

DATA ANALYSIS TERMS

Abundance: number of items (e.g., fish abundance is 1, or 10, or 50)

Density: the number of items (e.g., species, marine debris) per unit area

Distribution (Spatial): the position, arrangement, or frequency of occurrence over a defined area

Hotspots: locations of greater amount relative to other locations in the region.

Occurrence: presence of an individual, organism, species, event, etc.

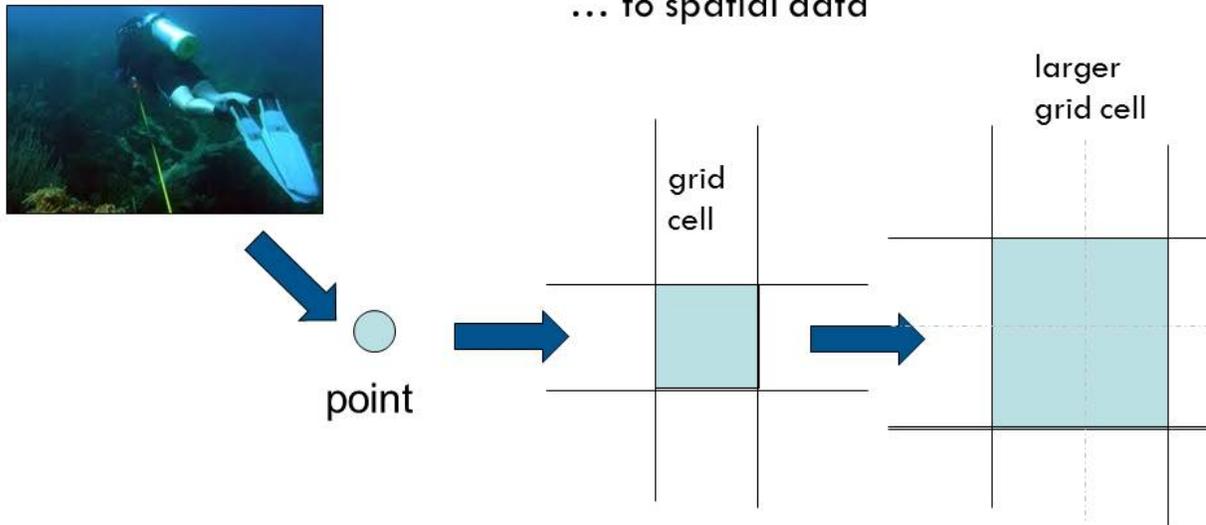
Percent Cover: proportion of a given area occupied by an organism (e.g. coral)

Resilient: the capacity of a system to absorb disturbances by maintaining key functions and processes

Species Richness: the number of species (e.g., 1, 2 3, 4, or 5 species); a measure of diversity

GIS Overview

From field sampling...



The above graphic shows how information is translated from values collected in the field to scientific information depicted on a spatial map.

- 1) Photo of diver collecting scientific data
- 2) Scientific data (what and where it is collected) can be displayed on a map as a point of information with GPS coordinates.
- 3) This point of information can be displayed in a gridded format across a map or chart. This grid display is due in part to the design of many of the scientific surveys.
- 4) Data is ranked and displayed at two separate scales, meaning two separate grid cell sizes. The two grid cell sizes used for the marine zoning and regulatory review are 200 meter by 200 meter (example above, left) and 1km by 1km (example above, right). Some of the human use metrics were collected at a more coarse resolution and are displayed at the resolution at which they were collected (e.g. 3km by 3km).

Rank survey site relative other sites
in upper Keys

High

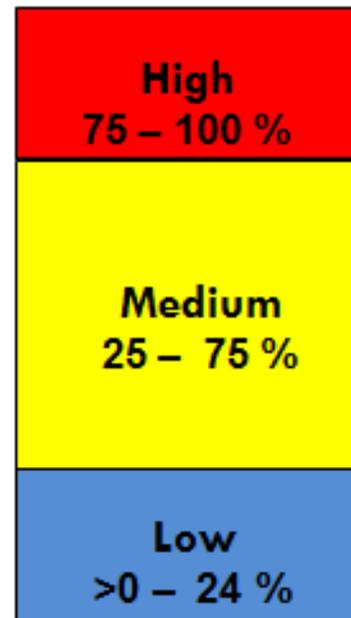
Medium

Low

Top 25%

Middle

Bottom 25%



The above graphic shows how the data have been categorized for use by the Ecosystem Protection working group.

- For each specific metric, data values were compared to each other within the region (Upper Keys, Middle Keys, Lower Keys, Marquesas, and Tortugas).
- Based on this comparison, each point was categorized High (75-100%), Medium (25-75%), or Low (>0-24%) relative to the other points within the region.
- Note that the category High means 75 – 100% of the data for a particular metric *as it relates to* the other data of the same metric. A 75-100% grid cell value means that the data within the cell are in the top 25% in the region. It does not mean 75 - 100% coral or seagrass cover or fish abundance.
- The categories have consistent color schemes on the maps. High is always red, Medium is yellow, and Low is blue.
- In the map legend, adjacent to the color ranks, actual data values may also be displayed within parentheses. These data values may be numbers within the category (e.g., 8-10 fishers), or may be actual percents of data (e.g., 12-28% coral cover). Data values may also be total number surveyed within all categories (e.g., 328 fishers surveyed total).