

HUMANITARIAN INNOVATION FUND

Final Report

Organisation Name	Vets Without Borders - Belgium
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Project Title	An innovative Methodology and Tool for Livestock Surveys in Sub-Saharan Africa
Problem Addressed / Thematic Focus	<p>One of the problems of livestock development programs in Sub-Saharan countries is the lack of reliable zootechnical data on traditional livestock farming to allow proper monitoring and impact assessment of major crisis and/or of a program on livestock based livelihoods.</p> <p>The thematic focus intends to implement a tool, based on a retrospective survey, which gives the zootechnical performances of livestock over one year. This tool is intended as a pragmatic tool, adapted to the conditions of Sub-Saharan traditional farms. From this perspective, it aims to contribute to a credible assessment of the results and effects of the actions and to increase their effectiveness through lessons learnt.</p>
Location	East and West Africa
Start Date	01/01/2014
Duration	6 months
Total Funding Requested	19.848 GBP
Partner(s)	Regional offices of VSF-B in Niamey and Nairobi and their local partners for feedback and tests of the tool
Total Funding	Total budget: 43.491 GBP Other contribution: 23.642 GBP
Innovation Stage	First phase (1 st small grant) : Invention Second phase (second grant) : Diffusion
Type of Innovation	Process for livestock-surveys and production of zootechnical performances monitoring software
Project Impact Summary	All interventions that aim small scale livestock farming development and treatment of humanitarian crisis due to the death of livestock (natural disasters: flows, droughts...) in Sub Saharan Africa.

Reporting Period	01/01/2014 – 30/06/2014
Total Spent	44.517 GBP

ACTIVITIES CARRIED OUT

The activities carried out since the official start of Project ZAK at the beginning of January 2014 covered all the actions planned at the time of the initial meeting. The activities are shown below in chronological order.

Table 1: List of activities carried out

NO	Date	Location	Activities	Comments
1	January-March 2014	Belgium	Development of the ZAK software (operating version for tests in the field) Internal test of the software and changes	Operating version available for the tests
2	January	Belgium	Establishment of engineering training and implementation of the surveys	Completed
3	January-March	Belgium	Drafting of support documents for the training (5 modules) and methodology guides (in French and English)	Completed, but needs the English version improved
4	April	Burkina Faso	1 st test in Francophone Africa: development of the engineering training, approval of the methodology and materials, software testing	Excellent assessment of ZAK Software adjustment
5	May	Niger	2 nd test in Francophone Africa (types of partners and different contexts)	Excellent
6	June	Uganda	3 rd 2 nd test in Anglophone Africa (+ types of partners and different livestock farming contexts)	Good: several organizational problems
7	June	Belgium	Overall assessment and reporting	Completed

Achievements

The status of completion of the activities and their overall good quality has allowed the following interim results:

- A functional, user-friendly software
- An effective methodology for carrying out the retrospective surveys and collected operating data
- Five modules in PowerPoint for training materials
- Three specific explanatory brochures for different categories of actors (deciders, project coordinators, researchers)
- Three series of surveys done in the field to test the tools in different contexts with different actors

The specific objective aimed at for phase 1, namely, “Creating a software for zootechnical monitoring adapted to traditional livestock farming in Sub-Saharan Africa” has been carried out since the tool was created and adapted several times in terms of feedback coming from different actors involved in the tests in the field. The overall evaluation of the different components of ZAK is excellent (see annex 4), as the synthesis below shows.

Table 2: Evaluation of the principal elements of ZAK by the different actors (scores in %)

Actors	Software Evaluation					Overall Eval.
	Training Manuals + User guides	Methodological Approach	Survey materials	User-friendliness	Operation	
Burkina Faso	89%	79%	89%	90%	67%	90%
Niger	86%	94%	84%	93% ¹	90%	94%
Uganda	81% ²	81%	90%	88%	88%	84% ³
Average	85%	85%	88%	90%	82%	89%

The great advantage of ZAK by comparison to other follow-up methods of the zootechnical performance of cattle are identified below:

- Ease of data collection
- Reduced resource mobilization (financial, human and material) in the carrying out of the surveys
- The speed of carrying out a survey campaign
- The active participation of livestock farmers because they quickly see their own interest and are drawn to the fun aspect of the “game”
- The feasibility of collected and encrypted data due to the numerous verification mechanisms
- The ease and user-friendliness of the software
- The very quick encrypting and immediate availability of the results

Methodology

The methodology used to implement a tool adapted from the zootechnical follow-up has proven to be very good. It consists of concurrently producing the operating software and the different methodological materials as well as the training modules.

(i) The ZAK software has been organized according to a logical sequence in coherence with the stages of collection and utilization of the data. Several internal tests (at the level of the binomial designer-developer) allowed the delivery of a functional version for the test phases in the field. As a result, the real bugs were avoided and utilizing the results was possible in the 1st test.

(ii) The accompanying brochures were produced (in French and English) in order to support the training of the researchers and coordinators. The training modules were created on the basis of a consideration of engineering training. This provides for a mix of

¹ The great rise in the score of the operation of the software is explained by the changes made to the software after the first test

² The less favorable score is linked to problems in translation and to the professional qualifications of the participants

³ The weaker score in evaluation and usefulness of ZAK stems from the fact that the majority of participants are not in the field of livestock farming

theoretical reports and practical application (demonstrations, carrying out surveys, encrypting data in the software and the utilization of the data).

The testing phase included participatory evaluations by homogeneous groups at two key moments: (i) after the carrying out of the field surveys (assessment of the methodology, utilization of survey materials, the behavior of the livestock farmers, the feasibility...) and (ii) at the end of the operating data (overall evaluation of ZAK).

This approach of establishing the tests has proven very pertinent in so far as the data, the lessons learned and the suggestions from different actors have allowed the improvement of the rolling out of the following test and bringing about certain corrections to the software.

Major Obstacles

Several obstacles have arisen during this phase:

- 1) The relatively short duration of execution (6 months) in comparison to the importance and diversity of the planned activities. Fortunately, this difficulty had been anticipated by the binomial “designer-developer” who had begun the tasks of creating and producing the tools (including the software) since September 2013.
 - 2) The problem of translation of the different tools due to the use of volunteers whose native language is not English and who do not know the technical terms for livestock farming. This situation has brought about the delay of certain training materials and a sometimes questionable quality in some documents submitted to the participants. In the framework of phase II, translations should be checked by native speakers who have a good understanding of livestock farming and computer science.
 - 3) The lack of respect of some instructions for carrying out the surveys, i.e. the prior deficiency of information at the survey sites, the disrespect of selection criteria of the participating livestock farmers in the surveys... Fortunately, these weaknesses only had a limited impact on the quality of the collected data due to control measures put in place at the time of the surveys.
 - 4) The difficulty of recording the data on collection sheets. This crucial stage requires a certain expertise, knowledge of zootechnology as well as a concentration on the part of those in charge of recording. The recommendations for the future include: (i) a review of the current collection file to improve visibility, (ii) the support for 2 researchers to record the data in the collection file and to find errors, (iii) the establishment of complementary verification mechanisms during the survey.
 - 5) Not all the researchers were on the level required to carry out the zootechnical follow-ups; this was principally the case in Uganda where 6 of the 11 researchers performed a function unrelated to livestock farming.
 - 6) The use of the software collided with several difficulties: an insufficient number of computers or computers without the necessary configuration (notably with respect to screen resolution); researchers not have enough knowledge of Excel.
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BENEFICIARIES/ HUMANITARIAN INTERVENTIONS IMPACTED

The principal beneficiaries of this test phase are the partner organizations that have acquired the skills in zootechnical follow-up and that have mastered the methodology, the various collection tools and the encryption and operating software. Yet, a consolidation of these assets is needed.

These organizations belong to different categories of actors, as the table below shows:

Table 3 : Distribution of partner organizations according to their area of intervention

Country	Ministry in charge of livestock farming		Local NGO Partners of VSF-B		VSF-B Projects		Other Organizations (specify)	
	STD	Central Services	Interv. in Humanitaire	Non-interv. in humanit.	Interv. in Humanitaire	Non-interv. in humanit.	Interv. in Humanitaire	Non-interv. in humanit.
Burkina Faso	1	1					Proj. Azawak (LuxDev)	
Niger		1	2		1	1		
Uganda	1			2	1			(3)
TOTAL :	2	2	2	2	2	1	1	

The purely humanitarian NGOs did not participate in this test phase. This essentially results from problems in time and resource availability (human and financial) in order to ensure the collaboration of these organizations with which VSF-B has no direct link. This stage is planned for phase II.

However, it should be noted that the partners that did participate in this test phase are all called to play a role in case of a humanitarian crisis. In fact, they will be able to support the humanitarian organizations to establish the effects of a crisis on the cattle of the affected populations, to develop action plans and follow the results.

The second beneficiaries are the surveyed livestock farmers, a large proportion of which has understood the interest of such a zootechnical follow-up in order to better manage their livestock.

PARTNERSHIPS AND COLLABORATION

In order to fully appropriate the ZAK tool and its methodology, VSF-B has always closely involved local actors in the carrying out of three series of surveys. In the three countries, the governmental (central or decentralized) services for livestock farming have fully supported the initiative through their very positive consideration and their active participation in the test and the evaluation of the tool and its methodology. That testifies to their motivation for a larger utilization of this tool.

In Burkina Faso, the framework of collaboration was that of a support project in livestock farming conducted by the government and Luxembourg cooperation.

In Niger and Uganda, the surveys were conducted in the framework of already established partner conventions between VSF-B and its local partners, through which support projects in livestock farming were conducted. With these same partners, VSF-B concluded specific conventions in the framework of testing the tool and the ZAK methodology.

In the two situations, the different local actors have benefited from the adopted training in order to master the diverse elements (the methodology, the materials, the software) needed for the implementation of the surveys. Moreover, they have contributed to evaluating the methodology and the tool to improve it.

Besides the specific character of the training, the newly acquired knowledge and skills in livestock farming fit into the broader approach promoted by VSF-B of capacity building with a view to greater autonomy and empowerment of the local (governmental and civil society) actors.

Dissemination

Although the spreading of innovation was not a part of the objectives of phase I, a kind of influence has nonetheless started by the integration of different categories of actors in the training and testing of the tools. Thus, the staffs of the partner organizations (NGO of the South) and the directors of the central services of the ministry in charge of livestock farming (in Niger and Burkina Faso) should play a role in adopting and spreading ZAK within their organizations. In addition, the reports from each of the 3 tests, carried out very quickly after the mission, contain all the elements that allow an understanding and evaluation of ZAK.

Transferability

The distribution of ZAK will not truly be done until certain conditions are fulfilled:

- Raising the awareness of the national deciders (Ministries in charge of livestock farming) and international deciders (those in charge of international ONGs, cooperating agencies...) in ZAK
- Producing a methodological support for organizations eager to use the ZAK tools (training and running the first surveys)
- Ensuring the training of trainers by country in the methodology and ZAK tools
- Setting up a central organization that ensures the coordination of ZAK in the areas of distribution, support and centralization of problems or needs (with a view to regular adaptations of the tool)
- Emphasizing the respect of the basic principles of ZAK, particularly in the choice of the team in charge of the zootechnical follow-up and the selection of livestock farmers to survey

Annexes:

Annex 1: Participants in the testing stages of ZAK

Annex 2: Assessment of field surveys

Annex 3: Appraisal of the stage of investigation (data collection)

Annex 4: Overall appraisal of the elements of the ZAK

Annex 5: List of the documents produced

Annex 1: Participants in the testing stages of ZAK

Date	Country	Agro-climatic zone	Participants						
			Livestock Dec. Techn. Serv.	Ministry Animal Husbandry	Projects VSF-B	Other Projects	Partners VSF-B	Various (not livestock)	Total
April 2014	Burkina Faso	· Sahelian	9	5		5 (Azawak)			19
		· Sudano-Sahelian							
May 2014	Niger	Sudano-Sahelian		2	3		4		9
June 2014	Uganda	Semi-aride	3		4			4	11
TOTAL :			12	7	7		4	4	39

Annex 2: Assessment of field surveys

Country	Number villages surveyed	Breeders surveyed				Livestock		
		Present	Selected	M	F	Cattle	Sheep	Goats
Burkina Faso	14	87	72	64	18	782	95	97
Niger	12	115	115	85	30	272	169	286
Uganda	12	112	112	107	5	578	33	258
Total	38	314	299	256	53	1632	297	641

Annex 3: Appraisal of the stage of investigation (data collection)

Country	Appreciation by breeders		Appreciation by investigative teams		
	Level of understanding of the game	Interest in ZAK approach	Reliability of data collected	Quality of registration in data sheets	Data exploitation
Burkina Faso	81%	84%	96%	83%	96%
Niger	75%	83%	78%	89%	94%
Uganda	66%	72%	69%	75%	88%
Total	74%	80%	81%	82%	93%

Annex 4: Overall appraisal of the elements of the ZAK

Elements of appreciation	Burkina Faso	Niger	Uganda	Average
1. Methodology ZAK	84%	90%	81%	85%
1.1. Clarity of instructions:	89%	86%	82%	86%
<i>(I) Methodological Guide</i>	96%	89%	69%	85%
<i>(II) Memo for investigators</i>	92%	88%	88%	89%
<i>(III) User Guide of the Software</i>	79%	82%	88%	83%
1.2. Appreciation of the methodology	79%	94%	81%	85%
2. Conduct of investigations	91%	82%	76%	83%
2.1. Supports for surveys:	89%	84%	90%	88%
<i>(I) Survey sheets (presentation)</i>	83%	86%	88%	86%
<i>(II) Thumbnails (drawings periods and reasons for leaving)</i>	83%	86%	88%	86%
<i>(III) Table and game tokens</i>	100%	81%	94%	92%
2.2. Notetaking (holding the sheet collection)	83%	89%	75%	82%
2.3. Mastery of the methodology and tools by investigators	96%	85%	75%	85%
2.4. Understanding by farmers	92%	75%	69%	79%
2.5. Reliability of the collected data	96%	78%	69%	81%
3. Use of the software	86%	92%	88%	89%
3.1. Overall presentation	96%	93%	81%	90%
3.2. Ease of use / usability	83%	92%	94%	90%
3.3. Running of the software	67%	90%	88%	82%
3.4. Quality / relevance of provided data (zootechnical parameters, ...)	96%	94%	88%	93%
4. Overall interest of ZAK	90%	94%	85%	89%
4.1. Overall Performance	79%	93%	75%	82%
4.2. Utility / interest to your organization	100%	95%	94%	96%
Overall appreciation of ZAK:	88%	90%	82%	87%

Annex 5: List of the documents produced

A. Information documents on ZAK

- 1) Presentation note
- 2) Methodology
- 3) Guide for Surveyors

B. Slide show (PowerPoint) for the support training

- 4) Module 0 Preamble to ZAK training
- 5) Module I Introduction
- 6) Module II Methodology
- 7) Module III Surveys Guide
- 8) Module IV Processing Surveys
- 9) Module V Software Manual