## Dataset Report

1. Dataset title (mandatory)

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| Results of surveys of benthic organisms, reef fishes and manta tow surveys of Capricorn Bunker reefs in October 2015 (NESP TWQ 3.7, AIMS) |

1. Dataset Authors (mandatory)

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| Sweatman, Hugh, Dr  Australian Institute of Marine Science  07 4753 4897  Townsville, Queensland, Australia  h.sweatman@aims.gov.au |

## Dataset documentation

1. Preview images (mandatory)

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| Image name | Attribution | Caption |
| <http://photos.aims.gov.au:8080/photos/photo.xhtml?id=339760>  retrieve image using this link | AIMS LTMP | Collecting a photo transect on Fairfax reef in October 2015 |
| http://photos.aims.gov.au:8080/photos/photo.xhtml?id=339722 | AIMS LTMP | Broomfield Reef. High coral cover and a diversity of coral lifeforms |
| Plectropomus leopardus courtin’.jpg | Long Term Monitoring  Australian Institute of Marine Science | *Plectropomus leopardus* is one of the species surveyed by the Long Term Monitoring Program. |
| Mike and bolbo2 | Long Term Monitoring  Australian Institute of Marine Science | A diver conducting an underwater visual census of reef fishes. |

1. Summary of what this dataset describes and where it is relevant? (mandatory)

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| This dataset consists of summaries of benthic, fish and manta tow surveys conducted in the Capricorn-Bunker Region of the Great Barrier Reef in October 2015. It consists of three tables:   1. A table summarising percent cover of benthic organisms grouped into broad categories from photo transects collected during the monitoring surveys. 2. A table of average abundance for each reef fish species on the 5 transects in each of the three sites on each reef is presented for the eight reefs surveyed. 3. A table of the average reef wide coral cover, the mean reef-wide density of crown-of-thorns starfish (CoTS), *Acanthaster planci* and the mean reef-wide density of coral trout for each reef based on manta tow surveys.   This dataset is an extract from part of the AIMS Long Term Monitoring database. |

1. Background information, purpose and lineage (optional)

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| The rezoning of the Great Barrier Reef Marine Park (GBRMP) in 2004 increased the number and extent of ‘no-take’ areas within the Park. This project surveys pairs of reefs, one in a ‘no-take’ or green zone and the other a similar reef where fishing is allowed (blue zone), in five regions of the GBRMP. Green and blue zones will be surveyed for the abundance and size of fishery species, particularly coral trout, as well as wider effects on coral reef communities. Surveys of coral communities are undertaken in the same location as surveys of fishes. Biennial surveys commenced in 2006. |

1. Methods (mandatory)

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| Benthic surveys:  Coral communities were surveyed on eight reefs (Boult Reef, Broomfield Reef, Erskine Reef, Fairfax Islands Reef, Hoskyn Islands Reef, Lady Musgrave Reef, Mast Head Reef, North Reef (North)) in the Capricorn-Bunkers region using digital still images taken along five permanent 50 m transects in each of three sites per reef (n = 15 transects). Forty images were selected randomly from the fifty taken per transect for analyses. The benthic organisms under five points per image arranged in a quincunx pattern were identified (n = 200 points per transect). Benthic organisms were identified to the highest taxonomic resolution possible and each organism is assigned a lifeform based on its shape. Data were converted to percent cover and the site averages is presented for each reef surveyed. [AIMS LTMP Standard Operating Procedure 10](http://www.aims.gov.au/documents/30301/23354/Long+term+Monitoring+GBR+Standard+Operational+Procedure+10/34301565-3820-4c49-9087-7f3f15f1962a). The data summaries the latest survey from a time-series of biennial surveys that commenced in 2006. Temporal trends at each reefs are available on <http://data.aims.gov.au/reefpage2/allreefs.jsp>  Reef fish surveys:  The abundance of ten families of conspicuous, diurnally active reef fishes was enumerated using standard underwater visual census techniques. Sites are located in a standard reef slope habitat on the north-eastern flank of each reef between 6 to 12m, and consist of five permanently marked 50 m transect (n=15 per reef). Damselfishes (Pomacentridae) were surveyed on one metre wide belt transects while the remaining nine families of large mobile fishes (Acanthuridae, Chaetodontidae, Labridae, Lethrinidae, Lutjanidae, Scaridae, Siganidae, Serranidae and Zanclidae) were counted on five metre wide belts. See [AIMS LTMP Standard Operating Procedure 3](http://www.aims.gov.au/documents/30301/52ecddd9-af66-4eab-b325-484fe4742aad).  Manta tow surveys:  Broadscale surveys of reef-wide coral cover, densities of crown-of-thorns starfish and of coral trout using manta tows involve a snorkel diver being towed around the perimeter of the reef. The boat stops every 2 min to allow data to be recorded. See [AIMS LTMP Standard Operating Procedure 9](http://www.aims.gov.au/documents/30301/20e3bf4f-4b3b-4808-ac02-c15c2912c3f2). |

1. Limitations of the data (optional)

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| N/A |

1. Format of the data (mandatory)

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| CapBunk\_NESP-TWQ-3-7\_AIMS\_Benthic\_2015-10.csv, CapBunk\_NESP-TWQ-3-7\_AIMS\_Benthic\_2015-10.shp:  Average percent cover of groups of benthic organisms on each of 3 sites on survey reefs in the Capricorn-Bunkers, GBR  Description of lifeforms are published in the Standard Operation Procedures, Appendix III  <http://www.aims.gov.au/documents/30301/23354/Long+term+Monitoring+GBR+Standard+Operational+Procedure+10/34301565-3820-4c49-9087-7f3f15f1962a>  The following are the classifications in the dataset:  - Turf algae  - Tabulate Acropora  - Coralline algae  - Branching Acropora  - Encrusting non-Acropora  - Sand  - Massive non-Acropora  - Macroalgae  - Submassive non-Acropora  - Soft coral  - Digitate Acropora  - Arb & Enc Soft Coral  - Arborescent Soft Coral  - Capitate Soft Coral  - Foliose non-Acropora  - Encrusting Acropora  - Millepora  - Branching non-Acropora  - Submassive Acropora  - Sponge  - Other organisms  - Encrusting Soft Coral  - Zoanthid  - Bottlebrush Acropora  - Dead coral (recent)  - Rubble  - Lobate Soft Coral  - Massive Soft Coral  - Mushroom coral  - Abiotic  - Solitary coral  - Unknown  The shapefile was created from the CSV. This process involved truncating the attribute names to comply with 10 character limit of the shapefile format. The CapBunk\_NESP-TWQ-3-7\_AIMS\_Benthic\_2015-10.aliases.csv file contains a lookup table from the shortened attribute names in the shapefile to the original longer names in CSV file.  NESP\_TWQ\_3-7\_Reef\_Fish\_data.csv:  Consists of a summary of the raw counts of reef fishes. The average abundance for each reef fish species per 1,000 m2 is presented for each of the 3 sites on the eight reefs surveyed in October 2015. Note: this table also includes rows for species that were searched for, but none were observed. These correspond to rows where the abundance is 0.  NESP\_TWQ\_3-7\_MantaTow\_data.csv:  Summary of the manta tow results for the surveyed reefs, including the mean hard coral cover (average over all tows on reef), CoTS (count per tow) and trout (count per tow). |

1. Data Dictionary (optional)

Does this dataset contain tables with attributes such as a CSV file, an Excel spreadsheet, shapefiles or database? If so please provide a description of the attributes so they can be understood by others. Each should have the name of the attribute, a description and units (if applicable). If you have multiple files then create put the filename then the data dictionary.

Example: Seagrass toxicity (Negri 2013)

- pH: Average of the calculated pH of the aquarium over the experimental period.

- pCO2 (uatm): average pCO2 levels over two weeks.

- Temp\_real (oC): Average of measured temperatures of the aquarium over the experimental period (N=3). These were measured manually.

- N\_sampling: Number of water samples taken for pCO2 and pH determinations

- Species: “CS”= Cymodocea serrulata, “HU”= Halodule uninervis, “TH”= Thalassia hemprichii

- Aquaria: ID of the aquarium each pot was kept in.

- Duplicate\_pot: ID of duplicate pot of species in each aquaria

- Resp (mgO2 g-1DW h-1): dark respiration rates of leaf from haphazardly chosen shoot from pot

- Productivity (mgO2 g-1DW h-1): photosynthetic rates measured under experimental treatment light level (400 µmol m-2 s-1), measured after 14 days.

**… [Text removed for brevity]…**

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1. Temporal extent (When) (mandatory)

When was the data collected for this dataset? If this dataset is not based on time dependent data (like zoning, bathymetry, etc.) then when was this dataset created?

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| Start date: | 02/10/2015 | End date: | 16/10/2015 |

1. Spatial Extent (Where) (mandatory)

# Study/sample/laboratory site locations (if not in data)

Use this if you have specific sites. You can also supply this in a spreadsheet rather than in this form.

|  |  |  |
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|  | (decimal degrees North) | (decimal degrees East) |
| Site | Latitude | Longitude |
| North Reef | -23.17549 | 151.90862 |
| Broomfield Reef | -23.24957 | 151.94255 |
| Erskine Reef | -23.49912 | 151.77490 |
| Masthead Reef | -23.53410 | 151.74968 |
| Boult Reef | -23.74525 | 152.27468 |
| Hoskyn Reef | -23.79565 | 152.29713 |
| Fairfax Reef | -23.84811 | 152.37238 |
| Lady Musgrave Reef | -23.88350 | 152.41978 |

1. References (optional)

Are there any references to additional material that would assist someone in understanding this dataset? In particular are there papers that directly describe the development of the dataset or the research behind the data.

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| AIMS LTMP Reef monitoring sampling methods web page  <http://www.aims.gov.au/docs/research/monitoring/reef/sampling-methods.html>  Project web page  <http://eatlas.org.au/nesp-twq-1/gbr-zoning-3-7>  Previous LTMP NERP TE 8.1 Project web page  <http://eatlas.org.au/nerp-te/gbr-aims-monitoring-zoning-mpa-mid-outer-shelf-reefs-8-1>  AIMS's Monitoring on the Great Barrier Reef  <http://www.aims.gov.au/docs/research/monitoring/reef/reef-monitoring.html>  [AIMS LTMP Standard Operating Procedure 3](http://www.aims.gov.au/documents/30301/52ecddd9-af66-4eab-b325-484fe4742aad)  <http://www.aims.gov.au/documents/30301/52ecddd9-af66-4eab-b325-484fe4742aad>  [AIMS LTMP Standard Operating Procedure 9](http://www.aims.gov.au/documents/30301/20e3bf4f-4b3b-4808-ac02-c15c2912c3f2)  <http://www.aims.gov.au/documents/30301/20e3bf4f-4b3b-4808-ac02-c15c2912c3f2>  [AIMS LTMP Standard Operating Procedure 10](http://www.aims.gov.au/documents/30301/23354/Long+term+Monitoring+GBR+Standard+Operational+Procedure+10/34301565-3820-4c49-9087-7f3f15f1962a), http://www.aims.gov.au/documents/30301/34301565-3820-4c49-9087-7f3f15f1962a  Temporal trends at each reef,  <http://data.aims.gov.au/reefpage2/allreefs.jsp> |

1. Declaration (mandatory)

I certify that I am the owner or creator of the submitted dataset and understand that the submitted dataset will be released publically under a [creative commons attribution 3.0 Australian license](http://creativecommons.org/licenses/by/3.0/au/) (contingent on restrictions applied in Question 13).

Example:

Project: NERP TE Project 3.4 - Monitoring of key vertebrate species

Submitted: David Westcott, Date: 28/01/2013

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| --- | --- | --- | --- |
| Project: | NESP TWQ 3.7 ***Monitoring the effects of zoning on coral reefs and their associated fish communities in the GBR Marine Park*** | | |
| Submitted by: | Hugh Sweatman | Date: | 22 Dec 2015 |

## Advanced options: Hosting, Publication and Licensing

This section contains questions that most projects do not need to consider. Please complete these if relevant.

1. Non eAtlas dataset hosting (optional)

Most projects can skip this question as their data will be made publically available via the eAtlas.

Where datasets are already maintained in an existing public institutional database or repository then provide the URL to where the data can be accessed and downloaded. If these systems don't provide public access then please provide a public extract to be hosted on the eAtlas and provide the name of the system where the authoritative data is held.

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| --- | --- | --- |
| Is this dataset already hosted in an institutional repository? | | Yes |
| If yes: | What is the name of the repository and a URL to where the data is available from? | [www.aims.gov.au](http://www.aims.gov.au) |

1. Restrictions on raw data (optional)

Describe any restrictions on the supply of the raw data. Are there any privacy reasons or sensitive environmental reasons why the original raw data cannot be published? If so please describe the reason for the restriction. In these cases a public form of the data should be developed and made available, such as a spatial summary of the data, or a rounding of the spatial coordinates (introduced error) to protect the exact location of sites. This description should make it clear what aggregation or protection measure has been added to the public form of the data.

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| None |

1. Delayed data publication (optional)

Is this dataset currently under an embargo due to a pending publication as part of a journal article? If so please indicate when this dataset can be made public. For most datasets the maximum embargo is 18 months.

|  |  |
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| Is there a reason for delayed publication of this dataset? | No |
| If so why and what date can it be published? |  |

1. Additional licensing information (optional)

Data submitted to the eAtlas is made available publically under a creative commons open access license. This allows others to freely use the data and create derivative works, but they must attribute the original data source.

If this dataset has been created from other datasets that need additional attribution to be included in the data documentation then please provide that here.

Example: Atherton Tablelands photo mosaic (Catterall et al. 2012)

This mosaic work is a digital product based on the "Digital Aerial Photography Area CD, 8063 Bartle Frere 1978 Program" by the Department of Environment and Resource Management (DERM) under a Single Supply License.

Derivative products and copies of this work must display this acknowledgement:

"Based on or contains data provided by the State of Queensland (Department of Environment and resource Management) [2012]. In consideration of the state permitting use of this data you acknowledge and agree that the State gives no warranty in relation to the data (including accuracy, reliability, completeness, currency or suitability) and accepts no liability (including without limitation, liability in negligence) for any loss, damage or costs (including consequential damage) relating to any use of the data. Data must not be used for direct marketing or be used in breach of the privacy laws."

You must also include meta-data with the product(s) and include as a minimum the metadata provided with this supplied data.

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| None |