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Forecast based Financing for Food Security : from early warning to early action in Eastern Africa

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The project “Forecast based Financing for Food Security” (F4S) aims to provide a deeper understanding of how key drivers of food insecurity can be forecasted early enough to enable the trigger of humanitarian action in pilot areas in Ethiopia, Kenya, and Uganda. In combination with the knowledge being produced about early warning and forecasting, F4S also wants to inform early action (e.g. ex-ante cash transfers) that can reduce the risk of food insecurity. F4S has been achieving this goal through three main pillars: (i) modelling, (ii) local knowledge and (iii) cost-benefits analysis.

This PICO presentation shares the lessons learnt and results of the F4S project. Moreover, it hopes to trigger the discussion on how the scientific community together with local stakeholders and communities can co-produce knowledge that is relevant to local action, focussing on three result areas.

- (i) The impact-based forecasting model to understand the key drivers of food insecurity in agricultural, agro-pastoral, and pastoral regions. Simple to more complex Machine Learning algorithms have been developed, applied and benchmarked. These algorithms were used to forecast, 6 to 1 months ahead, key indicators of food insecurity such as the shortage of calories and the transitions in IPC classes. Local knowledge was used to inform the selection of the predictors of the Machine Learning algorithm.
- (ii) The results of a household survey and individual choice experiments among 600 household members of vulnerable communities. The survey collected local knowledge on early warning (food insecurity triggers) and early actions traditionally taken to lessen food insecurity. The novel choice experiment consisted of giving potential beneficiaries of ex-ante cash transfers the choice between different timings and frequencies of cash transfers for different drought and food security scenarios. The results provided a better understanding of people’s willingness to invest in risk reduction actions and individual preferences on key design elements of cash transfer mechanisms.
- (iii) The evaluation of the cost-effectiveness of different cash transfer mechanisms that investigates how cash transfer programs can achieve a significant reduction in costs if cash is disbursed prior to the food insecurity occurrence.

This knowledge, as produced on the three areas above, is being currently used to improve the design of ex-ante cash programs. In addition to yielding significant cost savings, the project has found that cash transfer programs can be a more dignified solution when disbursed early enough. Cash transfer programs have the potential to increase the range of early action by beneficiaries that ultimately can reduce the risk of food insecurity and possibly malnutrition in vulnerable communities.