

### SESSION SUMMARY

<b>1. Title of the Session</b>	Agriculture and Climate Change: Modeling and Managing Water from Basin to Nozzle.
<b>2. Date and Location</b>	March 3, 2009, 5:00-6:30, MC-13-121
<b>3. Chair, Speakers, Panelists, Commentators</b>	Chair: - <b>Abel Mejia</b> , Sector Manager, Energy, Transport and Water, World Bank Panelists: - <b>Bridget Scanlon</b> , Senior Research Scientist, Bureau of Economic Geology, Jackson School of Geosciences, University of Texas at Austin - <b>Prasanna Gowda</b> , Agricultural Engineer, USDA - <b>Jeffery Richey</b> , Professor, School of Oceanography, University of Washington Commentator: - <b>Susanne M. Scheierling</b> , Irrigation Water Economist, Energy, Transport and Water, World Bank
<b>4. Topic and main message/s communicated in the presentation/s</b>	<b>Topics of presentations:</b> <ul style="list-style-type: none"> <li>▪ “From Fields to Watersheds to Basins: A Multi-Scale Information Framework” – Jeffery Richey</li> <li>▪ “Sustainable Groundwater Resources in Semiarid Regions” – Bridget Scanlon</li> <li>▪ “Mapping ET in the High Plains of the United States” – Prasanna Gowda</li> </ul> <b>Main messages of the presentations:</b> <ul style="list-style-type: none"> <li>▪ Climate change will impact water quantity and quality at surface and sub-surface zones from field to basin scales.</li> <li>▪ Developing quantitative approaches to measuring and modeling water fluxes and evapotranspiration will be key to developing predictive assessments and scenarios that will facilitate the proactive management of land, crops, and natural vegetation for optimal water flows, storage, and irrigation.</li> <li>▪ The presentations were on some of the cutting edge scientific approaches to model and manage water in the face of increasing variability and uncertainty due to climate change. Participants learnt about state of the art and field tested measurement and modeling approaches to surface and groundwater fluxes as well as emerging evapotranspiration remote sensing technologies that will transform irrigation practices and water use efficiency in agriculture in the next decade.</li> </ul>
<b>5. Gist of the discussion (provide a brief summary of the questions and answers)</b>	<b>Gist of the discussion:</b> <ul style="list-style-type: none"> <li>▪ Models are helpful to move from policy to local scale applications.</li> <li>▪ There are few policies in place to conserve groundwater which is undergoing rapid depletion.</li> <li>▪ Land use change has large scale impacts on groundwater resources (in semi-arid regions).</li> </ul>

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|  | <ul style="list-style-type: none"><li>▪ Land use can be used to manage water resources and techniques such as remote sensing and soil sampling can be used.</li><li>▪ There are low cost technologies to measure/map evapotranspiration which can be scaled up in developed and developing countries.</li><li>▪ Models for measurement and monitoring are both time referenced and geospatial and so can become better, with better data.</li></ul> |
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