

ARTIFICIAL REEFS – APPLICATIONS IN VICTORIA

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The Marine and Freshwater Resources Institute has recently conducted a review on the current status of knowledge of the use of artificial reefs and their implications for fisheries management. Artificial reefs are often popular because they are thought to enhance angler's catches. The big question is whether artificial reefs merely aggregate fish that were already in the area, or whether they actually produce more fish. There is very little evidence that shows artificial reefs increase fish numbers – however they may certainly attract some species and alter the local community composition. A major difficulty with most artificial reef programs is that their purpose is often poorly defined and their potential impact on the environment is usually not monitored and is unclear.

There are several beneficial and detrimental effects that might occur with the development of artificial reefs. They may be used to increase recreational fishing at specific locations and there is a possibility of increased catches of some of the species that are attracted to the reef. However, there is always the real risk of overfishing, particularly if the location is easily accessible from boat ramps and is frequently used. It is also quite likely that an increase in the catch of some species aggregating around artificial reefs may cause a decrease in the catch of these species available to anglers fishing in other areas.

Another important consideration is the environmental impact of artificial reefs. They may alter the natural tidal flows and wave action, which may cause accretion or erosion of sand in the vicinity. Artificial reefs may also attract undesirable species such as the introduced seastar, *Asterias*. The choice of materials used to construct the reef should also be considered to ensure that they don't cause pollution or degrade the amenity value of the coast. However, in areas closed to fishing, artificial reefs could possibly be used to enhance the stocks of some fish by providing a refuge from fishing effects. There is also potential for artificial reefs to be used for habitat restoration, for providing shelter for vulnerable life stages of some species, for mariculture, for long term monitoring and research, and for diving and eco-tourism purposes.

The suitability of artificial reefs as a fisheries management tool is highly dependent on the management goals for particular stocks, fisheries or areas. A cautious approach to their development is needed and it should not be assumed that more reefs will create more fish or better recreational fishing. The key is to develop clear objectives for any artificial reef proposal and to ensure that appropriate consultation and evaluation is carried out before and after the reef installation. Before proceeding with more artificial reef developments in Victoria, we need to evaluate and monitor those artificial reefs that are already in place and develop a coordinated artificial reef policy to ensure that any future developments have clear management objectives.