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Bridging the gap:

How to get climate services to farmers

Part of the Lao Climate Service for Agriculture
(LaCSA)



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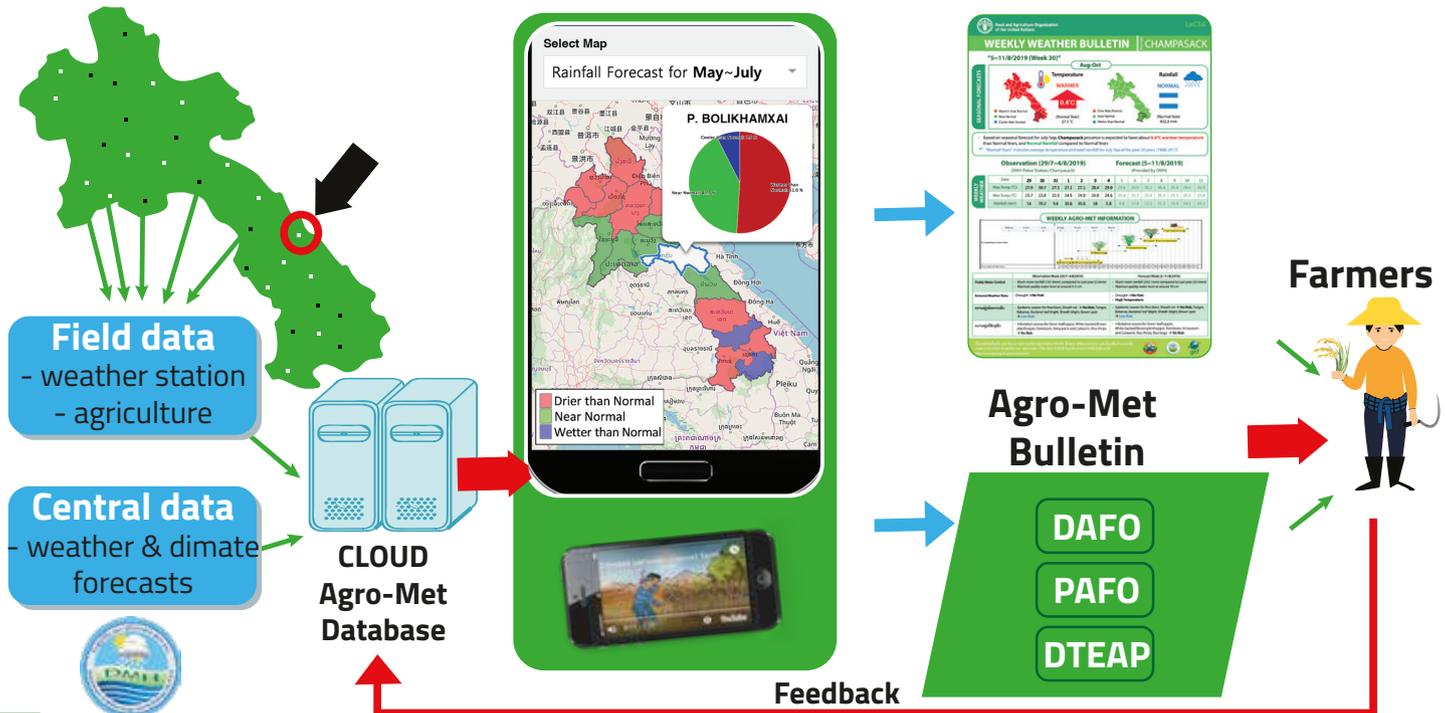
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LaCSA's last mile

The Lao Climate Service for Agriculture (LaCSA) provides agro-meteorological information in a compact format relevant to Lao farmers. The challenge addressed here, is the delivery of the provided information to farmers and other end-users. While the standard output channel are bulletins that are published online and sent to subscribed receivers, these resources may be beyond the reach of many farmers.

Under the SAMIS project, FAO in collaboration with the Department of Meteorology and Hydrology (DMH) and the Department of Agriculture and Land Management (DALaM), have tested a number of pathways to give farmers access to the produced content. Based on their testing, a number of ways have been identified that allow farmers to take advantage of tools that are normally out of their reach. To drive this process, the National Agriculture and Forestry Institute (NAFRI) has trained DAFO and DONRE staff throughout the country in the use and retrieval of LaCSA information.

The purpose of this leaflet is to present the identified dissemination options and insights, to encourage subsequent projects in taking them up or building on them.



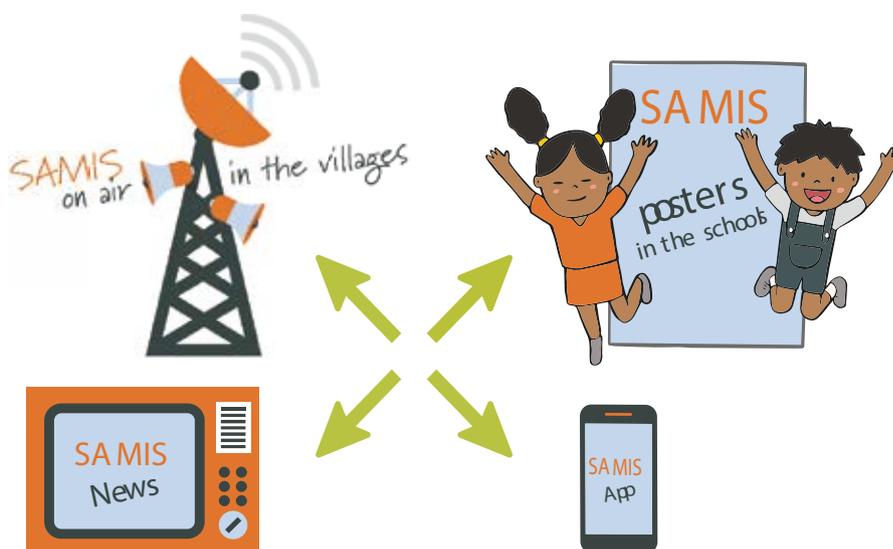
Tested approaches

There is great demand for agro-meteorological information by farmers. Several methods of providing this information were tested and farmers were questioned as to their preferences. While the tests did not reveal location specific preferences for different dissemination methods, there were clear differences in the effectiveness of the employed tools.

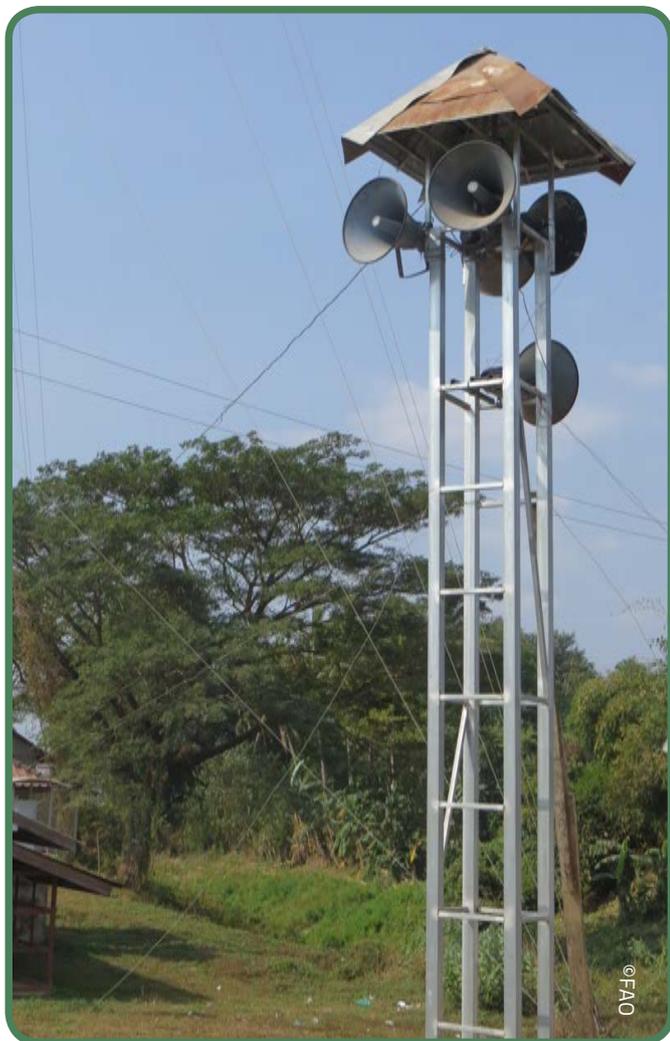
The information was delivered to farmers in nine districts throughout Lao PDR. Employed information dissemination tools included:

- Announcement through village loudspeakers (carried out by village authorities, training package developed by the Lao National Radio);
- Announcement through radio (carried out by the Lao National Radio)
- Provision through Farmer Field Schools (at present can be carried out by NAFRI, DALAM and the Plant Protection Center with the local support of PAFO and DAFO);
- School posters with the aim of pupils absorbing the information and passing it on to their parents (carried out by World Food Program and Ministry of Education and Sports);
- ICT tools including an app and posting on social media (carried out by DMH);
- Regular updates on TV.

Further approaches are planned such as the diffusion through farmer groups (under the Department of Technical Extension and Agro-Processing). Also, NGOs and development projects are starting to test different methodologies during the next season.



Village loudspeakers reach far



Information was provided to village chiefs who used the village announcement systems to inform their community. The effectiveness of this dissemination method was highest among all tested, with more than 80 percents of farmers listening to the announcements and acting on them. Especially highly valued were weather and seasonal forecasts. Forecasts on water levels, pest and disease, and extreme events still reached 30-70 percents of farmers. More than 80 percents of farmers who had listened to the announcements took action or adjusted their plans and practices. Changes in crop variety were most common (more than 75 percents of farmers), followed by water management practices. To a lesser extend farmers adjusted fertilizer and pesticide use. The system ensures long term economic sustainability of the information sharing process.

Drawback: Speaker systems only cover a limited area. Depending on village structure a significant number of farmers might not be reached by speaker announcements. This is also related to the time and frequency of announcements which have to be adjusted to community habits. Investment in farmers groups for scaling up lessons learned will ensure better quality of climate service use.

Farmer Field Schools (FFS)

FFS were used to explain how the provided information can be used effectively to improve agricultural performance. Focusing on rice, the importance of specific agro-meteorological aspects for different crop phases is explained. It is conveyed how to adjust soil preparation, variety type, planting time and spacing, fertilizing, water management, pest and disease control, and harvesting to different conditions.

Compared to other farmers, participants in FFS were more than twice as likely to change their planting dates based on loudspeaker announced agro-meteorological information, and found adjustments to cropping calendars more meaningful. Also, villagers who had attended FFS but were not reached by loudspeakers, were more likely to retrieve agro-meteorological information through Whatsapp, Facebook, and the LaCSA website (least used).

Drawback: Not everyone can attend FFS and the people attending are often better-off. The impact of FFS on farmer behavior is less clear. While for some topics FFS seemed to change farmer's behavior, for other topics, they seemed to adapt less than untrained farmers. However, it was not possible to assess if agricultural performance did improve. Given the intensity of the training process (two facilitators can run two FFS per season) the number of FFS is limited by the number of extension service staff.



Other media uses

Farmers who could not be reached through loudspeakers and had not attended FFS, showed a strong preference for TV-broadcasted information.

Depending on local conditions (e.g. signal coverage, etc.) radio, phone and internet were still used by about 30 percents of farmers who had not been reached through loudspeakers. While less than 40 percents of farmers did access the internet, three quarters of those, used ICT to get agro-meteorological information, indicating strong future potential for this approach.

Although data analysis is not finalized, the use of school posters, teaching children about agro-meteorological information, with the aim of further spread to families, was less successful. Pupils are able to understand the system well, but they may be too young to effectively communicate key messages to their parents, while parents may not take time to listen carefully enough to their children. However, it is conceivable that choosing the right age group and realizing appropriate awareness rising campaigns, distribution through schools may be a useful long-term approach as children grow older.

Support by extension staff is generally least favored options. The country-wide training initiative for DAFO and DONRE staff on agro-meteorological tools will likely change this perception.



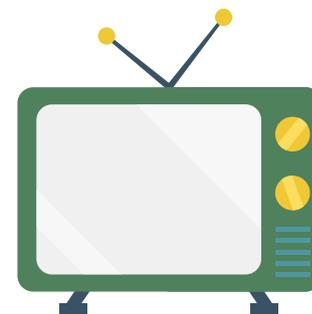
Radio



Internet



Website



TV

The future of agro-meteorological services in Laos

Agro-meteorological service provision has just started in Laos. The basic infrastructure is established, but further steps need to be undertaken to improve service and delivery. Projects are encouraged to make use of the system and support further development. Especially when it comes to bringing information to end-users, funding and technical support will still be needed in the future.

Specific areas of required input are:

- Create a denser raster of meteorological stations in the country and improve the list of crop and livestock forecasted;
- Expand delivery to communities by training local level staff and improving awareness in the donor and development sectors;
- Improve delivery mechanisms and adjust them to local conditions;
- Increase the number and quality of FFS or other farmers groups.





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FURTHER INFORMATION

Further information on the generated land cover maps and the SAMIS project is available at:

<http://www.fao.org/in-action/samis/en/>

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Detailed information on methodologies can be found in the under publication booklet *Agrometeorology For Agriculture Extension Officers In Lao PDR* on the SAMIS web page.

Detailed information on methodologies can be found in the under publication booklet *Adoption of Climate Services in Lao PDR* on the SAMIS web page.



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