

Evaluation study of the use of digital technologies for agriculture and food security in Mali

Amadou Sidibé/IPR-IFRA Katibougou, Mali:



Senekela & Sanji
Advisory services,
market infos and
weather forecast

Sentinel-2 Agri
Agric.Stati stics
and yields
estimation

STARS land tenure, crop
growth and yield observation
under fertility test



The study (3 Masters Students) explores what works or is likely to work in these projects under which conditions and for the benefit of whom.



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**Realist
Evaluation**
(Pawson
and Tilley,
1997)

- **Assess the present of the 3 projects**
- Understanding the intrinsic feature of the technologies
- Understanding the socioeconomic conditions
- Understanding the institutional environment

**System
dynamic
modeling**
(Amelia,
Kopainsky et
al. 2014)

- **Explore the future of the 3 projects**
- Understanding the adoption patterns of different types of users
- Understanding the implications of technologies on farmers decision-making process
- Projecting technologies adoption under different future scenarios



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Key results so far:

- **Relevance**
- Technologies are perceived to be relevant- contribute to farmers decision-making and problem - solving process
- One farmer in Dialakoro says; *“After several failures in growing watermelon, I called for advice through **Senekela**. I implemented the advice which I received on 0.5 ha; I succeeded to harvest a good amount of watermelon”*
- *“I received the **Sanji** sms on my phone which says that today will be sunny whereas tomorrow is forecasted to be rainy, I then decided to do weeding today and plan for plowing and sowing tomorrow”.*



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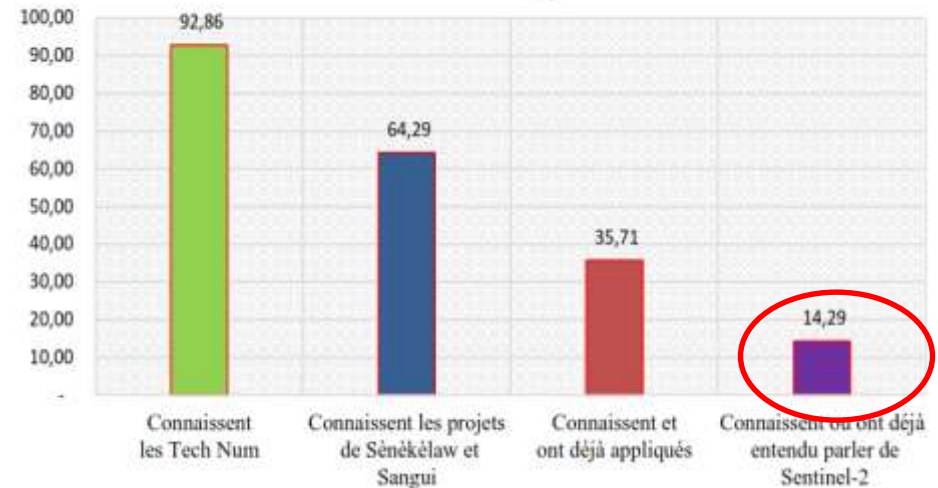
Key results so far

Access

- Illiteracy: Difficult for farmer to subscribe
- Constraining billing of the services (Senekela and Sanji)
 - The cost of 25FCFA or \$ 0.045 for one Sanji SMS is deemed expensive
 - The reception of Sanji SMS conditional to having 25FCFA top-up
 - Farmers' preference for vocal messages and monthly payment
 - The coverage of the network in rural communities is patchy for Senekela calls
- Technological gap between young people using the smart phones and the elder people making the decisions.



Résultats des Enquêtes



Field work Cris Auguste Niamba, July, 18

- Sentinel-2 is more at National level for Agric. Stats.

- Required reliable high speed internet connection at IER (this was the case in 2016 but not in 2017=>data were not analyzed)



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Next Steps

In-depth research on the sustainability of the technologies

- The perception of farmers on the information received (new information or not for them)
- Users adoption, disadoption and perception of the technologies
- The information flow among the different stakeholders
- Modelling future scenarios under which the technologies considered may be more or less attractive to different user groups.
- **Challenge: Difficult access to information and data from the mobile phone company and other key stakeholders (Senekela and Sanji).**



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THANKS!



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