

# **Enhance Climate Services in Agriculture by Economic Benefit Evaluation: the Experiences in Taiwan**

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## **Abstract**

Following WMO's GFCS guideline, Central Weather Bureau (CWB) of Taiwan government has initiated many action plans since 2012. Climate service evaluation for the societal and economic benefits has been one of the major tasks under a four-year national master policy project, which is named "capacity building for climate services", through a special funding source from central government since 2014. In the last four years, CWB has continuously funded our research team to explore the potential social benefits and economic value of applying meteorological information in agriculture, which is selected as one of the priority areas by WMO. Our study uses contingent valuation method (CVM) to evaluate the economic benefits of the non-market goods (eg. climate services) for agricultural producers. Based on our findings in the national survey in 2013, a pilot program cooperated with Erlin Farmers Association and Taiwan Agricultural Research Institute (TARI) has begun in 2014. By means of our CVM survey in 2014 with a user panel of selected 254 farmers, we have the preliminary results of users' needs, communication channels, and economic valuation results. Our team has been working with the experts from CWB and TARI in the last three years, and designs many activities and tools in the last two years in order to further promote climate services for agricultural users. Those activities and tools include holding a workshop by teaching farmers how to use the current climate service products in the farm level management, a guideline for agricultural researcher to teach their students in their agricultural extension classes, a very unique design of advertisement pages in farmers' year calendar booklet, and a teaching class material to teach farmers how to use CWB's application software on smartphones. We will bring our current designs and tools to share with everyone from all over the world in this special market place event.

Key word: Meteorological Information Services, Agriculture, Economic Valuation, Willingness to Pay (WTP), Contingent Valuation Method (CVM)