Entry No. IRRC-0007

Category	: International Rice Research Conference
Select Theme	: Sustainable and equitable farming systems
Endorsement email	:
Keyword 1	: Farm diversification
Keyword 2	: Livelihood and social equity
Keyword 3	: Sustainable management practices
Title of Entry	: Farming System Design for Diversification, Climate resilience, Sustainability, Livelihood and Nutritional Security in Rice farming
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Select only one type of presentation	: 15 minute oral presentation
Abstract	: Farming System Research and Extension at Annamalai University, India has evolved Integrated Farming System models with the integration of best suited animal components for irrigated lowland rice-ecologies. Integration of Fish polyculture and Poultry rearing, directly in the transplanted rice fields, offer better scope for lowland rice farmers, in terms of climate resilience, livelihoods enhancement and environmental sustainability besides nutritional security. The Annamalai Rice + Fish + Poultry model was upscaled for participatory on-farm research. This model was adopted in 200 m2 area of individual holdings by 1200

wetland rice farmers in Tamilnadu, to trace it's impact on farm productivity and livelihoods of farming households. Model clusters, each comprising three villages of similar administrative set up and geographic continuum with 100 farmers were formed in each of the three coastal and delta districts of Tamilnadu State in Southern India, Viz., Cuddalore, Villupuram and Nagapattinam. The results proved that the livelihoods of farmers were increased by 80 per cent (Rs. 25,516) on an average with Rice + Fish + Poultry faming system in wetlands. Manurial additions by poultry to rice were around 8 tonnes/ha/season and displaced the use of fertilizers while the complementary pest and weed control by fishery and poultry components (20 percent reduction in pest damage in the absence of any chemical pest control) displaced the use of plant protection chemicals. Additional employment generation was 219 mandays/year. Broiler meat produced from these clusters were 5,46,500 kg and that of fishes were 1,67,500 kg in a three year duration. Rice productivity on an average of 1200 farm holdings from three districts increased by 9.38 percent. The blood haemoglobin count of the development Partner or beneficiary of wetland cluster increased from 11.7 gm/dl to 13.9 gm/, folic acid level from 7.61 ng/mL to 8.76 ng/mL, serum albumin from 4.20 gm/dl to 4.87 gm/dl, calcium level from 9.4 to 10.05, globulin from 1.94 gm/dl to 2.79 gm/dl (sampled from an average of 10 beneficiary women farmers). This design is now out scaled for adoption in Nepal through an USAID – IKP funded research project and SAARC Experts have proposed an exposure visit.

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