Marine Reserve/Protected waters:

A marine reserve is a defined space within the sea in which fishing is banned or other restrictions are placed in an effort to protect plants, animals, and habitats, ultimately conserving biodiversity. Marine reserves can also be used for educational purposes, recreation, and tourism as well as potentially increasing fisheries yields by enhancing the declining fish populations. Marine reserves are also very similar to marine protected areas, fishery reserves, sanctuaries, and parks.

Declaration of certain protected areas/ biosphere reserves for in situ conservation of resources appears to be the pragmatic approach. Reserves are a system approach to fishery management that allows the re-establishment of age distribution and inter and intra specific relationships like un altered community. Established of Marine Parks is perhaps the best way for in situ conservation of marine resources.

Aquatic Diversity Management Areas (ADMAs):

The creation of ADMAs, are a systematic management approach for watersheds, where the primary goal is to protect the aquatic biodiversity in a given area. ADMAs range from individual species protection acts to full-scale biodiversity oriented programs. The best way to properly manage ADMAs is to stop or greatly reduce all human activity contributing to habitat degradation in that area.

Bioregional Management:

Bioregional management is a total ecosystem strategy, which regulates factors affecting aquatic biodiversity by balancing conservation, economic, and social needs within an area. This consists

of both small-scale biosphere reserves and larger reserves. Biosphere reserves, generally small in scale, have a strong conservation focus, and consist of one or more protected central habitats and surrounding buffer zones. In these bio conservation units, activities such as fishing, hunting, harvesting, and development activities are strictly limited.

Threatened or endangered species designations:

Threatened species include organisms likely to become endangered if not properly protected. Endangered species are plants and animals that need protection in order to survive, as they are in immediate danger of becoming extinct. Once species are "listed," they become subject to national recovery programs and will be placed under international protection. Severe monetary penalties can occur if threatened and endangered species regulations are broken, and can even result in jail sentences.

Local watershed groups:

Rivers and streams, regardless of their condition, often go unprotected since they often pass through more than one political jurisdiction, making it difficult to enforce conservation and management of resources. However, in recent years, the protection of lakes and small portions of watersheds organized by local watershed groups has helped this situation. For more information on how you can become involved in your watershed.

Freshwater Initiatives:

The Nature Conservancy has instituted a program referred to as the Freshwater Initiative. The objective of the FWI is to significantly increase freshwater conservation within the country, through three strategies: watershed action, water science, and water lessons.

Specialized Programs:

Many specialized programs have been instituted to protect biodiversity. The goal of this program is to restore the health of riverine systems and associated species.

Various organizations and conferences that research biodiversity and associated conservation strategies help to identify areas of future research analyze current trends in aquatic biodiversity, even conduct specialized studies.

Increase Public Awareness:

Increasing public awareness is one of the most important ways to conserve aquatic biodiversity. This can be accomplished through educational programs, incentive programs, and volunteer monitoring programs. For example, the State of Delaware has an Adopt-a-Wetland Program designed increase public awareness as to the value and of wetlands and the need for conservation. The EPA developed a site with links to organizations that teach the public how to become involved in volunteer monitoring programs

Restoration/Mitigation Efforts:

Aquatic areas that have been damaged or suffered habitat loss or degradation can be restored. Even species populations that have suffered a decline can be targeted for restoration (e.g., Pacific Northwest salmon populations). Some management practices such as the establishment of riparian buffer zones and the restoration of natural flow patterns and discharge regimes are being applied to riverine areas. Recently, habitat restoration has also been performed in various areas to replace losses from dredging projects and in many wetland habitats.

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Local community actions:

The demand for freshwater - and the threats to its health - originate from the actions of millions of people. To solve these challenges also requires actions of many. State and federal governments, and many local governments and public agencies, are already at work. So, too, are numerous citizen volunteers. Any individual can take steps to make healthy water a welcome part of everyday life. Learn how you can make a difference.

Ex situ conservation:

In this measure, the threatened are conserved outside their natural habitats. The main pillars of ex situ conservation programme are (I) live gene bank and (II) gene bank with gamete and (III) gene bank with DNA.

Live gene bank:

in a live gene bank which is a genetic resource centre, the endangered species are reared in captivity, bred therein and genetically managed avoiding inbreeding depression, domestication and unintended selection.

Gene bank gamete:

In Gamete/Embryo gene bank, adequate samples representative of the natural genetic variation of endangered species are kept in suspended animation under extra low temperature (-196^0C) in liquid nitrogen (LN_2) availability of genetic materials of threatened categories and for intensive breeding programmes of economically important species.