

Category	: International Rice Research Conference
Select Theme	: Sustainable and equitable farming systems
Endorsement email	:
Keyword 1	: Sustainable management practices
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Keyword 3	: Decision support tools
Title of Entry	: Designing future resilient rice production systems using an integrative landscape approach
Presenting author	: Dr Md. Panna Ali
Presenting author email	: panna_ali@yahoo.com
Co author 1	: Matthias Burgui
Co author 2	: SS Haque, Andreas Heinemann, Cornelia Hett, Felix Kienast, M Mondal, Bishnu Raj Upreti, Peter H. Verburg
Affiliation presenting author	: Entomology Division, Bangladesh Rice Research Institute (BRRI)
Affiliation 1	:
Affiliation 2	:
Select only one type of presentation	: 15 minute oral presentation
Abstract	<p>: Rice is one of the most important staple crops providing food security to millions of people. Multiple claims are made on the natural resources of rice landscapes, including those from urbanization and biodiversity conservation. Rice growing landscapes in the densely populated areas of south and south-east Asia are facing enormous challenges emerging from these different pressures on the land system that lead to competing claims, increased vulnerability of the inhabitants and potential undersupply of essential ecosystem services and food production. Multitude of global challenges, and ambitions to address those as expressed in SDGs, require novel integrative approaches (SEI 2014). The presentation is based on a paper (Bürgi et al. 2017), in which we present a framework to operationalize the integrated landscape approach (Reed et al. 2016) which are recently promoted as means of addressing these challenges (Rockström et al. 2016). The growing importance of the landscape approach in sustainable development agenda is due to its potential to overcome the problems of sectorial approaches (Sayer et al. 2013), to address trade-offs within the landscape (Reed et al. 2016) and enabling a better understanding of processes of change and resilience of local communities and their environment (DeFries and Rosenzweig 2010). Based on encompassing understanding of landscape-level processes and interactions, four pillars addressing different steps of a joint-learning circle are described and illustrated with examples. By focusing on rice-production systems, the approach intends to provide insights into how to increase the resilience of rice-production in (novel) landscapes under multiple future pressures including climate change. We hypothesized that by focusing on the landscape as a socio-ecological system more options are available to achieve the competing targets. The ultimate aim is to design and develop good-practice solutions for future resilient rice production landscapes that consider all interactions of farming systems with biodiversity, climate mitigation, food security, and sustainable development goals within a full landscape context. We consider the integrated landscape approach to be a prime way of targeting the Sustainable Development Goals (SDGs), but novel forms of collaboration between scientists and other stakeholders based on long-term commitments will be needed for operationalization in practice.</p>

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