

# 3<sup>rd</sup> International Conference on Earth Science & Climate Change

July 28-30, 2014 DoubleTree by Hilton Hotel San Francisco Airport, USA

## Adaptation technologies to minimize the impact of climate change on crop yield, income and water use in major river basins in India

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Researchers and practitioners are developing several adaptation technologies (strategies) to address the climate change impacts in agriculture. Observed rates of technology adoption range from 2 to 30% only in major river basins in India. The estimated cost of uncertainty (in terms of profits foregone by the farmers) due to non-adoption of the technologies is high compared to cost of technology itself thus justifying the need for technology promotion. At the farm level, lack of technical skills/support and poor managerial ability of the farmers affect technology adoption compared to poor irrigation infrastructure and inadequate water control at system level. This paper using the results of the optimization studies done during 2011-12 in Godavari, Krishna, and Cauvery River Basins, India indicates that the future water scarcity and crop yield reductions which range from 2 to 17% due to climate change could be managed through better adoption of the adaptation technologies. Institutional support for timely supply of quality seeds, partial mechanization in rice transplanting and better training to farmers on technologies using cluster approach could enhance the technology adoption and farmer income through better management of the land and water in the river basins.

### Biography

K Palanisami is currently Principal Researcher, International Water Management Institute (IWMI), Hyderabad, India. He was a visiting Professor at the University of Minnesota during 1982-84, 1990; Served as a consultant to the UN/FAO for East African Countries in 1997. He was also one of the expert team members in preparing Water Master Plan, for Abu Dhabi Emirate in 2007. He was also the Chairman of the Project Implementation Team of More Crop and Income per Drop Programme, 2007, for the Ministry of Water Resources, Govt. of India. He has written 18 books and published 34 papers in international journals.

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