

- Japan SDGs Innovation Challenge for UNDP Accelerator Labs -

Reducing climate change effects on agriculture by developing rainfall alert system

UNDP Accelerator Lab Burkina Faso

ブルキナファソ



面積： 274,200 km²
人口： 2,032万人 (2019年)
公用語： 仏語

出典) 外務省

Identified SDGs issues by Accelerator Lab Burkina Faso

Identified SDGs



- 70% of the population is engaged in agriculture
- Economy based in agriculture (32% of GDP)
- Agricultural production based on rainwater
- Agriculture is affected by droughts and floods
- Lack of information on rainfall
- Insufficient of conventional rain gauges
- Inaccessibility of some localities (insecurity and terrorism)

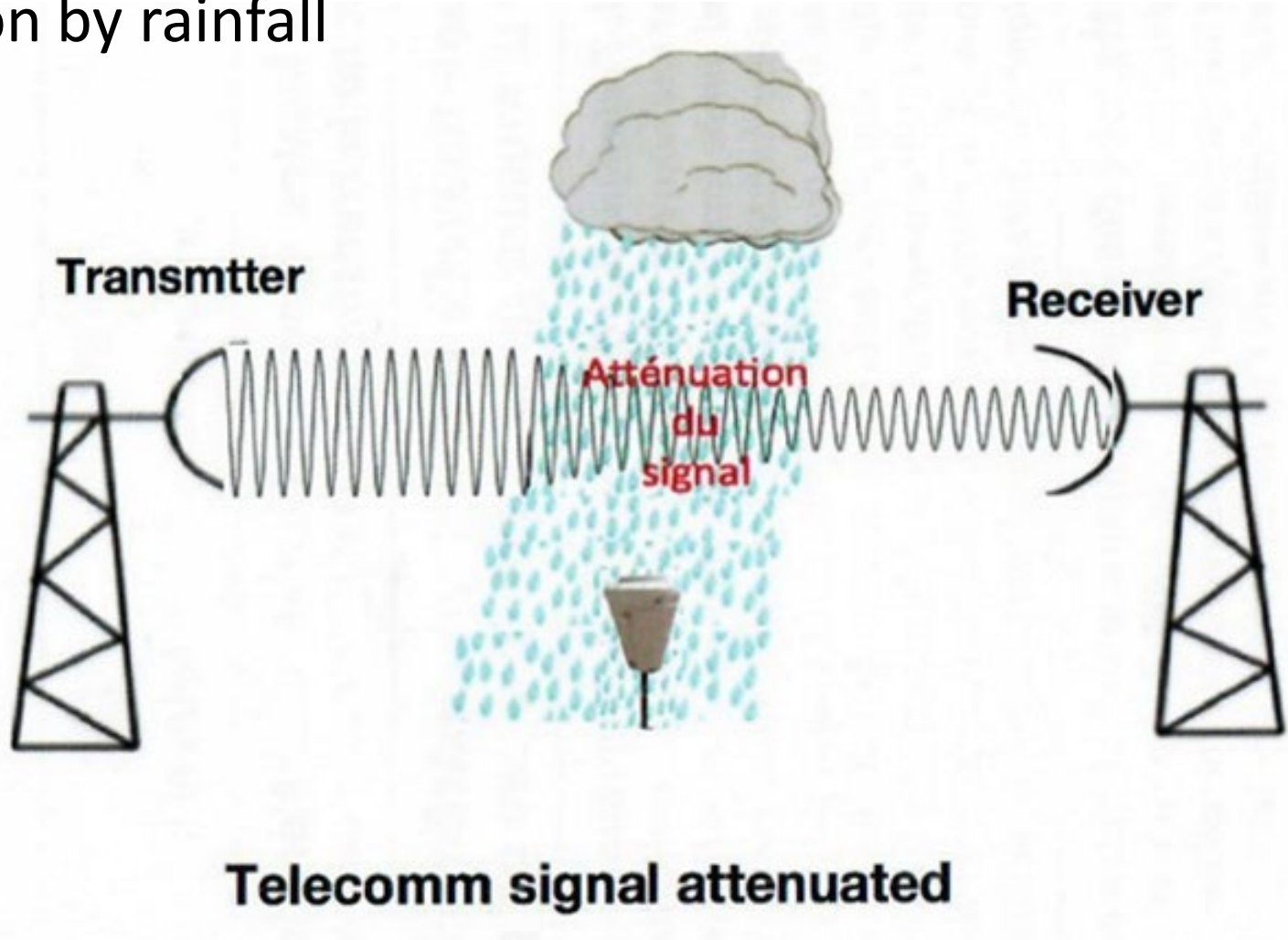
On-going solutions by Accelerator Lab Burkina Faso

Objective: Improve information on rainfall and its characteristics

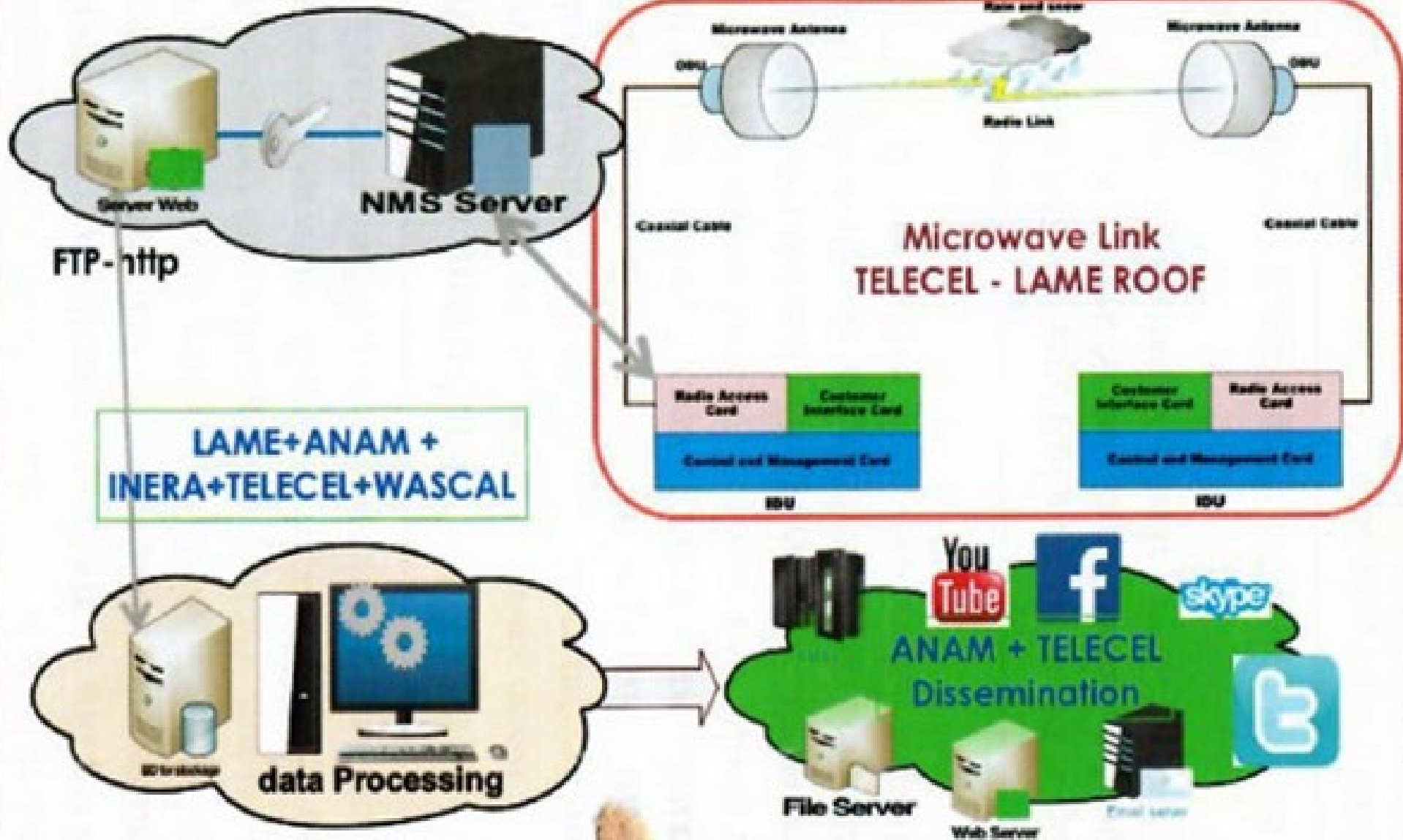
- Detect rainfall events
- Determine the quantity of rainfall in the experimental areas
- Determine the correlation coefficient between the data of the innovative solution and the data of the old approach by rain gauges

On-going solutions by Accelerator Lab Burkina Faso

A novel approach: Technique is based on using microwave signal attenuation by rainfall



TOP-RAINCELL : data collection, Processing and Dissemination



Expertise/technologies expected from Japanese partners

Key Results:

1. Collect data from mobile phone antennas in the area selected for experimentation
2. Process and transform digital data into simple information for Android
3. Develop rainfall application for Android
4. Develop rainfall alert system using SMS for feature phones

Stakeholders of the project

Accelerator Lab Burkina Faso – Project administration and finance support

Laboratoire LAME (Laboratory of Materials and Environment) – Technical and advisory support, Data collection, validation and analysis

TELECEL FASO (Mobile phone carrier) – Technology support, Data collection, validation and analysis

[In-direct stakeholders]

Regulatory authority for electronic communications and posts (ARCEP)

National Agency of Meteorology (ANAM)

National Agency for Communication and Technology Information (ANPTIC)

Ministry of Agriculture, Ministry of Urbanism, Ministry of Transport, Ministry of Water and Sanitation, National Water Office (ONEA), National Society of Electricity (SONABEL), Local Water Committee (CLE)

Accelerator Lab Burkina Faso Team



Eudoxie Zaongo,
Head of Solution Exploration

Focal Point for Stakeholder
Engagement, Knowledge
Management and
Community Participation



Abdoulaye Ouédraogo,
Head of Solution Mapping

Focal Point for Top Rain Cell
Coordination



Carine Kadoum Mossé ,
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Focal Point for Data Analytics,
Data Quality Checks and
Experimental Pilots