METADATA

Underwater georeferenced photo-transect survey was done on June 17-30, July 1-21, October 7-29 and November 5-9 2009 at different sections of the reef flat, reef crest and reef slope in Kadavu, Fiji. For this survey a snorkeler or diver swam over the bottom while taking photos of the benthos at a set height using a standard digital camera and towing a surface float GPS which was logging its track every five seconds. A standard digital compact camera was placed in an underwater housing and fitted with a 16 mm lens which provided a 1.0 m x 1.0 m footprint, at 0.5 m height above the benthos. Horizontal distance between photos was estimated by three fin kicks of the survey diver/snorkeler, which corresponded to a surface distance of approximately 2.0 – 4.0 m. The GPS was placed in a dry-bag and logged its position as it floated at the surface while being towed by the photographer. A total of 8323 benthic photos were taken. A floating GPS setup connected to the swimmer/diver by a line enabled recording of coordinates of each benthic. (http://ww2.gpem.uq.edu.au/CRSSIS/publications/GPS_Photo_Transects_for_Benthic_Cover_Manual.pdf).

The 2009 Kadavu, Fiji coral reef benthic and substrate cover data is given in an ArcMap shapefile format and consists of six associated files:

1. fj2009_Kadavu_BenthicData.shp
2. fj2009_Kadavu_BenthicData.dbf
3. fj2009_Kadavu_BenthicData.prj
4. fj2009_Kadavu_BenthicData.sbn
5. fj2009_Kadavu_BenthicData.shx
6. fj2009_Kadavu_BenthicData.sbx

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

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

Heading	Heading Info
East	Eastings (meter)
North	Northings (meter)
Photo ID	Filename of photo used in the point classification and cover estimation

Status	Basic bottom type class: Consolidated (C) or Unconsolidated (U)

Substrate	Substrate type classes for each bottom type class.
	
	    Consolidated bottom type:
	
	        1. Bedrock (BR)
	        2. Dead Coral (DC)
	        3. Red Encrusting (RE)
	        4. Rubble (RU)
	
	    Unconsolidated bottom type:
	
	        1. Sand (S)
	        2. Silt/Mud (SM)

Biota	Specific category for substrate type classes 1. Hard Coral (HC) 2. Soft Coral (SC) 3. Macroalgae (MA) 4. Turf Algae (TA) 5. Bare (BA) 6. Seagrass (SG)

Xcover	Category used for cover estimates of:
	
	1. Hard Coral
	    • "1" – 10-30% cover
	    • "2" – 30-50% cover
	    • "3" – 30-50% cover
	2. Soft Coral
	    • "1" – 10-30% cover
	    • "2" – 30-50% cover
	    • "3" – 30-50% cover
	3. Macroalgae
	    • "1" – 20-50% cover
	    • "2" – >50% cover
	4. Turf algae
	    • "1" – 20-50% cover
	    • "2" – >50% cover