

REDISSE in Benin and Lessons Learned for the Management of Public Health Emergencies after Five Years of Implementation

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Abstract

Introduction: Benin was embarked on phase 3 of the REDISSE Benin project (Regional Disease Surveillance Systems Enhancement) which began in 2018. The objectives were in five key components namely, Surveillance and health information; Laboratory capacity building; Emergency preparedness and response; Human resources management for effective disease surveillance and epidemic preparedness; and Institutional Capacity Building, Project Management, Coordination and Advocacy. After five years of implementation, this study aimed at the documentation of lessons learned and best practices. **Methods:** A descriptive cross-sectional study. Apart from individual semi-structured interviews, a thematic workshops bringing together the project's main stakeholders recruited on an exhaustive way by component to identify and validate lessons learned, good practices and propose improvement mechanisms to be taken into account by the sector. Criteria were set up and used to validate best practices and lessons learned. **Results:** A total 54 (Surveillance workshop), 47 (Preparedness & response workshop), 53 (Human Resources workshop), 26 (Laboratories workshop) participated to the thematic workshops, and five interviews. The good practices (33: 9 for animal health, 7 for human health and 17 crosscutting) and lessons learned (10: 3 for animal health and 7 for human health) have been identified and have been the subject, depending on the case, of proposals for improvement or conditions necessary for their maintenance. **Discussion:** The richness of a project lies not only in the immediate achievement of its results, but also and above all, in its usefulness for similar interventions, whether in the local, regional, national or international context. It is in this context that the REDISSE project has set out to make public the various lessons learned and best practices from the implementation of its activities over a period of some

five consecutive years.

Keywords

Public Health Emergency Events, Preparedness and Response, Capitalization, REDISSE, Benin

1. Introduction

The REDISSE Benin project (Regional Disease Surveillance Systems Enhancement) is a national project whose implementing structures (IS) are the Ministry of Health (MoH), the Ministry of Agriculture, Livestock and Fisheries (MALF) and the Ministry of Living Environment and Sustainable Development (MLESDD). The project aims to strengthen national and regional intersectoral capacities for collaborative disease surveillance and epidemic preparedness in West Africa, by overcoming weaknesses in human and animal health systems that hamper effective disease surveillance and response, and, in the event of an emergency, to provide an effective immediate response.

The project comprises five (05) components: (C1) Surveillance and health information. (C2) Laboratory capacity building. (C3) Emergency preparedness and response. (C4) Human resources management for effective disease surveillance and epidemic preparedness. (C5) Institutional Capacity Building, Project Management, Coordination and Advocacy.

Benin was embarked on phase 3 of the project, which began in 2018. With the advent of the COVID-19 pandemic, the project underwent a number of readjustments to cope with it, the last of which was the additional funding of December 2022 that came into effect in February 2023 in order to achieve all the unmet indicators and strengthen the veterinary health mandate over the remaining duration of the project, the closing date of which was March 31, 2024.

Now that it has come to an end, it has become important to document its implementation, in order to draw out the results and lessons learned and share them with all stakeholders, with a view to improving preparedness and response policies and practices throughout the ECOWAS region. It is with this in mind that the present study has been initiated to capitalize on the achievements and document the best practices of the REDISSE project in Benin.

2. Methods

This was a descriptive cross-sectional study involving the main stakeholders in ISs that were recruited on an exhaustive way. As recommended in the literature [1] [2], the best way to identify lessons learned and good practices is to reflect with the various stakeholders using participatory methods. In addition to semi-structured individual interviews, we mainly organized thematic workshops by component, to identify and validate lessons learned, good practices and propose

improvement mechanisms to be taken into account by the sector.

Discussions were conducted in groups, bringing together experts in animal and human health. The environmental health experts were divided among the groups thus formed. For each theme, three groups were set up, two for human health and one for animal health. Work was organized starting with a session to clarify the concepts of capitalization, lessons learned, best practices and SWOT (strengths, weaknesses, opportunities and threats) analysis, community participation and empowerment.

A lesson learned is a mechanism for documenting learning and sharing it with others [1] [2]. It is an essential contribution to knowledge building based on what worked and what didn't. It should describe what to do or avoid in similar projects. It should describe steps to be taken or avoided in similar projects. Lessons learned are an essential contribution to good practice, which is often a concise way of presenting specific information from the knowledge base. A good practice is a successful experience that has been tested and reproduced in different contexts, and can therefore be recommended as a model. It deserves to be shared so that more people can adapt and adopt it.

The groups proceeded to analyze strengths and weaknesses, opportunities and threats (SWOT), specify good practices and propose guidelines for the improvement of acquired knowledge/good practices. The tools used for the group work are presented in **Table 1**.

Table 1. Project assessment criteria.

Criteria	Questions to answer
1. Relevance	1.1. To what extent have the actions carried out by the project in this component contributed to achieving its objectives?
	1.2. To what extent did the activities carried out by the project in this component correspond to the needs of the beneficiaries/partners?
	1.3. How have the activities in this component been accepted and appreciated by the beneficiaries/partners?
	1.4. Did the beneficiaries/partners have control over the activities carried out under the component?
	1.5. Had the beneficiaries/partners benefited from the capacity building required to implement the activities in this component?
	1.6. To what extent did the activities carried out under this component contribute to building the overall context of beneficiaries/partners?
2. Effectiveness	2.1. What is the level of achievement of the project's objectives and results, and their impact on the players in this component?
	2.2. To what extent has the component achieved its objectives and improved the living/working conditions of beneficiaries/partners?
	2.3. What is the level of completion of the component's activities?
	2.4. What are the gaps between expected and achieved results?
	2.5. What are the expected and unexpected effects?
	2.6. What internal/external factors facilitated or hindered the achievement of results?
	2.7. Were the results sufficient and necessary to achieve the component's objectives?
3. Efficiency	3.1. Have the amounts allocated to the component achieved the expected results?
	3.2. Are resources in line with activity completion rates?
	3.3. Have deadlines (planning and implementation of actions) been met?
	3.4. How cost-effective are the activities carried out?

Continued

4. Coherence	4.1.	Are the component's actions in line with the government's development plan?
	4.2.	Do the actions under the component align with the objectives of the "One Health" approach in particular and those of sustainable development (SDGs) in general?
	4.3.	Are the component's objectives clear and aligned with REDISSE's objectives and the IS's overall mission?
5. Sustainability	5.1.	To what extent have the beneficiaries/partners of the component been empowered to help sustain the changes achieved?
	5.2.	What mechanisms and arrangements have been put in place to ensure the sustainability of the component's actions in the absence of REDISSE support?
6. Effects/Impacts	6.1.	Has the project's support for the component had an impact and improved the living/working conditions of beneficiaries/partners?
	6.2.	What processes have brought about the changes observed in terms of effects/impacts in the lives of beneficiaries/partners?

The items of each criterion were scored 1 and 0 according to whether they were present or not. To be validated, each criterion had to combine at least 75% of the score assigned to it. The criterion was classified as "strong" if the total of the scores combined was at least 75%, and as "weak" if the total of the scores combined was less than 75%. The "strengths" selected were examined in the light of the good practice criteria, which are: i) proven and successful, ii) environmentally, economically, socially and temporally sustainable, iii) gender-sensitive, iv) technically feasible, v) the result of a participatory process, vi) replicable and adaptable. **Box 1** defines each of the criteria for characterizing good practice. To be considered a "good practice", the "strengths" had to meet all the criteria, otherwise it is classified as a "lesson learned".

Box 1. Good practice characterization grid.

A practice was considered good if, and only if, it:

- ⇒ *has a proven track record and good results: it has proved its strategic relevance as the most effective means of achieving a specific objective, it has been successfully adopted and has had a positive impact on individuals and/or communities.*
- ⇒ *is environmentally, economically, socially and temporally sustainable: it meets current needs, particularly the essential needs of the world's poorest people, without compromising the ability to meet future needs. The component's beneficiaries/partners have been empowered to help sustain the changes achieved.*
- ⇒ *is gender-sensitive: a description of the practice must show how the men and women involved in the process have been able to improve their livelihoods.*
- ⇒ *is technically feasible: technical feasibility is the basis of "good practice": it's easy to learn and implement.*
- ⇒ *is the result of a participatory process: participatory approaches are essential in generating a sense of ownership of decisions and actions, and are key to empowerment.*
- ⇒ *is reproducible and adaptable: it must have reproducibility potential and therefore be adaptable to similar objectives in different contexts.*

Once the best practices had been identified, a summary table was drawn up to provide an overview and suggest possible areas for improvement (**Table 2**).

Table 2. Summary of good practice characterization.

Denomination of good practice	Analysis grid		Elements for improvement
	Yes	No	
Proven and successful			
Is environmentally, economically and socially sustainable over time			
Is gender-sensitive			
Is technically feasible			
The result of a participatory process			
Is reproducible and adaptable			

In plenary sessions, presentations included a SWOT analysis of the project in the sector, the identification of good practices in the sector and, on the basis of the proposed analysis grid, the characterization of these good practices. At the same time, the groups proposed guidelines for the improvement/consolidation of best practices. Discussions occur after each group presentation to ensure all the criteria have been taken into account for the validation of best practices and lessons learned.

By “management” we mean prevention, preparedness, response and rehabilitation (of public health emergencies).

The data collected, essentially qualitative, was subjected to a content analysis based on the criteria set up as presented in **Box 1** and cross-checked by triangulation with the individual semi-structured interview results in order to bring out the major ideas emerging from each working group and meeting the mission’s objectives. Common elements to the various technical components were identified, thereby refining the number of best practices.

Semi-structured individual interviews were conducted with a number of players chosen on the basis of their roles in the project, and who were not involved in the thematic workshops.

Thematic workshops procedure

The thematic workshops took place from January 30 to February 2, 2024, devoting a full day to each theme. Generally starting at 9am, the workshops ended at 5pm local time. Group work lasted between 2 and 3 hours 30 minutes, depending on the theme.

3. Results

A total 54 (Surveillance workshop), 47 (Preparedness & response workshop), 53 (Human Resources workshop), 26 (Laboratories workshop) participated to the thematic workshops, and five semi-structured interviews. **Tables 3 - 5** and **Table 6** show the profile and number of participants per thematic workshop. The interviewees were the Procurement Specialist (PS) and the Administrative and

Financial Manager (AFM) within the project, followed by three participants, departmental authorities, present at the thematic workshops.

Table 3. Breakdown of participants by sector and region—Surveillance workshop.

Variables	Modalities	Frequencies	Proportions
<i>Monitoring and information systems for early detection and analysis</i>			
Sex	Male	37	68.52
	Female	17	31.48
	Total	54	100.00
Sectors	Human health	30	55.56
	Animal health	14	25.93
	Environment	03	05.55
	Local Authorities	02	03.70
	Partners (FAO, USAID)	05	09.26
	Total	54	100.00
Regions	Alibori	03	05.56
	Atacora	02	03.70
	Atlantic	04	07.41
	Borgou	06	11.11
	Collines	02	03.70
	Couffo	03	05.55
	Donga	03	05.55
	Littoral	21	38.89
	Mono	04	07.41
	Ouémé	02	03.70
	Plateau	01	01.86
	Zou	03	05.56
Total	54	100.00	

Local authorities, mainly prefectures, are involved in the monitoring process.

Table 4. Breakdown of participants by sector and region—Preparedness & response workshop.

Variables	Modalities	Frequencies	Proportions
<i>Emergency preparedness and response</i>			
Sex	Male	32	68.09
	Female	15	31.91
	Total	47	100.00
Sectors	Human health	29	61.70
	Animal health	13	27.67
	Environment	2	04.25
	Local Authorities	2	04.25
	Partners (FAO, USAID)	1	02.13
	Total	47	100.00
Regions	Alibori	03	06.39
	Atacora	01	02.13
	Atlantic	03	06.38

Continued

	Borgou	04	08.51
	Collines	02	04.25
	Couffo	03	06.38
	Donga	03	06.38
	Littoral	19	40.43
	Mono	03	06.38
	Ouémé	02	04.25
	Plateau	01	02.13
	Zou	03	06.39
	Total	47	100.00

Local authorities, mainly prefectures, are involved in the preparation and response process.

Table 5. Breakdown of participants by sector and region—Human Resources workshop.

Variables	Modalities	Frequencies	Proportions
<i>Human resource management for effective disease surveillance and epidemic preparedness</i>			
Sex	Male	36	67.92
	Female	17	32.08
	Total	53	100.00
Sectors	Human health	33	62.26
	Animal health	14	26.41
	Environment	03	05.66
	Local Authorities	02	03.77
	Partners (FAO, USAID)	01	01.90
	Total	53	100.00
Regions	Alibori	03	05.66
	Atacora	02	03.77
	Atlantic	03	05.66
	Borgou	07	13.21
	Collines	02	03.77
	Couffo	02	03.77
	Donga	03	05.66
	Littoral	20	37.73
	Mono	04	07.55
	Ouémé	03	05.66
	Plateau	01	01.90
	Zou	03	05.66
Total	53	100.00	

Local authorities, mainly prefectures, are involved in the human resources management process as part of epidemic management.

Table 6. Breakdown of participants by sector and region—Laboratories workshop.

Variables	Modalities	Frequencies	Proportions
<i>Laboratory capacity building</i>			
Sex	Male	17	65.38
	Female	09	34.62
	Total	26	100.00
Sectors	Human health	12	46.15
	Animal health	10	38.47
	Environment	02	07.69
	Local Authorities	-	-
	Partners (FAO, USAID)	02	07.69
	Total	26	100.00
Regions	Alibori	-	-
	Atacora	-	-
	Atlantic	01	03.85
	Borgou	04	15.38
	Collines	01	03.85
	Couffo	-	-
	Donga	01	03.85
	Littoral	15	57.69
	Mono	01	03.85
	Ouémé	01	03.84
	Plateau	-	-
	Zou	02	07.69
	Total	26	100.00

Best practices

Table 7 presents the various best practices by theme.

Table 7. Summary of best practices.

#	Best practices	Elements for improvement
<i>Monitoring and information systems for early detection and analysis</i>		
<i>Animal health</i>		
1	<i>Priority zoonoses case definitions posted by private veterinarians</i>	<ul style="list-style-type: none"> ■ Make veterinary practices and PPVs full partners in this good practice; ■ Produce a pocket-sized brochure of case definitions to be distributed to all stakeholders, in particular PPVs and veterinarians who do not have an office in the zones.
2	<i>Training in the use of surveillance guides and CSSAZD prior to any training in field epidemiology (FETP, ISAVET)</i>	<ul style="list-style-type: none"> ■ Ensure equipment maintenance and retraining of trained professionals.

Continued

3	<i>Involvement of wildlife stakeholders (foresters) and private veterinarians in the multi-sector surveillance system</i>	<ul style="list-style-type: none"> Involve more wildlife stakeholders ; Involve private veterinarians in ISAVET and FETP training schemes at frontline and intermediate levels.
4	<i>Systematic collaboration between the animal and human health sectors for the joint management of DEPs and ZDs</i>	<ul style="list-style-type: none"> Consolidate the legal basis and Boost the operation of the “one health” platform at all levels of the health pyramids (national, intermediate and peripheral).
5	<i>Creation of standard operating procedures manuals by players and for players</i>	<ul style="list-style-type: none"> Plan the revision of SOPs as needed and budget the realization of SOPs on the LD’s AWP’s and program projects.

Human health

6 *Formulation of project activities to support the health system, taking into account the real needs of the community.*

Cross-cutting

7	<i>Involvement of stakeholders from all “One Health” sectors in the development of key surveillance documents (SOPs, Benin’s multirisk health plan, CHO Guide, CHO Aide-Mémoire, Image Boxes) and dissemination of the documents produced</i>	<ul style="list-style-type: none"> Guides need to be revised if necessary, and the time needed to recruit consultants needs to be anticipated.
8	<i>Strategy for cascade training on the 3rd edition of the SMIR guide, with a view to strengthening the technical capacities of surveillance players for early detection of priority diseases, case investigation and response</i>	<ul style="list-style-type: none"> Adopt continuous retraining of trained and Extend capacity building to hospital surveillance focal points and to new players recruited into the surveillance system.
9	<i>Mandatory weekly notification including zero NAD cases)</i>	<ul style="list-style-type: none"> Introduce the “One Health” biannual health information bulletin, sharing data from epidemiological weeks in the three sectors.
10	<i>Capacity building for specific FETP actors</i>	<ul style="list-style-type: none"> Mobilizing resources to continue building the capacity of FETP players at frontline and intermediate levels.
11	<i>Digitizing the monitoring system</i>	<ul style="list-style-type: none"> Ensure equipment maintenance, retraining of trained professionals and interoperability with other systems in the “One Health” sectors.
12	<i>Sufficient increase in budget lines available for monitoring</i>	

Preparation and response**Animal health**

13 *Involvement of veterinary surgeons in response and active surveillance around outbreaks*

Human health

14	<i>Organization of tabletop exercises and drills on epidemic management at all levels</i>	<ul style="list-style-type: none"> Ensure the availability of the financial resources needed to bring players together, Extend these simulation exercises to other departments in Benin.
15	<i>Increased analysis capacity for certain peripheral laboratories and departments</i>	
16	<i>Environmental aspects taken into account in the construction of premises involved in response preparedness, and in the management of response waste (nose plugs, effluents).</i>	<ul style="list-style-type: none"> Anticipate the completion of the environmental impact study in the construction phase, so that study deadlines do not delay work.

Continued

Cross-cutting	
17	<p><i>Pre-positioning of emergency case management kits and infection prevention and control (IPC) materials in health centers</i></p> <ul style="list-style-type: none"> ■ Draw up a procedure for managing stock movements and expiries.
18	<p><i>Expanded multi-sector collaboration beyond human and environmental health (ministry of education, media professionals) in responses</i></p> <ul style="list-style-type: none"> ■ Making “One Health” RITs work, ■ Continue to raise awareness of the one-health approach and develop short inter-sectoral pooling procedures.
19	<p><i>Community involvement in managing the epidemic and encouraging community involvement</i></p> <ul style="list-style-type: none"> ■ Ensure ongoing capacity-building for local councillors in risk communication and community involvement, on an equal footing with other stakeholders, and ■ Involve them in the entire epidemic management process.
20	<p><i>Implementation of incentives to maintain supervisory staff (equipment, training, supervision)</i></p> <ul style="list-style-type: none"> ■ Maintain the incentives for this activity to maintain the momentum generated by the project.
Human resources management	
Animal health	
21	<p><i>Implementation of incentives (equipment, training, supervision) for the installation and maintenance of private veterinarians and PPVs</i></p> <ul style="list-style-type: none"> ■ Involve mid-level SVs in the supervision of this practice and ■ Continue equipping, especially with cold chain equipment, and training/retraining veterinarians.
22	<p><i>Incentives and training for private veterinarians and ACPAs to improve sampling quality</i></p> <ul style="list-style-type: none"> ■ Include this activity in the initial and ongoing training plan for the veterinary health mandate.
Human health	
23	<p><i>Strengthening field epidemiology skills for human health professionals</i></p> <ul style="list-style-type: none"> ■ Extend training to other players (ICP and hospital focal points) to optimize surveillance; ■ Develop the training plan for each structure and ; ■ Ensure resource mobilization.
24	<p><i>Harnessing the skills of existing health system players to deal with emergencies linked to the management of COVID-19</i></p> <ul style="list-style-type: none"> ■ Formalize collaboration frameworks with the sectors and sub-sectors concerned, already in peacetime.
Cross-cutting	
25	<p><i>Training of “One Health” players on the IDSR (training of RRT members and animal health players on the 3rd edition of the IDSR guide)</i></p> <ul style="list-style-type: none"> ■ Use available trainers and make financial resources available; ■ Define requirements in association with the deconcentrated structures; ■ Include capacity-building activities in the logical framework of projects.
26	<p><i>Using the cascade training approach to build the capacity of human, animal and environmental health workers</i></p> <p style="text-align: center;">-</p>
Laboratory capacity building	
Animal health	
27	<p><i>Involvement of all laboratory staff (technical and support) in ISO 17025 training.</i></p> <ul style="list-style-type: none"> ■ Continue capacity building and ; ■ Make financial resources available to support the process.
Human health	
28	<p><i>DHIS2 use by laboratories</i></p> <p style="text-align: center;">-</p>
Cross-cutting	
29	<p><i>Availability of SOPs, safe specimen transport and biosafety manuals developed</i></p> <ul style="list-style-type: none"> ■ Monitor the availability of these tools to users over time.

Continued

30	<i>Effective provision of reagents and equipment to improve laboratory operations</i>	▪ Make laboratories more autonomous by allocating them an operating budget.
31	<i>Sharing of information and technical platforms between “One Health” laboratories / Pooling of equipment, materials, reagents and consumables</i>	▪ Draw up a maintenance and depreciation plan for the various materials and equipment.
32	<i>Commitment of laboratories in the “One Health” network to the quality management system</i>	-
33	<i>Availability of laboratory mapping</i>	-

Acronyms: APCOs: Animal Products Control Officer; AWP: Annual Work Plan; CHO: Community Health Officer; CSSAZD: Computerized Surveillance System for Animal and Zoonotic Diseases; DEP: Disease with Epidemic Potential; FETP: Field Epidemiology Training Program; IDSR: integrated disease services and response; IPC: Infection Prevention and Control; ISAVET: In Service Applied Veterinary Epidemiology training; LD: Livestock Division; NAD: Notifiable Animal Disease; NCHP: National Community Health Policy; PPVs: Para Professional Veterinarian; RRTs: Rapid Response Teams; SH: Sexual Harassment; SEA: Sexual Exploitation and Abuse; SOPs: Standard Operational Procedures; VSs: Veterinary Services; ZD: Zoonotic disease.

Lessons learned

Box 2 presents the various lessons learned by animal and human sector.

Box 2. Lessons learned.⇒ *Animal health*

- ✓ *Provision of internet access (kits and connection packages) for communication via the WhatsApp platform between the various players and rapid feedback of epidemiological surveillance data.*
- ✓ *Organization of secure sample transport*
- ✓ *Systematic sampling of suspected cases in active NAD surveillance for laboratory confirmation*

⇒ *Human health*

- ✓ *High-quality IT tools and a permanent Internet connection for health system players, enabling them to regularly report epidemiological surveillance data.*
- ✓ *Digitization of laboratory information systems for rapid feedback of results and laboratory data to support decision-making.*
- ✓ *Increased awareness of the various players in the health system and the community for systematic notification of cases of DEP*
- ✓ *Improving the electrical autonomy of certain health centers through the acquisition and installation of high-capacity generators.*
- ✓ *Support for the identification and designation of community relays as part of the implementation of the NCHP*
- ✓ *Establishment and training of complaint management committee members on the code of conduct and complaint management, including GBV/SEA-SH*
- ✓ *Boosting the performance of RRTs*

The good practices and lessons learned have been the subject, depending on the case, of proposals for improvement or conditions necessary for their maintenance.

4. Discussion

The systematic attention paid to public health emergencies and the understanding of the need to manage resources and information are now major achieve

ments following the events experienced in the region and worldwide in recent years. In view of the results of this capitalization exercise, we would like to highlight a number of elements, following the example of Wise [3]. The implementation of a rapid and rigorous evaluation process is necessary to ensure continuous quality improvement. Leadership is the essential ingredient for successful coordination as was the case with REDISSE Benin project at the time of the COVID-19 pandemic. The public health response varies according to events, so leadership must be flexible. REDISSE showed this leadership flexibility in the situation of the rabies epidemic with innovative strategies to quickly respond to it. Command and control must be agile to adapt to changing circumstances within and between public health emergency events. Authorities must be decisive yet flexible. They must also: i) know public health practices (they were trained during the COVID-19 pandemic), ii) be able to maintain good situational awareness, iii) provide continuous situation assessment to the population, iv) inspire confidence, v) coordinate the various members of the response team and vi) lead and manage effective and timely communications [4].

This exercise is also important in the various stages of epidemic management, and more specifically in preparing to respond to public health emergencies.

The importance of capitalizing on and sharing best practices

By capitalizing on and sharing best practices, a team, organization, or country can learn from its own experiences and those of others. This provides an opportunity to transform knowledge into action and build capacity to improve results, and to respond more quickly and effectively to different types of crisis or change that may arise [1]. If no steps are taken to analyze, capitalize on and share the knowledge acquired in programs and projects, mistakes are likely to be repeated, successful experiences may be forgotten and opportunities to improve practices lost. More specifically, we will recall the value of this exercise in improving: public health emergency preparedness, the capacities of professionals involved in public health emergency preparedness, the roles of authorities in improving public health emergency preparedness, community preparedness for public health emergencies.

Improving preparedness for public health emergencies

Capitalizing on and sharing best practices highlights areas where preparedness could be improved. In the case in point, REDISSE's experience identifies the following concerns regarding the country's response to the COVID-19 pandemic: i) insufficient resources—securing additional funding to meet all unmet indicators and strengthen the veterinary health mandate over the remaining duration of the project; ii) inequitable access to health care—which led the project to set in motion a process to reinforce staffing, taking into account the specific needs of the communities; iii) inconsistent messages—the project invested in building the capacity of actors in risk communication and community engagement (RCCE) to ensure that interactions with communities took place in strict compliance with the principles of community engagement with a view to adopting measures to cut the chain of transmission.

Improving the skills of professionals involved in public health emergency preparedness

Capitalizing on and sharing best practices will help improve the various activities of professionals in relation to emergency preparedness and population health promotion [5]: epidemiological surveillance, data collection on health risks, community involvement in action on the social determinants of health, the establishment of community partnerships and partnerships with other non-health sectors, in particular animal health in this case, for the continuous improvement of living conditions in communities, developing health policies and plans that help individuals and communities prevent and manage disease and risk factors, ensuring compliance with health regulations, promoting accessibility to human and animal health care, training providers and first responders in public health emergencies.

Enhancing the role of authorities in improving public health emergency preparedness

Authorities have specific roles to play in public health emergency preparedness, which can be enhanced by capitalizing on and sharing best practices. These include: encouraging emergency planning, providing emergency training, fostering teamwork and multi-sectoral preparedness, raising awareness among community members [6].

Improving community preparedness for public health emergencies

Communities can prepare for public health emergencies, such as epidemics and natural disasters, through a combination of planning, training and education [5]. Effective preparation for public health emergencies can pay dividends, strengthening community response when a crisis occurs and aiding recovery afterwards. Through effective planning, training and education, public health officials and community members can help keep people safe and enable them to get the help they need immediately. Capitalizing on and sharing best practices are resources that can help to reinforce achievements and facilitate an effective response [5].

Other lessons learned

Other lessons learned from this capitalization include: i) the establishment of a command and control organizational structure prior to the event; ii) the pre-positioning of a disaster assessment team; iii) the designation of a single point of contact for the coordination of activities; iv) the implementation of a disaster clause for local employees or at national level to reallocate personnel to fill support gaps should the need arise; v) pre-positioning RCCE systems; vi) identifying external sources to fill common resource gaps; vii) developing a plan to support government operations; viii) pre-organizing support contracts for needed resources; ix) acquiring uninterrupted power supply; and x) collaborating with industry to receive commitments to restore critical services after a disaster. This coordination plan requires a dominant and directive leadership style to be successful, and capitalization is an asset in this case, providing proven elements to take into account [3] [7].

The effects of a pandemic generate similar response needs. Coordination is essential to deal successfully with pandemics. Decentralized public health agencies need to coordinate better and establish a command and control plan. Surveillance capacities must be strengthened to ensure that the scale of pandemics does not take the country by surprise. Coordination between private, public and government agencies needs to be formalized. Adequate and appropriate resources, including human resources, must be planned and funded for the long term. Consistent command and control arrangements are needed, along with a firm commitment from political leaders to maintain preparedness over time. Participative yet decisive and flexible coordination leadership is essential, given the lessons learned from the COVID-19 pandemic. An important complement to this response is community engagement, which is included in the coordination effort to cope with the effects of pandemics. Community preparedness, response and recovery capacity can help optimize pandemic contingency planning. These are all aspects that capitalization can bring to the table, so as to benefit greatly and avoid inventing the wheel [7] [8].

It is therefore important to relate the broad outlines of this capitalization to the disaster risk reduction model developed by the United Nations, which aims to harmonize policies worldwide in this field—the Sendai Framework. The aim of the Sendai Framework is to reduce loss of life, injury, health impact and the effect of social determinants of health. The main priorities of the Sendai Framework are: i) understanding disaster risk, ii) strengthening disaster risk governance, iii) investing in disaster risk reduction and iv) improving disaster preparedness [6] [7] [9].

5. Conclusions

The richness of a project lies not only in the immediate achievement of its results, but also and above all, in its usefulness for similar interventions, whether in the local, regional, national or international context. It is in this context that the REDISSE project has set out to make public the various lessons learned and best practices from the implementation of its activities over a period of some five consecutive years.

The methodology used, which is the one recommended in the literature, the thematic workshops, brought together the main players to discuss the strengths, weaknesses, opportunities and threats of the interventions carried out. As a result of the group work and plenary discussions, the lessons learned and good practices summarized in this paper were identified.

Many of the lessons learned are good practices, given their internationalization through the WHO's International Health Regulations (IHR) [10] and the World Organization for Animal Health (WOAH) codes [11], and therefore deserve to be taken into consideration for future projects, so as to avoid perpetual repetition, but rather in a process that builds on the evidence to move towards innovative results for greater impact on populations.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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