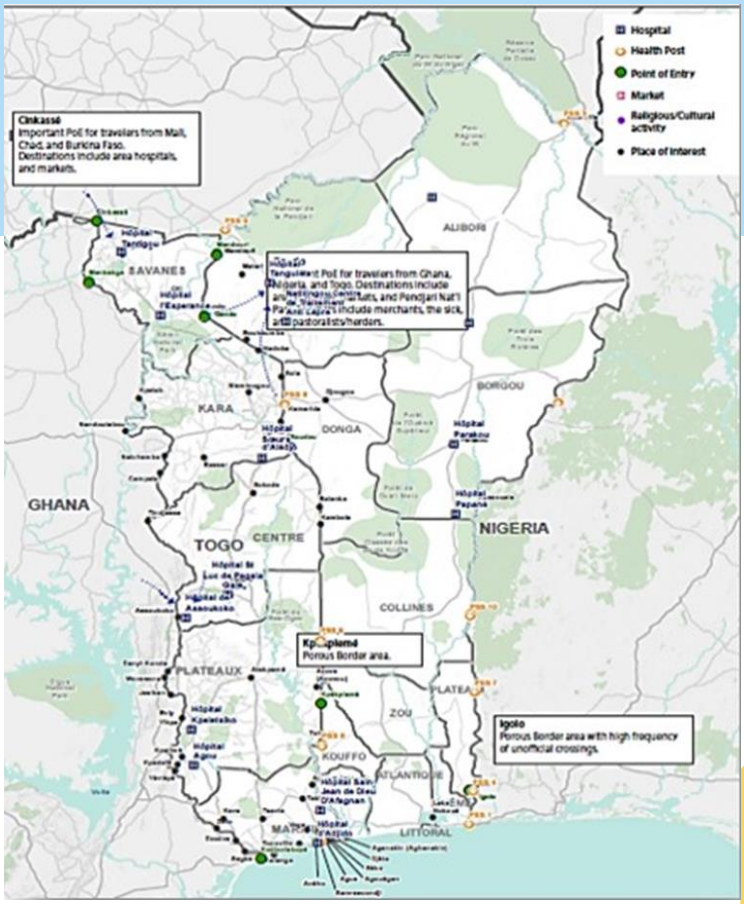
GLOBAL HEALTH SECURITY PARTNER COMMITMENT: EXPANDING EFFORTS AND STRATEGIES TO PROTECT AND IMPROVE PUBLIC HEALTH GLOBALLY

FOA: CDC-RFA-GH15-163202

GH001835



FINAL REPORT

30 September 2015 – 29 September 2020

ABIDJAN LAGOS CORRIDOR ORGANISATION (ALCO)

ABIDJAN - LAGOS CORRIDOR ORGANISATION

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LIST OF ACRONYMS

ALCO	Abidjan-Lagos Corridor Organization
CDC	Centers for Disease Control and Prevention
ES	Executive Secretary
PoE	Points of Entry
PopCab	Population Connectivity Across Border
IHR	International Health Regulations
IDSR	Integrated Disease Surveillance and Response

SUMMARY

Within the framework of the Global Heath Security Agenda and with support from the Ministries of Health of Benin and Togo, a grant was awarded in 2015 to the Abidjan-Lagos Corridor Organization (ALCO) by the US Centers for Disease Control and Prevention (CDC), with the view of strengthening the capacity of Benin and Togo Points of Entry.

This grant is implemented in eight points of entry in these two countries: Cotonou airport, the seaport of Cotonou, land borders of Kraké and Hillacondji in Benin, in Togo, the airport and the seaport of Lomé, as well as land borders of Sanvee Condji and Kodjoviakopé.

From October 2015 to September 2020, ALCO in collaboration with the Ministry of Health implemented several activities. The following key activities were carried out.

Objective 1: ***Build capacity of points of entry (PoE) (airport, seaport and major land borders) to prevent, detect, and respond to communicable disease threats***

- Assessment of the capacity to respond to health emergencies at the Points of Entry of international Airport Cardinal Bernadin Gantin of Cotonou, Port of Cotonou, Krake (Benin and Nigeria land border), Hillacondji (Benin and Togo land border) in Benin; Gnassingbe Eyadema Airport of Lome, Port of Lome, Sanveecondji (Benin and Togo land border, Kodjoviakope (Togo and Ghana border)
- Development/review of the emergency plan covering Points of Entry of member countries of the corridor on the basis of basic assessment results
- Equipment of Points of Entry posts with individual protection equipment, gloves, sodium nitrite, liquid soap, body bag, mask to cover nose, safety boot, ethanol, hydro alcoholic gel, etc.
- Training of 229 health and community workers of the Points of Entry areas on response to epidemic emergencies
- Training of 60 health/community workers on waste management at Points of Entry
- Organization of 2 tabletop and functional exercises (biannually) for epidemic emergency response.

Objective 2: ***Strengthen surveillance in border regions and along migration pathways in Togo and Benin along the Abidjan-Lagos corridor***

- Organization of Population Connectivity Across Border (PopCab) activities, to identify geographic areas and subpopulations at high risk of transmission in order to support outbreak responses
- Development of SoP of integrated community epidemiological surveillance

- Training of community mobilizers (Traditional healers, health workers, mortuary managers and veterinarians, etc) at the borders on epidemiological surveillance
- Training of transport companies staff on epidemiological surveillance of travelers
- Production and dissemination of tools for data collection surveillance at Points of Entry posts
- Provision of yearly telephone fleet networking for border epidemiological monitoring stakeholders
- Development of a communication plan on the prevention of epidemics including Ebola Viral Disease and the environmental sanitation measures
- Development and production of message dissemination tools (posters, brochures, picture boxes etc) of BCC materials for creating awareness at Points of Entry
- Advocacy missions for the better involvement of the national/local authorities in the epidemiological surveillance at PoE

Objective 3: ***Support bi-national and regional communications and coordination to prevent, detect and respond to communicable diseases threats***

- Organization of three annual regional meeting for information and experience exchange on the IDSR and the implementation of the 2005 IHR between Togo, Benin and their neighboring countries (advocacy for the signature of MoU)
- Organization of four cross border meetings
- Development of cross-border information exchange SOP to build upon IDSR

I. BACKGROUND AND JUSTIFICATION

The world is rapidly changing to a global village where the populations are continuously bound by the roads, the air, the seas and communication technology. The occurrence of an epidemic in any part of the planet becomes an issue of international concern.

The Abidjan-Lagos corridor, on which this grant is being implemented, is the most important West African corridor with 75% of the economic activities in this sub-region. The health systems along this corridor are characterized by:

- **Poor integrated disease surveillance and response systems:** The non-availability of data on time, the poor coordination and the low level of funding monitoring and evaluation systems, the poor integration of data from the private sector and traditional healers.
- **Inadequate human resources and infrastructures:** Poor staffing and training of health human resources, brain drain, inadequate geographical distribution of human resources and infrastructures at the expense of rural areas where land borders are often located.
- **High mobility of populations along the Abidjan-Lagos corridor:** With its 1022 km, this corridor records an annual migratory flow estimated at 48 million travelers per year on the eight borders of the five member countries (Nigeria, Benin, Togo, Ghana and Côte d'Ivoire).
- **Non-compliance of the points of entry (airports, ports and land borders) with core capacity required by the 2005 International Health Regulations:** The capacity assessment conducted within the framework of the implementation of this grant, revealed important gaps such as: nonexistence of local plan for response to public health emergencies, nonexistence or lack of knowledge of SOP at points of entry, lack of materials and poor collaboration among various stakeholders.
- **Unhealthy borders:** Poor management of medical and domestic wastes, lack of good water sources, poor management of human excreta.
- **Poor financial resources:** National health expenditures are largely below the commitment made in Abuja, by the Heads of State to devote at least 15% of State budgets to health.

The grant awarded by CDC to ALCO aims to reduce these shortcomings by strengthening the capacity of the points of entry (airports, seaports, land borders) of Togo and Benin in terms of prevention, detection and response to public health emergencies. The grant is awarded within the framework of the implementation of the Global Health Security Agenda and focuses on strategy 12 "Global Health Security Partner Engagement".

The grant is implemented at eight points of entry: **(i)** Cotonou airport, the port of Cotonou, Kraké and Hillacondji land borders in Benin, (ii) and in Togo the airport, the port of Lomé and Sanvee

Condji and Kodjoviakopé land borders. It is implemented by ALCO in partnership with the Ministries of Health, WHO, the Ministries of Transport and other stakeholders of the points of entry (National Civil Aviation Authority, port authorities, Ministry in charge of Animal Health, Ministry of Environment and Water and Forest, Police, Immigration, customs service, health districts and local authorities).

This narrative gives an overview of the implementation of this grant from October 2015 to September 2020 and describes the interventions planned for the period of the project.

II. PURPOSE AND OBJECTIVES

The purpose of the project is to contribute to prevention, detection and response to public health emergencies at the eight points of entry targeted in Togo and Benin, in partnership with the Ministries of Health and other stakeholders of the points of entry. Its objectives are to:

- Build capacity at air, sea and major land points of entry (PoE) to prevent, detect, and respond to communicable disease threats
- Strengthen surveillance in border regions and along migration pathways in Togo and Benin along the Abidjan-Lagos corridor
- Support bi-national and regional communications and coordination to prevent, detect, and respond to communicable disease threats
- Ensure monitoring, evaluation and management of the project

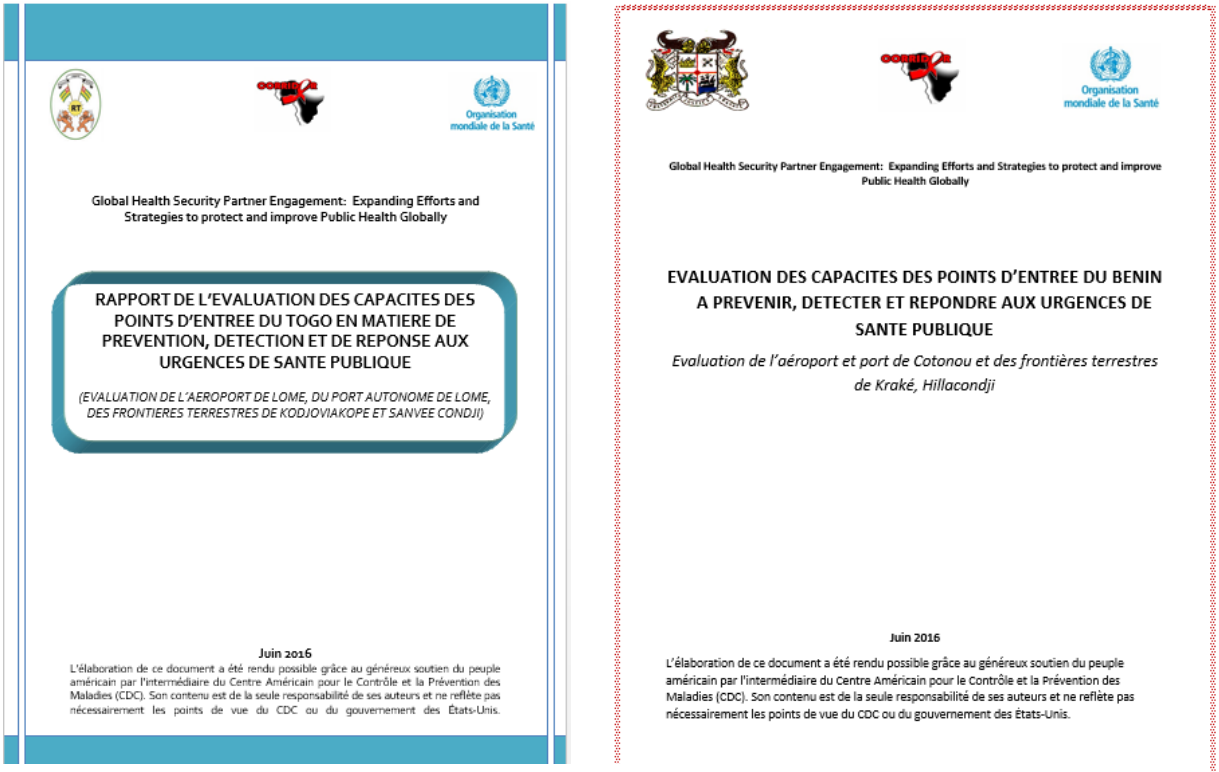
III. ACTIVITIES IMPLEMENTED

Based on the objectives, ALCO carried out many activities.

3.1 Objective 1: Build capacity at air, sea and major land points of entry (PoE) to prevent, detect, and respond to communicable disease threats

3.1.1 Equipment and development of standard documents:

a) ***Assessment of the capacities of points of entry in terms of prevention, detection and response to public health emergencies:*** four consultants (two per country) were recruited in February 2016 to conduct this activity. After developing the draft document, two country workshops were organized to validate the methodology, respectively in Benin on March 11, 2016 and in Togo on March 25, 2016. Two workshops were organized from June 1 to 3, 2016 simultaneously in Togo and Benin to validate the reports of the assessments of the capacities of points of entry in terms of prevention, detection and response to public health emergencies.


Global Health Security Partner Engagement: Expanding Efforts and Strategies to protect and improve Public Health Globally

RAPPORT DE L'EVALUATION DES CAPACITES DES POINTS D'ENTREE DU TOGO EN MATIERE DE PREVENTION, DETECTION ET DE REPONSE AUX URGENCES DE SANTE PUBLIQUE

(EVALUATION DE L'AEROPORT DE LOME, DU PORT AUTONOME DE LOME, DES FRONTIERES TERRESTRES DE KODJOVIAKOPE ET SANVEE CONDJI)

Juin 2016

L'élaboration de ce document a été rendu possible grâce au généreux soutien du peuple américain par l'intermédiaire du Centre Américain pour le Contrôle et la Prévention des Maladies (CDC). Son contenu est de la seule responsabilité de ses auteurs et ne reflète pas nécessairement les points de vue du CDC ou du gouvernement des États-Unis.

Global Health Security Partner Engagement: Expanding Efforts and Strategies to protect and improve Public Health Globally

EVALUATION DES CAPACITES DES POINTS D'ENTREE DU BENIN A PREVENIR, DETECTER ET REPONDRE AUX URGENCES DE SANTE PUBLIQUE

Evaluation de l'aéroport et port de Cotonou et des frontières terrestres de Kraké, Hillacondji

Juin 2016

L'élaboration de ce document a été rendu possible grâce au généreux soutien du peuple américain par l'intermédiaire du Centre Américain pour le Contrôle et la Prévention des Maladies (CDC). Son contenu est de la seule responsabilité de ses auteurs et ne reflète pas nécessairement les points de vue du CDC ou du gouvernement des États-Unis.

Report of the assessment of the capacity of the points of entry in terms of prevention, detection and response to public health emergencies for Benin and Togo

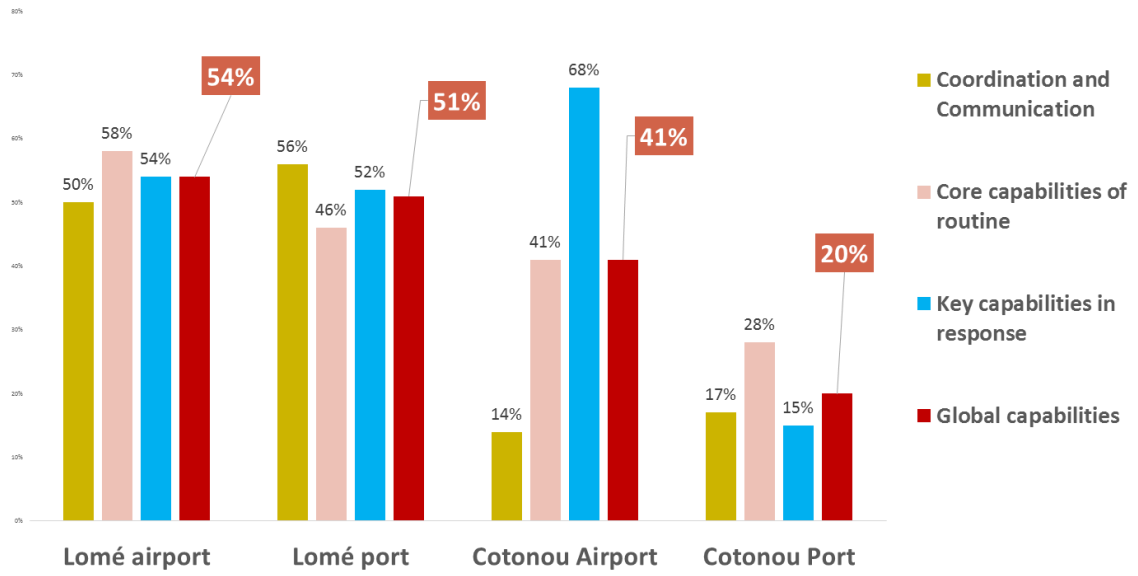


Figure 1: Assessment of the capacity of the points of entry in terms of prevention, detection and response to public health emergencies

b) ***Development of local plans to fill the identified gap:*** after the validation of the reports of the assessments of the capacities of the points of entry in terms of prevention, detection and response to public health emergencies, local plans to fill the identified gaps were developed and validated.

c) ***Development of SOP for the PoE (airport, seaport, land borders):*** SOPs were developed for PoE of Cardinal Bernadin Gantin Airport of Cotonou, Gnassingbe Eyadema Airport of Lome, Lome Port, Cotonou Port , Land border of Benin and Togo

Workshop for the development of SOP for the PoE (Benin)

Workshop for the development of SOP for the PoE (Togo)

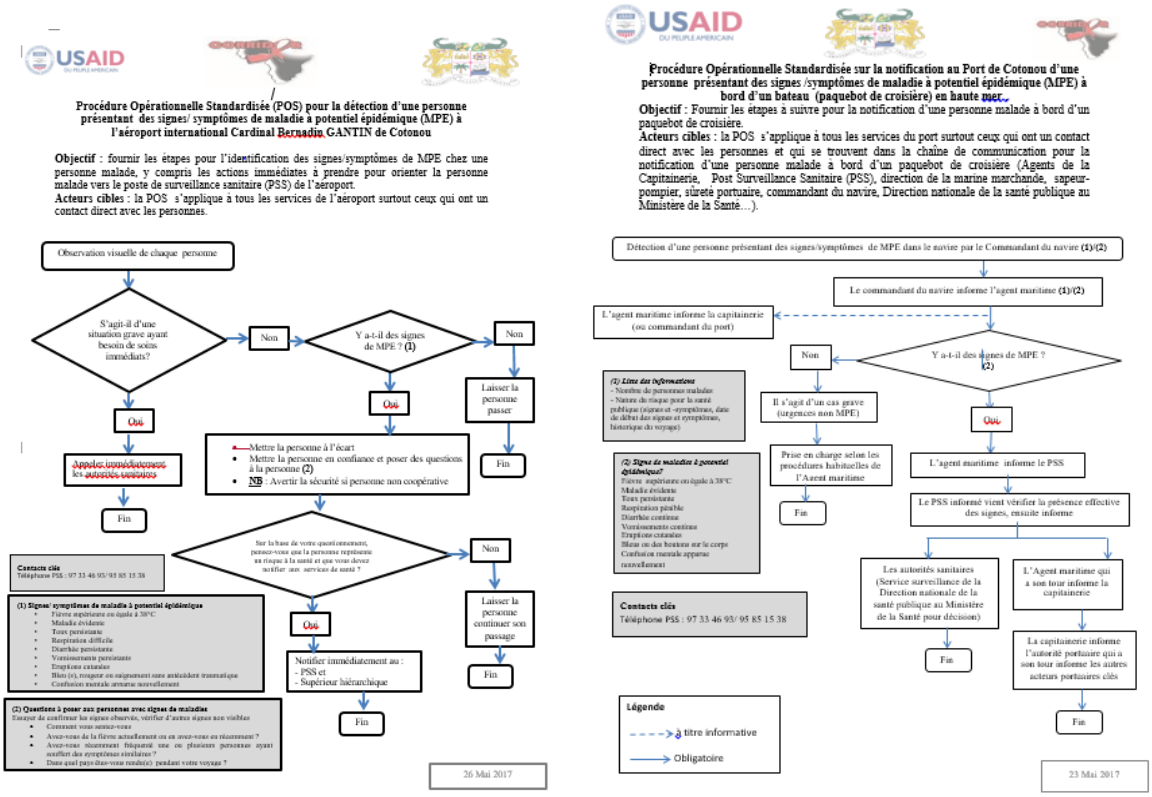
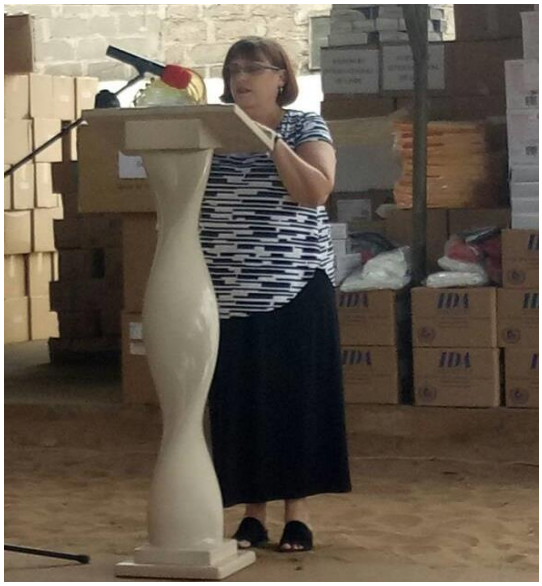


Figure 2: Some SOP developed for the airport and port of Cotonou (Benin)

d) ***Organization of periodic tabletop and functional exercises for epidemic emergency response:*** ALCO organized in Benin and Togo at their airport tabletop and functional exercises for emergency response. At the end of these exercises, health/community workers and other partners of these points of entry understand their roles and responsibilities during a public health emergency and are able to demonstrate their ability to respond appropriately.

e) ***Equipment of PoE with tools and infrastructure needed for prevention and response to infectious disease outbreaks (Ebola/Marburg, Cholera, Yellow fever and other diseases):*** ALCO provided to the points of entry equipment such as individual protection equipment, gloves, sodium nitrite, liquid soap, body bag, mask to cover nose, safety boot, ethanol, hydro alcoholic gel, etc. These equipment were distributed to Kodjoviakope and Sanvee Condji land borders, airport and seaport of Togo, Hillacondji and Krake land borders, airport and seaport of Benin.



Ceremony of delivery of materials and protection equipment at the Point of entry of Togo (Seaport of Lomé, airport of Lomé, Sanveecondji and Kodjoviakopé Land Border)

3.1.2 Training of health/community workers

After developing the SOPs, ALCO organized many sessions of training:

- Training of trainers workshop on the implementation of SOP at borders at Kara in Togo (April, 7th 2018) and at Parakou in Benin(April, 10-11th 2018)
- Training of 229 control officers (health staff, gendarmes, policemen, customs officers, soldiers, water and forestry) on the IHR at PoE
- Capacity building for ALCO and Ministries/ airports Stakeholders on airport public health: from 25th-29th June, 2018, ALCO and Ministries/ airports Stakeholders participated in Miami to a training on airport public health.

Training session for health workers at Cotonou Airport on SOP (Benin)

3.2 Objective 2: Strengthen surveillance in border regions and along migration pathways in Togo and Benin along the Abidjan-Lagos corridor

3.2.1 Development of standard documents

a) ***Organization of PopCAB activities to identify geographic areas and subpopulations with elevated risk of transmission in order to support outbreak response(s):*** in Benin, ten people from the Ministry and twenty from the northern health zones especially the FETP received capacity building training in view of data collection on population movement and connectivity, and use of these data for strengthening the capacity to detect, prevent and respond to a public health event. Five areas in northern Benin were visited and migration flows mapping carried out include the population connectivity between these regions and Nigeria. Data computerization was done in CDC Atlanta. These data will contribute to strengthening the capacity to detect, prevent and respond to a public health event.

The same exercise was done also in Togo

Visit of ALCO team and CDC to Benin authorities

Focus group with Kodjoviakopé traders

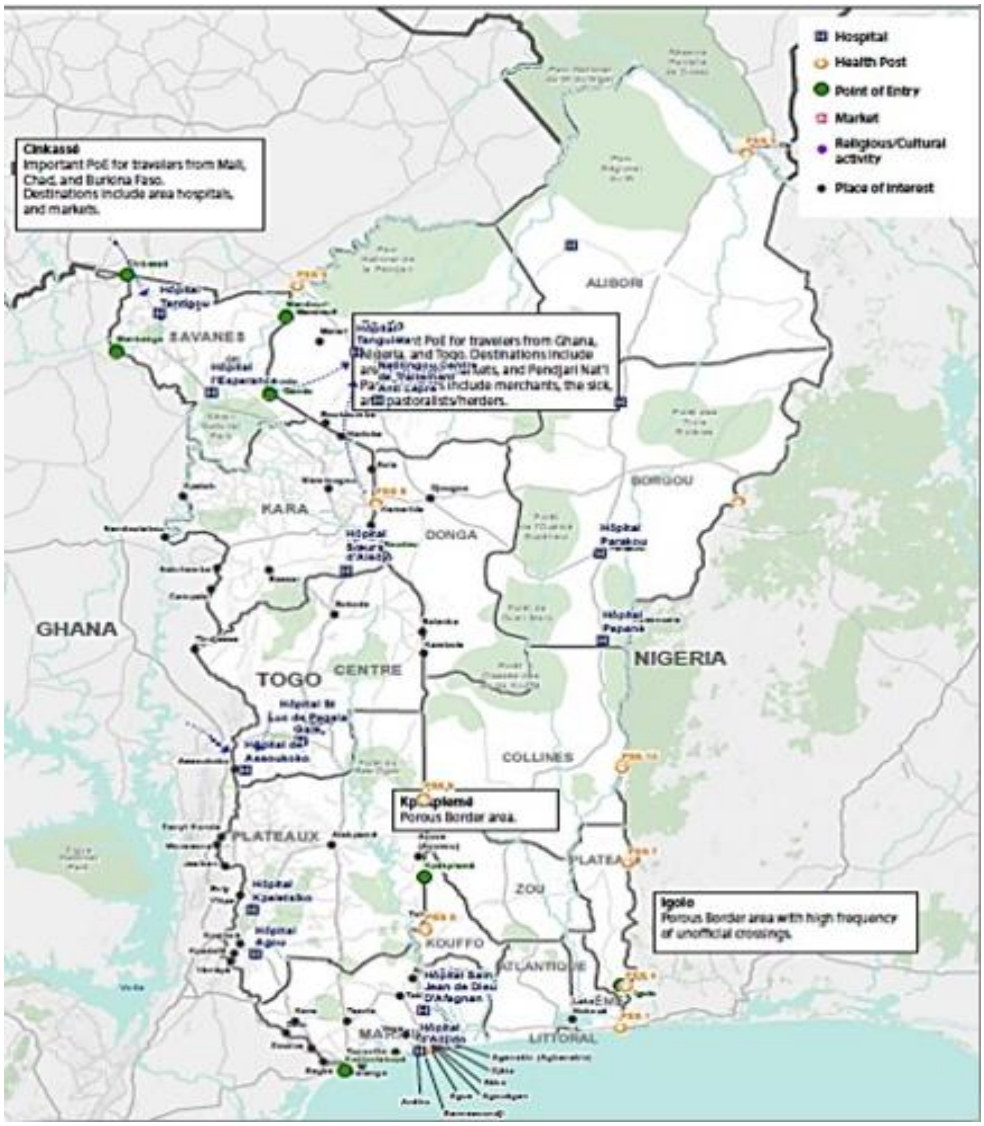


Figure 3 : Map of Population Connectivity and movement across borders

b) ***Development of the SoP of integrated community epidemiological surveillance:*** ALCO in collaboration with community developed SoP for community surveillance in order to prevent, detect and respond to public health event at land border of Krake, Seme, Hillacondji and Sanvee Condji.

c) ***Production and dissemination of tools for data collection surveillance at Points of Entry posts:*** after adaptating the WHO documents, the tools were produced and disseminated to Points of Entry of Krake, Seme, Hillacondji and Sanvee Condji.

FICHE DE RAPPORT MESNUEL D'ACTIVITES DE SURVEILLANCE AUX FRONTIERES

LOCALISATION

POSTE FRONTALIER DE :

SEMAINE DU : AU : MOIS DE : ANNEE :

ACTIVITES DE SURVEILLANCE COMMUNAUTAIRE

Tableau 1

Surveillance communautaire des maladies à potentielles épidémiques

Indiquer le nombre de cas suspectés, investigués et confirmés d'une des maladies à potentiels épidémiques sous surveillance dans votre zone

Maladies à potentielle épidémiques	Nombre de cas suspectés	Nombre de cas investigués	Nombre de cas confirmés	Localisation (Districtzone Sanitaire et Localité précise)
Rougeole				
Méningite				
Fièvre jaune				
Polio				
Fièvre Ebola				
Lassa				
Autres :				

Commentaires : .....

Gestion des rapports de surveillance

Nombre de centre de santé ayant transmis le rapport hebdomadaire au district/Zone sanitaire : _____/_____

Nombre de district/zone sanitaire ayant transmis le rapport hebdomadaire au Ministère de la santé : _____/_____

Tableau 2

Campagne de sensibilisation

Indiquer le nombre de personnes touchées par les messages de sensibilisation sur la prévention des maladies donnés par les relais communautaires dans votre zone

Type de populations	Hommes	Femmes	Dépliants distribués	Portes clés distribués	Tee shirt distribués
Voyageurs					
Populations résidentes					
Routiers					

GESTION DU RSI

Tableau 3

Compliance du RSI aux points d'entrées

	VALEUR
Nombre de points d'entrée ayant un plan local de réponses aux urgences de santé publique	
Nombre d'agents de santé et autres agents de contrôle aux frontières formés sur la réponse aux urgences de santé publiques	
Nombre de simulations réalisées concernant la réponse aux urgences de santé publique aux points d'entrée	

Rapport élaboré par (Nom, Fonction et Signature) :

Rapport Validé par (Nom, Fonction et Signature) :

Figure 4 : monthly report for border surveillance activities

d) ***Advocacy missions for better involvement of the national/local authorities in the epidemiological surveillance at PoE:*** at the inception of the project, ALCO organized advocacy mission in order to better involve national/local authorities. The mission was successful and the national authorities promises their full participation in the project activities.

3.2.2 Training of health/community workers

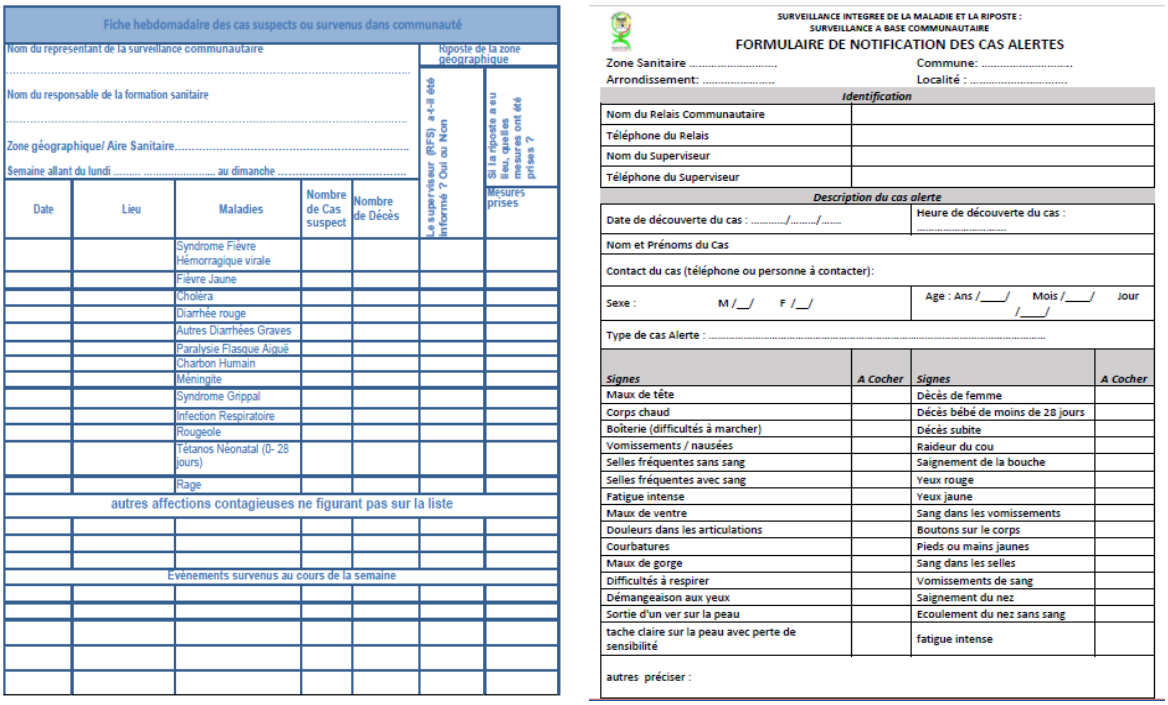
a) ***Training of Community relays on community disease surveillance:*** Community relays were selected in collaboration with Health District. In Benin, they were trained from 25 to 27 July 2016 at Grand-Popo and from 03 to 5 August 2016 at Seme-Podji.

Religious leaders were also trained in Benin from 28-29 July 2016 at Grand-Popo and 12-13 August 2016 at Seme-Podji. In Togo, community relays were trained from 25-27 July 2016 at Aneho and from 18-20 July 2016 in Lome; religious leaders were trained from 28-29 July 2016 at Aneho and from 18-21 July 2016 in Lome.

Training of community relays of Lome health district n° IV on community disease surveillance (Togo)

Training of leaders and other key informants of Lome health district n° IV on community disease surveillance (Togo)

b) After the training, data collection tools were given to the community (2000 alert case notification forms, 400 copies of daily tally sheet for alert cases and 400 weekly tally sheet)



Fiche hebdomadaire des cas suspects ou survenus dans communauté

Nom du représentant de la surveillance communautaire

Nom du responsable de la formation sanitaire

Zone géographique/ Aire Sanitaire.....

Semaine allant du lundi ..... au dimanche .....

Riposte de la zone géographique

Date	Lieu	Maladies	Nombre de Cas suspect	Nombre de Décès	Le superviseur (RFS) a-t-il été informé ? Oui ou Non	Si la riposte a eu lieu, quelles mesures ont été prises ? Mesures prises
		Syndrome Fièvre Hémorragique virale				
		Fièvre Jaune				
		Choléra				
		Diarrhée rouge				
		Autres Diarrhées Graves				
		Paralysie Flasque Aiguë				
		Charbon Humain				
		Méningite				
		Syndrome Grippal				
		Infection Respiratoire				
		Rougeole				
		Tétanos Néonatal (0- 28 jours)				
		Rage				
autres affections contagieuses ne figurant pas sur la liste						
Evènements survenus au cours de la semaine						

SURVEILLANCE INTEGREE DE LA MALADIE ET LA RIPOSTE :
SURVEILLANCE A BASE COMMUNAUTAIRE

FORMULAIRE DE NOTIFICATION DES CAS ALERTES

Zone Sanitaire ..... Commune: .....

Arrondissement: ..... Localité : .....

Identification

Nom du Relais Communautaire	
Téléphone du Relais	
Nom du Superviseur	
Téléphone du Superviseur	

Description du cas alerte

Date de découverte du cas : ...../...../.....	Heure de découverte du cas : .....
Nom et Prénoms du Cas	
Contact du cas (téléphone ou personne à contacter):	
Sexe : M /__/ F /__/	Age : Ans /____/ Mois /____/ Jour /____/
Type de cas Alerte :	

Signes	*A Cocher*	*Signes*	*A Cocher*
Maux de tête		Décès de femme	
Corps chaud		Décès bébé de moins de 28 jours	
Boiterie (difficultés à marcher)		Décès subite	
Vomissements / nausées		Raideur du cou	
Selles fréquentes sans sang		Saignement de la bouche	
Selles fréquentes avec sang		Yeux rouge	
Fatigue intense		Yeux jaune	
Maux de ventre		Sang dans les vomissements	
Douleurs dans les articulations		Boutons sur le corps	
Courbatures		Pieds ou mains jaunes	
Maux de gorge		Sang dans les selles	
Difficultés à respirer		Vomissements de sang	
Démangeaison aux yeux		Saignement du nez	
Sortie d'un ver sur la peau		Ecoulement du nez sans sang	
tache claire sur la peau avec perte de sensibilité		fatigue intense	
autres préciser :			

Figure 5 : data collection tools for cases notification

c) ***Training of community mobilizers (Traditional healers, health workers, mortuary managers and veterinarians, etc.) at the borders on epidemiological surveillance:*** 120 community mobilizers were trained on community surveillance and case notification

d) ***Training of transport companies staff on epidemiological surveillance of travelers:*** 60 staff of transport companies were trained during a workshop held in 2016.

3.3 Objective 3: Support bi-national and regional communications and coordination to prevent, detect and respond to communicable diseases threats

a) ***Development of cross-border information exchange SOP to build upon IDSR:*** after the first regional meeting in Cotonou, ALCO in collaboration with implementing entities developed a cross-border information exchange SOP.

b) ***Organization of three annual regional meetings for information and experience exchange on the IDSR and the implementation of the 2005 IHR between Togo, Benin and their neighboring countries (advocacy for the signature of MoU):*** From 7-9 December 2016, ALCO organized at Azalai Hotel in Cotonou an annual regional meeting. The aim of the meeting is to strengthen cross border cooperation and coordination, improve regional and national capacities of Benin, Ghana, Nigeria and Togo to prevent, detect, and respond to public health emergencies.

First regional communication and coordination meeting on IDSR between Benin, Togo, Cote d'Ivoire, Nigeria and Ghana

From 16-18 August 2017, the second annual regional meeting was organized in Togo at Sancta Maria Hotel and the third one was organized in Benin, at Chant d'oiseau from 6 to 7 December 2018.

Regional meeting on strengthening IDSR cross-border data information sharing

c) ***Organization of four cross border meetings (Krake-Seme, Sanveecondji-Hillacondji and Kodjoviakope-Aflao):*** on 16th March, 2017 at FOLIANA Hotel in Lome, ALCO organized a meeting for 17 participants (health workers and others stakeholders) of Kodjoviakope/Aflao border. In August, 9, 2018, 46 health/community workers of Togo and Ghana participated to the meeting. On 19th July 2018, 25 participants were present at the meeting held at Ganna Hotel for Hillacondji and Sanvee Condji Borders. The fourth meeting was organized at Alakoro Hotel in Krake for 27 participants of Seme/Krake border stakeholders

Cross-border meeting between Benin and Nigeria to strengthen information sharing relating to integrated disease surveillance and response (IDSR)

IV. PERFORMANCE MEASURE

Table 1 and 2 below shows the project outputs and outcomes values.

Table 1 : Project outcomes' values

Indicators	Basic data	Target	Achievement	Performance	Comments
OUTCOMES					
% of compliance with the core capability required by 2005 IHR at the airports (Lomé)	54%	NA	100%		In 2019, based on the State Party self-assessment annual reporting tool, the airport of Lomé have: • Competent authorities identified at designated PoE level (Y/N): Y • Level of core capacity requirements at all times for designated PoE (routine core capacities): 5 • Programme for vector surveillance and control at PoE (Y/N) : Y • Level of effective public health response at each designated PoE (capacities to respond to emergencies): 5 • PoE public health emergency contingency plan (Y/N): Y Source: https://extranet.who.int/e-spar/
% of compliance with the core capability required by 2005 IHR at the airports (Cotonou)	41%	NA	NA		
% of compliance with the core capability required by 2005 IHR at the ports (Lomé)	51%	NA	68%		In 2019, based on the State Party self-assessment annual reporting tool, the port of Lomé have: • Competent authorities identified at designated PoE level (Y/N): Y • Level of core capacity requirements at all times for designated PoE (routine core capacities): 3 • Programme for vector surveillance and control at PoE (Y/N) : N • Level of effective public health response at each designated PoE (capacities to respond to emergencies): 4 • PoE public health emergency contingency plan (Y/N): Y Source: https://extranet.who.int/e-spar/
% of compliance with the core capability required by 2005 IHR at the ports (Cotonou)	20%	NA	NA		

Table 2 : Project outputs' values

Indicators	Target	Achievement	Performance	Comments
OUTPUTS				
Number of supported Points of Entry having a local emergency response plan	8	8	100%	An Emergency plan was developed for each point of entry and approved by National Authorities (4 emergency plan in Bénin and 4 emergency plan in Togo)
Number of community /health workers at supported Points of Entry, who are trained to respond to epidemiological emergency;	120	229	191%	98 Health worker trained in Bénin and 131 Health worker trained in Togo
Number of supported Points of Entry posts that are well equipped for a rapid response to epidemiological emergency;	8	8	100%	All the supported points of entry posts are well equipped for a rapid response to epidemiological emergency (4 in Bénin and 4 in Togo)
Number of simulations carried out in view of epidemiological emergency response.	2	2	100%	One simulation exercise was carried out in Benin and the second one in Togo
Number of supported Points of Entry posts having standard operational procedure manual for community surveillance of diseases;	8	8	100%	
Number of community relays trained to implement SOP of community surveillance of diseases;	80	120	150%	
MoUs has been signed between Benin and Togo Ministries of Health in view of sharing IDSR information;	Yes	Yes	100%	
Number of supported Points of Entry having SOP of PoE	4	8	200%	Four PoE in Togo and four in Benin

V. FINANCIAL REPORT

During the overall project, out of the total approved budget (1,583,001 $), the total expenses amounted to 1,572,788.67$ that is 99%. The table below shows the details:

Table 3 : Financial statement of the project

APPROVED BUDGET (A)	**1,583,001**
YEAR 1	1,483,000.00
YEAR 2	1.00
YEAR 3 & CARRYOVER	100,000.00
AMOUNT DRAWN (B)	**1,572,788.67**
BALANCE (A)- (B)	**10,212.33**
EXPENDITURES (C)	**1,572,788.67**
Personnel	464,182.72
Fringe Benefits	143,760.00
Consultant	98,435.00
Equipment	50,402.00
Supplies	273,662.52
Travel	139,332.41
Other	386,285.43
Contractual	16,728.59
CASH ON HAND (B) –(C)	**0**

a) Personnel: $464,182.72

This amount represents salaries paid to all staff members during the project.

b) Fringes Benefits: $143,760

It includes salary-related expenditures, personal health insurance and severance fees of each staff member during the project.

c) Consultant: $98,435

Two international consultants for the two countries and one local consultant for Benin have been recruited within the framework of: (i) the assessment of points of entry capacity (airports, ports, and land borders), (ii) the development of local plans for capacity building and response to public health emergency, (iii) and the development of SOP for points of entry. The realizations of this category therefore include per diem and operating costs associated with their mission, which were paid as well as a provision for their service fees in accordance with the clauses of their respective contracts.

d) Equipment: $50,402

A vehicle was procured in accordance with the budget.

e) Supplies: $273,662.52

This expenditure includes tools and infrastructure needed for prevention and response to infectious disease outbreaks, materials for validation workshops held within the framework of validating the capacity of both Togo and Benin points of entry.

f) Travels: $139,332.41

This amount represents per diem and mission expenses within the framework of the workshops organized for the validation of the capacity of points of entry and the mapping of migratory flow at land borders by the project teams in both countries.

g) Other: $386,285.43

This category mainly includes operating costs associated with the project implementation and some expenses made in the organization of workshops in view of validating the capacity of points of entry, motivation and transportation fees to the community relays.

h) Contractual: $16,728.59

This category is made up of the costs of the various external financial audits carried out on the project. During the implementation of the project three external audits were carried out.

This brings us to a total **$1,572,788.67** representing **99%** disbursement at the end of the project.

VI. SUCCESS

Success story 1: Multi-disciplinary involvement of stakeholders in the design of a capacity assessment tool appropriate to targeted land borders.

Land borders of Kraké (Benin-Nigeria), Hillacondji (Benin-Togo), Sanveecondji (Togo-Benin) and Kodjoviakopé (Togo-Ghana) are among the most used in Benin and Togo. They are not like other land borders of these two countries, target borders as defined by the International Health Regulations 2005. It was therefore not appropriate to use verbatim land borders assessment tool developed by WHO (WHO_HSE_IHR_LYO_2009) to assess their capacities. An appropriate assessment tool has been designed for these land entries in collaboration with the International Boundary team of CDC, Ministry of Health, WHO, the Ministry of Animal Health, Ministry of environment, the Association of Firefighters and other border control forces (Police, Customs service, health districts).

View of the participants of the validation workshop on the methodology and tools in Cotonou

A validation workshop of this tool was then organized in Benin on March 10, 2016 and in Togo on March 24, 2016. A pre-test of the tool was made on March 11, 2016 at Igolo border (Benin-Nigeria) and on March 25, 2016 at Ségbé border (Togo-Ghana). At this stage, various amendments resulting from this pre-test were considered.

Pre-test of the tool at Igolo border (Benin-Nigeria)

The validated tool takes into account: (i) general information on the migration flow, (ii) Routine capacity in terms of monitoring and control services (human, animal, plant and other), (iii) Response capacity in terms of training plan, assessment and support for affected travelers or animals, (iv) Intra and inter-countries communication and coordination capacity.

Capacity assessment of the land borders was carried out with the various stakeholders and the gaps to be filled were identified. The multidisciplinary approach and the tool developed were appreciated by stakeholders and they wish to use them to assess other land borders.

Success story 2: Mapping of migration flow at Kodjoviakope and Sanveecondji borders in Togo, and Kraké, Hillacondji borders in Benin

One of the aspects of the CDC project is the understanding of migration flows at border areas of Benin and Togo, alongside the maritime corridor to improve public health interventions, health system and strengthen preparedness and response plans for public health emergencies at the local and national levels.

Picture 3: Focus Group with the drivers the border of Sanvee Condji (Togo)

To this effect, a mapping of migratory flow was conducted along the borders of Kodjoviakopé and Sanvee Condji in Togo from April 4 to 6, 2016 and along Kraké and Hillacondji borders from 11 to 12, April 2016 in Benin, with technical support from a CDC team. Focus groups discussions were conducted with transport operators (men) and traders (women) of each of the targeted points of entry. Issues which were addressed included points of interest that attract international travelers and the reasons for their travel, their demographic characteristics, origin and the destination of their migration, crossing roads, transportation and their travels seasonality / frequency. Points of interest identified by respondents were then mapped out.

Picture 4: Focus group with the carriers at the border of krake (Benin)

Several reasons have been identified and are subject to migration from Nigeria to Benin, Benin to Togo, Ghana to Togo , Togo to Ivory Coast and vice versa. Traditional celebrations and healthcare-related movements were also identified. Some people from Nigeria come for medical care in Benin while others from Benin seek treatment in Togo and some from Togo seek treatment in Ghana.

This methodology could be used at other points of entry in case of epidemic outbreak in order to quickly control its spread. The next step is to quantify these migratory flows.

Success story 3: Improving cross-border respond: Lessons learned from Lassa Fever across Benin, Nigeria and Togo by using Pop Cab.

On February 11, 2017, health facility staff at a district hospital in Benin performed an emergency cesarean section on a very ill patient who had just arrived from Nigeria. The doctor suspected she had Lassa fever and collected a blood sample for analysis at the national laboratory. The mother died soon after the delivery, but the newborn survived. On February 14, 2017, the deceased patient's husband departed with the newborn, against medical advice and before the staff could gather his contact information. Later that day, laboratory analysis confirmed the deceased patient had had Lassa fever. The only information the Benin IHR National Focal Point had about the deceased patient and her husband was that they were originally from Togo but had been living as agricultural migrants in Nigeria along the border with Benin. Typically, the IHR National Focal Point would activate a nationwide search to promptly locate the husband and baby to provide medical follow-up and avoid spread of infection. However, the Benin Ministry of Health had recently participated in multisectoral, binational meetings with Togo that included a PopCAB-based exercise to elicit information on informal migration pathways and points of interest within and across their national borders. One of the migration patterns that emerged was the circular migration route traveled by seasonal migrants from Togo and Benin seeking agricultural opportunities in Nigeria (Figure 6).

With the limited available demographic and travel history data about the father and newborn and the information about the circular migration pathway, the Benin IHR National Focal Point rapidly contacted his counterpart in Togo, district surveillance leads in Benin all along the relevant circular migration route, and the WHO office in Benin for a joint active search of high-risk Lassa fever contacts. With this collaborative effort, the father and newborn were located in a village on the Togolese side of a cross-border community, before they sought formal health care. The newborn later tested positive for Lassa fever and received treatment but died 10 days later. No other secondary case was identified. A few days later, on February 22, the Benin Ministry of Health identified a second, unrelated Lassa fever case at a medical facility along the migration route. Medical staff were extra vigilant as a result of targeted risk communication along the migration pathway. They rapidly identified and successfully managed the case, preventing further transmission.

Unlike previous outbreaks, there was a coordinated community-level response between Benin and Togo, which contributed to preventing secondary cases. This highlighted the value of improved knowledge about population migration and community connectivity; having such awareness.

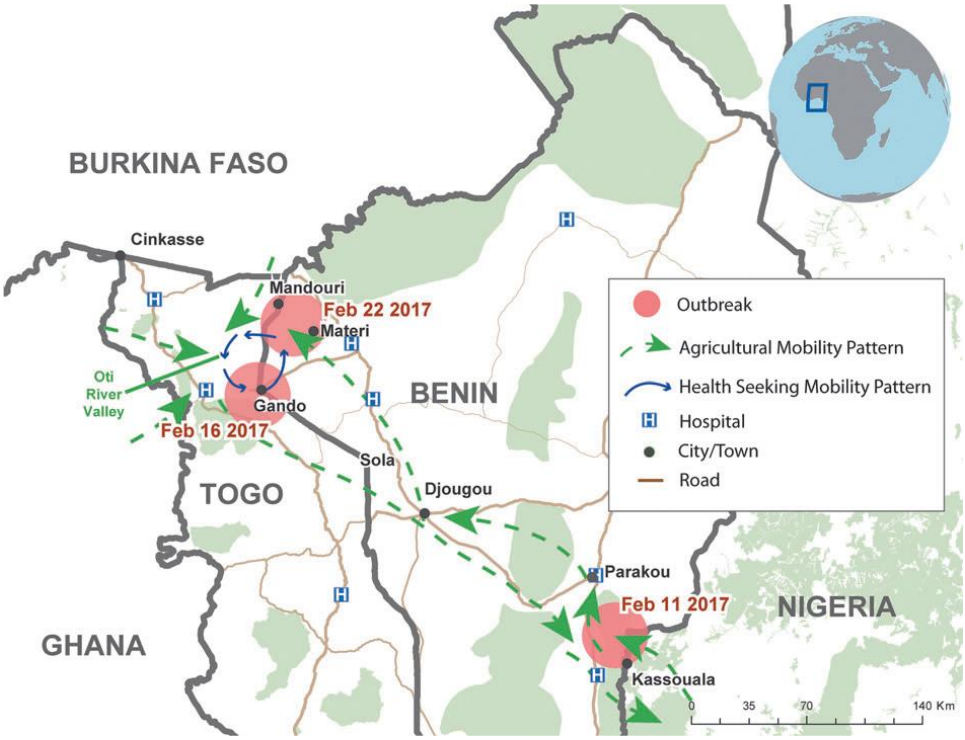


Figure 6: Map of circular migration route among Benin, Nigeria, and Togo with locations of Lassa fever cases from February 2017

VII. CHALLENGES

The main difficulty we encountered at the start was the poor number of applications received for international consultants and national positions responsible for assessing the capacity of points of entry. But this difficulty has been solved.

We have posted again the advert in the Relief Web site and in the database of the French company of Public Health. Moreover, the advert was shared with former students of the Field Epidemiology Training Program (FETP).

As this difficulty was solved, the activities planned for the first year could be implemented. Different advocacy missions that have been conducted allowed us to get the full commitment of national and local authorities for the successful implementation of the project. They all stressed the relevance of the project and actually participated in its implementation.

Also, ALCO encountered a delay with the procurement process of health product. So they cannot conduct related activities as planned.

CONCLUSION

Most of the activities planned for this project were carried out and the global performance is acceptable. The disbursement rate is 99%. All the stakeholders were satisfied and are asking for a new project.

This project made it possible to strengthen the capacity of implementing entities of the points of entry of Benin and Togo to prevent, detect and respond to public health emergency.