WEHUBIT

Learning from

SIT Sahel LAFIA project: Digital information system for transhumance relief in the Central Sahel region

Can digital social innovation support the upscaling and adoption of Climate Smart Agriculture best practices, how and in which context ?

Countries

Burkina Faso, Mali and Niger

Implemented by

Vétérinaires Sans Frontières
Dierenartsen Zonder Grenzen

ACTION CONTRE LA FAIM

Budget

350.000 €

Duration

07/2019-12/2021

Contributions to SDGs

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
10 REDUCED INEQUALITIES

Implemented by

Enabel

Financed by

Belgium
partner in development

PROJECT OVERVIEW

Reason

Burkina Faso, Mali and Niger cover a total area of 2.781.205 km², with a mainly semi-arid to arid climate. Livestock breeding, including **transhumant pastoralism**, is practised by about 80% of the population while 20% derive their livelihood exclusively from it; livestock breeding thus plays a crucial role in the **food** and **socio-economic security** of millions of people.

In 2021, the three countries had 138.592.224 heads of livestock. Livestock keepers regularly and increasingly face **climatic, health and security shocks** (droughts, floods, animal epidemics, conflicts between transhumant pastoralists and farmers, regional instability, etc.), making their mobility and that of their livestock difficult.

In this context of uncertainty and repeated shocks, information (on available resources, conflicts, localised diseases, market prices, etc.) becomes a valuable **decision-making tool** for livestock keepers, particularly transhumant pastoralists.

Digital social innovation

The SIT Sahel Lafia project combined two early warning and monitoring approaches with a view to setting up a **reliable, accurate** and **continuous digital information system**:

1. **Field data collection** (market situation, animal health, water and pasture availability and quality) via 172 sentinel pastoral surveillance sites in 8 regions * of the three countries covered: In key geographical areas, every 10 days, agents of the deconcentrated state services, private veterinarians and stock keeper leaders, equipped with smartphones and solar chargers, send the information collected via the KoboCollect application or the Telerivet system.

* *Niger (Tillabéri, Tahoua and Dosso), Burkina Faso (Eastern, Sahel and North) and Mali (Mopti and Gao)*

2. The **collection of satellite data** (annual biomass production, observation of surface water availability) processed for mapping and statistical interpretation by the project.

These **combined data are verified, validated** and **summarised by the national livestock ministries**. The resulting information is then **disseminated via various tools**, at a frequency adapted to the needs of the target groups:

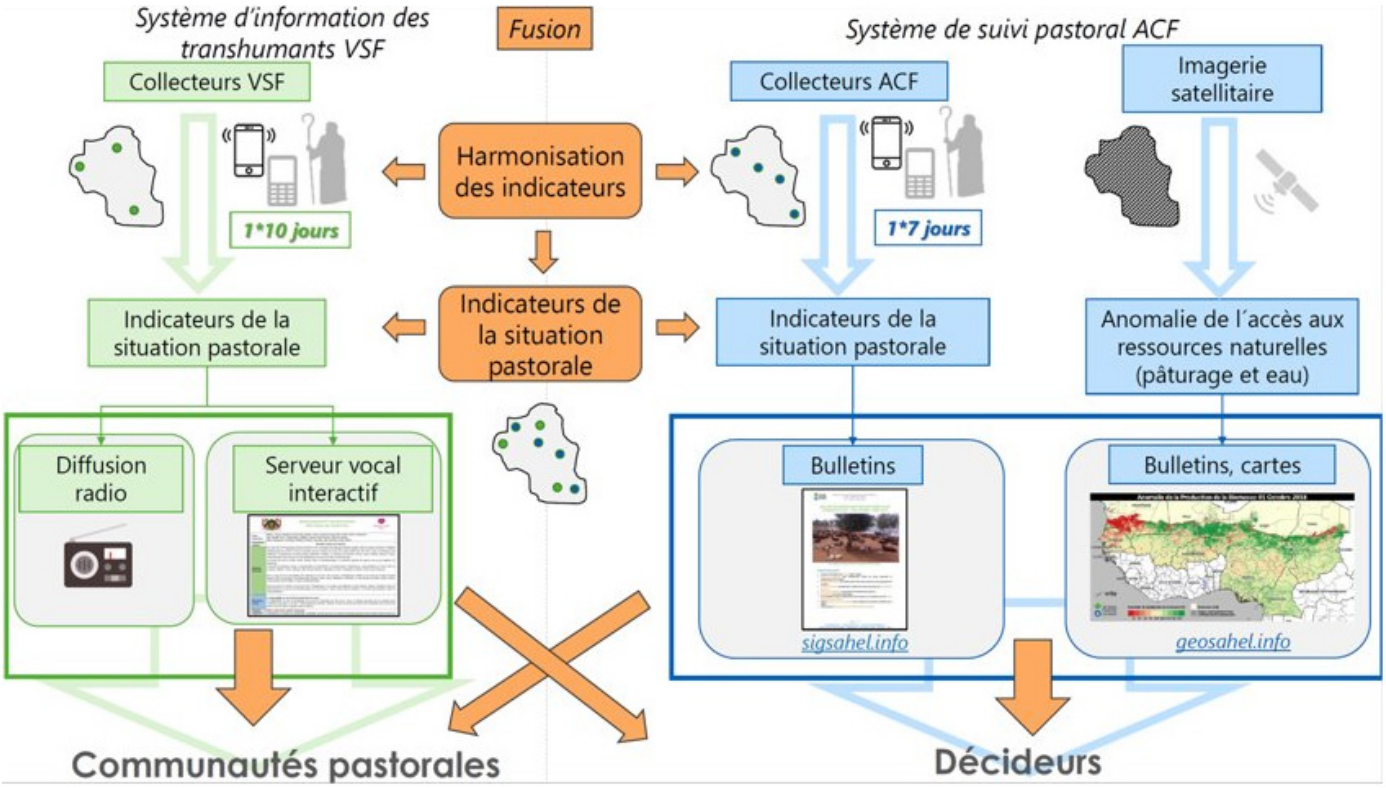
Governmental actors and national, regional and international partner institutions.

- Bimonthly monitoring bulletins are available on the website
- Interactive mapping platform for real-time monitoring of satellite data, available on the geo sahel.info website
- Communication in the framework of the Charter for Food Crisis Prevention and Management (PREGEC) meetings.

Livestock keepers and cooperatives

- Radio messages in local languages via community radio stations, within 4 to 5 days of data collection
- Recorded messages available at real rate (about 100 CFA francs/minute, for messages of 5 to 6 minutes) 24 hours a day on an interactive voice server, in several local languages, within 4 to 5 days after data collection
- Alerts about bushfires, animal epidemics or security incidents. These alerts are sent by the sentinels via a simple message and immediately communicated to farmers and policy makers if they prove to be accurate.

The project also used digital tools to disseminate **climate-smart farming techniques**. To do this, it mobilised mobile phone platforms and community radio stations, among others. Techniques were also disseminated via WhatsApp groups already used by farmers and SD cards shared at



From the perspective of the human rights-based approach (HRBA)

The goal of the HRBA is, on the one hand, to empower **rights holders** – **livestock keepers** and **their cooperatives in the 11 provinces concerned** – to claim their rights and participate in their own development process and, on the other hand, to share capacities with **duty bearers** – the **State** – to respect, protect and fulfil these rights.

The project pursued this two-pronged approach by, on the one hand, making the **collected data available through various channels relevant to the target groups** and, on the other hand, sharing the capacities with all stakeholders, rights-holders and duty-bearers. The available data also provides a basis for communication between rights-holders and duty-bearers and should help to make informed decisions.

2.604.933 livestock keepers (**45%** men and **55%** women) have benefited from information shared by digital means with a view on decision-making

KEY MESSAGES

Many livestock keepers – two thirds of whom have a mobile phone in the project area – were reached via various digital channels **despite the fact that they are scattered throughout the territory, with areas being poorly connected** and **transhumant pastoralists being on the move**.

The digital information system has supported government technical services in **monitoring the pastoral situation** by providing **continuous data** beyond the existing annual campaign. The delivery of data also improved the **quality of Early Warning Systems** * in the project's three countries.

The information – pastoral situation and stock-keeping good practices – is **adapted** to **seasonal issues** and **the geographical area** and thus contributed to improving **adaptation** and **resilience in the face of climate variability** and the increase in weather extremes for the livestock keepers who had regular access to information in the project zone.

Reliable, relevant, real-time and accessible information on the pastoral situation was used by livestock keepers in the project area to guide their choices and make decisions regarding their mobility, **on a regular** or **ad hoc basis**.

Regularly updated information gave representatives of livestock associations and networks **solid** and **verifiable argument**s to contribute to the debate and to ensure representation of livestock issues on national and international political platforms (Early Warning Systems in countries, ECOWAS, PREGEC, 'RPCA' Food Crisis Prevention Network).

** In the 3 countries of implementation, Early Warning Systems are state schemes tasked with monitoring key indicators with regards to deciding on warnings. EWS agents are operating at the decentralised level. They collect, compile and transfer the data and information regarding risks and pre-identified hazards.*

> We have always had to face difficulties, but there are more and more issues to address. Farmers have colonised all remaining space and we, livestock keepers, cannot access pasture land anymore. The insecure situation further complicates access to pasture land. All corridors are obstructed and the journey becomes harder with every transhumance. With the information that is made available to us we can now avoid some of these issues.

Bandé Amidou, 55 years old, livestock keeper and father of four children, leader of the livestock keepers in his community of Rugga

More stories?

LESSONS LEARNED

Inclusion and equity

The **channels for disseminating** the pastoral situation and stock-keeping good practices have been diversified to meet various needs: illiteracy (including digital), lack of access to mobile phones, areas with little or no mobile internet coverage.

Access to information for livestock keepers in the provinces concerned required the **translation** of this information into local languages (good practices, voice messages) and the diversification of radio broadcasts. In Niger, for instance, information is available in Fulfulde, Zarma, Tamasheq and Haussa.

The data collectors at the sentinel sites met **certain age** and **gender criteria**, which are still influenced by the socio-cultural context and the roles & responsibilities assigned to women and youth.

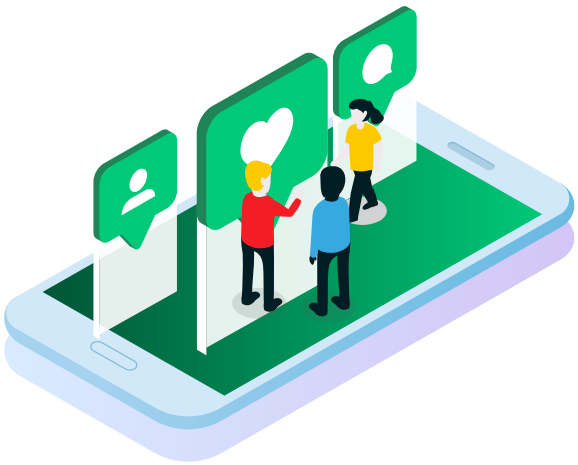
Use of digital tools beyond project's end

The information available via radio, voice server and WhatsApp responds to the needs of livestock keepers because it is timely, contextual and **relevant to the daily challenges they face:** managing animal disease and zoonotic risks, avoiding conflict zones, productivity, improving market access and supply conditions.

The digitised information system is useful on two levels: **civil society** and **ministries & technical services of the State**. It offers, on both levels, up to date, qualitative and relevant information on a continuous basis and constitutes a 'one-stop shop' unequalled in the region.

The **pooling and federation of existing data collection** and **analysis** systems by Vétérinaires Sans Frontières and Action Contre la Faim ensures the stability (on the level of frequency, quality, scope) of the digital information system and the dissemination of data.

By making data available that has already been verified, analysed and synthesised and that is compiled in a web-based format, the digitised information system also responds to the need of **international institutions** (WFP, OECD, ECHO) and actors in the humanitarian and development community to have access to up-to-date, quality information. This data support decision-making and prioritisation of activities.



Stakeholders and users' responsiveness

According to the project's surveys of 745 users, the **dissemination of stock-keeping good practices** and **resilience to climatic hazards** is just as important as information on the pastoral situation. These practices allow livestock keepers to optimise their practices, improve their productivity and animal health and increase their resilience to climate shocks.

The **government played a key role in verifying** – mainly by comparing field data with satellite data – **analysing** and **translating the data**. The institutionalisation and sustainability of the system also depends on its capacity to perform this task. However, technical departments do not always have the necessary **digital skills for this work.** Capacity sharing was needed in governance and data analyses.

PERSPECTIVES

The VSF-B / ACF consortium plans to develop a **smartphone application** (PASTONAVIGATOR) for livestock keepers so they obtain 'real time' georeferenced information on the availability of pasture, the state of surface water sources and the occurrence of bushfire, information which is accessible by satellite imaging. These means of broadcasting will require access to a smartphone, minimum (digital) literacy and timely access to mobile internet for data download, **all of which could be a problem** in rural areas.

The VSF-B / ACF consortium plans to **consolidate, densify and geographically extend the network of data collectors, which will increase the quality, reliability** and **context-specificity of the information**. As the analysis and synthesis of data depends mainly on human resources, this consolidation will have little influence on the speed of dissemination of information via the various tools.

The VSF-B / ACF consortium will continue to ensure the **transfer of knowledge** and **know-how on ICT technologies to the various local actors in the pastoral sector** (managers and technicians of pastoral organisations and ministries in charge of livestock) in order to ensure the effective use of the available data for monitoring and decision-making.

The surveys indicate a need **for information on the texts** and **laws governing transhumance**, which represents a significant volume of information. One way to take this important demand into account would be to analyse which parts are the most important in each text, according to time and season.

With its 2.500.000+ users, the VSF-B / ACF consortium will seek further collaboration with the private sector for support in information dissemination.

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