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Digital advisory services for smallholder families in Africa and Asia

A research and innovation project at the University of Bern aims to strengthen sustainable farming methods among smallholder families in Africa and Asia using digitally supported agricultural extension services. Its overall goal is to improve the families' productivity, incomes, and climate resilience. The project is being conducted together with international partners and is supported by the TRANSFORM programme of the Swiss Agency for Development and Cooperation (SDC) with five million Swiss francs.

Smallholders produce two thirds of all food worldwide. Yet the majority of these approximately 500 million farmers lives in poverty. Their production is susceptible to the impacts of climate change. At the same time, they have poor access to information on agricultural practices that could help them increase production, conserve resources, and sustain their livelihoods.

Digitally supported agricultural extension services provide an opportunity to change this. To date, however, they have only reached a small fraction of smallholders in the global South. One way to achieve significant gains in yields and improved living conditions is to involve women and young people: they make up over half the people engaged in agriculture in sub-Saharan Africa and Asia.

Addressing women and young people in particular

The project "Agripath" is blazing new trails: "The goal of the project is to develop effective, efficient, and far-reaching advisory services that engage as many smallholder families as possible, particularly incorporating women and young people," says Sonja Vogt, Professor of Sustainable Social Development at the University of Bern: "To achieve that goal, we are developing technical innovations that foster changes in people's attitudes and social norms related to agriculture."

To enable the broadest possible impact towards sustainable agriculture, explains Sonja Vogt, all family members must be involved. Accordingly, it is crucial to know who in the household has access to a mobile phone and thus digital services, as well as how agricultural decisions are made within the family. "In addition, we are particularly focused on efficient, country- and context-specific dissemination of sustainable farming methods within local communities," says Nicole Harari, project coordinator at the Centre for Development and Environment, University of Bern.

Beginning with five countries on two continents and expanding worldwide

The project is aimed at 50,000 smallholder families in Burkina Faso, Uganda, Tanzania, India, and Nepal, as well as 250 private and state agricultural extension service providers. Scaling of the results in at least six other countries is planned from the outset via a broad partner network comprising ministries of agriculture, NGOs, the private sector, and regional and international organizations, thus enabling Agripath to make the widest possible impact.

Lessons learned from Agripath will be made available in a toolkit for providers of digital advisory services – both in countries where the project is active and worldwide. In addition, the project consortium will provide long-term implementation and application support to digital providers. The *Farmbetter* app utilized and further developed for this research will be freely available for download.

Combining on-site consultation and digital solutions

The project will also provide new insights as to what type of advising is most promising in which cases. Using a novel “mixed methods” approach, the project will combine digital data collection with field experiments and randomized controlled trials. This will make it possible to study the impacts of three variants on farmer behaviour: a purely digital solution with an extension services app that farmers can use themselves; a model in which extension service providers use the app in their work with the farmers; as well as a hybrid model in which smallholders can use the digital advisory services on their own and, when needed, obtain access to on-site technical extension services.

In addition, focus groups and broad-based digital data collection to assess attitudes and behaviour will generate country-specific knowledge on gender and youth participation in sustainable farming. “This is central to the context-specific design and thus acceptance of the digital extension tool”, emphasizes Nicole Harari.

Close collaboration between science and practice

Agripath is a project of the Centre for Development and Environment (CDE) and the Institute of Sociology – both at the University of Bern – together with Grameen Foundation USA, Grameen Foundation India, the International Centre of Insect Physiology and Ecology *icipe*, as well as Farmbetter Ltd. The Swiss Agency for Development and Cooperation (SDC) is supporting the project through the TRANSFORM programme with five million Swiss francs. The project is based on close collaboration with Grameen Foundation agricultural advisors and the start-up Farmbetter Ltd. The latter’s app provides application-oriented information on sustainable farming practices and promotes climate resilience and productivity among smallholder farms in developing countries. The project begins in 2021 and runs through 2025.

[For more project information](#)

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