

## Participatory Agro-Climatic Forecasts for risk management in agriculture

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The project “Seasonal climate and crop forecasts for agricultural risk management” jointly developed by CIAT and the Center for Weather Forecast and Climate Studies (CPTEC/INPE), Brazil, under the CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS) and Colombia’s Ministry of Agriculture and Rural Development (MADR). Proposes the development of a methodology that combines the seasonal climate forecasts of the regional climate Eta Model, maintained by CPTEC, with the Climate Predictability Tool (CPT), developed by the International Research Institute for Climate and Society (IRI), as a starting point to produce seasonal forecasts of crop productivity. Identifying climate variability (temperature, precipitation, etc.) of importance to farmers and its predictability along with the risks and uncertainties associated to have an “agriculture prepared” adding: local knowledge + scientific tools + appropriate policies. The climate forecast has gained importance in recent years because of its use as a tool in decision making for different socio-economic sectors, including agriculture. Aimed at assessing risk from climate variability phenomena to ensure the supply of food through the food chain. Among the results found: (1) Design and implementation of seasonal forecasts pilots and consistent adaptive actions involving climate and crop models, (2) incorporation of local knowledge into the analysis of agro-climatic models through the climate farmer schools and (3) training to associations and other entities in the public and private sector on the use of climate forecast in the agricultural sector. For precipitation, the results of success, according to the proposed methodology, showed that for the period of analysis, on average 83% of cases fell within the range of the dominant categories. A monthly level success frequencies ranging from: 67% to 93% and the month with the highest rate was February. The results for maximum and minimum temperature, with a success average of 85% and 83%, respectively. The hit rate is higher in the months of December, January and February, when about 90% and the lowest in the months of March, September and November, with frequencies of the order of 76% to 80%, the most low for the minimum temperature. How many measures, strategies and planning decisions are based on an average year wait? We always hear that planting crops at certain times because on average the rain or temperature behaves in a certain way. We plan a year that will not exist! With Participatory AgroClimatic Forecasts ((PACP), acronym in Spanish) have useful information, because we started planning over a year that has nonzero probability. Were made, box testing, climate farmer schools focus groups on: concepts such as time and weather, use of agro-climatic information, among others. In conclusion, the use of statistical structure models by CPT allows implement a methodology for climate forecasts in a fast, easy and reliable. The results of these climate predictions were incorporated in models of rice, corn, potatoes and beans (AquaCrop and DSSAT) to identify adaptive measures.