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Implementation of New Hatchery Technologies to Improve the Supply of Chambo (*Oreochromis karongae*) Fingerlings for Rural Farmers in Malawi

Bernd Ueberschär[1], Marina Gebert[2], Daud Kassam[3], Hassib Sainan[3], Apatsa Pearson Chelewani[3], Peace Chemis Mnelemba[3], Martha Alufeyo[3]

[1] *Association for Marine Aquaculture Ltd. (GMA), Aquculture and Fish Larval Nutrition, Germany*
[2] *Fraunhofer Research Institution for Marine Biotechnology and Cell Technology, Marine Biotechnology, Germany*
[3] *Lilongwe University of Agriculture and Natural Resources (LUANAR), Aquaculture & Fisheries Science Department, Bunda Campus, Malawi*

Abstract

Malawi has significant shares of the ninth largest lake in the world and the third largest and second deepest lake in Africa, which accounts for a traditionally fish-eating nation. However, overfishing resulted in the collapse of the Tilapia fishery in the lake since the beginning of the 90s. The historical yields of 70 % of Chambo (*Oreochromis karongae*) in the nets has turned into only 3–5 % Chambo today, with Usipa (Lake Malawi sardine, *Engraulicypris sardella*) being the most prominent fish in the catches from Lake Malawi providing at present 70 % of the yield.

Under these circumstances, aquaculture is being considered as one of the measures to provide more Chambo on the table and for the market, however, the production in the country is still small and in general not efficient.

Aquaculture has a tradition of about 100 years in Malawi, taking off with about 60 ponds in the 1950s and is represented today with about 6000 active fish farmers. Increasing production of Chambo could compensate for the decreasing yield from lake Malawi. At present, about 3600 t of Tilapia-like species are being produced, whereas 50 % of this yield comes yet from the only professional farm in Malawi, Maldeco Fisheries. One of the bottlenecks for rural farmers to improve their yield is the scarcity of sufficient viable fingerlings, specifically from Chambo.

Thus, one of the major goals of the project "Ich liebe Fisch" was to establish technologies which improve significantly the stable supply of viable fingerlings to farmers which want to grow fish for food and for the market. To achieve this goal, the project has provided a solar powered hatchery which is designed to support intensive production of Chambo offsprings.

The prototype of the hatchery was set up in March and April within about 3 weeks at the farm of the Bunda College in Lilongwe (Lilongwe University of Agriculture & Natural Resources, Department of Aquaculture and Fisheries) which plays an important role in providing training sessions for these new technologies. The presentation will introduce the applied technologies and will report about the implementation of this approach for mass production of fingerlings.

Keywords: Aquaculture, Bunda college, Chambo, fingerlings, fishery, hatchery, Malawi, *Oreochromis karongae*, solar power, tilapia

Contact Address: Bernd Ueberschär, Association for Marine Aquaculture Ltd. (GMA), Aquculture and Fish Larval Nutrition, Hafentörn 3, 25761 Büsum, Germany, e-mail: ueberschaer@gma-buesum.de