

Category	: International Rice Research Conference
Select Theme	: Climate change and environmental sustainability
Endorsement email	:
Keyword 1	: Adaptation to climate change
Keyword 2	: Environmental sustainability
Keyword 3	: Landscape-level interventions
Title of Entry	: Adapting to future climates and reducing risks in the stress-prone coastal rice-ecosystems of Indonesia
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Select only one type of presentation	: 15 minute oral presentation
Abstract	<p>: Almost half of Indonesia's population live in rural areas, and approximately 14 million farm households directly derive their livelihoods from rice. Many of these agricultural areas are close to the sea and, on Java the most densely populated of the major islands, almost 30% of the rice-growing areas are within 10 km of the coast. Agricultural systems in coastal areas are threatened by climate variability, sea level rise and adverse soil conditions. Rice is the most important agricultural crop though, other crops, livestock and fisheries are commonly major components of rice-based systems. Large areas of lowlands within the coastal plains and within tidal deltas are developed for crop production yet major production constraints such as flooding, seawater intrusion, and problem soils result in low rice productivity (2–3 t ha⁻¹) and the systems are prone to risk. Considerable progress has been made over the past two decades, however, in the development of options to address these stresses through rice genetic improvement and integrated crop management approaches. Stress tolerant rice varieties with good agronomic performance have been developed from local rice landraces and modern rice genotypes. In on-farm trials, the first series of flood- and salinity-tolerant varieties have demonstrated yield advantages of up to ~50%, over varieties currently grown in the marginal lowlands. Some of these varieties are making impacts "at scale" and, for instance, Ciherang-Sub1, a submergence-tolerant variety is now being grown over 430,000 ha after having only been released in 2012. Further, crop management practices enable farmers to get the better returns on their investments, and these include improved nursery bed management, better timing of nutrient applications and reducing losses due to pests. These developments highlight opportunities for sustainable</p>

development in unfavorable rice environments of coastal areas and these are widely relevant elsewhere in Asia.

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