

METADATA

The 2010 Fiji coral reef system map is given in an ArcMap shapefile format and consists of seven associated files:

1. fj20100815qbikon_Kadavu_Habitat_Map.shp
2. fj20100815qbikon_Kadavu_Habitat_Map.dbf
3. fj20100815qbikon_Kadavu_Habitat_Map.prj
4. fj20100815qbikon_Kadavu_Habitat_Map.sbn
5. fj20100815qbikon_Kadavu_Habitat_Map.shx
6. fj20100815qbikon_Kadavu_Habitat_Map.sbx
7. fj20100815qbikon_Kadavu_Habitat_Map.xml

Data in the *.dbf file are in a tabular format where each line corresponds to a one polygon. The columns for each line give all the associated information for the particular polygon.

A description of the column header titles is given by Table 1.

| Heading | Heading Info |
|------------|--|
| LandReefWa | General cover type |
| ReefType | Areas within the reef, varying in exposure to deep clear water, terrestrial influences and variation in hydrodynamics |
| Geomorphi | Type of geomorphic zone |
| BenthicCom | Type of benthic community Type |
| Source | University of Queensland, Biophysical Remote Sensing Group |
| FieldSourc | see: Roelfsema, C. M., S. R. Phinn, S. Jupiter, J. Comley and S. Albert (2013). "Mapping Coral Reefs at Reef to Reef-System Scales (10-600 Km2) Using Obia Driven Ecological and Geomorphic Principles." International Journal of Remote Sensing, pp: 1-22. doi:http://10.1080/01431161.2013.800660 |
| ImageType | see: Roelfsema, C. M., S. R. Phinn, S. Jupiter, J. Comley and S. Albert (2013). "Mapping Coral Reefs at Reef to Reef-System Scales (10-600 Km2) Using Obia Driven Ecological and Geomorphic Principles." International Journal of Remote Sensing, pp: 1-22. |

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| | doi: http://10.1080/01431161.2013.800660 |
| ClasMethod | see: Roelfsema, C. M., S. R. Phinn, S. Jupiter, J. Comley and S. Albert (2013). "Mapping Coral Reefs at Reef to Reef-System Scales (10-600 Km2) Using Obia Driven Ecological and Geomorphic Principles." International Journal of Remote Sensing, pp: 1-22. doi: http://10.1080/01431161.2013.800660 |
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Table 1. Column header titles

The 27 benthic community types and their description are given in Table 2.

| Type | Description |
|------------------------|--|
| 'Breaking Waves' | Breaking waves are often a distinguishable feature of the reef crest on the barrier reef |
| 'Cloud or Shade' | Cover mainly dominated by cloud or shade |
| 'Coral – Reef Matrix' | Cover dominated by coral and reef matrix |
| 'Coral – Rubble' | Cover dominated by coral and rubble |
| 'Coral – Rubble – Sed' | Cover dominated by coral, rubble and sediment |
| 'Coral/AlgaeRubble' | Cover dominated by coral, algae and rubble |
| 'Deep Slope' | Deep section of the reef slope |
| 'Deep patch reefs' | Deep section of patch reef, reef areas that cannot be discriminated what exact cover it is |
| 'Lagoon Reefs' | Reef within a lagoon |
| 'Lagoon Slope' | Slope section of lagoon reef |
| 'Land' | Land |

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|--------------------------------|--|
| 'Land other' | Land Other |
| 'Reef Matrix – Coral' | Cover dominated by reef matrix and coral |
| 'Rubble – Reef Matrix' | Cover dominated by rubble and reef matrix |
| 'Rubble – Reef matrix – Coral' | Cover dominated by rubble, reef matrix and coral |
| 'Seagrass' | Cover dominated by seagrass |
| 'Seagrass – Sed' | Cover dominated by seagrass and sediment |
| 'Seagrass/Algae Rubble Sed' | Cover dominated by seagrass, algae, rubble and sediment |
| 'Sed' | Cover dominated by sediment |
| 'Sed + small features' | Cover dominated by sediment and small features |
| 'Sed – Rubble' | Cover dominated by sediment and rubble |
| 'Sed Rubble' | Cover dominated by sediment and rubble |
| 'Sed Rubble Coral' | Cover dominated by sediment, rubble and coral |
| 'Sed Rubble Seagrass/Algae' | Cover dominated by sediment, rubble, seagrass and algae |
| 'Turbid Water' | Water where bottom is not visible due water clarity, generally close to shore |
| 'Water Deep' | Clear water where bottom is not visible due to water depth. |
| 'Water Deep Lagoon' | As deep water but now surrounded by reefs, does not have to be completely enclosed |

Table 2. Benthic community types

The 10 geomorphic zone types and their description are given in Table 3.

| Type | Description |
|-------------------|---|
| 'Cloud or shade' | Cloud and shades |
| 'Land' | Land |
| 'Reef Crest' | Between the reef slope and outer reef flat and is mostly consolidated material and sometimes exposed, as it's the shallowest part of the reef |
| 'Reef Flat' | Reef flat section of the reef where there is no clear distinguish between inner and outer reef flat |
| 'Reef Flat Inner' | Inner reef flat section of the reef, area with dominant sand combined with patches of coral/ Algae |
| 'Reef Flat Outer' | Outer reef flat section of the reef, area with dominant coral and algae, with patches of sand or rubble in between |
| 'Reef Slope' | Reef slope section of the reef, the area neighbouring deep water at one site and reef crest on the shallow site |
| 'Shallow Reef' | Shallow reef flat section of the reef, areas that are visible through the water column and do not include deep water, turbid water, lagoon water, land. |
| 'ShallowWater' | Shallow water areas that are visible in the image but do not belong to a specific geomorphic zone |
| 'Water Deep' | Clear water where bottom is not visible due to water depth. |

Table 3. Geomorphic zone types

The 9 reef types and their description are given in Table 4.

| Type | Description |
|-------------------------|---|
| 'Barrier Reef' | Reefs neighbour open ocean/deep water one side forming a barrier to the adjacent deep lagoons and land on the other side |
| 'Cloud or shade' | Areas covered by cloud or shade |
| 'Fringing Barrier Reef' | Similar to 'barrier reef' as it formed a well-defined barrier and similar to fringing reef as it is attached to land, and not adjacent to a deep lagoon |
| 'Fringing Reef' | Reefs that are directly attached to land at one side with the other side facing protected water such as a lagoon |
| 'Lagoon Reefs' | Reefs that are within the lagoon but not connected to land |
| 'Land' | Land |
| 'Shallow Water' | Shallow water areas that are visible in the image but do not belong to a specific geomorphic zone |
| 'Water Deep' | Clear water where bottom is not visible due to water depth. |
| 'Water Deep Lagoon' | Clear water where bottom is not visible due to water depth. but areas surrounded by reefs, does not have to be completely enclosed |

Table 4. Reef types

The 6 LandReefWa types and their description are given in Table 5.

| Type | Description |
|---------------------|--|
| 'Cloud or Shade' | cloud or shade |
| 'Land' | A land |
| 'Reef' | Area covered by reef |
| 'ShallowWater' | Shallow water areas that are visible in the image but do not belong to a specific geomorphic zone |
| 'Water Deep' | Clear water where bottom is not visible due to water depth. |
| 'Water Deep Lagoon' | Clear water where bottom is not visible due to water depth. but areas surrounded by reefs, does not have to be completely enclosed |

Table 5. General cover types