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# Better information for livestock keepers to facilitate their transhumance in the Sahel



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Mali, Burkina Faso and Niger, situated in the heart of the Sahel, share an arid or semi-arid climate. Livestock keeping is omnipresent there: it is the principal livelihood for vulnerable households. In these three countries of the Sahel, more than eight in ten people practice livestock keeping, and the sector plays an important role in the economy. Animals are therefore vital for the food security and socio-economic security of millions of people.

Nevertheless, livestock keepers face many difficulties. In the countryside, veterinary care services are often insufficient. The livestock keepers have to adapt constantly to the shocks of climate hazards: successive droughts have led to a chronic shortage of grain, water and pastures.

Many of these livestock keepers practice transhumance. For several months of the year, they travel with their herds in search of these essential resources. However, in this area gripped by armed conflicts between communities (linked to competition for access to resources), their journey is often far from peaceful. That is all the more so because they do not always have a clear idea of the situation in terms of security and pastures, although these factors have significant implications for their ability to travel.

## What Vétérinaires Sans Frontières Belgium does

Since 2016, Vétérinaires Sans Frontières Belgium has been developing an **innovative information system intended for transhumant livestock keepers**. Initially designed for Nigerien herders, this tool to facilitate decision-making was extended to Burkina Faso and Mali in 2018.

Before it was set up, the livestock keepers experienced **difficulties obtaining reliable, affordable information about the pastures in good time**. They used scouts to decide where to lead their herds. The scouts went out to observe the quality of the pastures and safety of the routes, then returned to advise the livestock keepers on the route their transhumance should take. On market days, conversations between livestock keepers were also an important source of information.

However, these details were often incomplete and sometimes turned out to be outdated. That was why livestock keepers sometimes had to backtrack or change their itinerary during their transhumance, losing precious time. Therefore the challenge was to speed up the collection, processing and distribution of information.

### Collectors providing input for a voice server

To fill the gaps in traditional practices, we came up with a **digital system** based on a network of information collectors. It was a role that could easily be fulfilled by officials in decentralised government departments, private vets and leaders of livestock keepers who were used to collecting data and located in key geographic areas.

To **make it easier for them to send data**, the collectors received smartphones and solar chargers. Every 10 days, they send the information they have collected using the **application KoboCollect**. The data arrives at a server that our teams and the Ministry of Livestock can access.

Once the data has been validated and summarised, **broad-casting by local radio stations** can begin. The information is also **accessible 24 hours a day on an interactive voice server** that the livestock keepers can call for a few francs. Since most livestock keepers are illiterate, the information is translated into local languages and made available in spoken form. In Niger, for example, it is available in Fulfuldé, Zarma, Tamasheq and Hausa.

### Key information

According to our research, more than two thirds of livestock keepers in the Sahel have a mobile phone. So all they need to do is call the server and key in the number for the information they want. The data available in the voice menu includes localisation of the pastures and water sources, the concentration of livestock around them and even the value of animals at market.

The system also makes it possible to give 'alerts' of events such as bush fires, outbreaks of animal disease or security incidents by leaving a simple message on the voice server. If these alerts turn out to be accurate, they are immediately passed on to the livestock keepers and political decision-makers. In the event of disease, they can trigger a national contingency plan. Private veterinary services are also informed, in order to take charge of cases and prevent the disease from spreading.

Last but not least, the system also acts as a tool for awareness raising and training. Specifically, it makes it possible to spread good livestock-keeping practices adapted to changes in the climate. The livestock keepers also learn how to keep their animals fed all year round, in spite of the increasingly severe droughts, in ways that respect the environment.

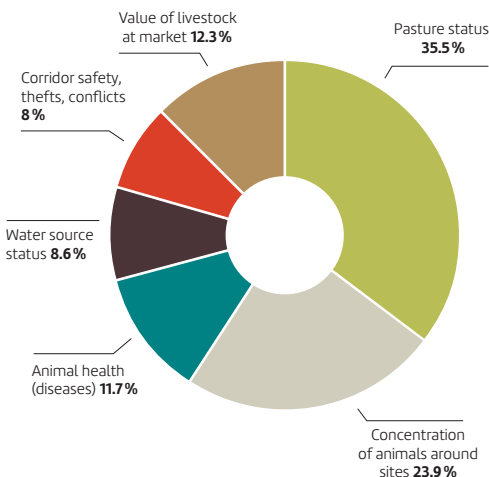
## Results

At present, the transhumance information system is fed into by **107 data collectors**: 47 in Niger, 33 in Burkina Faso and 27 in Mali. They report information about **187 grazing sites**. This gives almost **3 million livestock keepers** access to the information available on the interactive voice server that is also broadcast by our **23 partner radio stations**.

Thanks to the alert system, cases of pasteurellosis, Newcastle disease, strangles and lumpy skin disease have been signalled in good time, avoiding several epizootics (animal epidemics).

Proportion of time spent listening to the server according to the type of information available

Case: Niger, 2020



### Key figures

**107**  
information collectors  
spread over 3 countries

**187**  
grazing sites  
monitored

**45**  
public services  
managers  
trained in data  
analysis

**53**  
summaries  
of pastoral  
information  
broadcast in 2020  
via radio stations  
and the voice server

**23**  
local radio stations  
involved in broadcasting  
information

**2,749**  
phone calls recorded  
on the interactive voice  
server in 2020

In total  
**3 million**  
livestock keepers  
have had access to the  
transhumant information  
system



## Lessons learned

The success of the transhumance information system proves that new technologies can make a genuine contribution to **improving livestock keepers' living conditions**. Now that they have access to the information they need to decide on the best transhumance route, livestock keepers save time and resources. They are also less exposed to risks of conflicts or animal disease epidemics.

However, **insecurity in the region** makes it necessary to diversify the stakeholders and adapt the tool to each area. That is why each national system has a few **specific features** to tailor it better to local realities, whether they are social, economic or geopolitical in nature.

Two elements guarantee the long-term success of the system following our intervention:

- **A 'self-financing' system:** the costs of collection, analysis and transmission of data are financed by calls to the server: a charge is made for this service while keeping it accessible.
- **An inclusive approach:** the different stakeholders are involved from the outset. The collectors, technical services, vets, livestock keepers and local radio stations can all express their needs. By taking their wishes into account, we can ensure that they will adopt the system and play their role in it to the full.

For the system to be functional, it is vital to use **tools suited to the target group**. The voice server and community radio stations proved to be the most appropriate channels for reaching livestock keepers, the majority of whom are illiterate but have mobile phones.

In future, we would like to set up an **interconnected regional system** that integrates the three national systems, in order to facilitate cross-border transhumance. To achieve this, it will be crucial to involve intergovernmental regional structures and umbrella livestock keepers' associations.

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