

Glossary of Terms

Bleaching: Loss or degradation of zooxanthellae due to biotic (bacteria) or abiotic (e.g., temperature, UV radiation, salinity, toxicants) causes.

Coral Disease Outbreak Investigation: An unusual disease occurrence has been reported. Regional Coordinator is notified and implements a level of investigation he sees fit. Sampling procedures in an investigation are standardized, and effort is made to determine the severity and causality of the outbreak.

Disease: Any impairment that interferes with or modifies the performance of normal functions, including responses to environmental factors such as nutrition, toxicants, and climate; infectious agents; inherent or congenital defects, or combinations of these factors. (Wobeser 1981).

Enzootic: Disease that occurs in a population at a regular, predictable or expected rate, usually low frequency, affecting only a few animals at any one time; similar to endemic, used for human populations

Epizootic: Disease that appears at a time or place where it does not normally occur or with an abnormally greater frequency for a specified time; similar to epidemic, used for human populations

Expert Working Group: Complied by the National Coordinator, this group of coral disease experts assists the National Coordinator in decisions during an outbreak investigation, i.e., when to close the case/ implement a response plan.

Growth Anomalies: Abnormal growth and development, including hypertrophy, hyperplasia, neoplasia, tumors

Health: A continuum between "... absolute health (a state in which all functions are optimal) and death, which occurs when functions are so severely compromised that life is impossible. Between the two points there is a region of relative health that blends imperceptibly into a region that we can define as disease." (Wobeser 2006).

Holobiont: (coral) A collective term referring to the totality of a coral animal, its endosymbiotic zooxanthellae, and the associated community of microorganisms.

Hyperplasia: an increase in the number of normal cells in normal arrangement in a tissue or organism, increasing its size.

Hypertrophy: Occurs in tissues or organs due to an increase in the *size* of cells, while the number stays the same.

Incidence: Frequency with which the disease has increased from base line (new occurrence)

Incident Command System: Management tool used by Federal (and State) emergency responders in response to a planned event, natural disaster, or terrorist attack. It can be used to investigate the causes/ prevention measures for an emergency, and can be applied to an Outbreak Investigation ([http://www.nrt.org/\(2000a\)](http://www.nrt.org/(2000a))).

Incident Commander: In a Level III response, oversees response teams in order to take samples for detailed analyses, makes arrangements for logistics, lodging, boats, support staff, shipping of samples, laboratory use, permits, etc. and is designated by the Regional Coordinator.

Infectious diseases: Partial and whole colony mortality caused by bacteria, fungi, viruses and other microorganisms.

Level I Response: An unusual observation is made in the field. Regional Coordinator interviews the observer.

Level I case closed: Regional Coordinator determines the case is closed after the interview for reasons such as, but not limited to, the case already being reported, lack of credibility given to the initial observer, determination that it was a non-disease observation, or if the Regional Coordinator is never able to contact observer.

Level II Consultation: Used to determine the need for a Level II data collection trip and requires the following be considered: strength of observation; magnitude supported by surveys, photos, and prevalence data; and availability of boats and staff in the area with specific knowledge.

Level II Recommendation: May be made if the report constitutes a new observation, if more information is needed, if the species affected is one at particular risk, if the magnitude appears to be large, if there is a change from earlier reports, or if there are pictures needed to validate the report.

Level II Response: Reconnaissance team of knowledgeable divers observes the incident to investigate its severity and report findings to the Regional Coordinator.

Level II Case Closed: After a Level II response, the Regional Coordinator determines that the case is closed for the following reasons: observations were not supported during Level II response; the disease is within normal (known) background levels; non-diseased agent (i.e., boat trauma, hurricane damage) caused the issue; the decision to refer the case to another response team (bleaching, grounding, fish kills); or adequate information was obtained in Level II.

Level III Consultation: Aids the National Coordinator and expert working group in their decision to launch a level III response, and includes considerations such as: the strength of the Level II observations; the magnitude (distribution (multiple reefs), frequency, multiple species, higher than expected proportion of colonies affected or

mortality rates); the apparent occurrence of a new/unusual condition; temporal irregularity; the relative importance of species at risk; or potential population and/or community impacts.

Level III Response: Full scale investigation to determine causality and clarify severity; launched upon the recommendation from the Regional Coordinator and confirmed by the National Coordinator.

Monitoring of Coral Disease: A routine, local effort to sample or observe coral. Disease may or may not be present, but it is not considered a direct threat. Sampling techniques may vary. *A severe disease outbreak has not been reported*

National Coordinator: Versed in coral disease; Serves as central contact for all Regional Coordinators, collates all reports of verified Level I and II investigations submitted by Regional Coordinators, and convenes the Expert Working Group to make decisions for a Level III response

Non-infectious diseases: Physiological and morphological (e.g., tissue loss or discoloration) changes due to agents such as toxins or toxicants, sedimentation, pollution, and other environmental stressors

Parasitic infections: Infestation by protozoans (e.g., ciliates, amoeba), metazoans (e.g., trematodes, flatworms, flukes) or parazoans (e.g., sponges)

Prevalence: Current number of the population affected by the disease (old and new)

Proficiency Drills: In class and field exercises to review each response step and consist of varying scenarios aimed to determining a team member's ability to conduct their assigned tasks

Regional Coordinator: Knowledgeable about coral disease and its occurrence in his/her region; Coordinates communication between scientists, managers and the public in order to assess the threat of an incident, implement control and prevention procedures, determines the amount and type of data needed to recommend further action. Regional Coordinators conduct interviews with initial observers after a Level I observation, and evaluate the need for a Level II response. Following this, Regional Coordinators recommend to National Coordinators a need for a Level III investigation, or to close the case. Current regions include the Southeast United States, Gulf of Mexico and Florida coast; the Caribbean; and the Pacific.

Surveillance: Systematic collection, analysis, and interpretation of health data

Trauma: Physical damage (e.g., groundings, fish bites)