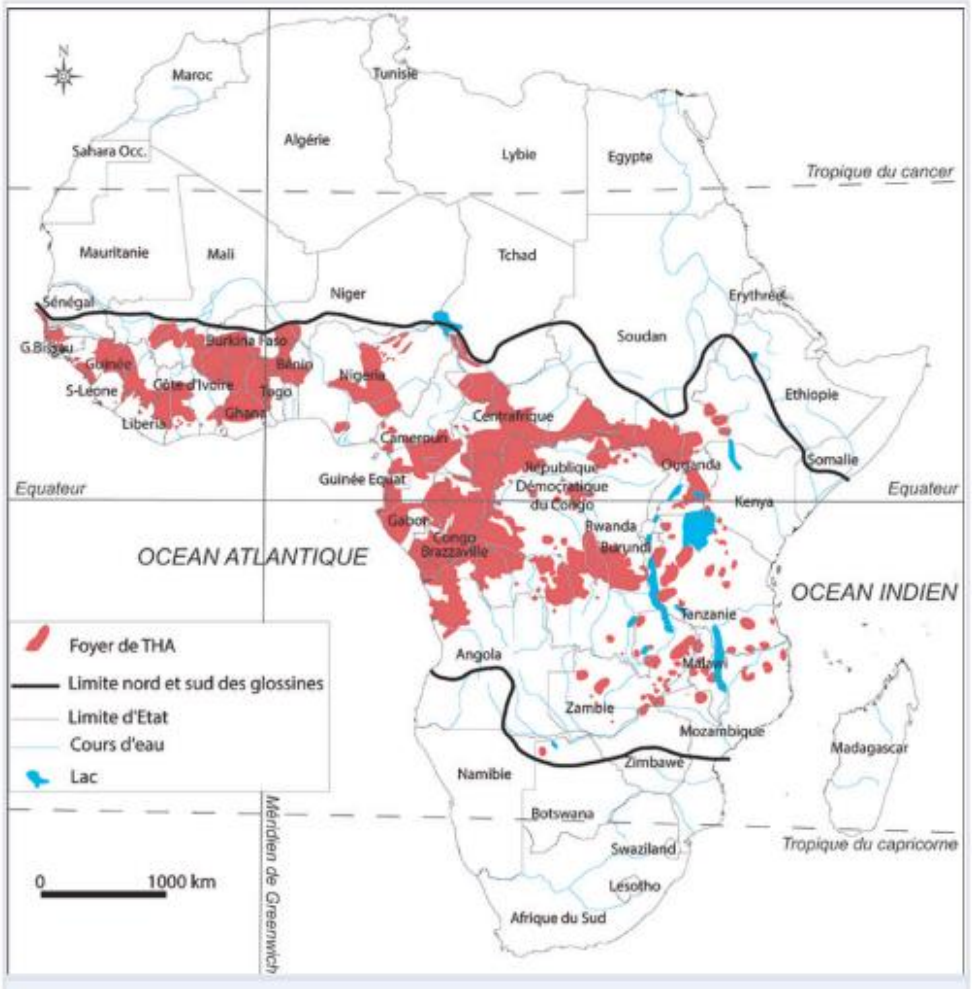
Identification des Villages à Risque (IVR) : Une approche géographique pour évaluer le risque de réémergence de la THA dans les foyers historiques

Rouamba J, Coulibaly B, Adingra P, Kouakou C, Ouattara A, Krouba D, Ramadan K, Camara M, Kaba D, Lingue K, Mallaye P† , Jamonneau V, Solano P, Courtin F



La THA en Afrique subsaharienne: le début de la fin?

- Feuille de route de l'OMS (Elimination comme Problème de Santé Publique en 2020)

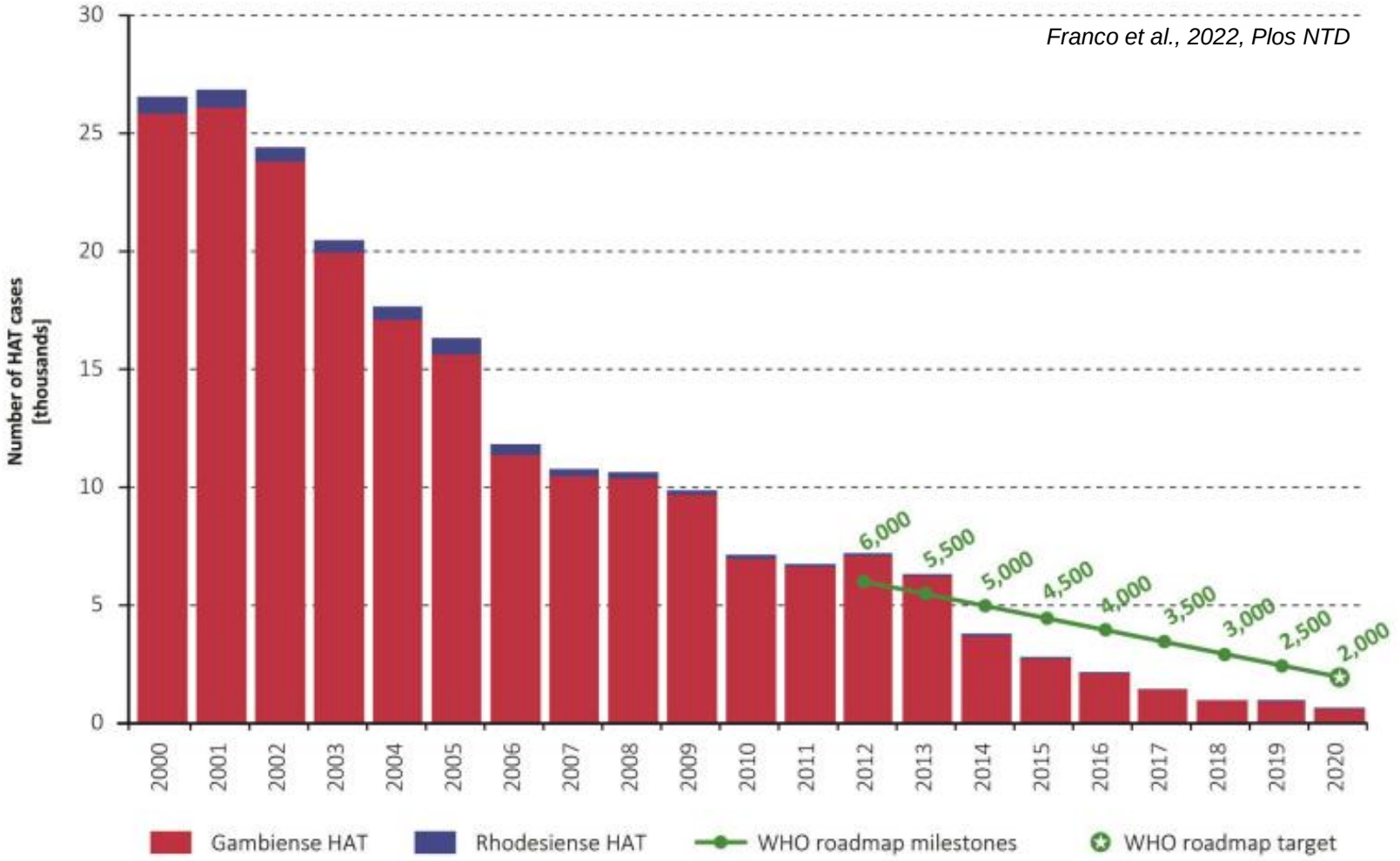
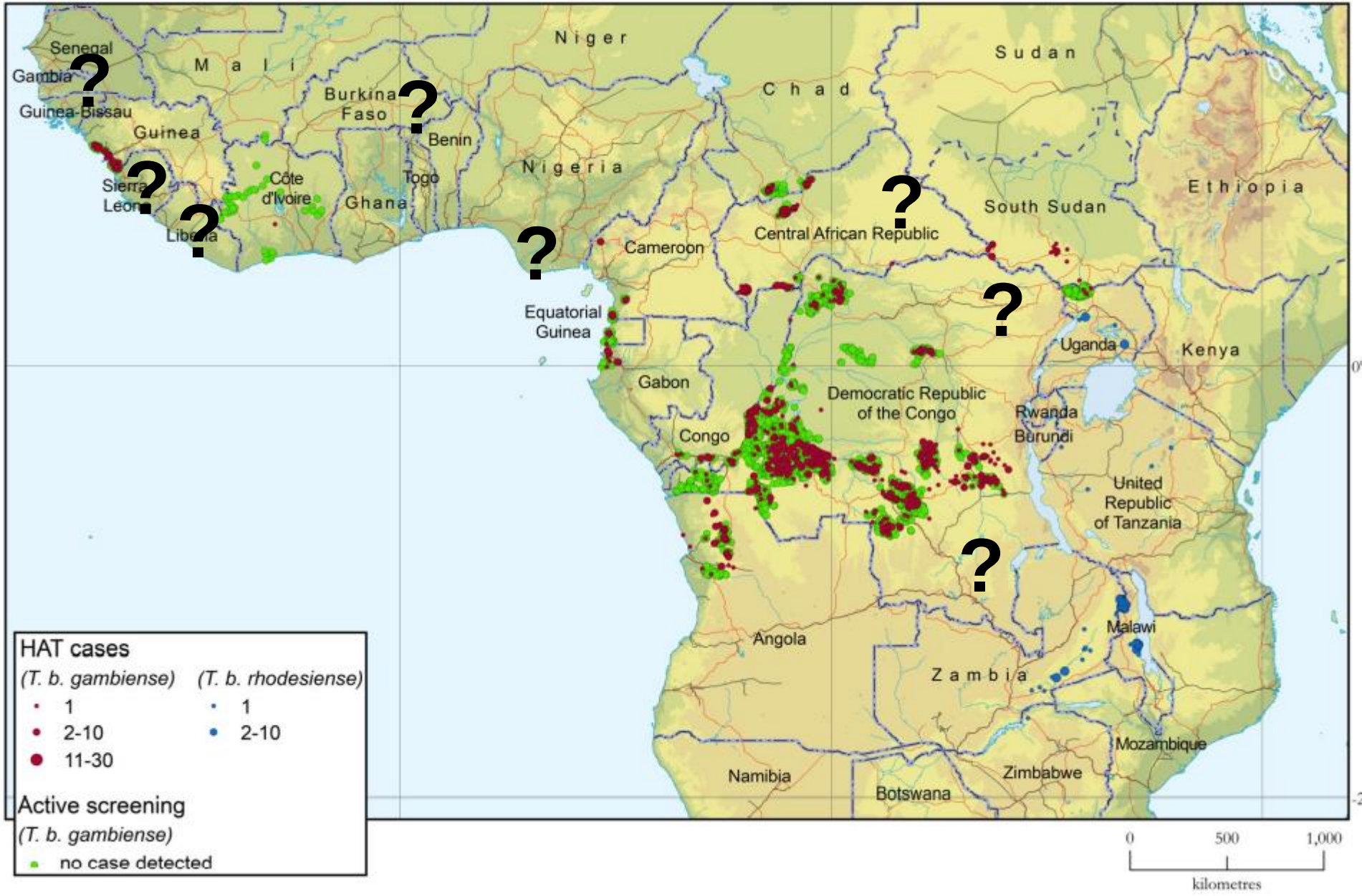


Fig 1. Total number of reported cases of HAT (gambiense and rhodesiense) per year (2000–2020). The green line and the green circles show the milestones and target set in the WHO road map for HAT elimination [14].

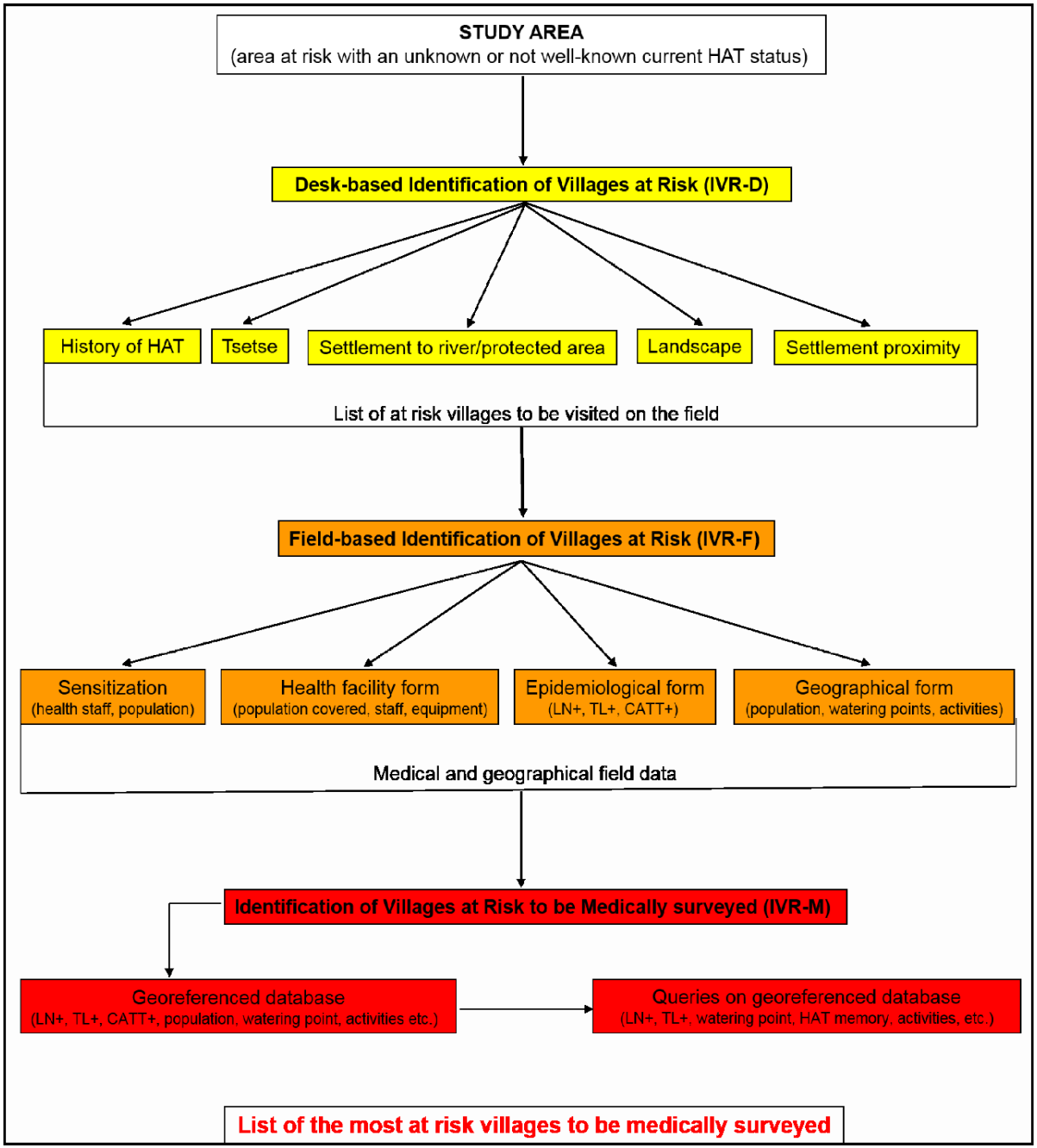
- Dépistage actif devient moins adapté (coût élevé/au nombre de cas dépistés)
- Dépistage passif à partir des structures de santé dans les foyers actifs connus

Existence de « Zones grises »



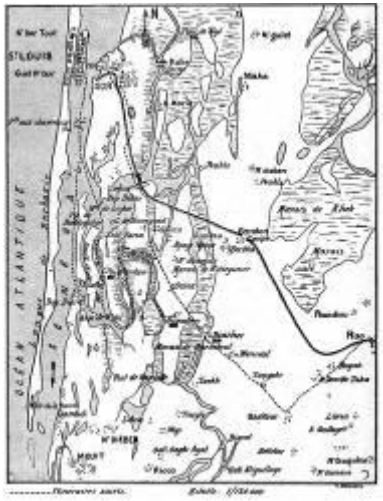
Franco et al., 2022, Plos NTD

Méthode IVR = 3 étapes

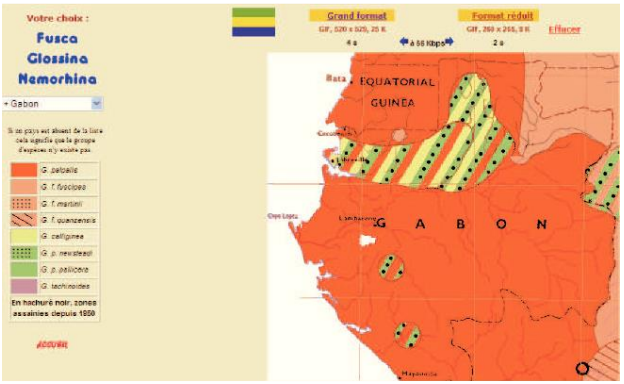


Etape 1:Identification des Villages à Risque au Bureau

Foyers historiques

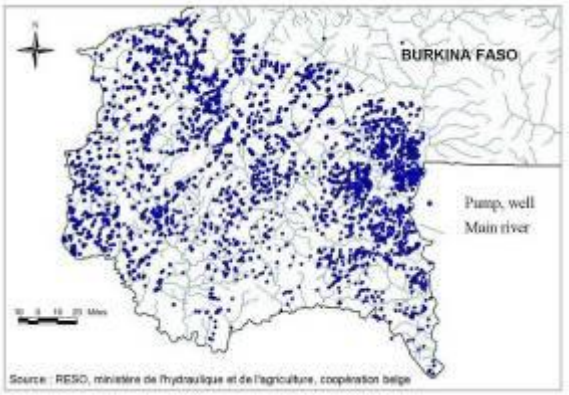


Glossines

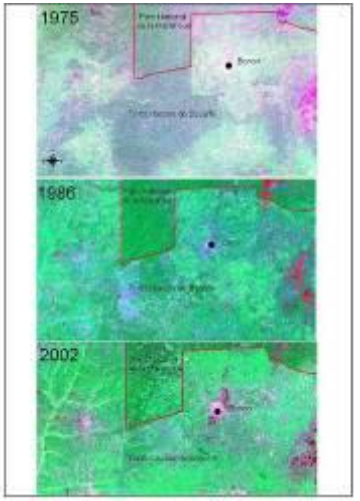


Peuplements

Réseau hydrographique



Paysages



Liste de villages à risque à visiter sur le terrain (IVRF)

Etape 2: Identification des Villages à Risque sur le Terrain

Visiter les villages identifiés à l'étape 1 avec une petite équipe mobile

Sensibilisation des agents de santé et des populations de ces villages

Récolte de données géo-référencées

Structures fixes

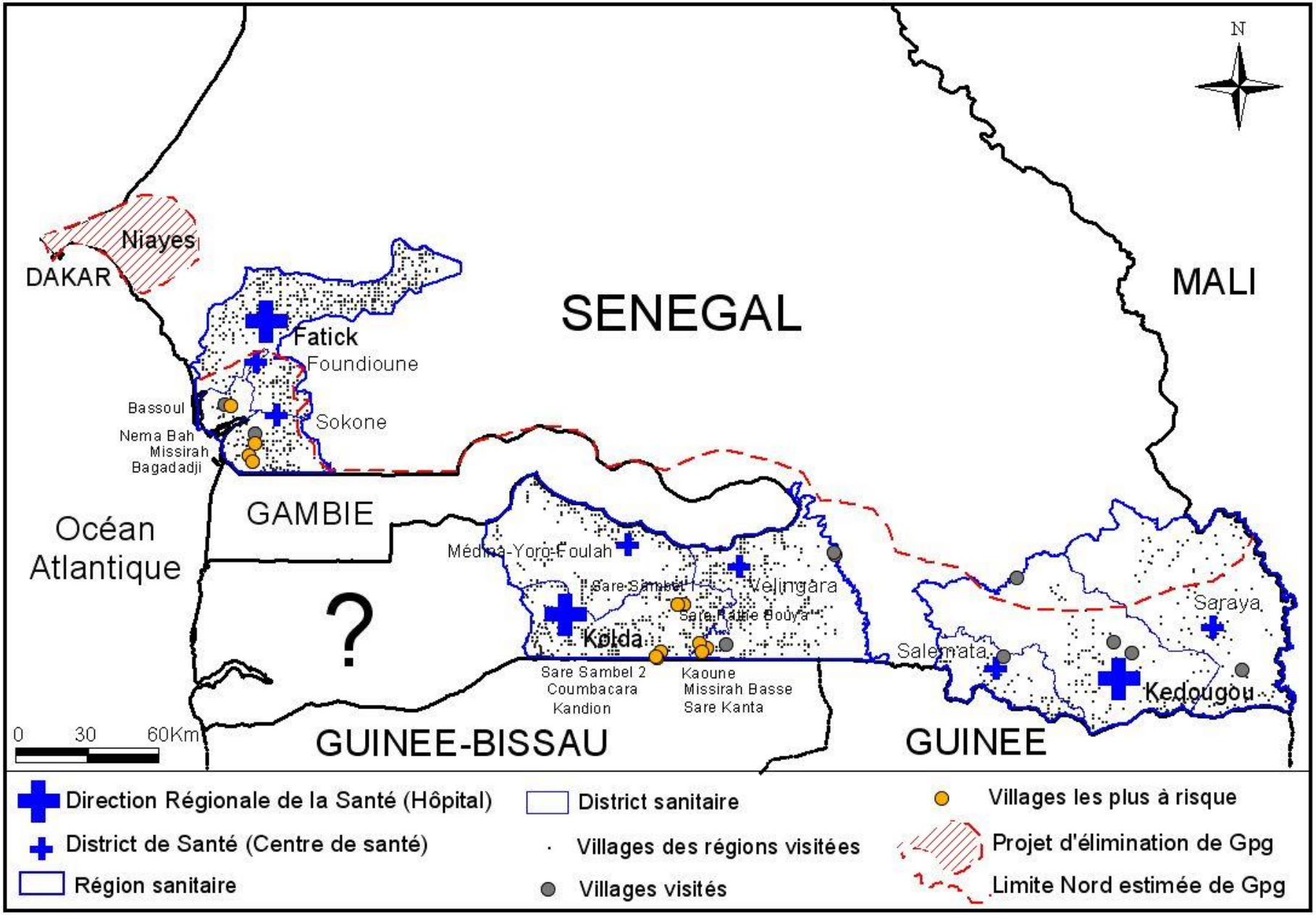
Epidémiologique

Géographique

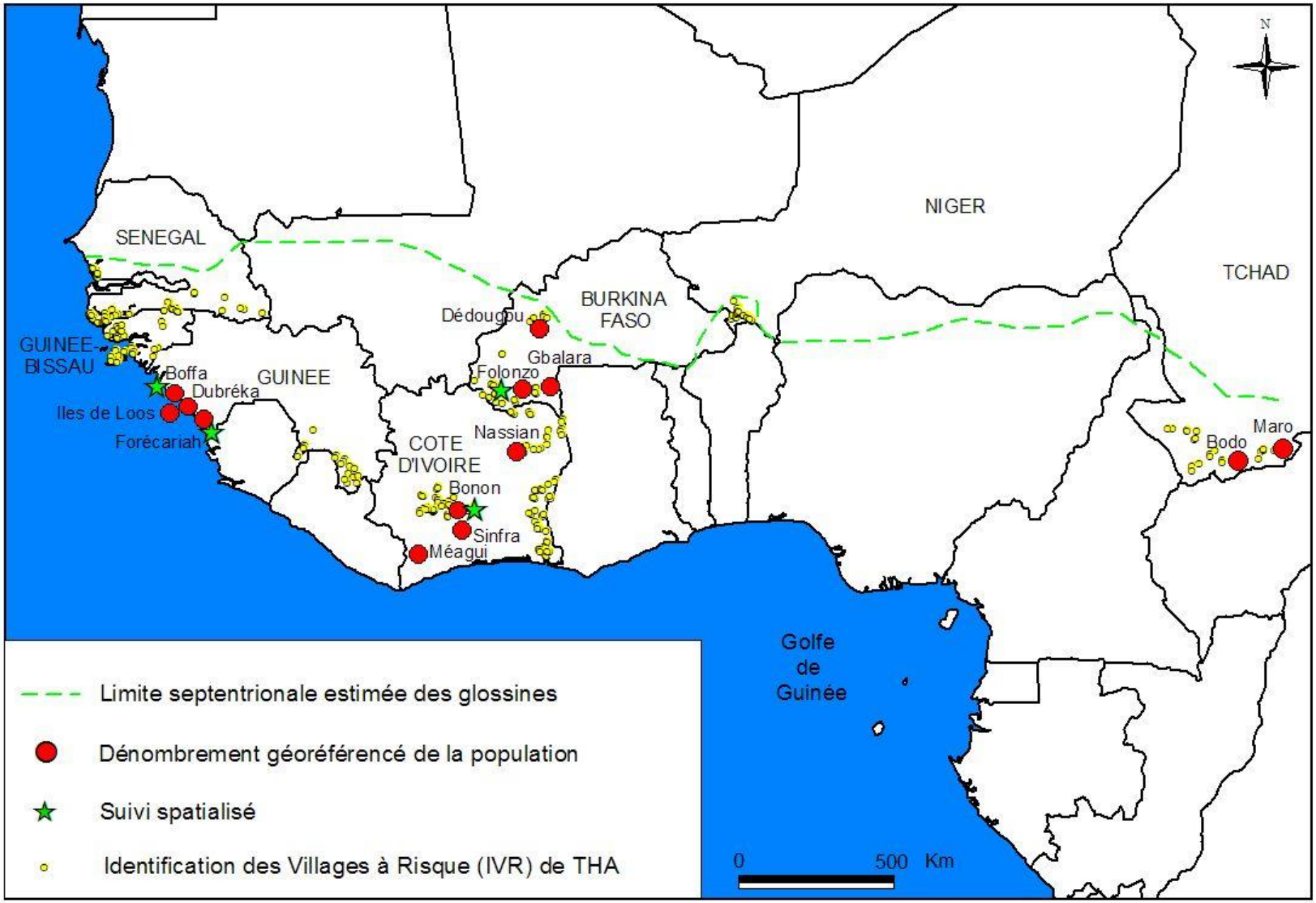
Etape 3: Identification des Villages à Risque à Prospecter

ID	Name of settlement	Lat	Long	Visited by IVR-F	Reasons	Level of risk	Reasons	Medically surveyed
1	Bouye	9,122331	-10,094464	Yes	Proximity with river	Low	Low memory of HAT, pump, casava cultivation, horse breeding, no pig breeding, high economic level	No
2	Kolibenda	8,616629	-10,324742	No	Landscape degradation, proximity with Mandou	Not visited on the field	Not visited on the field	No
3	Moa	8,713916	-10,364047	No	Proximity with Mandou	Not visited on the field	Not visited on the field	No
4	Mandou	8,707567	-10,350263	Yes	High presence of HAT in the past, landscape conservation	High	TL+, high memory of HAT, no pump, rice cultivation, fishing, pig breeding, low economic level	Yes
5	Kofian	8,695240	-10,321637	No	Proximity with Mandou	Not visited on the field	Not visited on the field	No
6	Lengo	8,666590	-10,336863	No	Landscape degradation, proximity with Mandou	Not visited on the field	Not visited on the field	No
7	Temessadou	8,667514	-10,262054	No	Proximity with Mandou	Not visited on the field	Not visited on the field	No
8	Koendou	8,695980	-10,257788	No	Proximity with Mandou	Not visited on the field	Not visited on the field	No
9	Seoua	8,704113	-10,299909	No	Proximity with Mandou	Not visited on the field	Not visited on the field	No
10	Fero	8,639217	-10,336077	No	Landscape degradation, proximity with Mandou	Not visited on the field	Not visited on the field	No
11	Kenema	8,670544	-10,352943	No	Landscape degradation, proximity with Mandou	Not visited on the field	Not visited on the field	No
12	Koundou Lengo Bengo	8,640071	-10,415120	No	Landscape degradation, proximity with Mandou	Not visited on the field	Not visited on the field	No
13	Singuedou	8,764007	-10,454232	No	Landscape degradation	Not visited on the field	Not visited on the field	No
14	Bolodou	8,849499	-10,333244	No	Landscape degradation	Not visited on the field	Not visited on the field	No
15	Belessa	8,581038	-10,394384	Yes	Three HAT cases diagnosed in 2004, close to low ground, landscape conservation	Moderate	3 HAT cases diagnosed in 2004, high memory of HAT, no pump, rice cultivation, pig breeding	Yes
16	Fangamandou	8,490776	-10,592525	No	Inaccessibility	Not visited on the field	Not visited on the field	No
17	Kouloumba	8,367041	-10,647591	No	Proximity with Koundoutoh and Keleme	Not visited on the field	Not visited on the field	No
18	Koundoutoh	8,355026	-10,589004	Yes	Proximity with rivers, swamp area, proximity with Kailahun Sierra Leone HAT focus	Low	Low memory of HAT, pump, casava cultivation, no pig breeding	No
19	Kelema	8,308261	-10,691162	Yes	Proximity with rivers, landscape conservation, proximity with Kelema protected area	Low	Low memory of HAT, pump, casava cultivation, no pig breeding	No
20	Dandou	8,322826	-10,560335	Yes	Proximity with rivers, swamp area, proximity with Kailahun Sierra Leone HAT focus	High	TL+, Sierra Leone refugee	Yes
21	Faendou	8,339701	-10,574311	Yes	Proximity with rivers, swamp area, proximity with Kailahun Sierra Leone HAT focus	High	TL+, Sierra Leone refugee	Yes
22	Massadou	8,381913	-9,431443	Yes	Proximity with river, Proximity with protected area, proximity with Vonjaima Liberian HAT focus	Low	Low memory of HAT, pump, casava cultivation, no pig breeding	No
23	Sedimai	8,291126	-9,457742	Yes	Proximity with protected area, proximity with Vonjaima Liberian HAT focus	Low	Low memory of HAT, pump, casava cultivation, no pig breeding	No
24	Zoubouroumai	8,392335	-9,357171	No	Proximity with Massadou	Not visited on the field	Not visited on the field	No
25	Soundedou	8,288638	-9,458559	No	Proximity with Sedimai	Not visited on the field	Not visited on the field	No
26	Irie	8,276110	-9,174340	Yes	Located in low ground, proximity with Ziama protected area	Low	Low memory of HAT, pump, casava cultivation, no pig breeding	No
27	Boa	8,190635	-9,217781	Yes	Proximity with Ziama protected area, proximity with Baimani	Low	Low memory of HAT, pump, casava cultivation, no pig breeding	No
28	Baimani	8,134357	-9,272770	Yes	Proximity with Ziama protected area	Moderate	High memory of HAT, rice cultivation, pig breeding	Yes
29	Gboda	8,121842	-9,380932	No	Proximity with Baimani	Not visited on the field	Not visited on the field	No
30	Oroye	7,864713	-9,007785	Yes	Proximity with river, landscape conservation	Moderate	High memory of HAT, rice cultivation, pig breeding	Yes
31	Kobela	7,884485	-9,023109	No	Proximity with Oroye	Not visited on the field	Not visited on the field	No
32	Neaye	7,912061	-8,988618	No	Proximity with Kelemanda	Not visited on the field	Not visited on the field	No
33	Kelemanda	7,944325	-8,954135	Yes	Proximity to river, landscape conservation	High	TL+, rice cultivation, pig breeding	Yes
34	Oulo	7,851371	-9,107593	No	Far from river, proximity with Konipara and Oroye	Not visited on the field	Not visited on the field	No
35	Oueye	8,033632	-8,948995	Yes	High presence of HAT in the past, landscape conservation, close to low ground	Moderate	High memory of HAT, no pump, wood cutting, rice-fish farming, pig breeding, low economic level	Yes
36	Koule	8,036393	-9,021586	No	High presence of HAT in the past	Low	Low memory of HAT, pump, casava cultivation, no pig breeding	No
37	Guela	7,798113	-8,908240	Yes	High presence of HAT in the past, landscape conservation, proximity with river	Moderate	High memory of HAT, wood cutting, rice-fish farming, pig breeding, low economic level	Yes
38	Konipara	7,849861	-9,040703	Yes	High presence of HAT in the past, proximity with river, landscape conservation	Moderate	High memory of HAT, no pump, rice-fish farming, pig breeding, low economic level	Yes
39	Gbonoma	7,981428	-8,888323	Yes	Proximity with river, landscape conservation	Low	Low memory of HAT, pump, casava cultivation, no pig breeding	No
40	Kerema	7,716980	-8,927370	Yes	Landscape conservation, close to low ground	Low	Low memory of HAT, pump, casava cultivation, no pig breeding	No
41	Galaye North	7,773030	-8,770480	Yes	Close to lowground	Moderate	No pump, rice-fish farming, pig breeding, low economic level	Yes
42	Nonah	7,555770	-9,089550	Yes	Proximity with Diecke protected area	Moderate	No pump, rice-fish farming, pig breeding, Liberian refugee, low economic level	Yes
43	Yossono	7,552852	-8,815732	Yes	Proximity with Diecke protected area, close to lowground	Moderate	High memory of HAT, Liberian refugee, low economic level	Yes
44	Kotonhui	7,435987	-8,989097	No	Far from Diecke protected area, landscape degradation	Not visited on the field	Not visited on the field	No
45	Galaye South	7,654670	-9,156030	Yes	Landscape conservation, close to low ground	Moderate	High memory of HAT, hunting, rice-fish farming, pig, Liberian refugee, low economic level	Yes
46	Gerpa	7,427766	-8,831665	No	Inaccessibility	Not visited on the field	Not visited on the field	No
47	Douloupa	7,434890	-8,796662	No	Inaccessibility	Not visited on the field	Not visited on the field	No
48	Manaouen	7,484887	-8,783733	No	Inaccessibility	Not visited on the field	Not visited on the field	No
49	Beleton	7,485153	-8,769392	No	Inaccessibility	Not visited on the field	Not visited on the field	No

Proposition d'une surveillance épidémiologique ciblée



Application d'IVR en Afrique de l'Ouest et Centrale



Une méthode reconnue et financée par l'OMS

World Health Organization

Collaborating Centres ANNUAL REPORT

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Name of the University, Hospital, Research Institute, Academy or Ministry

Institut de Recherche pour le Développement (IRD)

Name of the Division, Department, Unit, Section or Area

Joint Research Unit IRD/CIRAD 177 INTERTRYP « Host - Vector – Parasite – environment interactions in neglected tropical diseases due to Trypanosomatids »

City	Montpellier	**Reference Number**	FRA-137
Title	WHO Collaborating Center for research on host/vector/parasite interactions to sustain surveillance, control and elimination of Human African Trypanosomiasis		
Report Year	04-2020 to 04-2021		

Activity 4

Title: Providing support to WHO in improving HAT epidemiological knowledge in grey areas applying the identification of villages at risk (IVR) methodology
Description: In order to advance on the elimination of HAT and to reinforce national control programs for developing HAT control activities, improving epidemiological knowledge of the diseases.
INTERTRYP developed a geographical based method to assess epidemiological situation of HAT in areas where the status is not well known.

Publications sur la méthode IVR

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RESEARCH ARTICLE OPEN ACCESS

Sleeping sickness in the historical focus of forested Guinea: update using a geographically based method

Fabrice Courtin[1,a,*], Oumou Camara[2,a], Mamadou Camara[2], Moïse Kagbadouno[2], Bruno Bucheton[3], Philippe Solano[4], and Vincent Jamonneau[1]

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Identification des Villages à Risque (IVR) : pour un état des lieux de la Trypanosomiase Humaine Africaine au Niger

Identificação de Vilarejos à Risco: para Análise da Situação da Tripanossomíase Humana Africana no Níger

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Identification des villages à risque de Trypanosomiase Humaine Africaine dans les foyers historiques du Tchad

Identification of villages of Human African Trypanosomiasis risk in Chad's historic homes

Jérémi Rouamba [1], Justin Darnas [2], Mallaye Peka [2] Fabrice Courtin [3]

Annales de l'Université de Sarh, 2021

Objectif

Contribuer à éliminer durablement la THA en Afrique

(défi sécuritaire qui complexifie ou empêche l'accès aux zones)

IVR Niger, 2015

Merci pour votre attention