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Topic: The impact of food systems on nutrition, diet and health

Title: The contribution of fish food systems to nutrient intakes in Bangladesh

Presentation Type: Oral

Introduction: Fish is a nutritionally and culturally important (though often undervalued) animal-source food (ASF) in many low-income countries, including Bangladesh; produced from two sub-sectors: capture fisheries (non-farmed) and aquaculture (farmed). Micronutrient contents of fish from these sub-sectors differ greatly and little is known about intra-household fish consumption. We examined the contribution of fish in diets of vulnerable groups compared to other ASFs, and the contribution of non-farmed and farmed fish to nutrient intakes.

Methods: Food consumption data (24-hour recall) in 2-stage stratified sample nationally representative survey of rural Bangladesh were combined with nutrient composition of fish. Regression analyses were conducted to predict nutrient intakes, adjusting for age, sex, wealth and location.

Results: Fish makes the largest contribution to ASFs consumption across all wealth, age and location groups; and is more important for the poor (85% of total ASFs, compared to 64% of total ASFs in richest group). Predicted mean nutrient intakes (/person/day) from non-farmed and farmed fish were: iron, 2.9 and 1.0 mg; zinc, 1.7 and 0.7 mg; calcium, 521 and 169 mg; vitamin A, 113 and 12 µg retinol activity equivalents; vitamin B12, 1.8 and 1.4 µg, respectively (all differences $P < 0.001$).

Conclusion: Non-farmed fish makes a larger contribution to micronutrient intakes than farmed fish. Aquaculture plays an important role in increasing availability and affordability of fish, however, non-farmed fish are better placed to contribute to greater nutrient intakes. This presents an opportunity for aquaculture to contribute to improved nutrition, utilising diverse production technologies, and fish species, including small fish.