

**Joint DENR-DA-DILG-DND
Memorandum Order No. 2000 - 01
July 05, 2000**

**SUBJECT : Guidelines On The Establishment,
Management And Utilization Of
Artificial Reefs In Municipal
Waters**

Pursuant to Section 2, Article XII of the Philippine Constitution mandating the State to protect the nation's marine wealth, the Philippine Fisheries Code of 1998, the Local Government Code of 1991, Executive Order No. 192 series of 1987, DENR Administrative Order No. 19, series of 1993 and the Joint DENR-DA- DILG-DND Administrative Order No. 97-01, series of 1997, the following policy guidelines on the establishment, utilization and management of Artificial Reefs (ARs) in municipal waters are hereby promulgated :

SECTION 1. Rationale - Statistics show that the contribution of coral reef fishes to the total fisheries production of the country ranges from 8% to 20% (White, A.T. 1990). It further shows that of the total 27,000 square kilometers of coral reefs in the country, only 5% are in excellent condition, 25% in good condition, and 70% are in fair or poor condition (Gomez, E.D.1994). This poor condition of our coral reefs is attributed to a myriad of factors due to man's insensitivity to his marine environment and greed for short-term economic benefits (Alcala, A.C. 1987). As a result, the unabated degradation of coral reefs is one of the causes of the decline in municipal fisheries production. To address this problem, an artificial reef development program was launched by BFAR between 1985 to 1987 covering all regions with the objective of enhancing the fisheries production (Miclait, R. 1988). At the same time. however, there was a proliferation and indiscriminate installation of ARs that spawned socioeconomic, environmental, management and technical problems exacerbated in the absence of policies on the establishment of ARs as a fisheries management tool.

SECTION 2. Basic Policy - It is the policy of the government to initiate the rational and sustainable development of the environment and natural resources and institute management measures designed to rehabilitate and enhance productivity of degraded coastal reefs and its environment for the benefit of stakeholders dependent upon it for their livelihood and job opportunities.

SECTION 3. Scope and Objectives - This Order shall cover the establishment, management and utilization of ARs in municipal waters including bays and gulfs, with the following objectives:

- a. To ensure the sustainable development of the county's fishery and aquatic resources.
- b. To address the concern for food security.
- c. To allow the natural regeneration and recolonization of degraded coral reefs and its environment.
- d. To provide habitat enhancement and the recruitment of important species of fish.
- e. To improve the quality in terms of diversity and sizes of fish caught.
- f. To alleviate poverty among fisherfolks in coastal communities.
- g. To develop community-based initiatives on coastal resource management.

SECTION 4. Definition of Terms - The terms and phrases used herein shall be construed as follows:

- a. **Artificial Reef** - any structure of natural or man-made materials and placed on the sea bed to serve as shelter and habitat, source of food, breeding areas for fishery species and other marine organisms.
- b. **Bay** - refers to an inlet of the sea or a body of water forming an indentation of the shoreline usually smaller than a gulf.

- c. **Commercial Fishing** - refers to the taking of fish and fishery/aquatic products by any person utilizing fishing vessels more than three (3) gross tons and using either active or passive gear for trade, business and profit beyond sustenance or sports fishing.
- d. **Coral** - the hard calcareous substance made up of the skeleton of marine coelenterate polyps, which include reefs, shelves and atolls or any of the marine coelenterate animals living in colonies where their skeletons form a stony mass. They include: (a) skeletons of anthozoan coelenterates characterized as having a rigid axis of compact calcareous or horny spicules, belonging to the genus corallium as represented by the red, pink, and white which are considered precious corals; (b) skeletons of anthozoan coelenterates characterized by thorny, horny axis such as the antipatherians represented by the black corals which are considered semiprecious corals; and (c) ordinary corals which are any kind of corals that are not precious nor semi-precious.
- e. **Coral Reef** - a natural aggregation of coral skeleton, with or without living coral polyps, occurring in inter-tidal and sub-tidal marine waters.
- f. **Fisherfolk** - refers to people directly or personally and physically engaged in taking and/or culturing and processing fishes and/or aquatic resources.
- g. **Fisherfolk Cooperative** - a duly registered association of fisherfolk pursuant to the Fisheries Code with a common bond of interest, who have voluntarily joined together to achieve a lawful common social or economic end, making equitable contributions to the capital requirement and accepting a fair share of the risks and benefits of the undertakings in accordance with universally accepted cooperative principle.
- h. **Fisherfolk Organization** an organized group, association, federation, alliance or an institution of fisherfolk duly

registered with the Securities and Exchange Commission (SEC) or Cooperative Development Authority (CDA) which has at least fifteen (15) members, a set of officers, a constitution and by-laws, an organizational structure and a program of action.

- i. **Food Security** - refers to any plan, policy or strategy aimed at ensuring adequate supplies of appropriate food at affordable prices. Food security may be achieved through self-sufficiency (i.e...ensuring adequate food supplies from domestic production), through self-reliance (i.e. ensuring adequate food supplies through a combination of domestic production and importation), or through pure importation.
- j. **Gratuitous Permit** - refers to the authority issued by the Municipal/City Mayor concerned, free of charge, in favor of accredited private research institutions, LGUs and national government agencies for educational, research and scientific purposes.
- k. **Gulf** - refers to a portion of the ocean or sea partly enclosed by land and usually larger than a bay.
- l. **Habitat Enhancement** - refers to the process of improving the condition of the water environment to produce more of its resources.
- m. **Municipal Waters** - include not only streams, lakes, inland bodies of water and tidal waters within the municipality which are not included within the protected areas as defined under Republic Act No. 7586 (The NIPAS Law), public forest, timber lands, forest reserves or fishery reserves, but also marine waters included between two (2) lines drawn perpendicular to the general coastline from points where the boundary lines of the municipality touch the sea at low tide and a third line parallel with the general coastline including offshore islands and fifteen (15) kilometers from such coastline. Where two (2) municipalities are so situated on

opposite shores that there is less than thirty (30) kilometers of marine waters between them, the third line shall be equally distant from opposite shore of the respective municipalities (R.A. 8550).

- n. **People's Organization** - a bonafide association of citizens with demonstrated capacity to promote the public interest and with identifiable leadership, membership and structure. Its members belong to the fisheries sector who voluntarily band themselves together to work for and by themselves for their own upliftment, development and greater good.
- o. **Stock Assessment** - an evaluation of the effects of fishing on the status of a fishery. It is primarily concerned with the estimates of the catches that can betaken from fish stocks by fishery.
- p. **Subsistence Fishing** - refers to the taking of fish through hook and line by municipal fisherfolks, using fishing vessels less than three (3) gross tons, or fishing not requiring the use of fishing vessels.

SECTION 5. Authority to Issue Permits - Municipal/City Mayors shall issue permits to establish and operate ARs pursuant to an approved Special Municipal/City Fishery Ordinance. The Ordinance shall provide, among others, sanctions for violations of the terms of conditions of the permit, collection of reasonable permit and annual rental fees, the rates of which shall be determined by the Sangguniang Bayan concerned. A pro-formatted ordinance shall be prepared by the Department of Agriculture-Bureau of Fisheries and Aquatic Resources (DA-BFAR) in coordination with the Department of Environment and Natural Resources (DENR).

SECTION 6. Priority in the Grant of AR Permit - The priority in the grant of an AR permit shall be given the following order:

- a. Resident municipal/city fisherfolk cooperative/organization.
- b. Resident municipal fisherfolk /POs.
- c. Provincial fishery associations/federations.

SECTION 7. Gratuitous Permit - A gratuitous permit for the establishment of ARs that adhere to this guidelines shall be granted to the following

- a. Accredited academic and research institutions.
- b. Local Government Units (LGUs)
- c. National government agencies.

However, in case of conflict over the area applied for under this Section with those provided in Section 6 of this Order, the order of priority stated in the latter shall prevail.

SECTION 8. Application Procedures - The following steps shall be followed in the processing of an application for an AR permit:

- a. Prior to the filing of an application for an AR permit, the proponent shall formally seek the technical assistance of the DA-BFAR in collaboration with the DENR to determine the suitability and feasibility of the proposed site for AR deployment.
- b. If found suitable, the DA-BFAR shall require the proponent to submit a proposed management and operation plan of the area applied for. (A pro-formatted outline shall be prepared by the DA-BFAR).
- c. The proponent shall be advised to file his application with the Municipal/City Mayor together with the following documents:
 - 1. A photocopy of the SEC or CDA registration, Constitution and By-laws of the fisherfolk cooperative/organization/association duly approved by the Securities and Exchange

Commission (SEC) and/or, the government agency mandated to certify or register the same.

2. An updated list of members and their respective addresses.
3. A proposed management and operation plan indicating the name, technical description and sketch plan of the proposed site, deployment scheme and materials to be used in the construction of ARs.
4. Certificates of suitability of the site and feasibility of the proposed management and operation plan duly issued by the Regional DA-BFAR and DENR

SECTION 9. Criteria for Site Selection of ARS - The criteria for site selection of ARs are as follows :

- a. The site where ARs are to be installed should not be less than one (1) kilometer away from existing natural reefs, if any and five hundred (500) meters away from existing ARs.
- b. It should be near an alternative food sources (i.e. seagrass beds); constructed on a flat, barren area of relatively good visibility and at depth protected from wave action but still accessible to members of the Association (i.e. 15-25m.).
- c. It should be deployed outside designated navigational sea lanes and does not obstruct traditional navigational route of local fishermen going to and from the fishing ground or pose as a navigational hazard to ships and other sea crafts.

SECTION 10. Materials for the Construction of ARs - The materials for the construction of ARs shall include, but not limited to the following:

- a. Concrete blocks or culverts
- b. Limestone or rocks

A moratorium on the use of scrap tires and junk vehicles or sea crafts for ARs shall be observed pending completion of further studies by the DENR on their environmental impact. Other materials not included above are subject to prior approval by the DENR and DA-BFAR.

SECTION 11. Management and Operation of ARs - The management and operation of the ARs shall be the primary responsibility of the cooperative/organization/association (permittee) who shall abide by all the terms and conditions of the permit including effective compliance to the following measures:

- a. Commercial fishing is prohibited within the area technically described in the AR and 200 meters away from the boundary lines of the said permit.
- b. Subsistence fishing with the use of hook and line shall be allowed for members of the cooperative/organization/association who shall be bound by time and catch limitations and other restrictions that maybe Described by the Association in coordination with the DENR and DA-BFAR.
- c. Subsistence fishing with the use of hook and line shall be allowed for members of the Association and resident fisherfolk nonmembers provided that certain restrictions shall be imposed by the Association.
- d. Sustenance fishing shall be allowed one (1) year after the establishment of the AR and only after a coordinated stock assessment finding conducted by the DA-BFAR in coordination with the DENR.
- e. The permittee shall submit a quarterly report to the Office of the Municipal/City Mayor, copy furnished the DA-BFAR and DENR, on the status of the AR, including volume of catch by species, composition and sizes and estimated market value thereof.

- f. The permittee shall assist the national and local government agencies concerned in the conservation, management and protection of both municipal and offshore fishery and aquatic resources.
- g. ARs shall be firmly anchored/secured for safety reasons.
- h. The "core zone" covered by the AR permit shall be properly demarcated by buoys or other suitable material.

SECTION 12. Monitoring and Evaluation of ARS - The DA-BFAR and DENR Regional Offices, in close coordination with DILG and the Department of National Defense Regional Offices, shall:

- a. Conduct an inventory of existing ARs in terms of number, location and status, including volume, catch statistics, species/composition/sizes and catch per unit effort (CPUE).
- b. Gather baseline data on initial recruitment, standing stock and other relevant scientific information and observations six (6) months after the installation of ARs.
- c. Evaluate annually the socio-economic benefits derived from and the ecological impact of ARs.
- d. Investigate recruitment movements from natural reefs to ARs or vice-versa and study trophic relationships in refuges or in feeding and breeding areas.

SECTION 13. Transitory Provision - Persons, partnerships, associations or corporations are hereby given a grace period of ninety days (90) upon the effectivity of this Order to comply with the requirements hereof, otherwise, existing ARs shall be removed/demolished by the LGU concerned at the expense of the operator.

SECTION 14. Amendments to these Guidelines - Amendments to these guidelines may be proposed by any of the agencies signatory to this Order.

SECTION 15. Repealing Clause. - All Administrative Orders, Circulars, Memoranda and other Issuances inconsistent herewith are repealed accordingly.

SECTION 16. Effectivity - This order shall take effect fifteen (15) days after its publication in a newspaper of general circulation.

Done in Quezon City, this 05th day of July in the year of our Messiah, two thousand.

(Sgd.) **EDGARDO J. ANGARA**
Secretary
Department of Agriculture

(Sgd.) **ANTONIO H. CERILLES**
Secretary
Department of Environment
And Natural Resources

(Sgd.) **ALFREDO S. LIM**
Secretary
Department of Interior and
Local Government

(Sgd.) **ORLANDO S. MERCADO**
Secretary
Department of National
Defense

Publication:

KABAYAN - August 18, 2000 - page 3