GLOSSARY OF TERMS

TERM	DEFINITION	SOURCE
Agarose	Agarose is the preferred matrix for work with proteins and nucleic acids because of its neutral charge and lower degree of chemical complexity.	www.coris.noaa.gov
Algae	Unicellular, multicellular, solitary, or colonial organisms that contain chlorophyll. They lack roots, stems, leaves, flowers, and seeds. Algae are in the Kingdom Protista.	www.coris.noaa.gov
Anthropogenic	Made by people or resulting from human activities.	www.coris.noaa.gov
Aragonite	A mineral species of calcium carbonate ($CaCO_3$) with a crystal structure different from the other two forms of $CaCO_3$ (vaterite and calcite); it is precipitated from ocean surface waters mainly by organisms (e.g., coral) that use this aragonite form of calcium carbonate to make their shells and skeletons.	www.coris.noaa.gov
Backreef	The shoreward side of a reef, including the area and sediments between the reef crest/algal ridge and the land. It corresponds to the reef flat and lagoon of a barrier reef and platform margin reef systems.	www.coris.noaa.gov
Baseline	A quantitative level or value from which other data and observations of a comparable nature are referenced.	www.coris.noaa.gov
Bathymetry	The science of measuring ocean depths to determine the topography of the sea floor.	www.coris.noaa.gov
Benthic	Bottom dwelling; living on or under the sediments or other substrate (benthic region = bottom layer lining a body of water).	www.coris.noaa.gov
Benthos	An organism whose habitat is on or near the bottom of a stream, lake, or ocean.	www.coris.noaa.gov
Biodiversity	The total diversity and variability of living things and of the systems of which they are a part. This includes the total range of variation in and variability among systems and organisms at the bioregional, ecosystem and habitat levels, at the various organismal levels down to species, populations and individuals and at the level of the population and genes.	www.coris.noaa.gov
Bioinformatics	The analysis of biological information using computers and statistical techniques; the science of developing and utilizing computer databases and algorithms to accelerate and enhance biological research. Bioinformatics is particularly important as an adjunct to genomics research, because of the large volume of complex data generated.	www.coris.noaa.gov
Biomass	An estimate of the amount of living matter per some unit volume or area.	www.coris.noaa.gov

Calcification	The process by which corals and calcareous algae extract calcium from seawater and produce it as calcium carbonate (accretion = growth by virtue of an increase in intercellular material).	www.coris.noaa.gov
Calcium Carbonate	A molecule consisting of calcium, carbon, and oxygen secreted by corals to their skeleton. It is also secreted by mollusks to form their protective shells.	www.coris.noaa.gov
Carbonate Chemistry	When CO_2 from the atmosphere comes into contact with seawater, it dissolves into the water where it undergoes chemical reactions to form inorganic carbon (in the form of carbonic acid, hydrogen ion + bicarbonate and/or hydrogen ion + carbonate).	https://www.e-education.psu.edu/earth103/node/677
Climate Change	The long-term fluctuations in temperature, precipitation, wind, and all other aspects of the Earth's climate. It is also defined by the United Nations Convention on Climate Change as "change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods"; an observed change in the prevailing or average weather conditions.	www.coris.noaa.gov
Climatology	The scientific study of climates, including causes and long-term effects of variation.	https://www.google.com/webhp?sourceid=chrome-instant&ion=1&espv=2&ie=UTF-8#q=climatology+definition&*
Coastal	The areas of land and sea bordering the shoreline and extending seaward through the breaker zone. Coastal areas throughout the world are under enormous environmental stress caused by a wide range of factors, including pollution and the destruction and deterioration of marine habitats.	www.coris.noaa.gov
Conductivity	The ability or power to conduct or transmit heat, electricity, or sound. Because the electrical current is transported by the ions in solution, the conductivity increases as the concentration of ions increases.	http://www.lenntech.com/applications/ultrapure/conductivity/water-conductivity.htm
Coral Bleaching	The process in which a coral polyp, under environmental stress, expels its symbiotic zooxanthellae from its body. The affected coral colony appears whitened; for example, if the sea surface temperature (SST) exceeds the climatological maximum for a region by 1 degree Celsius or more, this stress can result in bleaching, which is often followed by mortality.	www.coris.noaa.gov
Crustose Coralline Algae	Crustose coralline algae are red algae of the division Rhodophyta. They are very important members of a reef community as they cement and bind the reef together.	www.coris.noaa.gov

(*continued*)	They are particularly common in high wave energy areas but can be found throughout all reef zones. Crustose corallines resemble pink or purple pavement. Morphology can range from smooth and flat, to rough and knobby, or even leafy.	
Cryptofauna	Small organisms that often live in protected or concealed microhabitats.	https://en.wikipedia.org/wiki/Fauna#Cryptofauna
Cytochrome Oxidase I (COI)	A gene from mitochondrial DNA used as a DNA barcode to identify species	https://en.wikipedia.org/wiki/Cytochrome_c_oxidase_subunit_I
Deep Sea	The water beneath the permanent thermocline that usually has a low and uniform temperature.	www.coris.noaa.gov
Depth Invariant Index Layer	Pixel values converted to an index of bottom type independent of depth to account for natural variation in bottom reflectance, turbid water, and sensor noise. These depth-invariant indices of bottom type lie along a continuum, but pixels from similar habitats will have similar indices.	http://www.unesco.org/csi/pub/source/rs10.htm
Depth Soundings	Depth sounding refers to the act of measuring depth. It is often referred to simply as sounding. Data taken from soundings are used in bathymetry to make maps of the floor of a body of water, and were traditionally shown on nautical charts in fathoms and feet.	https://www.google.com/webhp?sourceid=chrome-instant&ion=1&espv=2&ie=UTF-8#q=depth+soundings&*_
Dereplicated Sequences	The process of finding duplicated (replicate) sequences.	http://drive5.com/usearch/manual/dereplication.html
Detritivores	Animals that feed on dead organic material, especially plant detritus.	https://www.google.com/webhp?sourceid=chrome-instant&ion=1&espv=2&ie=UTF-8#q=detritivore+definition&*&dobs=detritivore
Dissolved Inorganic Carbon	Inorganic compounds that are dissolved in the water.	www.coris.noaa.gov
DNA Barcoding	A taxonomic method that uses a short genetic marker in an organism's DNA to identify it to a particular species.	https://en.wikipedia.org/wiki/DNA_barcoding
Ecosystem	An ecological community and the interactions therein of living (including humans) and non-living factors considered together as a unit of the environment.	www.coris.noaa.gov
Fore Reef	The portion of a reef seaward of reef crest. A synonym of reef slope.	www.coris.noaa.gov
Georeferencing	Relating the internal coordinate system of a map or aerial photo image to a ground system of geographic coordinates.	https://en.wikipedia.org/wiki/Georeferencing

Gleaning	A fishing/collecting method used to gather marine organisms in shallow coastal, estuarine, and freshwater habitats exposed during low tide.	https://genderaquafish.org/portfolio/gleaning/
Habitat	The place or environment where a particular organism, population, or species lives.	www.coris.noaa.gov
High-Throughput Sequencing	A rapid method of determining the sequence of bases in a DNA molecule; also referred to as "next generation sequencing", technologies that parallelize the nucleotide sequencing process, producing thousands or millions of sequences at once. Using these technologies may lower the cost of DNA sequencing beyond what is possible with standard methods.	www.coris.noaa.gov
Homogenized	In cell biology or molecular biology research, homogenization is a process whereby a biological sample is brought to a state such that all fractions of the sample are equal in composition. A homogenized sample is equal in composition throughout, so that removing a fraction does not alter the overall molecular make-up of the sample remaining and is identical to the fraction removed.	https://en.wikipedia.org/wiki/Homogenization_(biology)
Hydrocast	A process in which water is collected at various depths, providing data on differing water characteristics.	https://www.google.com/webhp?sourceid=chrome-instant&ion=1&espv=2&ie=UTF-8#q=hydrocast+definition&*
Intertidal	The region between the highest water line and the mean low tide level.	www.coris.noaa.gov
Invertivores	Animals that eat invertebrates.	https://en.wikipedia.org/wiki/List_of_feeding_behaviours
Lagoon	A shallow, quiet waterway separated from the open sea by a reef crest.	www.coris.noaa.gov
Linear Regression Analysis	Regression in which the relationship is linear.	www.coris.noaa.gov
Macroalgae	Large algae that project more than ~two centimeters above the substratum.	www.cdoris.noaa.gov
Mahalanobis Distance	Mahalanobis distance measures the distance of a point x from a data distribution. The data distribution is characterized by a mean and the covariance matrix, thus is hypothesized as a multivariate gaussian. It is used in pattern recognition as similarity measure between the pattern (data distribution of training example of a class) and the test example. The covariance matrix gives the shape of data distribution in the feature space.	https://en.wikipedia.org/wiki/Mahalanobis_distance
Metabarcoding	DNA metabarcoding identifies multiple species at the same time by sequencing a targeted region of pooled DNA and	https://en.wikipedia.org/wiki/Environmental_DNA

(*continued*)	comparing the results against referenced databases.	
Metadata	Information about data or other information. Metadata or "data about data" describe the content, quality, condition, and other characteristics of data.	www.coris.noaa.gov
Morphospecies	Identification using clusters of variations or phenotypes within specimens to differentiate species.	https://en.wikipedia.org/wiki/Species#Typological_or_morphospecies
Motile	Organisms capable of self-locomotion.	www.coris.noaa.gov
Nearshore	Relating to or denoting the region of the sea or seabed relatively close to a shore.	https://www.google.com/webhp?sourceid=chrome-instant&ion=1&espv=2&ie=UTF-8#q=nearshore&*&dobs=nearshore
Nutrient Cycling	All the processes by which nutrients are transferred from one organism to another. For instance, the carbon cycle includes uptake of carbon dioxide by plants, ingestion by animals, and respiration and decay of the animal.	www.coris.noaa.gov
Ocean Acidification	Ocean acidification occurs when CO_2 from the atmosphere is absorbed into the ocean and reacts with water to create carbonic acid. This process decreases both ocean pH and the concentration of the carbonate ion, which is essential for calcification by calcifying marine organisms such as corals.	www.coris.noaa.gov
Patch Reef	A coral boulder or clump of corals formed on a shelf, usually of less than 70 m depth, often in the lagoon of a barrier reef or atoll. It is unattached to a major reef structure.	www.coris.noaa.gov
pH	Provides a measure on a scale from 0 to 14 of the acidity or alkalinity of a solution (where 7 is neutral and <7 is acidic and >7 is basic).	www.coris.noaa.gov
Phenol Chloroform Extraction	A liquid-liquid extraction technique in biochemistry and molecular biology for purifying nucleic acids and eliminating proteins and lipids. This procedure is often performed multiple times to increase the purity of the DNA.	https://en.wikipedia.org/wiki/Phenol%E2%80%93chloroform_extraction
Photo Transect	A photo-transect survey aims to quantify the projected areal cover of species using digital photography and subsequent image analysis for monitoring or measurement.	http://sango.churashima.okinawa/monitoring_en/cpc.html
Photo Quadrat	A quadrat that is photographed for purposes of later analysis and permanent record for species monitoring or measurement.	www.coris.noaa.gov
Phyla	Plural for Phylum. A major division of a biological kingdom, consisting of closely related classes; represents a fundamental pattern of organization and, presumably, a common descent.	www.coris.noaa.gov

Phylogenetic	Biology that deals with relationships among organisms.	www.coris.noaa.gov
Phylogenetics	The study of the evolutionary history and relationships among individuals or groups of organisms (e.g., species or populations).	https://en.wikipedia.org/wiki/Phylogenetics
Piscivores	Animals that feed on fishes.	www.coris.noaa.gov
Pixel	Abbreviation of a picture element.	www.coris.noaa.gov
Planktivores	Organisms that feed on plankton; also called "planktonivore".	www.coris.noaa.gov
Radiance	The radiant flux emitted, reflected, transmitted, or received by a surface, per unit solid angle per unit projected area.	https://en.wikipedia.org/wiki/Radiance
Reference Values	The reference value is used for comparison during measurement system analysis, such as with a baseline.	http://support.minitab.com/en-us/minitab/17/topic-library/quality-tools/measurement-system-analysis/other-gage-studies-and-measures/what-is-a-reference-value/
Salinity	A measure of the salt concentration of water.	www.coris.noaa.gov
Sessile	Describes an organism that is immobile because of its attachment to a substrate. The term has also been applied to organisms, such as anemones, that move very slowly.	www.coris.noaa.gov
Sieve	A sieve, or sifter, is a device for separating wanted elements from unwanted material or for characterizing the particle size distribution of a sample, typically using a woven screen such as a mesh or net or metal.	https://en.wikipedia.org/wiki/Sieve
Size-Frequency Distributions	Displays the frequency of various outcomes in a sample.	https://en.wikipedia.org/wiki/Frequency_distribution
Spectral Signature	The radiance of a surface per unit frequency or wavelength, depending on whether the spectrum is taken as a function of frequency or of wavelength.	https://en.wikipedia.org/wiki/Radiance
Standard Error Of The Mean	The standard deviation of the sampling distribution of a statistic, most commonly of the mean divided by the square root of the number of samples.	https://en.wikipedia.org/wiki/Standard_error
Standard Proteinase-K Digestion	A way of extracting DNA from tissues or cell culture.	https://en.wikipedia.org/wiki/Surveyor_nuclease_assay
Stratified Random Survey	In statistics, a survey using a sample drawn from a population divided into tiers or strata specifically relating to the study being undertaken; a sample derived by dividing the data population into a number of nonoverlapping classes or categories from which cases are selected at random, the number of cases selected from each category being proportional to the variation therein.	www.coris.noaa.gov
Subsurface	Below the surface layer.	https://en.wiktionary.o

(*continued*)		rg/wiki/subsurface
Supernatant	The soluble liquid fraction of a sample after centrifugation or precipitation of insoluble solids.	www.coris.noaa.gov
Taxa	Taxonomic groups or entities.	www.coris.noaa.gov
Total Alkalinity	Alkalinity is the name given to the quantitative capacity of an aqueous solution to neutralize an acid. Total alkalinity is the equivalent sum of the bases that can lose proton(s) as a reaction to strong acid.	https://en.wikipedia.org/wiki/Alkalinity
Trophic	Related to or functioning in (levels of/types of) nutrition.	www.coris.noaa.gov
Turbidity	Clarity of water, usually influenced by the suspension of fine particles in the water column. The particles may be inorganic, such as silt, or organic, such as high densities of single-celled organisms.	www.coris.noaa.gov
Turf algae	Sparse to thick mats of highly diverse, diminutive and juvenile algae less than 2 cm high, composed of juvenile macroalgae and faster-growing filamentous species accompanied by the ubiquitous blue-greens, diatoms, and detrital sediments.	https://link.springer.com/referenceworkentry/10.1007%2F978-90-481-2639-2_174