

Day 1 – Saturday, 5 December 15.30 - 17.00 Room: 253

## Up and down the scales of time and place: Integrating global trends and local decisions to make the world more food-secure by 2050

<http://www.landscapes.org/glf-2015/agenda-item/day-1-saturday-5-december-2/6-parallel-discussion-forums/up-and-down-the-scales-of-time-and-place-integrating-global-trends-and-local-decisions-to-make-the-world-more-food-secure-by-2050/>

### **Presenters:**

*Keith Wiebe, Senior Research Fellow, Environment and Production Technology Division, IFPRI, USA, presenting "Climate, Agriculture and Food Security: Global and Regional Trends to 2050"*

*Alex De Pinto, Senior Research Fellow, Environment and Production Technology Division, IFPRI, USA, presenting "From Global to Local: Modeling Low Emissions Development Strategies"*

*Mercedita Sombilla, Director ANRES, National Economic and Development Authority, Office of the President, Republic of the Philippines, presenting "Economic Impacts of Climate Change in the Philippine Agriculture Sector: Scenarios, Policies and Investments"*

**Moderator & Rapporteur:** TBD

### **Panelists:**

Mark W. Rosegrant, Director, Environment and Production Technology Division, IFPRI, USA

Rodrigo Suarez Castaño, Climate Change Director at Ministry of Environment and Sustainable Development, Colombia.

Kirit N. Shelat, Executive Chairman National Council for Climate Change Sustainable Development and Public Leadership, formerly Principal Secretary, Government of Gujarat.

### **Background info:**

Current scenarios for ‘business-as-usual’ farming under climate change project slower yield growth and rising food prices by 2050. The worst hit will be underdeveloped economic regions of the world where food security is already problematic and populations are more vulnerable to shocks. Without substantial measures that address the challenges caused by increasing

temperatures and frequencies of extreme weather events, losses in crop and livestock productivity are expected to reduce the rate of gain from technological and management improvements. Furthermore, climate change is not only threatening the productivity of world's agricultural systems but it is expected to have consequences on a wide range of ecosystem services and people's resilience.

One approach to create a responsive institutional environment is to establish a decision-support mechanisms for agricultural, climate change, and food security policies that use new and updatable data, customizable modelling output, and innovative scenario assessment. Modeling environments must be designed to integrate seamlessly in the national government's development process (e.g., planning, project evaluation, and investment programming).

This Discussion Forum will draw on new research activities to analyse regional and county policy options that promote a healthy growth of the agricultural sector in a changing climate. The economic implications of changing climate conditions will be evaluated using examples from developing countries including the Philippines, Colombia, Vietnam and Central Asia.

#### Key Questions:

1. What are the projected impacts of climate change and socioeconomic drivers on agriculture and food security at global and regional scales in 2050?
2. What are the global and national economic implications of adoption of climate friendly (climate-smart) agricultural practices?
3. Can larger-scale approaches (e.g. landscape approach) increase the feasibility of plans that target reducing emissions while preserving economic development and increase food security?

#### ***Background reading***

1. Food Security in a World of Natural Resource Scarcity: <http://www.ifpri.org/publication/food-security-world-natural-resource-scarcity-role-agricultural-technologies>
2. Climate change impacts on agriculture in 2050 under a range of plausible socioeconomic and emissions scenarios: <http://iopscience.iop.org/article/10.1088/1748-9326/10/8/085010>
3. Low emission development strategies for agriculture and other land uses: The case of Colombia: <http://ebrary.ifpri.org/cdm/ref/collection/p15738coll2/id/128679>