



## THE KAFUE FISHERIES EXAMINED

# CATCHING UP

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**E**arly in the morning every day, an army of small traders — most of them women — starts arriving at Chanyanya fishing camp in buses, in hired cars, on bicycles, and on foot. They cluster around incoming canoes, bidding furiously for the supplies of bream being landed. After cleaning the fish near the landing, they head off immediately for Lusaka and towns near the Kafue Floodplain Fishery to sell their stock.

Chanyanya is one of the numerous fishing camps that have sprung up on Lake Kafue, about 70 kms from the Zambian capital of Lusaka. Because of a scarcity of jobs in the urban areas, the number of people taking up fishing as a livelihood is on the increase. Research done by the Institute of African Studies at the University of Zambia in Lusaka indicates that the fishing industry at Kafue provides about 10 per cent of the fish produced in Zambia, and self-employment for 6000 fishermen.

Fishing is an attractive enterprise, especially to young Zambians who are jobless. It does not require a large amount of capital to enter the industry. And as fish is in great demand in the urban markets, new fishermen and traders can be assured of cash income immediately on starting work.

The Kafue River, which creates this inland fishery, rises in north-central Zambia, flows south-eastwards through the Itezhi Tezhi Gorge and then turns eastwards for about 240 kms along the Kafue Flats. The Flats have more than 450 kms of shifting river shore. According to fishery biologists, the annual inundation of the vast floodplain sets the conditions for the production of some 70 species of fish. The fish breed and grow rapidly during the rainy season, feeding on plants and other nutrients such as cattle manure deposited on the floodplain. In the dry season, the falling river flood drastically reduces the fish environment and their population.

Fishermen have adapted themselves to the changes in the floodplain, moving to higher ground when it rains and to riverside fishing camps during the dry season. As supplies of fish fluctuate

due to the flooding cycle and are scattered along the 240-km length of the fishery, fishermen and small-scale traders must migrate to follow the fishery.

The life of a fisherman can be hard. There is always the danger of encountering hippos. Because hippo manure fertilizes the water for algal growth, and thus indirectly provides fish food, most fishermen know that the animals' habitual resting and grazing grounds usually provide good catches. Although fishermen try to avoid the animals as much as possible, it often means forsaking the favoured fishing grounds. Each year several fishermen are killed by the hippos.

Living conditions at the fishing camps are hard, too. Houses are constructed of reeds, and material possessions usually consist of only basic fishing equipment and utensils. Although there are many children in some fishing villages, there are neither schools nor clinics.

According to surveys by the Zambian Fisheries Department, the inaccessibility of much of the Flats to traders in high water creates a paradox for fishermen. When fish are plentiful, the traders cannot reach them. On the other hand, during the dry season, fishermen's lower catches often do not keep up with the demand. As a result, some fishermen resort to a destructive and illegal method of fishing locally known as *kutumpula*, which involves driving the fish into waiting nets by beating the water surface with wooden plungers.

*Kutumpula* is a symptom of overfishing in some parts of the Kafue fishery. Another is frequent violation of the Ministry of Commerce's regulated prices for fresh and dried fish. As a result, most of the fish trade is considered by the government to be illegal, and traders and fishermen who overprice their fish risk being arrested.

A project recently funded by IDRC at

the Institute of African Studies is investigating ways in which the economic status of the less privileged fishermen and traders can be improved. This could include loans for particularly important equipment, such as boats. Although some fishermen have well-built boats, which cost about 2200 *kwacha* (about CA\$2250), the majority use dugout canoes. Chief researcher Dr Peter Hayward is working with engineers from the University to determine if cheaper, but sturdy, boats could be constructed. This would also help in overcoming one of the major occupational hazards: attacks by hippos.

The project is experimenting with low-cost solar fish driers in an attempt to improve the quality of dried fish. The present method of drying fish with firewood has problems. Fuelwood is hard to obtain in the Flats, and is usually bought from nearby farms at a high cost. Due to this scarcity of firewood, fish is often poorly dried and is spoiled by mould, blow-flies, and beetles. To avoid such losses, some traders have started spraying their fish with insecticide — a health hazard to consumers.

Some innovative research techniques are being used in this project. For example, the technology of the fishermen is being videotaped so that it can be analyzed and improved. The same method is used to record details of social life in the fishing camps, and fishing strategies. The technique will enable Dr Hayward and his assistants to present research tapes and taped interviews with fishermen and traders to fisheries officials, so that they can vividly see the conditions and problems in the fishery.

There is also an attempt to organize fishermen, traders, and their small villages in order to improve their leverage in influencing government policy. With careful management, the small-scale fishing industry in Lake Kafue can itself become a renewable resource, providing employment and food at little cost to Zambia. □

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