
U	North Victoria Land geologic (also includes Executive Committee Range, Prince Charles & Jones mountains)

Figure 1 – Map of Antarctica showing the classification layer with its 21 Environments

