

Entry No. IRRC-0269

Category	: International Rice Research Conference
Select Theme	: Sustainable and equitable farming systems
Endorsement email	:
Keyword 1	: Yield gaps
Keyword 2	: Sustainable management practices
Keyword 3	: Ecological approaches
Title of Entry	: Closing rice yield gaps while reducing the environmental impact of rice production in Asia
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Select only one type of presentation	: 15 minute oral presentation
Abstract	: CORIGAP-PRO is a project located in six Asian countries aimed at co-developing science-based tools to close rice yield gaps while reducing the environmental impact of rice production. Since 2017 there has been a strong focus on implementing effective project outputs on a wide scale, leading to improved production systems that increase the livelihoods of smallholder rice farmers; and meet the increases in rice production required to maintain food security in Asia. We will report on exciting progress in the main lowland irrigated and favorable rainfed granaries in our six target countries—Myanmar, Sri Lanka, Indonesia, Thailand,

Vietnam, and China. This multi-disciplinary study includes improving crop, post-harvest, pest (insects, weeds, rodents, golden apple snail) and water management; analysis of value chains; economic analyses of production efficiency; sociological analyses of pathways to adoption; and the effects of project outputs on gender and livelihoods. By January 2018, the roll out of best management practices (BMP) for pre- and post-harvest led to activities in 26 provinces where activities were promoted across the six partner countries. More than 379,000 farmers have been reached and 86,456 smallholder farmers increased yields and profits by greater than 10%. In Vietnam, 51,908 farmers drawn from eight provinces increased mean profit by greater than 14%. In Yogyakarta, Indonesia, mean profit increased by 17% (n = 2,000). In 2012 in Banyuasin District in S. Sumatra, Indonesia, monsoon rice was generally the only crop grown with less than 20 farmers planting a dry season rice crop over 30 ha. In 2017, 17,650 farmers practiced rice double-cropping and production increased by more than 500,000 t since 2012. In Nakhon Sawan, Thailand, mean profit increased by 26% (n = 4,500). In Maubin and Letpadan, Myanmar, mean yield increased by 20% and profit by 30% (n = 2,400). In China, farmers (n >10,000) increased grain yield by 11% and enhanced their profit by 14%. Farmers in Sri Lanka realized up to 23% yield increase (n = 500). These increases have occurred in concert with reduced environmental impacts through marked reductions in fertilizer, pesticide and water use, and associated greenhouse gas emissions.

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