

# Applications in the Agricultural Sector



**The projects train rice farmers on farming techniques for sustainable production.** Farmers also get educated in how to record production data correctly which is then manually inputted to Excel. For visualisation of the data, the project uses MS Power Business Intelligence (BI). An app-based approach to reach out to farmers at the beginning of the project did not prove scalable due to high costs. Therefore, the Excel approach was initiated.

## SOLUTION PROVIDER & USER



GIZ Thailand

Sustainable Aromatic Rice Initiative (SARI)

Market-oriented Smallholder Value Chain (MSVC) Thailand

## CORE TOOLS



MS Excel



MS Power BI

Farmers collect detailed data and send it to respective GIZ colleagues working on the Excel file

The Excel file incorporates multiple parameters such as: farming practice, timing of applying fertiliser, pesticide type, formula, organic/inorganic fertiliser type, labor force usage, water system, irrigation, harvesting (times and nature), nitrogen efficiency, production cost, profitability (margin).

Visualisation of the data can be simply done either with Excel or more professionally with Power BI.

Farmers are trained on the job on how to record data and awareness is raised for sustainable agriculture and the need for transparent and traceable production.

The whole platform is provided to users without additional costs.

The database includes around 19,000 farmers in Thailand.

## HOW DO THE KEY TOOLS WORK



### Quality of data

All information and suggestions are based on data that is being collected from farmers. Although farmers are trained, there are still wrong or delayed data inputs.

### Operational cost and GIZ involvement

The initial approach with a mobile-app based solution was too costly. With the excel solution data is easier collected, yet, it highly relies on the involvement of respective GIZ projects.

### Training for farmers

Respective training is implemented by GIZ for farmers to collect reliable data. Yet, the advanced age of many smallholder farmers that often comes with less affinity to digital approaches, poses a challenge, as they are often more reluctant to new approaches in data-based production.

## CHALLENGES



## RECOMMENDATIONS

The simpler strategy with Excel is proven effective in this case and might be an example for other smallholder projects. However, it is currently mainly a national-level database and should be transferred or linked with other platforms to improve cross-border utilisation.

Transferring the simple solution slowly into a more sophisticated technological solution while continuing to educate farmers on how to use blockchain applications might be one approach.

