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RESEARCH REPORTS

Sustainable Aquaculture for a Secure Future

Title: Carp-SIS Polyculture: A New Intervention to Improve Women's Livelihoods, Income and Nutrition in Terai, Nepal

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Abstract: Based on lessons learned from field trials, carp-small indigenous fish species (SIS)-prawn polyculture technology was improved to a "carp-SIS polyculture" technology suitable for small scale farmers in Terai, Nepal. In December 2008, the project was initiated to improve income and nutrition of Tharu women in Chitwan (100 farmers) and Kailali (26 farmers) districts. SIS dedhuwa, *Esomus danricus* (Hamilton, 1822) and pothi, *Puntius sophore* (Hamilton, 1822) were intended to improve household nutrition through increased consumption due to their high micronutrient content whereas large carps rohu, *Labeo rohita* (Hamilton, 1822); mrigal, *Cirrhinus mrigala* (Hamilton, 1822); silver carp, *Hypophthalmichthys molitrix* (Valenciennes, 1844); bighead carp, *Aristichthys nobilis* (Richardson, 1845); common carp, *Cyprinus carpio* (Linnaeus, 1758) and grass carp, *Ctenopharyngodon idella* (Valenciennes, 1844) were grown mainly for sale. The farmers consumed 48.7% of the production and raised their fish consumption to twice the national average of 1.85 kg. caput⁻¹. year⁻¹. Farmers earned NPR 3,025 (USD 34.23) per household in 270 days which helped them economically. A women fish farmers' co-operative was established. Altogether 156 women directly benefited from the project. The training and project experiences improved their self-confidence. Micro-nutrient analysis of common SIS

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showed that vitamin A was higher in mara, *Amblypharyngodon mola* (Hamilton, 1822) whereas iron and zinc were higher in dedhuwa. The approach was found to be a more economic and sustainable, and is being replicated in other districts.

This abstract was excerpted from the original paper, which was in the *Asian Fisheries Science: Gender in Aquaculture and Fisheries: Navigating Change* (2014), *Asian Fisheries Science Special Issue 27S*: 165-174.

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