



Marine Fisheries Stock Assessment Workshop February 7, 2012

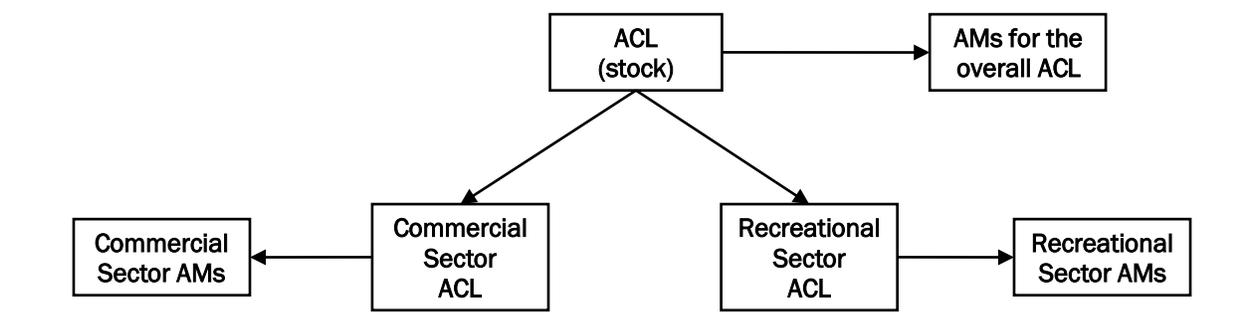
Common Terms Used in Fishery Management

Accountability Measures (AMs) – These measures are designed to prevent annual catch limits (ACLs) from being exceeded and correct or mitigate for any overages ACL if they occur. Accountability measures are established for each sector of the fishery. These measures increase the likelihood that an overfished stock will continue to rebuild. There are two types of accountability measures: in-season accountability measures are used to prevent ACLs from being exceeded during the fishing season by close fishery monitoring (e.g., some commercial fisheries) and post-season accountability measures are used to compensate for ACL overages (e.g., overage deduction) in the fishing season(s) after the ACL is exceeded. Post-season accountability measures are often used for fisheries in which monitoring data are delayed (most recreational fisheries).

Allocation – Distribution of the available harvest among user groups or individuals. The portion a user group is allocated is typically based on historic harvest amounts.

Acceptable Biological Catch (ABC) – Refers to the range of estimated allowable catches for a species or species group. ABC estimates have been used to set the annual total allowable catch (TAC) but with the reauthorization of the Magnuson-Stevens Act they are now also used to set the annual catch limits (ACLs).

Annual Catch Limits (ACLs) – A scientifically derived amount (number or weight) of fish that is allowed to be caught in a year. The 2006 reauthorization of the Magnuson-Stevens Act requires fishery management plans to contain annual catch limits that are set at levels such that overfishing does not occur. Additionally, the Act requires fishery management plans to contain accountability measures that hold fishery sectors accountable to these limits, and that annual catch limits not exceed the catch level recommendations (ABCs) made by the regional fishery management councils' scientific committees. The Act required annual catch limits to be established for U.S. commercial and recreational fisheries subject to overfishing by 2010, and for all other stocks by 2011.



Age Structure – A breakdown of the different age groups of a particular fish species. For fishes, ages are commonly determined by counting annual rings associated with bony hard parts, such as fin spines and otoliths (ear bones).

Biomass – The total weight or volume of a species in a given geographic area.

Bycatch – A species that is caught, but not targeted. Non-targeted species that are
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retained are called incidental catch and non-targeted species that are released or discarded are known as discard catch.

Catch-per-unit-effort (CPUE) / catch-rate – The number of fish or invertebrates caught per unit of effort (*e.g.*, hour or day) (see definition of effort below). Catch-per-unit-effort is often used as a measure of relative abundance for a particular fishery species.

Discard Mortality – Fish that cannot be kept because of regulatory constraints (size limits, bag limits, etc.) must be returned to the sea. Some percentage of these may die and estimates of this mortality are included in fishing mortality estimates.

Escapement – The proportion of fish that survive through a certain age, relative to the number of fish that would have survived if there were no fishery.

Effort – The amount of time and fishing power used to harvest fish. Fishing power includes gear type, size or efficiency, boat size, and horsepower.

Exclusive Economic Zone (EEZ) – All waters seaward of Florida's territorial sea boundary (3 geographical miles on the Atlantic coast; 9 nautical miles on the Gulf coast) out to 200 nautical miles or federal waters of another country, whichever is less. The National Marine Fisheries Service manages fisheries within the EEZ through the federal fishery management Councils and the Highly Migratory Species Division.

Fecundity – A measurement of the egg-producing ability of a fish. Fecundity generally increases with age and size of the fish.

Federal Registry – This registry requires everyone in the United States who fishes in federal waters, or fishes for anadromous species (species that spawn in freshwater but spend most of their life in saltwater) in state waters, to be licensed. Florida is currently exempted from this federal registration requirement. This national registry will supply better contact information for a very large number of saltwater anglers, resulting in more accurate recreational harvest information for management purposes.

Harvest – The total number or pounds of fish caught and kept from an area over a period of time.

Individual Fishing Quota (IFQ) – This is a type of limited entry program or quota management system that typically allocates part of the total allowable catch (TAC) to individual fishers or vessel owners in the form of quota shares.

Individual Transferable Quota (ITQ) – A type of individual fishing quota (IFQ) allocated to individual fishers or vessel owners that can be transferred (sold or leased) to others. ITQ is often used synonymously with IFQ.

Landings – The number or pounds of fish unloaded at a dock by commercial fishers or brought to shore by recreational fishers for personal use. Landings are reported when fish are brought to shore.

Limited Access Privilege (LAP) – A federal permit, issued as part of a limited access system, that allows harvest of a specified quantity or portion of a fishery's total allowable catch that may be received or held for exclusive use by a person. IFQs are a type of LAP.

Limited Access System – A system that limits participation in a fishery to those satisfying certain eligibility criteria or requirements contained in a fishery management plan or associated regulations

Limited Entry – A management control used to reduce fishing pressure and effort by reducing the number of vessels or fishermen in a fishery. For example, a limited entry program was recently implemented in the Florida commercial blue crab fishery.

Magnuson-Stevens Fishery Conservation and Management Act (Act or MSA) – A federal law that directs the National Marine Fisheries Service to manage and conserve fisheries in federal waters. The Magnuson Act created eight regional fishery councils to advise the National Marine Fisheries Service (NMFS) on fishery management issues. This Act was reauthorized in 1996 and again in 2006.

Marine Fisheries Commissions – In 1981, three regional interstate marine fisheries commissions were established to assist in managing and conserving coastal fishery resources. The Director of the Division of Marine Fisheries (or a designee), a member of the state Legislature, and a citizen appointed by the governor represent the state of Florida on both the Gulf States Marine Fisheries Commission (GSMFC, includes all U.S. states bordering the Gulf of Mexico) and the Atlantic States Marine Fisheries Commission (ASMFC, includes all U.S. states bordering the Atlantic Ocean). The Commissions are intended to promote and encourage management of fishery resources among states. Their primary objective is to determine priorities for fishery management in coastal state waters and recommend to state and federal governments management measures that will benefit fisheries. The ASMFC has some regulatory authority over management of coastal fisheries.

Marine Fisheries Information System / Trip Ticket Program – Commercial fishers in Florida are required to sell their catch only to wholesale fish dealers. Saltwater products sold to wholesale dealers must be reported on trip tickets. A trip ticket is a form provided by the FWC to wholesale dealers. The form requires wholesale dealers to report the purchase and sale of saltwater products. Data from trip tickets allows managers to identify trends in landings and catch rates from year-to-year and from various regions of the state.

Marine Protected Area (MPA) – Any area of the marine environment that has been reserved by Federal, State, territorial, tribal, or local laws or regulations to provide lasting protection for part or all of the natural and cultural resources therein. MPAs have varying levels of restriction and can be established for varying lengths of time. (See also Sanctuary Protection Areas)

Marine Recreational Fisheries Statistical Survey (MRFSS) – A national survey that collects data about recreational fisheries using angler interviews and a telephone survey. During angler interviews, data is collected on the species of fish caught, how many fish are caught, angler demographics, and other trip characteristics. The telephone survey provides an estimate of recreational fishing trips by coast (East or West Florida coast), year, two-month time period, fishing mode (shore, private/rental boat, charterboat), and location (bays, nearshore, offshore). These data are used together to assess the status and trends of Florida's recreational fish catches. This data collection system is being redesigned and renamed the Marine Recreational Information Program (MRIP).

Marine Recreational Information Program (MRIP) - An initiative to review and redesign MRFSS, the system that collects and distributes marine recreational fishery data and statistics. A redesign was mandated by Congress and the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006. This new program is a coordinated effort among personnel with federal and state agencies and representatives of the recreational industry from around the nation. MRIP will replace MRFSS and should greatly improve the collection, analysis, and use of recreational saltwater fishing information.

Maximum Sustainable Yield (MSY) – The largest average catch that can be harvested continuously (sustained) from a stock during average environmental conditions that will not compromise a stock's ability to renew itself.

Mortality – Total mortality includes fishing mortality and natural mortality.

Natural mortality – The rate at which fish die from natural causes

Fishing mortality – The rate at which fish are removed from the population due to fishing. Fishing mortality includes directed harvest (catch), bycatch, and discard mortality.

Optimum Yield (OY) – The harvest level of a species that achieves the greatest overall benefits, including economic, social, and biological considerations. Maximum sustainable yield only considers biological and economic benefits. Optimum yield is lower than maximum sustainable yield and typically provides more of a buffer against overharvest. It leaves more fish in the water. The term includes both commercial and recreational yields.

Overfished – An overfished stock is a fish population that is harvested above levels that would enable the stock to replenish itself. It is a measure of when a fish population has reached a critically low abundance level. FWC standards for an overfished stock vary by species.

Overfishing – Harvesting at a rate exceeding the rate at which fish can replenish themselves through reproduction. A population may be overfished, but not undergoing overfishing and vice versa.

Quota – An established amount of fish or invertebrates that can be landed in a time period.

Recruitment – The number of fish or invertebrates of a single age group entering a stock during a given period. Recruitment can also refer to the number of fish entering the harvestable phase of a fish stock during a given period.

(SEDAR) SouthEast Data Assessment and Review – A federal cooperative process initiated in 2002 to improve the quality and reliability of fishery stock assessments in the South Atlantic, Gulf of Mexico, and US Caribbean. SEDAR is managed by the Caribbean, Gulf of Mexico, and South Atlantic Regional Fishery Management Councils in coordination with NOAA Fisheries and the Atlantic and Gulf States Marine Fisheries Commissions.

Spawning-potential-ratio (SPR) – The ratio of the total weight of mature fish in a fished population to the total weight that would exist if the population was not fished. For example, the FWC's management goal for mullet is to maintain a minimum SPR of 35%.

Spawning Stock Biomass (SSB) – The total weight of the fish in a stock that are old enough to spawn.

Stock – A managed unit of fish. A stock is based on genetic relationships, geographic distributions, and movement patterns. For instance, the FWC manages snook as two separate stocks. These stocks are genetically different, and are geographically separated.

Stock Assessment – A comprehensive report that summarizes the biological condition of a fish population.

Territorial Seas – State waters; all waters from shore out to 3 geographical miles on Florida's east coast and 9 nautical miles on Florida's west coast.

Total Allowable Catch (TAC) – The annual recommended or specified regulated

maximum catch for a species or species group. Total allowable catch is a management control to limit the catch for the entire stock. TAC is usually partitioned into quotas.

Yield – The production of a fishery in terms of numbers or weight.