



DISTRIBUTION OF LONG-LASTING INSECTICIDAL TREATED NETS (LLINs) AMONG MALARIA HIGH-RISK GROUPS: YOUTH IN BOARDING SCHOOLS

REPORT

Kigali - Rwanda

ACKNOWLEDGEMENT

The Rwanda Biomedical Centre (RBC), through the Malaria and Other Parasitic Diseases Division, Malaria Prevention Unit alongside the Rwanda NGOs Forum on HIV/AIDS and Health Promotion, gratefully acknowledges all partners who supported Long-Lasting Insecticidal Nets (LLINs) distribution exercises.

We appreciate the invaluable contribution of civil society and faith-based organizations whose consistent support made this activity possible. We also extend our gratitude to the Director General of District hospitals, the Directors of Health Units, the Directors of Education Units, the Heads of Health Centers, and the Heads of Schools, who supported this activity immensely.

The coordinated and synergized efforts of all stakeholders led to the successful distribution of Long-Lasting Insecticidal Nets (LLINs) in all boarding schools across the country, demonstrating solid and collective actions toward achieving the shared goals of preventing and reducing the incidence of malaria, especially in the high risk groups including easy to reach population, paving the way toward zero malaria in Rwanda.

Mrs. Nooliet KABANYANA
Executive Secretary
Rwanda NGOs Forum on HIV/AIDS and
Health Promotion

Dr Mangara Jean Louis Ndikumana
Director of Malaria Prevention Unit,
Rwanda Biomedical Center (RBC)

Dr. MBITUYUMUREMYI Aimable
Division Manager
Malaria and Other Parasitic Diseases Division
Rwanda Biomedical Center (RBC)

II. Table of Contents

ACKNOWLEDGEMENT	1
I. Executive summary	3
III. Rationale	4
IV. Objectives	5
VI. Methodology	6
VII. Source of funds	9
VIII. LLINs distribution exercise	9
• Closed Schools	11
• New identified boarding schools during the LLINs distribution period	11
IX. Media and Communication	11
IX.3. Online Newspaper	12
IX.4. X (Former Twitter engagement) engagement	13
IX.5. YouTube	13
IX.6. Radio Broadcast	13
X. Lessons Learnt	14
XI. Challenges	14
XIII.. Conclusion	15
Annex 2: Photo Gallery	17

I. Executive summary

This report highlights a remarkable achievement in implementing the LLINs redistribution activity to all boarding schools in Rwanda. Since December 13, 2023, through this exercise, we successfully redistributed **236,522 LLINs** nationwide to **480 boarding secondary schools** marking a success of **99.44%**, under the overall coordination of the Rwanda Biomedical Centre and Rwanda NGOs Forum on HIV/AIDS and Health Promotion.

This impressive feat was achieved through the collaborative efforts of stakeholders, such as the Rwanda Biomedical Centre (RBC) and Civil Society Organizations (CSOs), including Rwanda NGOs Forum on HIV/AIDS and Health Promotion, Society for Family Health (SFH) Rwanda, Strive Foundation Rwanda (SFR), Rwanda Interfaith Council on Health (RICH), Kigali Hope Organization (KHO), Pro-Femmes Twese Hamwe (PFTH), Cartas Rwanda, Association de Solidarité des Femmes Rwandaises (ASOFERWA), Union de Solidarité d'Aide au Développement Communautaire (USADEC), Ihorere Munyarwanda Organization (IMRO) and Rwanda Development Organization (RDO), the Ministry of Education (MINEDUC), Director Generals of district hospitals, Directors of Health Units, Directors of Education Units, supervisors, Heads of health centers, and Heads of Boarding Schools, among others, a testament to the dedication and hard work of all the stakeholders involved. Furthermore, distinguished media outlets were engaged to increase awareness about malaria prevention and control to the general population, with a particular emphasis on the proper use of mosquito nets.

Prior to the implementation of the LLINs redistribution activity, there was a planning phase marked by intensive coordination meetings and teamwork sessions involving all stakeholders to ensure the efficiency and effectiveness of the LLINs redistribution exercise. It was previously planned to distribute a total number of **237,850 LLINs** to **482 schools** countrywide.

The financial support from the Global Fund through RBF Malaria was also crucial in making this exercise successful.

However, the work does not stop here. There is a need to plan for the supervision of schools to ensure that students use mosquito nets daily and are not kept in school stores. This will be instrumental in ensuring the success of the LLINs redistribution activity in reducing the incidence of malaria in high-risk groups in Rwanda.

II. Background

Today, malaria continues to represent a real public health concern, with the entire Rwandan population at risk of infection. In response to malaria infection, Rwanda implemented integrated malaria control interventions, including LLIN distribution through mass campaigns and routine channels, IRS, behavior change communication, and improved access to diagnostics and treatment, and those combined interventions resulted in significant malaria infection reduction. As per the annual malaria report, almost all 30 districts of Rwanda registered a decline in malaria during the reporting period of July 2022 to June 2023. With the end of Fiscal Year 2022-2023, malaria incidence in Rwanda reduced from 76 per 1,000 persons per year in FY 2021-2022 to 47 per 1,000 (39% reduction), while the Slide Positivity Rate (SPR) dropped from 22% in FY 2021/2022 to 14% in FY 2022/2023. Uncomplicated malaria cases dropped from 998,811 cases in FY 2021/2022 to 622,900 cases in FY 2022/2023 (38 % reduction), with currently 58% of these cases managed at the community level. Severe malaria cases were reduced from 1,831 cases in FY 2021-2022 to 1,316 severe cases in FY 2022/2023, representing a 28% decrease in severe malaria. The number of deaths due to malaria decreased significantly from 71 in FY 2021-2022 to 51 deaths in FY 2022-2023 (28 % reduction).

III. Rationale

In reference to the malaria Matchbox recommendations, in collaboration with partners, the Ministry of Health/RBC/MOPDD, using the Matchbox findings of March 2021, have conducted the need assessment, mapping of hotspots and situational analysis among high-risk groups to orient the specific interventions being implemented in the context of malaria. From the assessment, a total number of 766,647 persons among high-risk groups were identified. These vulnerable groups include Rice Farmers, Fishermen, Mining workers, truck drivers, Health Care Providers, Students at School, hotel staff and Clients, Female Sex Workers, Motorcyclists, Cross-border trades, Seasonal Workers, people with disabilities, and travelers, etc; with this background, RBC planned to distribute LLINs to all boarding schools sleeping space to ensure that students at school are protected by LLINs.

Reference was made to the LLINs stock status as of October 2023 countrywide in health facilities (ANC and EPI stock). The internal redistribution (from HCs to Boarding schools in the district)

helped to speed up the distribution and stock management at the health center level to avoid unnecessary overstock.

IV. Objectives

IV.1. Main objective

The distribution of LLINs among youth in boarding schools had a main objective of contributing to the reduction of Malaria Burden and promote academic continuity by protecting students' health and ensuring uninterrupted access to education among youth in boarding schools

IV.2. Specific objectives

Below were the specific objectives at which the distribution of LLINs among students in boarding schools based on:

1. To ensure that every youth in boarding schools across Rwanda has access to a Long-LLIN for personal use.
2. To improve the health and well-being of youth in boarding schools, minimizing the risk of malaria-related illnesses and complications that could disrupt their academic pursuits and quality of life.
3. To promote academic continuity by reducing malaria-related burden among youth in boarding schools (Malaria often leads to missed school days due to illness, which can disrupt students' learning progress and hinder their educational attainment).

V. Results

The distribution of LLINs among youth in boarding schools expected to achieve the following results:

1. Achieving universal LLIN coverage among youth in boarding schools, with each student having access to their own LLIN
2. Increased LLIN utilization rates among students, leading to a significant reduction in mosquito bites and malaria transmission within boarding school youth/students
3. Decreased incidence of malaria-related illnesses and complications among students in boarding schools

4. Reduction in malaria-related absence rates among students, leading to improved school attendance and continuity in learning.

VI. Methodology

VI.1. Needs Assessment and Planning

Rwanda NGOs Forum on HIV/AIDS and Health Promotion in collaboration with Malaria Division/RBC conducted a comprehensive needs assessment to determine:

- The number of LLINs required based on the number of beds per school;
- Boarding school size in all the 30 Districts of the Country that needed to be reached;
- Assessing the stock status of LLINs in health centers to serve those schools;

The boarding school size was informed by the mapping of Boarding schools that was conducted by Rwanda NGOs Forum during the Needs assessment for easy to reach groups which included Boarding schools.

There was also collaboration with Health Centers' authorities, educational institutions mainly Boarding schools and CSOs representatives to develop a distribution plan fitted to the specific needs and circumstances of each boarding school.

- The preparatory and planning meetings were conducted from Malaria Division/RBC as follow:
 - 26th October 2023
 - 6th December 2023
 - 11th December 2023

- List of involved CSOs and public institutions involved in planning and LLINs distribution exercise.

#	CSOs and Public institutions supported in LLINs Distribution	Geographic Coverage
CSOs		
1	Society for Family Health Rwanda (SFH)	Eastern Province
2	Strive Foundation Rwanda (SFR)	Western Province
3	USADEC	Western Province
4	CARITAS Rwanda	Western Province
5	Rwanda Interfaith Council on Health (RICH)	Southern Province
6	MEDSAR	Southern Province
7	Profemmes Twese Hamwe (PFTH)	Northern Province
8	Kigali Hope Organization (KHO)	Northern Province
9	Rwanda Development Organization (RDO)	City of Kigali
10	Association de Solidarité des Femmes Rwandaises (ASOFERWA)	City of Kigali
11	Ihorere Munyarwanda Organization (IMRO)	City of Kigali
12	Rwanda NGOs Forum on HIV/AIDS and Health Promotion (RNGOF on HIV/AIDS & HP)	Overall coordination and Monitoring
Public Institutions		
13	Malaria Division/RBC	Close Overall coordination and Monitoring with RNGOF
14	Health Centers	All selected Districts
15	Districts Directors of Education	All selected Districts

VI.2. Logistics

Rwanda NGOs Forum on HIV/AIDS and Health Promotion in collaboration with Malaria Division/RBC had a planning meeting at which logistics and transportation arrangements were discussed from to facilitate coordination and delivery of LLINs to each identified boarding school, considering factors such as distance, terrain vis a vis to Health Centers.

- Transport (Vehicles)

- Facilitation (Allowance for accommodation and meals)
- Communication fees to facilitate communication during the planning and LLINs distribution period
- Reporting tool for LLINs distribution

VI.3. Distribution plan, geographic coverage and timeline

In different planning meetings that were conducted and led by Malaria Division/RBC in collaboration with Rwanda NGOs Forum with other CSOs who were engaged to support in the LLINs distribution, there was developed and adopted a clear distribution plan, with a clear coverage and timeline for CSOs to better coordinate and deliver on time. Each CSO, was assigned to its specific coverage. The distribution plan started from

- **List of CSOs and other supported institutions with geographic coverage for LLINs distribution**

#	CSOs institutions supported in LLINs Distribution	Supported Institutions	Geographic Coverage
1	Society for Family Health Rwanda (SFH)	RBC Health Centers Boarding schools	Eastern Province
2	Strive Foundation Rwanda (SFR)	RBC Health Centers Boarding schools	Western Province
3	USADEC	RBC Health Centers Boarding schools	Western Province
4	CARITAS Rwanda	RBC Health Centers Boarding schools	Western Province
5	Rwanda Interfaith Council on Health (RICH)	RBC Health Centers Boarding schools	Southern Province
6	MEDSAR	RBC Health Centers Boarding schools	Southern Province
7	Profemmes Twese Hamwe (PFTH)	RBC Health Centers	Northern Province

		Boarding schools	
8	Kigali Hope Organization (KHO)	RBC Health Centers Boarding schools	Northern Province
9	Rwanda Development Organization (RDO)	RBC Health Centers Boarding schools	City of Kigali
10	Association de Solidarité des Femmes Rwandaises (ASOFERWA)	RBC Health Centers Boarding schools	City of Kigali
11	Ihorere Munyarwanda Organization (IMRO)	RBC Health Centers Boarding schools	City of Kigali

VI.4. Coordination and Monitoring

Rwanda NGOs Forum on HIV/AIDS and Health Promotion played a key role in coordination and monitoring of LLINs distribution by ensuring that every identified Boarding school received the number of LLINs equal to the number of beds for students.

To achieve this, Rwanda NGOs Forum assigned its Provincial Coordinators to work closely with CSOs allocated in the Districts under each province for specifically distribution of LLINs.

They also worked with Health Centers representatives and Boarding Schools administrators to monitor if the LLINs were received by the schools.

In some schools, there was conducted demonstration on proper LLIN installation techniques and conducted hands-on sessions to empower students with the knowledge and skills needed to set up their nets independently.

VII. Source of funds

The total funds for the LLINs distribution will be covered by CSOs implementing partners for Malaria Program through their existing action plans funded by RBF Malaria

VIII. LLINs distribution exercise

- LLINs distribution exercise took place in all districts of the City of Kigali, Southern, Northern, Eastern and Western provinces

- The distribution exercise started from **13th December** and **completed on 29 December 2023**.
- LLINs stock was found at the Health Centers.
- CSOs engaged in the distribution process would collect LLINs from the health to nearby boarding schools as per the approved plan.
- To ensure security accountability of LLINs, a delivery note was filled and signed out by the responsible person at both health center and the boarding school.

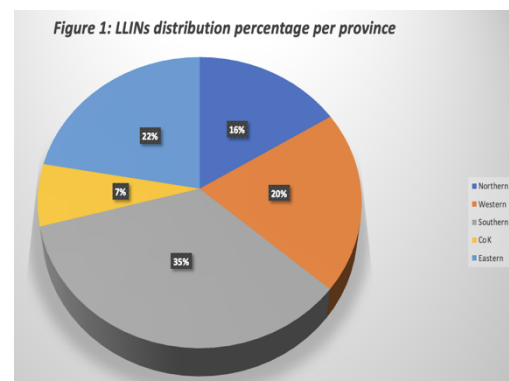
Table: The table below highlights the status of LLINs distribution per each province and per district.

PROVINCE	DISTRICTS SERVED	NUMBER OF SCHOOL SERVED	NUMBER OF SCHOOL IN DISTRICT	Schools closed or added	NUMBER OF LLINs REDISTRIBUTED	STATUS	LLINs/Province	Schools served per province
NORTHERN	GICUMBI	18	19	1 schools closed (GS Apapebu [150])	7650	Fully covered	38350	82
	BURERA	14	15	1 schools closed (KABONA TSS [400])	7000	Fully covered		
	GAKENKE	13	13		6150	Fully covered		
	MUSANZE	19	19		8500	Fully covered		
	RULINDO	18	19	1 schools closed (ES Remera Mbogo [40])	9050	Fully covered		
WESTERN	KARONGI	22	22		7920	Fully covered	47570	110
	NGORORERO	14	14		6750	Fully covered		
	RUBAVU	16	16		6950	Fully covered		
	RUSIZI	17	18	St Peter closed [100]	7250	Fully covered		
	NYAMASHEKE	16	16		8450	Fully covered		
	NYABIHU	13	13		5800	Fully covered		
	RUTSIRO	12	12		4450	Fully covered		
SOTHERN	HUYE	18	18		8600	Fully covered	81700	140
	NYAMAGABE	12	12		8850	Fully covered		
	KAMONYI	14	14		7700	Fully covered		
	NYARUGURU	11	11		6150	Fully covered		
	MUHANGA	31	31		15300	Fully covered		
	RUHANGO	24	24		16050	Fully covered		
	NYANZA	19	19		12650	Fully covered		
	GISAGARA	11	11		6400	Fully covered		
CITY OF KIGALI	KICUKIRO	12	12		5600	Fully covered	16322	34
	GASABO	15	15		5911	Fully covered		
EASTERN	NYARUGENGE	7	7		4811	Fully covered	52580	114
	BUGESERA	18	17	There is one additional school: Rwanda C	6780	Fully covered		
	RWAMAGANA	19	19		8350	Fully covered		
	KIREHE	8	7	There is one additional school: Musaza T	4150	Fully covered		
	GATSIBO	20	20		9050	Fully covered		
	NYAGATARE	20	20		9000	Fully covered		
	Kayanza	16	16		8800	Fully covered		
NGOMA	13	13		6450	Fully covered			
TOTAL		480	482		236522		236522	480

Throughout this exercise:

- **236,522 (99.44%)** LLINs were successfully distributed out of **237,850** initially planned to be distributed
- **480** boarding schools were served out of **482** Boarding schools.
- All **30** Districts of the country were covered with a number of identified boarding schools per District

Chart: Pie chart illustrates the LLINs distribution percentage per province



- **Closed Schools**

As part of the distribution exercise for Long-Lasting Insecticidal Nets (LLINs), it was found that some boarding schools were closed. Below is a table which provides the number of LLINs that would have been provided to each of the below closed schools.

Province	District	Name of Boarding Schools	# planned LLINs to be distributed
Northern	Gicumbi	GS Apapebu	150
	Burera	KABONA TSS	400
	Rulindo	ES Remera Mbogo	400
Western	Rusizi	St Peter	100
Total planned LLINs to be distributed		4	1,050

- **New identified boarding schools during the LLINs distribution period**

New schools were identified during the LLINs distribution. Those schools were not planned but were provided with LLINs.

Province	District	Name of Boarding schools	# additional LLINs distributed
Eastern	Bugesera	Rwanda Children Christian School	180
	Kirehe	Musaza TSS	200
Total distributed LLINs		2	380

IX. Media and Communication

During the distribution exercise, Rwanda NGOs Forum engaged the following media aimed to raise awareness on the distribution of LLINs among youth in Boarding schools aimed to contribute to the reduction of malaria incidences among youth in Boarding schools and malaria- related absences in class leading to improved school attendance and continuity in learning.

- Radio and TV Talk shows and DJ Mentions
- Journalists to produce articles
- Social media influencers were also fully engaged.

IX.1. Target audience were:

- Public institutions,
- Development partners
- Districts, Boarding schools
- CSOs in Malaria response.

IX.2. Radio 1 DJ Mention

A script for a DJ mention was developed and shared with all stakeholders for their feedback. After collecting all the necessary inputs, the final version was endorsed for airing on Radio TV 1 which was aired from 14th to 26th December 2023.

The airing schedule was as follows:

Description	Station	Airing Time
Airing LLINs Distribution DJ Mentions within RIRARASHE and other programs throughout the day	Radio 1	9:00 am 11:20 am 11:50 am 15:20 pm 17:20 pm
The morning show for "Rirarashe" was being rebroadcasted	Radio and TV	9:00 am 8:00pm - 9:00 pm

IX.3. Online Newspaper

5 newspaper articles were developed and widely disseminated

1. <https://www.umusarenews.com/story/rulindo-niyonkuru-yahinduye-imyumvire-kubera-ubukangurambaga-bwa-rwanda-ngo-forum>

2. <https://radiotv10.rw/rwanda-hatangiye-igikorwa-cyo-gusakaza-inziramibu-mu-bigo-byose-byamashuri-kinazaniye-ababyeyi-inkuru-nziza/>
3. <https://muhaziya.rw/amakuru/kirehe-ibigo-byamashuri-byahawe-inziramibu-zisaga-4-000-ku-buntu/>
4. <https://umuseke.rw/2023/12/gicumbi-abanyeshuri-bari-guhabwa-inziramibu/>
5. <https://thesourcepost.com/rwandan-coalition-strengthens-boarding-students-against-malaria-with-insecticide-treated-nets/>

IX.4. X (Former Twitter engagement) engagement

In the same efforts, throughout the redistribution exercise, we also leveraged the use of social media and other digital platforms:

1. <https://x.com/RwandaNGOForum/status/1735061649118130230?s=20>,
2. <https://x.com/AnnonciataB/status/1735565580185354685?s=20>
3. <https://twitter.com/hambajona/status/1735642494358999355?t=2XidMvtxMQyGkgUVQuJXYg&s=19>
4. <https://x.com/hambajona/status/1736712638753648921?t=T5puozYSrl6GC2JrrSnxIw&s=09>
5. https://twitter.com/Fazilclaude/status/1737024123333750848?t=0zu__JcybGYpssl8SQDaA&s=19
6. <https://x.com/thesourcepost/status/1737067067449250038?s=20>
7. <https://x.com/thesourcepost/status/1737089795199844608?s=20>

IX.5. YouTube

A video was captured during the distribution activities in Kicukiro District and was uploaded and widely disseminated through Rwanda NGOs Forum's YouTube channel: <https://youtu.be/mQHC4GKZmyE>

The video shows the distribution of LLINs, a demonstration of how to hang them and the gratitude expressed by school authorities for the government's support in malaria prevention and control. The students also showed their appreciation and commitment to effectively use mosquito nets.

IX.6. Radio Broadcast

Activity in the Southern Province was rebroadcasted on Radio Salus:

https://drive.google.com/file/d/1FrgccLuZWksCbyG-nqecw2aAnlGJY_IG/view?usp=sharing

X. Lessons Learnt

1. Meaningful involvement and engagement of all stakeholders from the planning phase to the implementation contributes to a success as everyone implements the approved plan with respect to the timeline.
2. Meaningful involvement of the concerned public institutions, civil society organizations local authorities and school administrators contributed to the success of LLINs redistribution plan and within the set timeline
3. Consistent daily monitoring played an important role in tracking the progress towards the LLINs distribution, documenting challenges throughout the process and immediately find a solution to the identified issue.
4. Daily reporting was very important to track the progress and plan for the next days of LLINs distribution.
5. Communication between the Provincial coordinators, CSOs that were supporting LLINs distribution and Rwanda NGOs Forum was very important for effective coordination and monitoring

XI. Challenges

1. Lack of budget to support LLINs distribution (The distribution of LLINs was not planned to be implemented)
2. Some CSOs were reluctant/not fully committed to the LLINs distribution
3. Unconducive environment in some areas where roads were not favorable. Ex the cars would not be able to cross the bridges and people responsible for LLINs distributions would walk for a long distance to reach the boarding schools in that areas
4. Unplanned funds for man power to pack LLINs in the car from the health centers and unpack from the Boarding schools.
5. Unplanned funds for man power where roads were not conducive and favorable to the boarding schools
6. Limited time for activity planning and implementation

XII. Recommendations

1. Ensure the activity for LLINs distribution is part of the Annual work plan and costed for the ease of its implementation
2. Ensure having enough time for activity planning and implementation
3. Always consider and plan on how to overcome the barriers that may be met throughout the activity implementation process

XIII.. Conclusion


The successful distribution of LLINs among students in boarding schools represents a significant achievement in stakeholders' joint efforts to fight against malaria and prioritize the health and well-being of youth in boarding schools in Rwanda. Through joint planning, strong collaboration and solid commitment, the stakeholders have accomplished the goal of ensuring that each youth in boarding school/student has access to the LLIN to protect him/her against mosquito-borne disease.

By promoting the well-being of youth in boarding schools, stakeholders in malaria response are laying the foundation for academic achievement and socio-economic progress. By reducing the number of school days missed due to malaria, students can fully engage in their studies, pursue their ambitions and make significant contributions to society.

However, our journey does not end here. As we celebrate this milestone, it is essential that we maintain a consistent level of dedication to sustain and further enhance our progress. Ongoing capacity building, monitoring, evaluation and collaboration are crucial to ensuring the continued effectiveness use of LLINs and addressing the risk of malaria in boarding schools and beyond.

Rwanda NGOs Forum on HIV/AIDS and Health Promotion (RNGOF on HIV/AIDS & HP) strongly appreciate all stakeholders involved and fully supported this initiative. This includes Public institutions "Rwanda Ministry of Health (MoH), Rwanda Biomedical Center (RBC), Rwanda Ministry of Education (MINEDUC), District Local authorities, Representatives of District Hospitals and Health Centers, School administrators, and more especially CSOs who meaningfully supported the successful LLINs distributions and students themselves who committed effective use of LLINs. Your unwavering commitment and dedication have played a crucial role in achieving our collective goal of a healthier, malaria-free future for the youth in Boarding schools in Rwanda.

Annex 1: Sample of a delivery note



Rwanda
Biomedical
Centre

IHDPC/MALARIA & OTHER PARASITIC DISEASES DIVISION

Bordereau de livraison de LLINs du centre de santé

Centre de santé expéditeur: G. MUKONKO

Destinataire: E.S. G. MUKONKO (School)

Type	Quantité	Observation
Rectangulaire	400	<u>Good</u>
Total	400	<u>Good</u>

Pour la remise FOSA

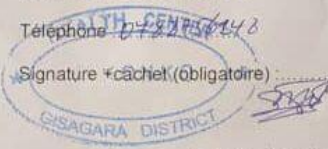
Noms: MUSIRUMARE Ignace

Institution (FOSA): E.S.M. GIKONKO

Fonction: Data Manager

Date: 13-12-2023

Téléphone: 0789518055

Signature + cachet (obligatoire): 

Pour la réception

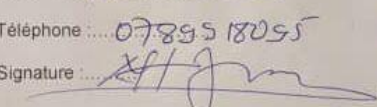
Noms: Miyonsaba Jean Piyse

Institution: UMCOF

Fonction: Provincial Coordinator

Date: 13-12-2023

Téléphone: 0789518055

Signature: 

Pour la réception /Shcool

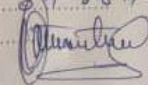
Noms: NTACIRUTIMANA Emmanuel


Institution: E.S. GIKONKO

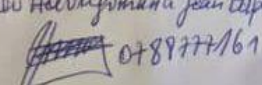
Fonction: DoT

Date: 13-12-2023

Téléphone: 0788777651

Signature: 



Approved by H.T.
Ruv Havaugimana Jean Baptiste
 0789777161

Annex 2: Photo Gallery







