GREAT BARRIER REEF
MARINE PARK AUTHORITY

GENERAL INFORMATION FOR USERS OF BIOREGION INFORMATION SHEETS

The classification of the Great Barrier Reef World Heritage Area (GBRWHA) into 70 bioregions is an attempt to describe the enormous biological and physical diversity of the area. Boundaries between bioregions (particularly non-reef bioregions) are often 'fuzzy' either because there is a continuum in nature, or because the boundaries are difficult to define given current data. Whilst the best information available was used to define the bioregions, the boundaries of bioregions and descriptions may change over time as further information becomes available. The bioregions are a basis for GBRMPA's Representative Areas Program (RAP).

The attached bioregion information sheets describe some biological and physical attributes of each bioregion and define how much of each bioregion is currently protected in 'no-take' zones. As new information comes to light, the information presented on the bioregion information sheets may change.

Marine Park Zoning
The percentage of existing zoning within each bioregion was calculated from the Great Barrier Reef Marine Park Authority's current zoning plans (as at 12/7/02). Zoning plans were developed for each section of the Marine Park, through public participation, balancing ecologically sustainable use and conservation of the Great Barrier Reef Marine Park, in accordance with the Great Barrier Reef Marine Park Act, 1975. 'No-take' zones include those areas that are within Preservation zones, Scientific Research zones and Marine National Park B / National Park zones.

Area exposed to flooding events
The area exposed to flooding events was calculated from the mapped extent of major flood plumes following heavy rainfall from five different cyclones between 1994 and 1998.[1] No recorded event indicates that no flooding event has been recorded in that area during the period of the study, however it is possible that an event occurred and was not recorded.

NON-REEF BIOREGIONS

Bathymetry
The bathymetry of the bioregion was derived from a depth model of the Great Barrier Reef [2] and indicates the average depth of the bioregion below sea-level.

Substrate
Sediment data was derived from the AUSEABED Database [3]. Sediment grain size was divided into four categories: mud (< 0.004 mm), sand (0.06 mm – 2 mm), gravel (> 2 mm) and rock. The percent grain size of sediment was then calculated, and the dominant sediment type for each bioregion indicated on the information sheet.

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[1] Brodie, J and Furnas, M, (1996) Cyclones, river flood plumes and natural water quality extremes in the central Great Barrier Reef. In: HM Hunter, AG Eyles, GE Rayment (eds.), 'Downstream Effects of Land use', 9-21.
[2] Lewis, A, (2001) Great Barrier Reef Depth and Elevation Model: GBRDEM, CRC Reef Research Centre, Technical Report No. 33, Townsville.
[3] Jenkins C, (Ocean Sciences Institute, University of Sydney from the AUSEABED database, a joint research program of the Ocean Sciences Institute and the Australian Oceanographic Data Centre

Biological

Epibenthos and Deep water seagrass
Presence/absence of benthic fauna was recorded at sites along cross-shelf transects that started near shore at the 15 m contour and ended 1 nautical mile short of the outer most reef at the edge of the continental shelf.[4] In each bioregion, fauna were only listed on the information sheet when found in more than 10 samples sites.

Turtle foraging and nesting areas
These areas are known locations of turtle nesting and foraging sites in QLD.[5]

Shallow water seagrass
The text lists where shallow water seagrass has been mapped in the GBRMP.[6]

REEF BIOREGIONS

Reef geomorphology
The reef geomorphology was derived from the classification of reefs based on geomorphology and evolution into ribbon, crescentic, planar, lagoonal, reef patches, submerged, fringing, coastal fringing and incipient coastal fringing reefs.[7]

Interim biophysically special / unique sites
These are biologically and/or physically special sites or unique sites. Their priority has been assessed against assessment criteria including the number of sources of the information, the level of detail, justification and spatial explicitness of the information, existence of published information about the site and relevance to any threatened species.

[4] Coles RG, Lee Long W, McKenzie LJ, Roelofs A, Dea'th G, (2000) Department of Primary Industries, Queensland Fisheries Service, Cairns
[5] Limpus C, (1996-1998) Environmental Protection Agency, Turtle Database, Brisbane
[6] Coles RG, McKenzie LJ, Mellors JE, Yoshida RL, (1984 – 1988) Department of Primary Industries, Queensland Fisheries Service, Cairns
[7] Hopley D, (1982) The geomorphology of the Great Barrier Reef: Quaternary development of coral reefs. John Wiley and Sons. USA