



## INDIAN STATISTICAL INSTITUTE

Bangalore Centre  
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### ECONOMIC ANALYSIS UNIT

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Professor and Head

#### ANNOUNCEMENT AND INVITATION

The Economic Analysis Unit of the Indian Statistical Institute, Bangalore Centre, is hosting a one-day workshop on climate change and agriculture in India. The workshop will be held from 10 a. m. through 5:30 p.m. on March 28, 2016, at the campus of the Indian Statistical Institute, Bangalore Centre.

The workshop will be conducted by a team led by T Jayaraman, Professor and Chairperson, Centre for Science, Technology and Society, School of Habitat Studies, Tata Institute of Social Sciences, Mumbai.\*

M Phil, Ph D scholars and other researchers are invited to attend the workshop. The organisers will meet the costs of local transport (autorickshaw or equivalent) plus lunch and refreshments for participants.

Interested persons are required to send an email to [vkr@isibang.ac.in](mailto:vkr@isibang.ac.in), with a copy to [kaushikb\\_rs@isibang.ac.in](mailto:kaushikb_rs@isibang.ac.in). The last date for receipt of such mails is Wednesday, March 23, 2016.

V K Ramachandran

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\*T. Jayaraman was a contributing author to the Intergovernmental Panel on Climate Change (IPCC) Working Group III for the Fifth Assessment Report. He organised an event on Equity in Climate Mitigation at the Conference of Parties (COP16) at Cancun, Mexico, for the Ministry of Environment and Forests (MOEF), Government of India. Prior to COP21 in Paris, he undertook a study on Carbon Budgets and Equity in Climate Change for the MOEF. He then participated in an event on COP 21 and wrote extensively on the proceedings of the conference.

Economic Analysis Unit

Indian Statistical Institute, Bangalore Centre

Project on Rural Energy

Workshop on Climate Change and Agriculture

March 28, 2016

### Workshop Statement

Global warming caused by the emission of greenhouse gases, the most prominent and dominant component of which is carbon dioxide, is one of the most profound environmental issues in the world today. Of the sectors of the economy that will be affected by global warming, agriculture is surely one of the most important. Although its contribution to global GDP may appear minor, agriculture is the primary source of the world's food and food security, and the impact of climate change on agriculture is therefore a matter that concerns the world as a whole. In less-developed countries, where agriculture and allied activities are the main sources of income for large sections – and often a majority – of the population, any threat to food production is a threat to mass livelihoods and food security.

This one-day workshop will focus on climate change and agriculture. In this context it will also briefly review the significance of Paris Conference on Climate Change, and the problem of energy in the context especially of rural development.

Agriculture is vulnerable to the current state of climate variability as well as to projected changes in climate because of anthropogenic global warming. Models of crop production, considered together with global climate models, indicate that global warming will increase the exposure of major crops to temperature stress, leading ultimately to lower yields. Such decreases in yields vary significantly across the globe (there remain significant uncertainties

about their magnitude). Studies also indicate that climate variability alone has the potential to decrease yields to an extent comparable to or greater than the decrease in yields expected due to rising mean temperatures.

Following a survey of these results at the global level, this workshop will explore some aspects of the impact of climate variability and projected changes in the mean values of temperature and precipitation at the regional level for India. The workshop will discuss the issue of distinguishing between current climate variability and future changes in climate with respect to the mean and the variance of climate variables, especially in understanding the socioeconomic impact of climate change on Indian agriculture.

The workshop will examine the importance of understanding the differentiated impact of climate variability across different socio-economic categories of producers, agro-climatic zones. Such study can provide significant insights into climate adaptation in a future of global warming. A just and equitable policy for dealing with the impact of climate change on India's development must pay as much attention to climate adaptation, especially with reference to agricultural production, as it does to climate change mitigation.

Among the many aspects of deprivation and inequality of the bulk of the rural population, energy is one that is of particular significance. Understanding the dimensions of energy inequality in rural India is essential to exploring different specific pathways to rural development across various agro-climatic zones in the country. At the same time, promoting the rapid transition to modern fuels and modern techniques of extracting energy from different sources is essential.

Adaptation of agricultural production to climate change requires, in the first instance, that the extent of global warming be kept under check to the extent possible. The mitigation of greenhouse gas emissions is therefore the first line of defence for agriculture in the face of the threat of climate change. It is in this context that the Paris climate summit is of critical significance to agriculture, even though agriculture was not the explicit subject under discussion. Whether the Paris Agreement will indeed help the world to come to grips with dealing with the problem of global warming of anthropogenic origin is a matter of concern to all humanity.