

Policy Brief

No. 1 • July 2022



Lessons from mobile app based delivery of agro-met advisory services to the Belaka farmers

About the initiative

The project supported approx.5000 local farmers in accessing and applying real time weather information for refining their crop planning calendar, thus, saving time, costs and efforts. The achievement was possible through development, testing and application of a mobile app called ProMS , which is equipped with agromet related early warning and varieties of weather information including rainfall, temperature, humidity, risks of flood, landslides and forest fire. The project was executed by a competitive grant from ADPC for innovative climate challenge competition. Arbonaut in partnership with CEN won the competition for this project which they implemented in collaboration with Belaka Municipality and Federation of Farmers Groups between Jan and Jul 2022. Ministry of Forest and Environment of Nepal endorsed the project as a climate compatible initiative for municipal level activities.

Approach

The uniqueness of the project lies on its interactive mobile app that was designed and developed with essential features required for the local farmers. A sophisticated automatic weather station has been established and operationalized in the municipality complex with digital display board. The real time data of the station is accessible to all those using the app. Testing with the farmers who carry a smartphone revealed that the app is quite useful for them to making wise decisions regarding appropriate weather conditions for farming activities such as seedling and harvesting of crops.



Fig 1: Weather station and Display Board installed in Belaka Municipality

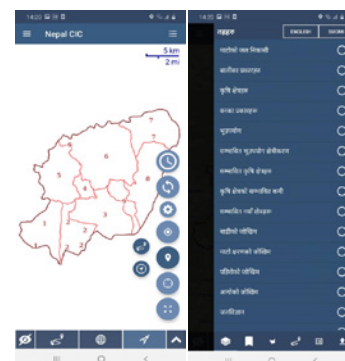


Fig 2: ProMS mobile application

Major achievements may be categorized into three aspects. The first achievement is the development of a farmer focused mobile app packed with sophisticated weather information backed by locally generated weather data, forecasts and alerting messages along with relevant maps of land use and land cover, flood risk zone and fire incidents, which they find quite interesting and useful to make everyday decisions for farming activities. The second is the delivery model of the project that proved its effectiveness to create enabling environment among the different stakeholders, namely, the target beneficiaries, municipal leaders, facilitating agencies of province and national levels and specialized technical service providers. Without the direct interfaces of the stakeholders, the rich information packed in the app alone won't get through the intended farmers. And, the third achievement is the ownership of the process and product by the municipality and the groups of farmers, which they are committed to maximise benefits of the application by investing more on the process as and when needed basis in the days ahead.



Fig 3: Group photo after orientation training to farmers



Fig 4: Group work during the training

- 1. Intriguing interest of local farmers on agromet advisory services:** In absence of agromet advisory services accessible to local farmers, they are compelled to plan daily farming activities on ad hoc basis. Those available online are scattered, too general, and less relevant. For the first time, they learned to receive the alerting information in their personal phone, interpret the message and apply the same for planning farm activities. This project just served as an initial step forward to address the gap.
- 2. Innovations at three stages:** The three stages include 1) packaging of need-based weather information in the app, 2) phased engagements with farmers, municipal officials and stakeholders, and, 3) physical agromet station not only for generating local weather data but also to familiarize stakeholders with data and messages.
- 3. Upscaling and outscaling plan for ProMS as a model:** The learning of the piloting phase offers adequate grounds for expanding its application for wider and real benefits of farmers. Two approaches may be advised. First, offering continuous support to the Belaka farmers for monitoring effective applications of the app-based information through seasons and crops for a complete annual cycle. Second, develop multiple versions of the app per the need of neighboring areas or those with Belaka like geographical and socio-economic features of the farmers.
- 4. Ownership and commitment of municipality matters:** Support of municipal leaderships and officials is the prerequisite for effective planning, delivery and sustainability of the initiative. On top of this, they are willing to procure services to complement the project so that the agriculture support program of the municipality can produce synergic effects. One year cycle of engagement can be an appropriate project cycle to achieve the intended goals.
- 5. Producing local champions be a key focus:** Youth from agricultural family background demonstrated their eagerness and talents to learn and apply the knowledge throughout the project. Identifying a couple of talents from each cluster of the farming communities not only helps them develop their capacity but also to help peers to go with the newly acquired information for better planning that would save costs and time for the farmers in the days ahead.

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