

## **Glossary of Terms and Abbreviations**

Adapted from <http://www.dfg.ca.gov/marine/amp/pdfs/glossary.pdf>

**Abalone seed** - Abalone reared in captivity and ranging in size from a fraction of an inch to several inches. Used primarily for out-planting to recover depleted populations.

**Absolute abundance** - The total number of abalone in a population. This is rarely known and is typically an estimate.

**Abundance** - The number of abalone counted or estimated.

**Adaptive management** - In regard to a marine fishery, it means a scientific policy that seeks to improve management of biological resources, particularly in areas of scientific uncertainty, by viewing program actions as tools for learning. Actions shall be designed so that even if they fail, they will provide useful information for future actions. Monitoring and evaluation shall be emphasized so that the interaction of different elements within the system can be better understood.

**Allee effect** - A minimum density of abalone spawners is essential for successful broadcast spawning. When densities drop below a critical threshold, spawning success declines, resulting in population declines and even localized extinctions.

**Allocation** - Dividing the take of a resource between recreational, commercial and ecosystem needs.

**Annual limit** - The number of abalone that can be legally taken by one person in a year.

**Aquaculture** - The propagation, cultivation, maintenance and harvest of aquatic plants and animals.

**Assessment** - A formal study and review of a population based on a standardized method.

**Bag limit** - The number of abalone that can be legally taken per person per day.

**Benthic** - On or relating to the bottom of a sea or ocean.

**Biological reference points** - Limits within which abalone take should be constrained in order to maintain sustainability.

**Broodstock** - Individuals from a natural population that are to be used as parent stock in aquaculture facilities.

**Coralline algae** - Coralline algae are calcified (containing hard calcium-based structures) red algae that are typically divided into two groups: articulated and encrusting. Articulated corallines are branching and tree-like, and are attached to the substrate by root-like holdfasts. The encrusting corallines form crusts over the substrate and contain a substance that induces settlement of larval abalone.

Drift algae (or drift kelp) - Marine algae fragments that are carried on currents toward the ocean bottom where they may be more accessible to abalone and other herbivores. Biomass (B) - The total weight of a stock or population of organisms at a given point in time.

California current - A southward moving, cold water current along the California coast.  
Emergent - Being in plain view on the surface of the substrate; the opposite of cryptic.  
Emergent abalone is defined as abalone that can be surveyed without moving habitat or using artificial lights.

Fecundity - The reproductive capacity of an individual female animal, generally expressed as the number of eggs or larvae per unit weight or per individual.

Gastropod - A type of mollusk in the class Gastropoda, the largest and most successful class of mollusks.

Genetic bottleneck - A reduction of a breeding population's size to a few individuals, which leads the loss of genetic variability.

Genetic diversity - The range of genetic variability of a species that occurs throughout its population.

Key locations - Specified areas where a species is known to live, based on survey data and landing records. These are used to identify areas for recovery.

Macroalgae - Multicellular algae (visible without using a microscope) such as giant kelp and bull kelp; having a filamentous, sheet, or mat-like appearance.

Mariculture - The commercial raising of fish, crustaceans, and other oceanic species.

Marine Protected Areas (MPAs) - Areas closed to all fishing, or to specific user groups, or to the take of certain species; they are used to geographically limit effort and to protect portions of stocks.

Moratorium - A legally authorized suspension of activity (such as ending the issue of new permits or the closure of all fishing for a particular species).

Recovery - In the ARMP (abalone recovery management plan), recovery is defined as assessment, research, or development and implementation of regulations pertaining to rebuilding depressed abalone populations. Recovery currently applies to five abalone species in central and southern California: red, pink, green, black, and white.

Recruit - In common usage, this term refers to a newcomer to a field or activity. In biology, it typically refers to a larval or juvenile organism as it settles or moves into adult habitat, or to an organism entering the exploitable stage of its life cycle .

Sabellid worm - A marine parasitic worm that lives on the growing edge of mollusc shells

causing deformities. A South African species was introduced accidentally into California aquaculture facilities. To prevent introduction into the natural environment, a ban on out-planting of cultured abalone has been established, except from certified sabellid-free facilities.

Settlement - In marine ecology, the process by which organisms change from an open ocean life history phase to assume a new mode of life as a member of a sea-floor community.

Sustainable, Sustainable use, and Sustainability - A population that is self-reproducing and able to maintain its genetic diversity over a long period of time. In a fished population sustainability also involves social and economic benefits, maintaining biological diversity, and managing fisheries in a way that does not exceed optimum yield.

Young-of-the-year (YOY) - Abalone less than 1 yr old, estimated at 30 mm or less in size.

Withering Syndrome (W S) - An abalone disease caused by a bacteria-like organism and characterized by shrinking of the foot, usually leading to death.

### **Green abalone (*Haliotis fulgens*)**

#### Status

**ESA Species of Concern** - from Point Concepcion, California to Bahia de Magdalena (in Gulf of California), Mexico

#### Taxonomy

Kingdom: Animalia

Phylum: Mollusca

Class: Gastropoda

Order: Archaeogastropoda

Family: Haliotidae

Genus: *Haliotis*

Species: *fulgens*