

# Fish Aggregation Devices (FADs) and Fisheries Development in Tanzania

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## Fish Aggregation Devices (FADs)

The tunas of the Indian Ocean are already exploited by a variety of countries and fishing fleets, including artisanal fishers in Tanzania. A well-planned FAD programme would provide an opportunity to increase the livelihood benefits generated from exploitation of these tuna resources.

FADs attract (aggregate) potentially valuable pelagic fish species including skipjack, yellowfin and bigeye tuna. They aggregate the smaller tunas at the surface as well as large tunas at depth. Other lower-value species e.g. frigate tuna and dolphin-fish, are also attracted to FADs. Schools of tuna may take up residence around a FAD for periods ranging from a few days to a few weeks. Some schools exceed 1,500 tonnes in weight. Free-floating FADs are used, with much success, by purse-seine fishing vessels in the Indian Ocean.



The poorer fishers that are normally restricted in their ability to leave their home waters due to seasonally rough weather will be able to access strategically-placed FADs thus improving year-round returns from fishing. In all areas, fishers will be able to readily exploit FADs with relatively simple (and cheap) fishing gears that can be used day or night, and that have the additional benefit of not usually taking a by-catch of marine mammals.

## The Potential livelihood benefits of a FAD programme in East Africa.

Potential FAD Programme Outputs	Beneficial Impact on Livelihood Assets
Improved catch rates	More efficient use of fishing capital (vessels, engines, sails, etc.)
Increased revenues and stability of revenue	Improved income for fishers
Reduced fuel consumption over open-sea fishing	Greater efficiency in the fishery
Market development	Development of export industry
Reduced search time	More efficient use of capital
Diversification of marine resource consumption	Reduced dependence on particular resources
Reduced pressure on inshore fisheries	More sustainable use of current fisheries
Increased supply of affordable dietary protein through catches of lower-value species and increased income	Improved health; reduced health costs; increased labour productivity

## **The next steps...**

This policy brief is based on a recent piece of research that sought to evaluate the current livelihood context of artisanal fisheries in Tanzania and to match these with what is known to be required for a successful programme. The research indicated that Tanzania already has many of the necessary conditions to support a successful FAD programme. However, there are few issues that must be considered. Specifically, these relate to policy frameworks, marketing of the product and technical and financial needs for developing such a programme.

### **Policy framework**

The national policy environments are generally supportive of efforts to diversify fishing opportunities for artisanal fishers, especially offshore. While the legislative framework already supports local management of fisheries through various tools including by-laws. There is however no existing legislation that specifically addresses FAD-related issues. This would have to be reviewed to address issues of ownership of, and access to, FADs. The use of by-laws does have potential in FAD programmes but requires an effective system for development and approval of these at all levels of government.

District and Community-level experience in cooperative local management of marine resources is growing in East Africa. This experience would benefit from additional support to manage activities around FADs to maximise the efficiency of fishing and to minimise the potential of conflict between resource users.

### **Marketing of large pelagic fish**

The market demand for high value pelagic fish species has increased throughout most of Tanzania. A market network has developed to transport fresh and frozen fish around the country to tourist destinations and urban centres. The tourist market, in Zanzibar in particular, provides fishers with a good market that coincides with the best time for catching large pelagic species, although this market avenue is vulnerable to geo-political tensions.

Export of marine fish from Zanzibar has been successful in the past although export of marine resources from mainland Tanzania is subject to restrictions based on issues of household food security. The review of this policy may reveal options to develop a vibrant export fishery for tunas from Tanzania. In conjunction with this there may be options to develop value-added products from tunas and other large pelagic species, an approach that has worked elsewhere.

### **FAD Programme Support**

A FAD is a relatively simple piece of equipment but requires skills, high quality components and experience to deploy in the high-energy environment of the ocean. It is also essential that a cohesive FAD programme is developed, rather than a series of independent deployments.

A national programme is therefore required to develop skills in constructing and deploying FADs and in bathymetric surveys. Fishers will also benefit from training in FAD fishing techniques. Training is usually incorporated in a well-designed FAD programme. Finally, it is important the necessary monitoring is in place to evaluate the contribution of FADs to realising objectives clearly stated in current poverty reduction policies.

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