WHO SUPPORT TO ETHIOPIAN DRACUNCULIASIS ERADICATION PROGRAM

WHO support to the Nationwide Guinea worm eradication program

WHO Supported GWEP activities in Gambella

WHO supported GWEP activities in Bench Maji Zone, SNNPR

WHO Supported GWEP activities in South Omo

World Health Organization
Ethiopia Country Office

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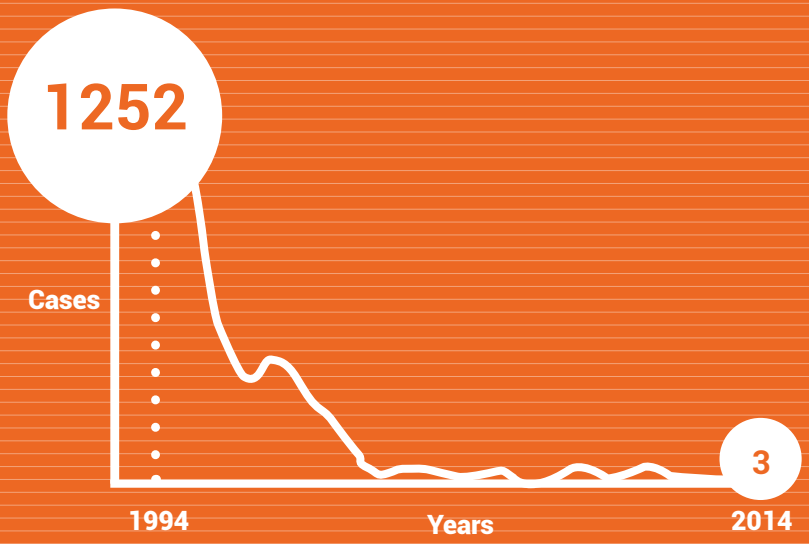

SECTION 1

Executive Summary
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Executive Summary

This document presents the World Health Organization (WHO) supported Guinea Worm Eradication Program (GWEP) activities carried out nationwide and in the high risk areas such as Gambella region, South Omo and Bench Maji Zones of SNNP region in particular. Mainly it involves the WHO technical, financial, and logistical support to the Ethiopia's Dracunculiasis Eradication Programme (EDEP) since the commencement of the eradication effort. In more details, it describes the progress made on the dracunculiasis eradication endeavours in recent years and quantified the support during the period from 2012-2015. The document contains six sections. The first section provides summary, introduction and objective. Section two to five highlights results achieved in strengthening guinea worm disease surveillance, public awareness of the disease on the reward system, and documentation of surveillance data and programme activities nationwide, in Gambella region, in South Omo Zone and in Bench Maji Zone, respectively. Section six also describes major challenges and recommendations to be considered by the national programme.

The global eradication campaign has made steady progress. Both the number of cases and endemic villages has fallen significantly since the launch of the eradication efforts in the 1980s when 20 countries were endemic for the disease. Currently, there are four countries endemic to Guinea worm disease. These countries are Chad, Ethiopia, Mali, and South Sudan.

After combating for 22 years which began with only 1,252 cases in 1994, Ethiopia remained endemic to Guinea worm disease. The country ended up the year 2014 by reporting three indigenous Guinea worm cases representing 57% decrease in the number of cases as compared to seven cases reported in 2013. The annual incidence of dracunculiasis cases in Ethiopia has shown a reduction by more than 99% from 1994 to 2014. Indigenous transmission of Guinea worm disease interrupted in SNNPR since 2001. However, low intensity transmission continued in Gambella region. Currently the disease is endemic in Abobo and Gog districts of Gambella region.

The World Health Organization has been supporting the EDEP to strengthen surveillance, documentation and raise awareness of the cash reward offered by the program.

The following are some of the key activities and achievements conducted to strengthen the Guinea worm disease surveillance with WHO support. WHO Provided financial support to Ethiopian Public Health Institute (EPHI), Supported logistics such as vehicles, motor cycles, computers etc., deployed WHO Guinea worm officers, communication consultants and data manager, supported the detection and reporting of Guinea Worm Disease (GWD) rumors and their investigation within 24 hours, used other disease surveillance programs like polio during National Immunization days (NIDs) and conducted GWD active case search, supported the refugee community in Gambella by providing training to the community health agents within the refugee camps to promptly report any suspected cases of dracunculiasis, reactivated the National Certification Committee (NCC) and conducted meetings and field work, supported

the conduct of national technical working group meetings, supported EDEP by conducting detailed case investigation of GWD to identify the source of infection and recommended intervention measures, supported EDEP for the establishment of villages under active surveillance in Ilia kebele of Itang special district in Gambella, in Surma and Nyangatom districts in Southern Nations and Nationalities of People's Region (SNNPR), Supported the establishment of villages under active surveillance in Abobo district of Gambella region and provided full scale intervention activities in 2013 before TCC stepped in to operate in the district. As a result, it was possible to interrupt indigenous transmission from Abobo in 2014, supported cross border collaborative meeting between South Sudan and Ethiopia on Guinea Worm Eradication Program (GWEP), conducted monthly joint supervision by WHO-National Professional Officer (NPO) and the National coordinator, bi-monthly regional coordinators & WHO field officers supervisions, provided technical support by WHO Inter country Support Team (IST)/AFRO and WHO Head Quarters (HQ), Conducted mapping of at risk villages in high risk areas, supported EDEP national review meetings as part of monitoring.

WHO has been supporting EDEP to enhance the community awareness on guinea worm disease and the cash reward system. Some of the key activities conducted include the recruitment of WHO communication consultants that assisted the national program in community mobilization, sensitization, and publicizing of the cash reward in free areas of Gambella Region, South Omo and Bench Maji Zones of SNNPR, disseminated GWD messages on Ethiopian Broadcasting Radio stations and Television (TV), used mobile van in high risk areas and refugee camps, provided face to face health education on GWD in various public gatherings, schools, market places etc., printed and distributed promotional materials such as GW ID cards, Brochures, Cash reward posters, Billboards and Standard Operating Procedures (SOPs), Assessed the level of awareness of the community on the disease and the cash reward system, developed Communication for Behavioral Impact (COMBI) plan for EDEP by International consultants, provided training to the local WHO GW communication officers and designated government officers. On top of this, the Neglected Tropical Disease (NTD) director from the WHO HQ and WHO GWEP team also conducted a high level advocacy meeting with the honorable Minister of health of Ethiopia and partners, in Gambella which resulted strong and renewed commitment at all levels. As a result, EDEP established semi-vertical structure to expedite the process of interrupting the disease transmission by the year 2015.

WHO supported EDEP to ensure an adequate level of documentation of surveillance data and program activities at all levels for eventual certification. More support on GWD documentation was particularly provided by WHO in Gambella, Bench Maji and South Omo Zones of SNNPR.

Some of the key challenges include unknown sources of transmission particularly for 2012 Umha case, 2013 PRC Agnuak case and 2014 cases, low level of commitment at regional and district level to stop transmission, Low involvement of HEW in GW surveillance and awareness raising activities, inadequate health infrastructure particularly in Nuer zone of Gambella, South Omo and Bench Maji zones of SNNP region, Insecurity in Surma and physical inaccessibility

in Jor and Akobo districts of Gambella region. Hence, it is recommended that, there is a need for evidence based interventions and operational research to identify source of infection and to stop transmission, continued high-level advocacy and increased NCC field visits to advocate at all levels, Stringent supervision and follow ups on HEWs, Lobby for health systems strengthening, advance planning and integrate guinea worm activities into other public health programs.

Currently, there is a change in the division of responsibilities between the World Health Organization and The Carter Center (TCC) for assisting EDEP. This change in providing financial support by WHO and TCC for EDEP will come into effect from 1 April 2015. To this end, it is essential for the program to officially handover the WHO supported GWEP activities to the Federal Ministry of Health of Ethiopia (FMOH). However, WHO will continue the leadership in coordinating Guinea worm disease eradication activities in Ethiopia, supporting the eradication effort to attain the goal of interrupting transmission in 2015 and assisting for subsequent certification of the country as Guinea worm disease free.

Introduction

Guinea worm disease or dracunculiasis is a disabling parasitic disease caused by the emergence of a thread-like worm that can reach 100 centimeters long.

In May 1981, the Inter agency Steering Committee for Cooperative Action for the International Drinking Water Supply and Sanitation Decade (1981–1990) proposed the elimination of dracunculiasis as an indicator of success of the Decade. In the same year, the World Health Assembly (WHA) adopted a resolution (WHA 34.25) recognizing that the International Drinking Water Supply and Sanitation Decade presented an opportunity to eliminate dracunculiasis. This led to WHO and the United States Centers for Disease Control and Prevention (CDC) formulating the strategy and technical guidelines for an eradication campaign. Guinea Worm Disease is now poised to be the next disease after smallpox to be eradicated.

In 1986, the Carter Center joined the battle against the disease and in partnership with WHO and UNICEF has since been in the forefront of eradication activities.

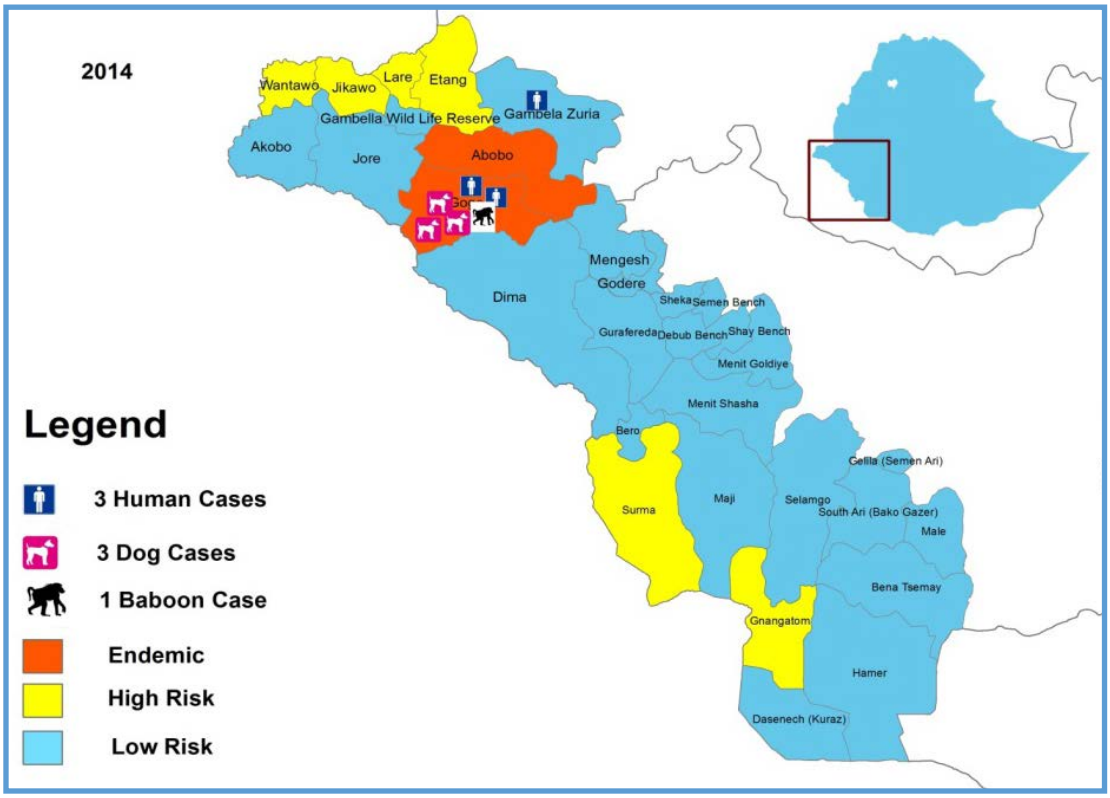
To give it a final push, in 2011 the World Health Assembly called on all Member States through resolution WHA 64.16 to expedite the interruption of transmission and enforce nation-wide surveillance to ensure eradication of dracunculiasis. The eradication strategy recommended by WHO in collaboration with its principal partners involves: Mapping of all endemic villages and establishing community-based surveillance systems, implementing effective case containment measures in all endemic villages, implementing specific interventions, reporting on a regular basis, even if zero cases, and maintaining global and national dracunculiasis databases to monitor the epidemiological situation; consolidating advocacy for eradication of the disease and managing the certification process for global eradication country by country.

The global eradication campaign has made steady progress. Both the number of cases and

endemic villages has fallen significantly since the launch of the eradication efforts in the 1980s when 20 countries were endemic for the disease. Currently, there are four countries endemic to Guinea worm disease. These countries are Chad, Ethiopia, Mali, and South Sudan.

After combating for 20 years which began with only 1,120 cases in 1993, Ethiopia remained endemic to Guinea worm disease. The country ended up the year 2014 by reporting three indigenous Guinea worm cases representing 57% decrease in the number of cases as compared to seven cases reported in 2013 (Fig 1).

Fig. 1: District risk map and 2014 GWD cases



Currently GWD is endemic in Abobo and Gog districts of Gambella region. There are seven districts classified as high risk by EDEP. These districts include Jikawo, Wantoa, Makoy, Lare and Itang in Gambella region and Nyangatom and Surma in SNNP region. (Fig 1)

The major reason for classifying those districts as high risk is because those districts in Gambella are formerly endemic plus there is population movement within as well as they are point of entry for refugees. Some of the districts (Itang, Lare and Makoye) are currently hosting more than 200,000 refugee influx. In the case of Surma and Nyangatom districts, there is cross border population movement related to trade or market which may lead to high risk of importation from Eastern equatorial State of South Sudan which is reporting most of the Guinea worm cases globally.

WHO has been providing financial, logistic and technical support to EDEP since the commencement of the eradication effort in 1994. Based on the need for support nationwide and in the high risk areas, WHO deployed staffs to strengthen the GWEP. Surveillance, awareness creation on the cash reward and documentation are among the major eradication strategies that WHO has been providing support to EDEP.

Currently, there is a change in the division of responsibilities between the WHO and TCC for assisting EDEP. This change in providing financial support will come into effect from 1 April 2015.

Accordingly, TCC will provide full financial support to EDEP for active surveillance in Ethiopia to cover the entire three years after the last indigenous case in all villages under active surveillance currently and in any other villages that may need to be added to that list before transmission is interrupted. **TCC financial support will also cover nationwide surveillance including generating awareness of the cash reward scheme.**

As assigned by the resolution WHA 64.16, WHO will continue its normative and coordination function towards eradication, which includes closely monitoring the implementation of this resolution. Therefore, WHO will continue to provide technical assistance and support Ethiopia to prepare for the stringent examination by the International Commission for the Certification of Dracunculiasis Eradication (ICCDE) that will be required in order for Ethiopia to become certified as having interrupted transmission of Guinea worm disease. This will include field visits by WHO staff and other experts from WHO Collaborating Center at CDC and ICCDE, field assessment and feedback, to prepare the evidence and the basis for certifying the country. Assistance will be provided to the activities carried out by EDEP national Certification Committee. WHO will also provide assistance for a visit by an evaluation team soon after it appears transmission has been interrupted, preparation of detailed Country Report to the ICCDE, and preparation for the visit of an International Certification Team (ICT) to inspect surveillance records and assess the evidence that transmission of Guinea worm disease has been interrupted. WHO will continue the leadership in coordinating Guinea worm disease eradication activities in Ethiopia, supporting the eradication effort to attain the goal of interrupting transmission in 2015 and assisting for subsequent certification of the country as Guinea worm disease free.

To this end, it is essential for the program to officially handover the WHO supported GWEP activities to the FMOH. In this connection, this handover document is prepared with clear description of WHO supported GWEP activities nationwide and in the high risk areas of Gambella, Bench Maji and South Omo zones of SNNP region in particular. The document also contains the challenges of the eradication effort and recommendations for program improvements.

Objectives

General objective

The overall objective of the document is to handover WHO supported Guinea worm eradication program activities to the FMOH, facilitate smooth transition, and provide recommendations for the overall program improvements.

Specific objectives

- Provide contextual background and epidemiological information on Guinea worm disease in WHO supported areas.
- To highlight/quantify major activities carried out and results achieved with the support of WHO in order to assist future efforts in sustaining and building up on what has been done.
- To highlight challenges and make recommendations to be considered by the national program and The Carter Center in future endeavors towards the eradication effort.

SECTION 2

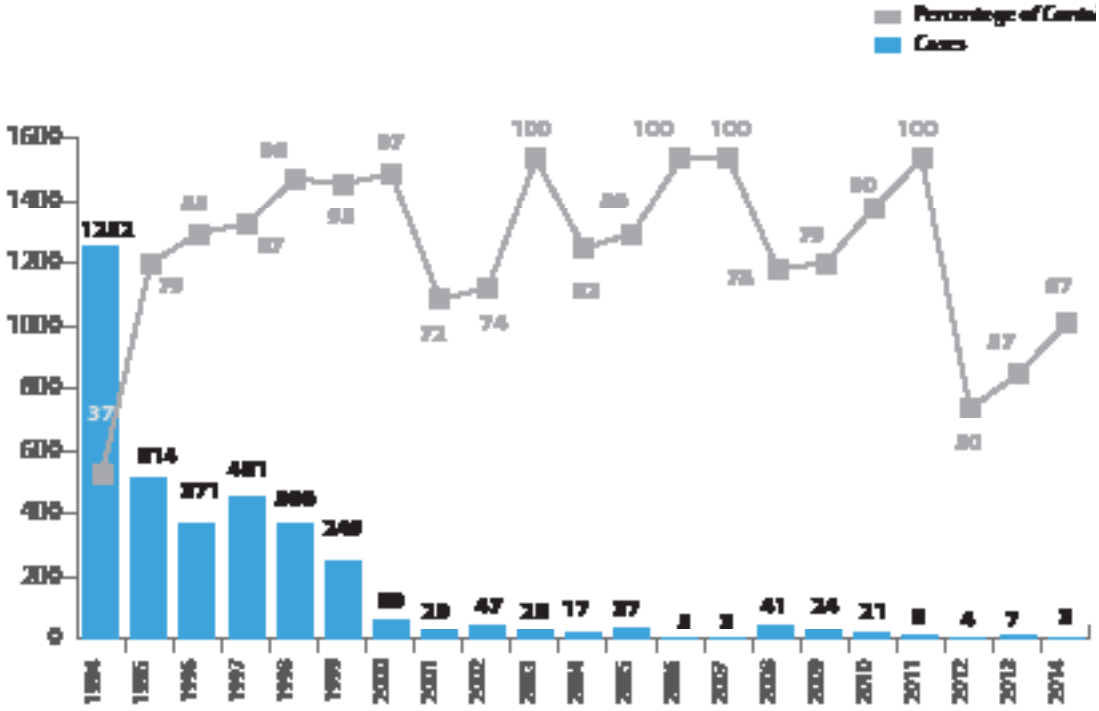
WHO support to the Nationwide Guinea worm eradication program

WHO support to the Nationwide Guinea worm eradication program

Introduction

- The annual incidence of dracunculiasis cases in Ethiopia has shown a reduction by more than 99% from 1994 to 2014 (Fig 1). However, low intensity transmission continued in Gambella region. In 2014, three cases were reported, all from Gog district. Compared to 2013 there is reduction of cases by 57%.
- The World Health Organization has been supporting the Ethiopian Dracunculiasis Eradication Program (EDEP) since it began in 1994. Effort was made to strengthen surveillance, documentation and raise awareness of the cash reward offered by the EDEP.

Fig 1: Annual number of dracunculiasis cases and % of cases contained



Surveillance

WHO human resource to strengthen GWD surveillance

- WHO supported EDEP by deploying eight staffs (One NPO, four GW field officers, Two GW communication consultants and one data manager). The WHO staffs supporting GWEP are described below:
- A National Professional Officer (NPO) working in the WHO country office as a focal person on the Guinea worm eradication program nationally

- Four WHO GW Field officers working in Guinea worm disease at risk areas where one of them is deployed to help augment surveillance in camps housing refugees from South Sudan. The other one is to support districts in Agua and Mezenger zone of Gambella region and in free areas bordering endemic districts. The two officers in Bench Maji and South Omo zones of SNNPR are particularly providing support to the high risk Surma and Nyangatom districts, respectively. There is a frequent supportive supervision to these high risk areas by WHO NPO jointly with the EDEP coordinator.
- Two GW communication consultants were supporting communication on Guinea worm particularly in publicizing the new cash reward in Gambella region and in South Omo and Bench Maji Zones of SNNPR
- A data manager supporting GW data management, reporting and documentation nationwide

Key Activities supported by WHO to strengthen nationwide GWD surveillance

- Reporting of Guinea worm cases and rumors (even if zero) was ensured through Integrated Disease Surveillance and Response (IDSR). WHO contributed a lot in strengthening the IDSR by providing nationwide training to surveillance/Public Health Emergency Management (PHEM) officers and other health workers. It also extended the support by conducting regular supervisions of health facilities particularly in the high risk areas. WHO has also played a key role in the detection and reporting of GWD rumors and their investigation within 24 hours. Compared to the previous year for instance, the proportion of health facilities that reported weekly on GWD had shown increments.
- The program had taken opportunities for dracunculiasis surveillance to conduct active case search through other disease surveillance programs like polio during National Immunization days (NIDs)
- National coordinator & WHO-NPO monthly joint supervision, bi-monthly regional coordinators & WHO field officers supervisions was key to strengthen the surveillance
- Joint assessments were conducted by the EDEP, WHO IST/AFRO, WHO HQ and ICCDE team in Gambella and risk areas of SNNP regions. The team provided recommendations for program improvement
- Mapping of at risk villages, non-village settlements, ponds, crossing points was conducted in high risk districts of Gambella, South Omo zone and Bench Maji Zones of SNNP regions by WHO officers using GPS geo-coordinates and documented at national level.
- WHO is providing support on Guinea worm disease to the refugee community in Gambella by providing training to the community health agents within the camps to promptly report any suspected cases of dracunculiasis
- WHO supported EDEP to reactivate the National Certification Committee (NCC) and conducted meetings and field work.

- WHO is supporting EDEP to conduct a national technical working group meeting. The technical working group is composed of the FMOH, EPHI, WHO and TCC.
- WHO supported EDEP by conducting detailed investigation of GWD cases to identify the source of infection and recommend immediate and long-term intervention measures

Fig 2: Training of Village Volunteers in Ilia Kebele of Itang Special District, Gambella

- WHO supported EDEP for the establishment of villages under active surveillance in Ilia kebele of Itang special district in Gambella after the 2013 imported case was reported from the district (Fig 2)
- WHO supported EDEP for the establishment of villages under active surveillance in Surma and Nyangatom districts. The villages were selected based on their risk status and most of them share border with South Sudan Eastern Equatorial State which is endemic to Guinea worm.
- WHO supported the establishment of villages under active surveillance in Abobo district of Gambella region and conducted intervention activities in 2013 before TCC stepped in to operate in the district. **As a result, it was possible to interrupt indigenous transmission from Abobo in 2014**
- WHO supported the cross border collaborative meeting on GWEP that was held in Gambella in 2012 (Fig 3). The meeting helped to strengthen surveillance, communication and coordination of guinea worm disease eradication in cross-border areas.

Fig 3: South Sudan and Ethiopian GWEP Cross border meeting, Gambella

Nationwide community awareness on Guinea worm disease

- EDEP has in the past created awareness about GWD and the cash reward through trainings, sensitization and distribution of IEC materials in currently endemic, formerly endemic and never-endemic areas of the country. However, the level of awareness of GWD and cash reward in free areas still remained low. In order to intensify efforts required towards certification activities and to increase the level of awareness of the community, WHO recruited communication consultants to support the national program in conducting community mobilization, sensitization, and publicizing of the cash reward in Gambella Region, South Omo and Bench Maji Zones of SNNPR
- WHO supported the nationwide awareness campaign by disseminating GWD messages on the disease and cash reward scheme on Ethiopian Broadcasting Radio stations and TV.
- Messages on guinea worm disease and the new cash reward was performed using mobile van in high risk areas such as Gambella (particularly in the refugee camps, entry points and refugee reception center) and Bench Maji Zones, SNNPR
- WHO has been supporting EDEP by printing and distribution of Guinea worm promotional materials. For instance In 2014, the following promotional materials were printed and distributed throughout the nation.
  - GW ID card: 150,000
  - Brochure: 20,000 i.e. 2500 in Nuer, 2500 in Agnua, 10,000 in Amharic, 1000 in Tigrigna and 4000 in Afan Oromo
  - Cash reward posters: 50,000 i.e. 40,000 in Amharic, 5000 in Nuer and 5000 in Agnua
  - Billboards: 10 i.e. 5 in Nuer and 5 in Anua
  - SOPs: 5000 in English

- WHO conducted several assessments in endemic and free areas to determine the level of awareness of the community on GWD and the cash reward system
- WHO supported the development of COMBI (Communication for Behavioral Impact) plan for EDEP by International consultants. The consultants also provided training to the local WHO GW communication officers and designated government officers who are key in the implementation of the national GW COMBI plan for 2015.

Advocacy

- In 2013, His Excellency Dr. Kestebirhan Admassu, the honorable Minister of health of Ethiopia, invited the NTD director from the WHO head quarter and conducted a high level advocacy meeting in Gambella (Fig 4). This high level advocacy meeting was accompanied by FMOH, Regional council, Regional Health Bureau, WHO/AFRO, WHO Country office, The bill and Melinda Gates foundation and The Carter Center which resulted strong and renewed commitment at all levels. As a result, Ethiopian Dracunculiasis Eradication Programme (EDEP) established semi-vertical structure to expedite the process of interrupting the disease transmission by the year 2015 with full time coordinator, the engagement of WHO NPO and field officers, the subsequent technical support visit provided from IST/AFRO and HQ and the implementation of intervention activities in the two endemic districts.

Fig 4: High Level Advocacy Mission to Gambella

- WHO representative and the country office Guinea worm team also conducted a follow up of the high level advocacy mission in Gambella to strengthen the technical support and re assure the logistic assistance from WHO (Fig 5).

Fig 5: Follow up of high level advocacy mission in Gambella

- In collaboration with Health, Development and Anti Malaria Association (HDAMA) and Federal Ministry of Health and Regional Health Bureaus, WHO conducted advocacy meetings in Gambella, Bench Maji and South Omo zones. The advocacy workshop organized in 2012 was entitled "Promoting the Involvement of Decision Makers and other Pertinent Stakeholders on the Eradication Initiative of Guinea Worm Disease"

Review meetings

- As part of monitoring of the program, WHO supported EDEP national review meetings annually. For instance recently, EDEP had conducted its national annual review meeting in Jimma from 03 to 04 2014, which included participants from ICCDE, NCC, FMOH, WHO HQ, TCC Atlanta etc.

Fig 6: EDEP national annual review meeting, Jimma 2014

Documentation

- WHO supported EDEP to ensure an adequate level of documentation of surveillance data and program activities at all levels for eventual certification. More support on GW documentation was particularly provided by WHO in Gambella, Bench Maji and South Omo Zones of SNNPR.
- WHO country office maintained and updated electronic album and documented Guinea Worm Data and various implementation activities conducted by the program

Logistic support

- WHO donated 1 vehicle, 12 motor cycles, 8 desktop computers, 12 Megaphones, 5 GPS machines, 1 photo camera, 1 laptop, 100 boots, 100 rain coats, 100 field bags, 100 umbrella, 100 overcoats, 100 torches and 100 water containers to Gambella region. Two motor cycles, 2 desk top computers, and two GPS machines were given to SNNP Region for Nyangatom and Surma districts. 1 new vehicle was donated to EPHI in 2010. One laptop, 1 photo camera and 1 GPS machine was also offered to EPHI for the National GW program coordinator. 1 new Toyota pickup vehicle is also already procured to be donated to the program soon.

SECTION 3
WHO Supported GWEP activities in Gambella

WHO Supported GWEP activities in Gambella

Part 1: Contextual background

Gambella Peoples' National Regional State is one of the emerging regions in the nation that is located 766km from the capital Addis Ababa. It covers a total area of 23,127 sq. km in the Southwest direction of Addis Ababa. The region has long international border with South Sudan and internal border with Oromia, SNNPR and Beneshegul Gumuze regional states. Administratively, the region is divided in to three tribal zones with twelve districts, one special woreda and one administrative town. It encompasses five endogenous ethnic groups namely Nuer, Anywa, Majeng, Komo and Opo. However, there are also other ethnic groups as highlanders and refugees from Southern Sudan.

The region has 68% health services coverage, 72% safe drinking coverage and 25% sanitation service coverage (2011). Despite the relatively high safe water coverage, the region is still reporting indigenous GWD cases which make the country remained to be endemic for the disease. Gambella region is at risk of importation for GWD due to cross-border movement and seasonal migration to and from South Sudan.

According to the status of the refugee, a total of 247,914 South Sudanese are located in the region from which 192,734 were new arrival after post conflict in South Sudan while 57,180 refugees were those previously residing in Ethiopia.

EDEP with support from the WHO has extended its activities to the new refugee camps and reception centers to strengthen the surveillance system. The reception centers are the entry point for the new influx where they can be registered and given temporary assistance before they could be sent to the camps.

Figure 1: Map of Gambella region

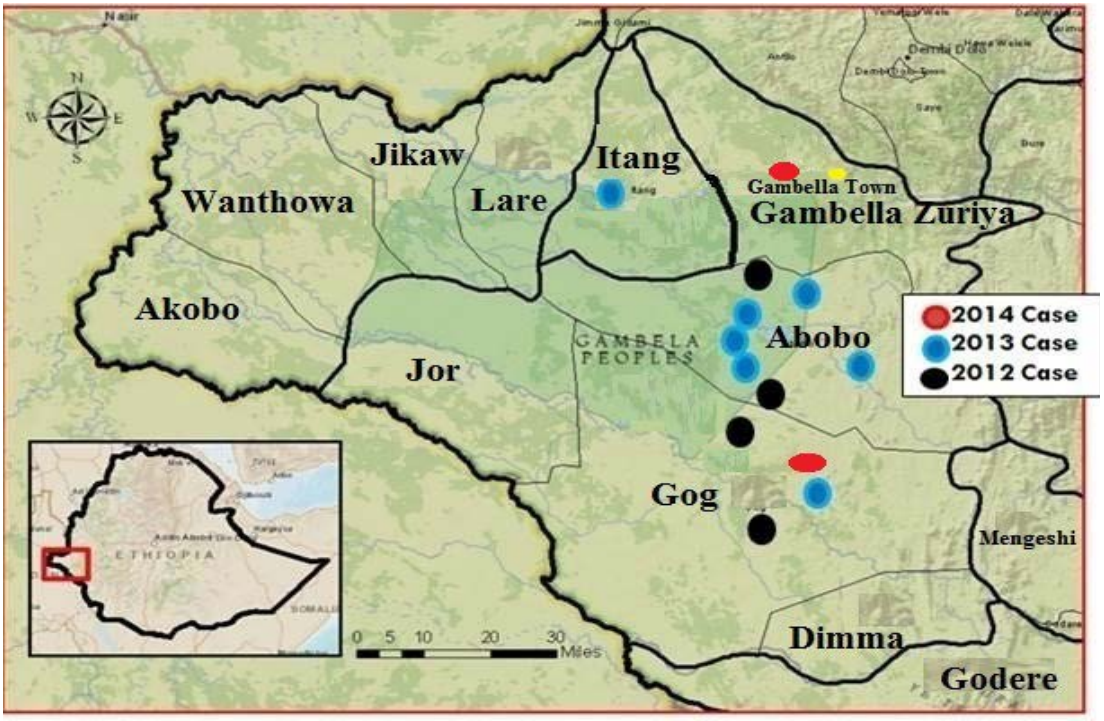
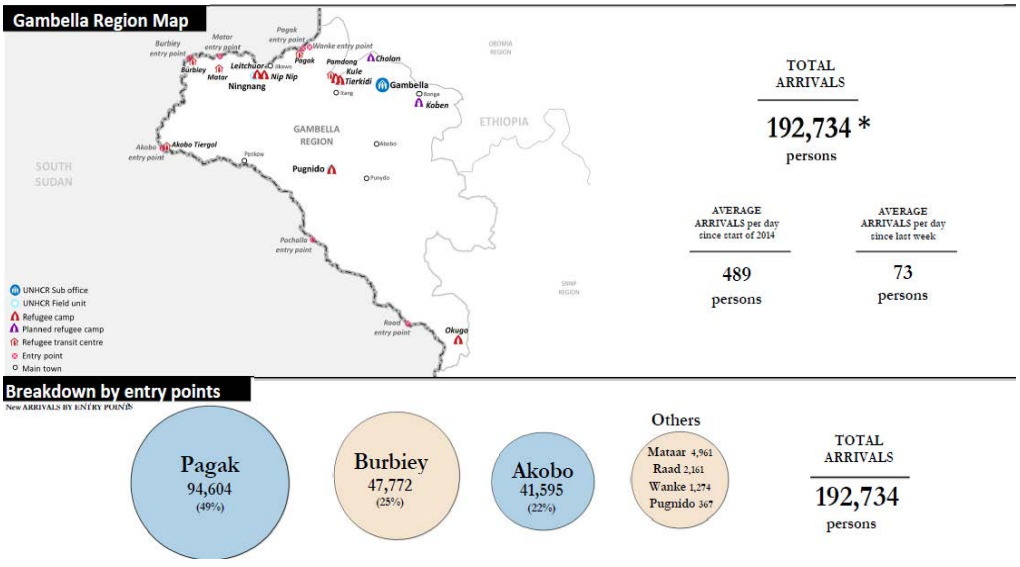


Figure 2: Map and population of refugee in Gambella region



Part 2: Surveillance activities supported by WHO

The surveillance activities have been supported by WHO throughout the region and a lot of achievement has been made so far. These supports were financial support which has been strengthened since 2012 and other supports like transportation and logistics in both endemic and none endemic districts. The surveillance activities have been improved in most of the districts especially in Abobo where WHO intervention has played a great role in stopping GWD transmission before Carter center took over. WHO supported EDEP in Gambella region by provision of operational funds through EPHI/FMOH that assisted 11 district GW field officers in strengthening surveillance activities.

1.Rumors or case detection and investigation

Due to the WHO support, the surveillance activities like early detection and investigation of rumors within 24hrs have been improved and strengthened through the provision of transportation. Not only logistic support but also technical support has contributed a lot for the improvement of the surveillance system due to the regular supportive supervision and capacity building activities.

In recent years, the reporting and investigation of rumors has been improved in non-endemic districts as 38 rumors were reported and 72% were investigated within 24hr**s** during the year 2013 while 36 rumors were reported and 94% investigated within 24hrs during 2014. This showed an improvement in case detection and timely investigation of the rumors compared to the previous years before 2012.

Table 1: Rumors reported and investigated in non-endemic districts

S/N	Name of the District	Rumors reported	Rumors investigated within 24hrs	% of rumors investigated within 24hrs
1	Gambella Woreda	3	3	100%
2	Itang sp. Woreda	4	4	100%
3	Lare Woreda	3	3	100%
4	Jekow Woreda	6	5	83%
5	Makuey Woreda	6	6	100%
6	Wanthoa Woreda	3	2	67%
7	Jior Woreda	4	4	100%
8	Dimma Woreda	7	7	100%

Figure 3: Pictures showing rumors reported and investigated within 24hrs

EDEP has reported zero case in 2010 and 2011 in both Abobo and Itang districts, which means the surveillance system, did not detect any indigenous cases. However, suddenly a case of GWD was reported from Abobo district in 2012 where a joint investigation of the case was conducted by WHO, MOH and RHB team. The team forwarded action point to move the WHO field officer from Gog district to Abobo district to support the intervention. That was the time where WHO provided full scale intervention in Abobo district. The team mission from Addis Ababa briefed and debriefed RHB based on their findings and recommendations were given which emphasized the need for political commitment in the region for GWEP.

Figure 4: The field mission and investigation team at Gambella region

Based on evidences and facts resulted from the assessment and investigation team, the following activities were supported by WHO in Abobo district during the year 2012 and 2013.

- Training of 17 Village Volunteers, full scale of intervention in all Villages under Active Surveillance (VAS) through distribution of filters, regular HE, supportive
- Supervision and application of abate chemical in collaboration with TCC for the supply of intervention materials.
- Active case search in 20 VAS and others risk villages in Abobo district from September to December, 2012.

As a result of the uncontained case detected in Terkudi-Gothock village of Abobo district close to Batpullo village during 2012, there have been four indigenous cases detected in Batpullo village in 2013 and one imported case reported in Elia kebele of Itang special district.

Due to the stated uncontained case, the district was re-infected with indigenous transmission of GWD during the year 2013. **However, because of intensified intervention and surveillance support provided by WHO in 2013, the district has managed to interrupt the GWD transmission by having zero case in 2014**. WHO handover Abobo district to TCC at the end of 2013 and continuous its support in non-endemic districts during 2014.

Table 2: VAS and supervision conducted during 2013 in Abobo district

S/No	Village name	No of VV	No. of HH	No. of population	# supervisions conducted, 2013	Filter distributed	
						C/F	S/F
1	Badpullo	2	19	57	48	20	50
2	Elagn	1	22	97	48	25	20
3	Oma	2	61	261	24	0	30
4	Gotock	2	80	290	48	74	91
5	Ochokchala 1	1	83	367	12	11	20
6	Ochokchala 2	1	78	274	12	0	0
7	Zero-zero	1	35	111	12	0	0
8	Tegni	1	34	182	12	0	0
9	Lurakilo	1	35	164	12	0	0
10	Dumbing	1	32	233	6	0	0
11	Debi	1	33	136	6	0	0
12	Akurabadi	1	38	180	6	0	0
13	Jor jay	1	44	217	6	0	0
14	V.17 borged 1	1	46	207	6	0	0
15	V.17 borged 2	1	44	287	6	0	0
16	Vi.17borged3	1	35	92	6	0	0

S/No	Village name	No of VV	No. of HH	No. of population	# supervisions conducted, 2013	Filter distributed	
						C/F	S/F
17	V.17 borged 4	1	102	472	6	0	0
19	Pokedi alwero	1	43	125	6	0	0
20	Pokedi mina	1	18	90	6	0	0
	Total	23	882	3742	288	130	211

WHO also supported Elia kebele of Itang special district by placing or establishing 6 villages under active surveillance (VAS) with full intervention support. By mobilizing the community, 12 village volunteers were selected and training was provided. Intervention materials obtained from TCC were provided in order to carry out their daily activities. In the same fashion, the district intervention support in Elia kebele was handover to The Carter Center at the end of 2013.

Based on current regional data, the transmission of GWD was expected to be localized in certain areas in Gog district of Gambella region. WHO usually provides technical and logistic supports to the EDEP during the investigation of cases. Despite the effort made by EDEP and its partners, the source of GWD transmission is still unknown for the 2014 cases detected in Gog district (Wichini and Bathor villages). From those three cases of 2014, two were detected in June while the last case was detected during December, 2014 that is out of the normal transmission window period and all of them were indigenous. There is no clear evidence of the transmission source; however possible contamination of Tanchi pond may be the common source of infection for the June 2014 cases in Wichini village.

Fig 5: Photo of GWD cases and Abate application during the year 2012 - 2014

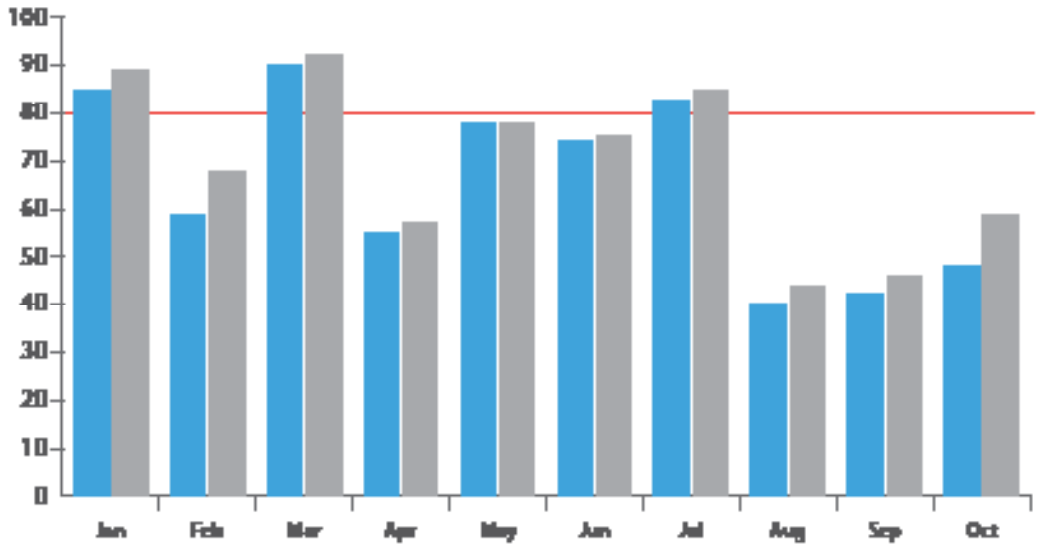
Table 3: Keys operational indicators in non-endemic district during 2014

Plan	Target	% achieved	Remarks
District reporting rate	>80%	40 - 80%	
% of awareness on cash reward	>50%	50 – 70%	
% of rumors reported	100%	80 – 90%	
% of rumors investigated within 24hrs	100%	70 – 90%	
% of district with monthly supervision	9	8 (89%)	

2.Timeliness and Completeness of the report in Gambella region

Despite the effort made by Gambella Regional Health Bureau and its partners, the reporting rate is still low as timeliness and completeness is concerned. Regional health bureau usually received late reports from districts as most of them complained of transportation problem.

Figure 6: Shows reporting rate at HF in Gambella region



Supportive supervision

Due to the assignment of district GW officers who were supported by WHO through the provision of operational budget to EPHI and the assignment of WHO GW field officers for technical support, supportive supervision strengthened in non-endemic district throughout the region during 2014. This supportive supervision was aimed to assist district health workers on GWEP activities based on EDEP strategies and has improved surveillance.

During the supervisory visits, all surveillance reports were checked based on their completeness

and timeliness. The documentations on GWD were also properly verified. The major problem encounter during supervisory visits was the absence of some government GW officers and Health extension workers in their respective duty stations.

Supervision has been conducted in both government and Non-Governmental Organizations' (NGOs) health facilities with the provision of guidance for health workers on the documentation of all data concerning Guinea worm disease and IDSR. Immediate feedbacks on both positive and negative findings as well as recommendations were given accordingly during the supervisory visits.

There were great improvements concerning documentations in all districts. However, still there is a need to strengthen documentation and data management practices which could be achieved through regular supportive supervision.

The other activity on supervision was the field visit jointly carried out with the involvement of national certification committee, ministry of health, WHO AFRO and HQ together with WHO country office and RHB which was aimed to evaluate the surveillance system concerning GWD and the documentation system at all level. During the joint field visit, recommendations and comments were given for program improvements.

Figure 7: Field visit by WHO, NCC, MOH and Gambella team during supervision

There was another supervisory visit by NCC chairperson and national Guinea worm coordinator that intended to identify all the challenges encountered by the program. During the discussion, some of challenges identified were the absence of Health Extension Workers in their duty station and lack of commitment to discharge their responsibilities.

The solution given during the meeting was regular evaluation of HEWs performance and conduct stringent supportive supervision by RHB which was already started by the region with the presence of RHB leadership.

3.Capacity building/Training

The capacity building has been provided as a technical support from WHO throughout the region. The full capacity building and technical support was started in 2012 during the training of Village Volunteers (VVs) in Abobo district. Health Extension Workers were also trained on GWD during the month of December, 2012 at the training organized by RHB/PHEM on Community awareness and sanitation. That opportunity was used to sensitize 28 HEWs on GWD case definition, mode of transmission and methods of prevention (disease surveillance and community awareness).

Figure 8: HWs training on GWD during acute watery diarrhea training in Gambella town

Orientation on GWD, cash reward and Standard Operating Procedures (SOPs) was also given to Health workers who attended the training conducted on acute watery diarrhea organized by GRHB and UNICEF during the month of June, 2014 (Fig 8). The orientation also covered the reporting of rumors, investigation of rumors and the treatment of GWD cases.

Figure 9: Orientation of HWs on GWD at Kule refugee camp

During the same month of June 2014, health workers at Kule refugee camp were also briefed on GWD by WHO and RHB team (Fig 9). They were informed about SOPs and orientated on what GWD is, how it could be transmitted and prevented and briefed on the cash reward awareness as well.

Figure 10: Seventy five HEWs training on GWD at Lare district

The same briefing on GWD was also conducted to Makuey district health office staffs and Lietchuor refugee camp health workers for early detection and investigation of rumors. Similarly GWD orientation/training was given to 75 HEWs in Lare district during the integrated active case search with Polio campaign by WHO field officers. Since HEWs are frontline workers close to the community level, much effort and focus have been made to reach all of them during GWD training in the region. The aim was to attain reasonable knowledge on GWD and cash reward awareness in the community. Due to this a lot of trainings were conducted on GWD throughout the region since 2012 with the support of WHO.

Sixty nine HEWs from three districts namely Lare, Itang and Gambella zuria were trained on GWD and the cash reward system while 22 were trained in Jor district.

Figure 11: HEWs and VVs training at Itang special district and Elia kebele

During the year 2014, two sessions of GWD trainings were conducted in Tierkide and Kule refugee camps to 166 community outreach workers (COWs) to strengthen GWD surveillance system in the refugee community. The COWS responsibilities in the camps were to conduct GWD house to house active case search, house to house health education for early rumors detection and investigation.

Figure 12: Community outreach workers training on GWD at Tierkide and Kule Refugee Camps.

Figure 13: Training of 62 HWs on GWD and Cash reward system in Gambella town

Health workers including district health office heads were briefed on Standard Operational Procedures (SOPs) and GWD including cash reward system. Those received the training included 62 HWs from different districts

Table 4: Number of HWs received training on GWD and cash reward system by district

S/N	Name of district	No. of HWs trained	No. of HEWs trained	No. of VV/ COWs trained	Kebele leaders
2	Gambella zuria	28	20	34	0
3	Itang sp.woreda	10	37	46	24
4	Lare woreda	10	37	0	0
5	Makuey woreda	31	20	0	0
6	Jekow woreda	38	12	0	0
7	Wanthoa woreda	3o	36	0	28
8	Jor woreda	13	22	0	19
9	Dimma	87	15	0	0
10	Tierkide RC	20	0	112	0
11	Kule rc	15	0	54	0
	Total	252	199	246	71

The PHEM department of Gambella regional health bureau has organized training on IDSR on surveillance activities from 20/01/2015 to 27/01/2015. This training had involved various areas of IDSR including Guinea worm disease (Fig 14).

The training highlighted the health workers on how Guinea worm disease is transmitted and prevented. The training also provided enough time to explain the standard operational procedures (SOPs) on Guinea worm disease eradication program. All the necessary procedure to be taken during case detection and case investigation were also given. It also highlighted the staffs on case containment as early case detection and management is very important for the eradication program.

Fig 14: Training of HWs on GWD during January, 2015

4.Integrated active case search

Active case search integrated with polio campaign have been conducted in the region in different location and time. This was aimed to use the opportunity of the house to house polio vaccination campaign for GWD case search. Table 5 showed the active case search conducted by integrating with polio campaign during the month of September, 2014 around Nuer zone and refugee camps.

Table 5: GWD integrated active case search during polio campaign in Nuer zone districts

No.	Name of district	Total No. of household	# Of persons in household	# Of household searched/ visited	# Of persons interviewed/ examined	# of Persons with hanging worms/ blisters	# Of persons reported having a hanging worm in the past year	# Of persons reported seeing a person with a hanging worm in the village in the past year	# Of persons reported seeing a person in other village with a hanging worm in the past year
1	Lare	9666	38,664	9666	9666	0	0	0	0
2	Jekow	5613	22,452	5613	5613	0	0	0	0
3	Makuey	4977	19,908	4977	4977	0	0	0	0
4	Wanthoa	5981	23924	5981	5981	0	0	0	0
5	Akobo	5183	20732	5183	5183	0	0	0	0
6	Itang sp w	8568	34,272	8568	8568	0	0	0	0
7	Litchuor RC	7201	28,804	7201	7201	0	0	0	0
8	Kule 1 RC	3403	13,612	3403	3403				
9	Kule 2 RC	7929	31,716	7929	7929	0	0	0	0
GRAND TOTAL		58,521	211,632	58,521	58,521	0	0	0	0

Table 6: Active case search integrated with polio campaign in two rounds in Anywa zone districts

No.	Name of district	Total No. of household	# of persons in household	# Of household searched/ visited	# Of persons interviewed/ examined	# of Persons with hanging worms/ blisters	# Of persons reported having a hanging worm in the past year	# Of persons reported seeing a person with a hanging worm in the village in the past year	# Of persons reported seeing a person in other village with a hanging worm in the past year
1	Abobo	4445	22,225	4445	4445	0	0	0	0
2	Gog	476	2380	476	476	0	0	0	0
3	Dimma	5085	25,425	5085	5085	0	0	0	0
4	Gambella z	817	4085	817		0	0	0	0
5	Jor	2757	13,785	2757	2757	0	0	0	0
6	Gambella Town	10,072	50,360	10,072	10,072	0	0	0	0
GRAND TOTAL		23,652	115,880	23652	23652	0	0	0	0

The integration of Guinea worm health education with EBOLA virus health education was also conducted in the region especially at the entry point of the borders where refugees crossed into the country. This was organized to utilize the opportunity of giving GWD and cash reward awareness health education together with EBOLA virus health education to all new influxes at the border since EBOLA Virus received high political attention at the moment. At the same time, this also helps for screening or early detection of cases or suspects who might come from South Sudan.

The integration of active case search with polio campaign was also conducted during the month of February 6 – 9, 2015 throughout the region. This is the time where all districts were covered and as usual the Guinea worm active case search were carried out by the Polio vaccinators who were orientated on GWD and cash reward system. The integration was possible due to the commitment and collaboration of Polio campaign supervisors who helped the GWEP team during the orientation of polio vaccinators.

5.Formation of regional technical working group

The government of Ethiopia has been working hard to eradicate Guinea worm disease through implementing EDEP. In order to coordinate and facilitate the overall activities of EDEP, the region has formed Regional Technical Working Group who conducted monthly meeting to discuss the problems and obstacles faced by the program and providing direction. The members of the committee were composed of representative from RHB as a chairperson and WHO as a secretary, TCC, UNICEF, IRC, ARRA, Regional

educational Bureau and Regional Water Resource and Energy Bureau.

Part 3: Awareness creation and GWD promotion materials

The awareness creation activities on GWD and cash reward system were conducted throughout the region by using different methods such as Guinea worm health education using mobile van, distribution of cash reward posters, brochure and person to person GWD health education. Regarding activities conducted in Anywa zone in non-endemic districts, around 500 GWD posters and 1000 brochure were distributed while 1500 GWD posters and 1000 brochures in Nuer version plus 500 posters in Amharic version were distributed to the Nuer zone districts including Refugee camps during the year 2014 (Table 7).

a.Translations and distributions of promotion materials

The promotional materials were translated into Nuer and Agnua languages with the support of WHO GW field officers in the region. The translated IEC materials were distributed to the respective districs in order to create Guinea worm disease awareness in the entire community.

Table 7: showing IEC materials distributed in the region

Type of media/ IEC	Quantity	Topics
Cash reward posters in Nuer	1500	Cash reward system
Cash reward poster in Anywa	500	Cash reward system
Cash reward posters in Amharic to Nuer zone	500	Cash reward
Cash reward posters in Amharic to Anywa zone	500	Cash reward
GWD brochure in Ahmaric to Nuer zone	1000	GWD transmission, prevention, intervention and cash reward
GWD brochure in Amharic to Anywa zone	1000	GWD transmission, prevention, intervention and cash reward
Reginal radio spot in Nuer and Anywa language	3 times/day every 3 week	Awareness created on GWD and cash reward
Mobile van HE in Nuer, Anywa and Amharic	Monthly	HE on GWD transmission/ prevention and cash reward
Guinea Worm ID in English	364	Case definition, Integrated with polio campaign

In the month of July, awareness creation on Guinea worm disease was conducted to 28 kebele leaders in Wanthoa woreda during district council meeting. The advocacy included how GWD is transmitted and prevented; cash reward scheme and early detection and reporting of suspected cases. The discussion focused on how to extend GWD awareness to the entire community of their respective kebeles.

Figure 15: GWD awareness creations at Burebiey refugee reception center

Figure 16: GWD and cash reward awareness through mobile van in Matar & Jor districts

a..Cash reward ceremony at 05 kebele in Gambella town

Cash reward ceremony was conducted in 05 kebele of Gambella town where the first case of 2014 was detected. The ceremony was conducted in order to give the reward to the person who provided information. It was organized by RHB while supported by WHO, and TCC with the presence of EDEP coordinator. The reward was presented by the deputy head of Gambella regional health bureau in the presence of Gambella deputy town mayor. It also creates opportunity to provide GWD health education as well as cash reward scheme awareness to the gathered community members.

Fig 17: Cash reward cermoney

b.COMBI training conducted at Gambella RHB

Communication for Behavioural Impact (COMBI) training was given to 10 people at RHB by the support of WHO and the purpose of this training was to equip WHO staffs and RHB with communication skills to create awareness on GWD and cash reward system to the community. One communication consultant was assigned in Gambella region in order to support Guinea worm disease and cash reward awareness.

The Guinea worm disease awareness and cash reward system has been assessed in 2014 by using surveys in different districts with the following results (Table 8):

Table 8: GWD cash reward awareness survey

S/N	Name of district	Sample size	% of persons who knew GW	% of person who knew cash reward	% of person who knew exact amount of cash reward
1	Lare	285	229 (80%)	170 (63%)	147 (51%)
2	Itang Sp.				
3	Makuey	2298	1639 (62%)	1333 (58%)	1080 (47%)
4	Jekow	84	61 (72%)	51 (60%)	45 (53%)
5	Wanthoa	140	89 (64%)	70 (50%)	63 (45%)
6	Gambella	828	68%	54%	44%
7	Jor	336	56%	1%	43%
8	Dimma	196	88%	73%	52%

c.Awareness creation through the Local Radio

WHO provided technical and financial support for broadcasting of GWD awareness and cash reward messages through Gambella local Radio in two local languages that is Nuer and Anuak with an estimated number of over 300,000 listeners in the region. This was conducted in three times a day for 4 - 6 weeks

d.Awareness creation using health education through mobile van

Health education about Guinea worm disease and cash reward system was given through mobile van in three languages namely Amharic, Nuer and Agnua which created awareness to the following individuals during the month of August, 2014 (Table 9)

Table 9: Awarness creation activities by district

S/No	Name of woreda visited	Name of kebeles visited	No. of individual received HE
		Kule1 Refugee camp	48,438
		Kule2 Refugee camp	51,400
		Itang town	8,484
		Badhil kebele	200
1	Itang woreda	Koat-manchuong kebele	250
		Matar refugee reception center	11,129
		Burebiey refugee reception center	61
		Burebiey kebele	1,240
		Matar 01 kebele	1,004
		Matar 02 kebele	1,300
2	Wanthoa woreda	Matar kebele	1,147
		Nyinenyang 01 & 02 kebeles	2,396
3	Makuey woreda	Lietchuor refugee camp	48, 000
		Kuergeng town	4,042
4	Lare woreda	Pagak refugee reception center	8,000
		Bonga town	300
		Bonga village	1138
		Jawae kebele	287
6	Abol woreda	Karmi kebele	750
		Ognogni Kebele	2500
7	Jor Woreda	Olaw Kebele	230

1.Documentation activities supported by WHO

In collaboration with RHB, Woreda GW field officers and WHO field officers, it was possible to establish Guinea worm disease documentations in all non-endemics districts with the exception of Akobo district due to inaccessibility. As a result of strong support from WHO, great improvement in documentation has been achieved. As it was known earlier, the documentation

of IDSR including GWD was very weak throughout the region. However, currently there is great improvement in documenting Guinea worm disease data from the regional level to the districts.

In general, the recording/documentation system has got improved as a result of the continuous monthly supportive supervision conducted by Guinea worm officers and the provision of financial and logistics support by WHO.

Table 10 and Figure 18 showed the available types of documentation supported by WHO in each districts:

Table 10: Available types of GWD documentation

S/N	Name of facility	GW Rumors and suspects file	GW cases file	Administration file	Log book
1	GRHB	YES	YES	YES	YES
2	Gambella Z.Woreda	YES	NO	YES	TES
3	Itang sp. Woreda	YES	YES	YES	YES
4	Lare Woreda	YES	NO	YES	YES
5	Jekow Woreda	YES	NO	YES	YES
6	Makuey Woreda	YES	NO	YES	YES
7	Wanthoa Woreda	YES	NO	YES	YES
8	Jor Woreda	YES	NO	YES	YES
9	Dimma Woreda	YES	NO	YES	YES

Fig 18: Documentation of GWD data at regional health bureau and Lare woreda

WHO supported Gambella RHB for the distribution of PHEM reporting formats and GW IEC materials to districts and health facilities.

WHO Logistical support to Gambella regional Health bureau

The regional health bureau was supported by WHO through financial and logistical support to strengthen surveillance activities. The financial support from WHO were given in the form of operational budget to support GWD activities. In 2013, the following items were provided to Gambella regional health bureau by WHO (Table 11 and Figure 19):

Table 11: WHO Logistic support to the Gambella Region

S/N	Types of logistics supplied	No. supplied	Donated by	Received by
1	Used vehicle	1	WHO	For RHB
2	Motor cycle	12	WHO	For RHB, districts
3	Desk top computer	8	WHO	For RHB, districts
4	Lap top	1	WHO	RHB
5	Photo camera	1	WHO	RHB
6	Megaphones	10	WHO	Districts
7	GPS machine	5	WHO	RHB
8	Rain coats	100	WHO	For VV
9	Umbrella	100	WHO	For VV
10	Boots	100	WHO	For VV
11	Water containers	100	WHO	For VV
12	Torches	100	WHO	For VV
13	Over coat	100	WHO	For VV
14	Surveillance bag	100	WHO	For VV

Figure 19: Donated logistical materials to Gambella

SECTION 4

WHO Supported GWEP activities in South Omo

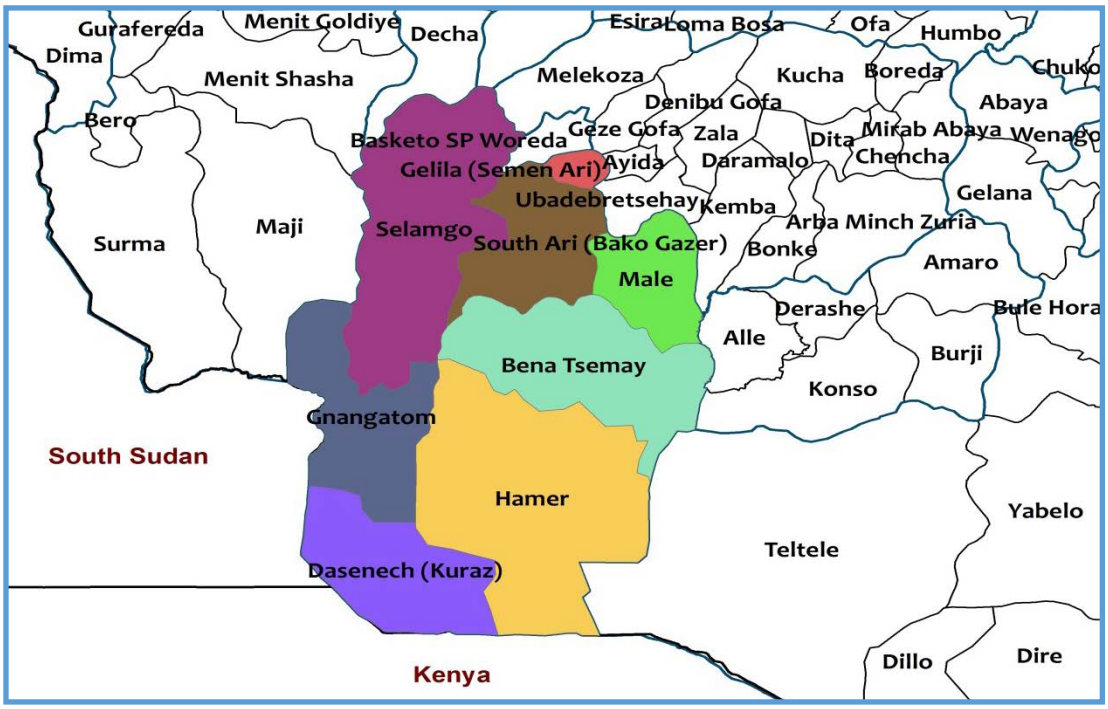
WHO Supported GWEP activities in South Omo

Part I, Introduction

1.1 Background

South-Omo Zone is one of the Administrative zones of SNNPR which is located at 775KM and 525 km away from Addis Ababa and Hawassa, respectively. Administratively it is divided into eight districts and one town administration. Jinka is the capital of the zone. The estimated population size of South Omo Zone in 2014 is around 724,172 as projected from 2005 Census. The total Surface area of the zone is about 23,535 Sq.Km and is found in an altitude of 380-3300mm above sea level. Regarding the climatic condition, 0.5% is humid, 5.1% is temperate, 60% is hot and 34.4% is semi desert. Its annual average rainfall amount is about 700 to 2500mm and has a temperature range of 14 to 41 degree centigrade. The zone share boundary with Gamo Goffa, Kaffa, and Basketo special districts from North, and Derashe, Konso, and Bench-Maji zone from East, and bordered by Kenya from South and South Sudan in the South-West (figure 1). There is one Hospital, 31 health centers and 223 Health posts, and one NGOs' clinic in South-Omo serving about 724,172 Zonal populations. There are 16 ethnic groups within the Zone.

Figure 1: Map of South-Omo Zone



Nyangatom district

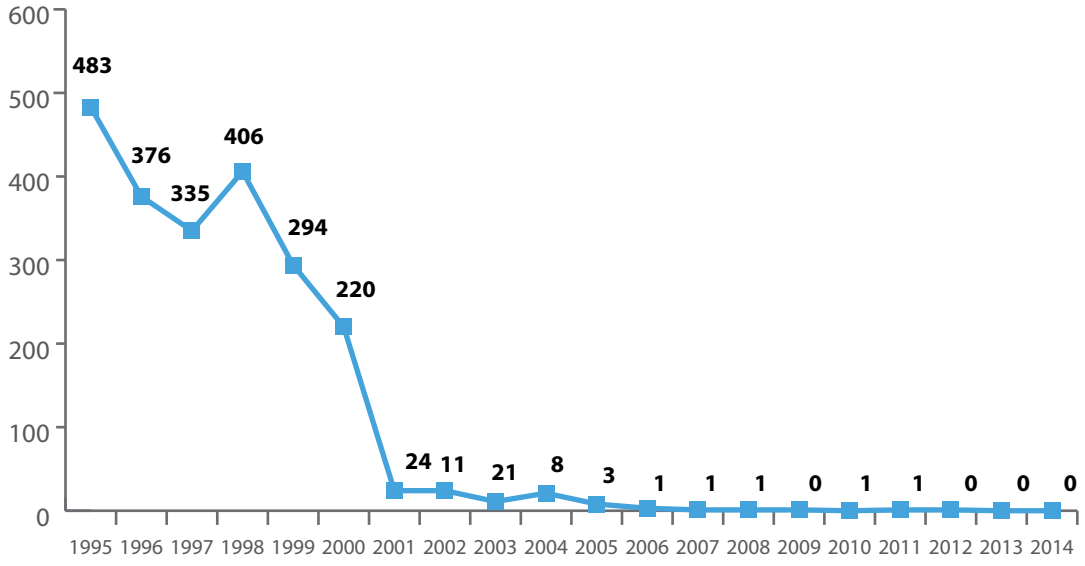
Nyangatom district is one of the eight districts of South-Omo Zone, and share boundary with Bench Maji Zone from North, Dasenech district of South Omo Zone from South, Salamago district of South Omo Zone from West and bordered by South Sudan from the East. The population of Nyangatom district is originally pastoralist; they now have semi-permanent camps close to the banks of the Omo and Kibbish rivers, where cultivation of sorghum takes place. The Nyangatom migratory routes involve border of the three countries, such as: Ethiopia, Kenya and South-Sudan in search of water and grazing for their cattle during the dry season.

There is only one health center, (Kangaten HC), in the district serving the woreda population of 22,163. There are twenty Kebeles, of which 7 Kebeles have functional health posts and the health posts for 11 Kebeles are under construction. Nyangatom district is a formerly endemic district for Guinea worm disease. Indigenous transmission was interrupted in 2001. However, there were reports of GWD case importations from South Sudan.

1.2 Epidemiological Situation in South-Omo, Nyangatom

Following the establishment of EDEP in 1992 and its implementation in 1994, indigenous transmission has been interrupted from SNNPR, South Omo, Nyangatom (formely called Kuraz) since 2001 and zero indigenous case report is maintained so far as shown in fig 2 below.

Figure 2: Number of cases of Drancunculiasis reported by year: 1995 – 2014



1.3 WHO support to EDEP in South-Omo, SNNP Region

WHO country office has assigned a GW field officer and intensified its support to the EDEP in South Omo Zone of SNNPR since 2013. The assigned GW field officer has been providing technical support to strengthen surveillance, awareness raising campaigns, and improving reporting and documentation of program activities in all districts of South-Omo zone and in Nyangatom district in particular. WHO has been operating using various strategic approaches to intensify volunteer based surveillance system through:

- Training of VVs, CHEWs, HWs, kebele leaders, and others using various opportunities,
- Putting villages in under active surveillance and establish community based surveillance system in Nyangatom district,
- Integrating GWD surveillance into IDSR/Polio-NID,
- Rumour reporting and immediate response, and
- Increasing quality and frequency of support supervision.

Part II-Achievements

WHO supported GWEP major activities in South-Omo from 2013 to March 2015 is highlighted below:

2.1 Strengthening GWD Surveillance

The South-Omo ZHD with WHO assistance has been conducting GWD surveillance in all districts in the zone and in Nyangatom district in particular. National Immunization Day drives in this area also provide opportunities for surveillance and Awareness level assessments of GWD in 2013 and 2014.

In October 2014, the EDEP with WHO's assistance has established active Community Based Surveillance (CBS) system in 12 selected villages of Nyangatom district. The districts were found to be high risk for GWD case importation from South-Sudan. Training of 24 village volunteers were conducted by selecting 2 volunteers (1Male and 1Female) for each village. Eleven villages are now reporting monthly. House to house active case searches are also being conducted every month with regular health education. The village volunteers have conducted on average 7 health education sessions in those villages included in under active surveillance. Distribution of GW promotional materials is also ongoing. Table 1 provides information on trained village volunteers and their respective villages.

Table 1. Information on trained village Volunteers

S. No	Name of Village Volunteers	Sex	Kebele	High risk Villages in VAS	Latitude	Longitude	Village Code
1	Ekino Etilbon	M	Kajamakin	Esekon	05° 82.778'	036° 08.16 296'	SO/N01
	Lokuri Lokodo	F					
2	Lotabo Losamok	M	Natiker	Kaile	05° 82.907'	036° 08. 16147'	SO/N02
	Eukuru Ekino	F					
3	Natapar Asewigna	M	Narogoy	Nachapalakua			SO/N03
	Nakute Kapua	F					
4	Tore Berchio	M	Kopria	Napataragay			SO/N04
	Lopuke Lokarie	M					
5	Kakuta Losura	M	Ayipa	Toro			SO/N05
	Lokoru Loyinach	F					
6	Lopingo Lozure	M	Nakiriaman	Kekerziang			SO/N06
	Batala Natre	F					
7	Lochuwa Kuma	M	Napotokoyt	Chelete			SO/N07
	Lewan Kapua	M					
8	Lomugut Locale	M	Kakuta	Longungura	05° 22.427'	035° 46. 1271'	SO/N08
	Loro Losigria	F					
9	Daniel Losimer	M	Lokorlam	Nachebelkua	05° 88. 908'	036° 08. 23510'	SO/N09
	Feyiso Alamu	F					
10	Lokuang Tirga	M	Lokumognang	Lokupaku	05° 84.521'	036° 08. 17649'	SO/N10
	Pangas Modong	F					
11	Nayita Aregay	M	Nawyape	Lobor	05° 17.653'	035° 52.514'	SO/N11
	Nalabato Arignur	F					
12	Lomarle Alegna	M	Lopoker	Kawlegna			SO/N12
	Nachech Lorika	F					

Risk assessments were conducted to identify and select 12 high risk villages in order to establish active CBS system in Nyangatom district.

Mapping of at risk villages including ponds, crossing points at border areas of South Sudan and Ethiopia has been conducted in Nyangatom district. Geo-coordinates were taken by the Government and WHO guinea worm field officers (Figure 3)

Figure 3: Mapping of at risk villages, ponds and crossing points in Nyangatom district

Training

As part of strengthening the surveillance, WHO has been supporting EDEP in capacity building by providing training/refresher training of VBVs, CHEWs and HWs in South Omo zone.

Trainings and refresher trainings were conducted in 2014, and a total of 126 health staffs were trained and sensitized on GWD-SOP. Of which 24 were Village volunteers for VAS in Nyangatom district (Table 2 and Figure 4).

Table 2: Trainings & Refresher trainings in 2014

No of trainings conducted	No. of Health staff trained	No of volunteers trained	Other actors trained
3	102	24	0

Figure 4: Participants of village volunteers training in South-Omo, SNNPR_ October 2014

Figure 5: Participants (CHEWs/Health workers) attending sensitization sessions on GW-SOP

Training on developing guinea worm program communication strategy

In 2014, WHO hosted one day training on developing guinea worm program communication strategy for EDEP in SNNPR, South-Omo, Jinka. The workshop held with the objectives of orienting the ZHD-PHEM coordinators, health staffs, WHO Guinea Worm Eradication Program Communication officer, Gov't and WHO GW-filed officers using the COMBI approach. After the training the team paid field visits to kebeles, Health center and health posts of Malle and Bena-Tsemay districts of South omo zone.

Since November 2014, Nyangatom district health office with WHOs' assistance has been conducting Village volunteers monthly meeting and reporting regularly (fig.6).

Figure 6: Village Volunteers attending monthly meeting, in November 2014.

Supportive supervision

Field visits were conducted to support and supervise ongoing GWEP activities of the visited health facilities. During the field visit, health posts (HPs), HHs, Villages, and Water Sources have been supervised. In each supervisory visits, technical support were provided to village volunteers and CHEWs to improve surveillance and reporting.

Figure 7: Supportive supervision to HP in high risk villages of Nyangatom district

WHO technical field mission to support EDEP in South-Omo, SNNPR

Filed mission was also conducted jointly by WHO country office, WHO Regional Support Team (RST), and South Omo zonal and district staffs to support and supervise ongoing GWEP activities in South-Omo Zone. During filed visit, program activity reports and documentations were reviewed, and technical support was given to all supervised health facilities (Fig 8).

Fig 8: WHO supportive supervision in South-Omo, SNNPR

Rumor reporting and response

Following the establishment of community based surveillance system in Nyangatom district, rumour reporting and response has been improved in the program area in 2014 and in Jan-March 2015, as compared to 2013.

In 2013, 3 rumors were reported from formerly endemic district (Nyangatom) and all were investigated of which one was investigated within 24 hours. However, a total of 40 rumours were reported in 2014, of which 39 were reported from formerly endemic district (Nyangatom) and one rumour was reported from non-endemic woreda (Jinka Town Administration) and all were investigated. Of the reported rumors, 39 were investigated within 24 hours. In 2015 (Jan-Feb), 9 rumors were reported from VAS in Nyangatom district and all were investigated within 24 hours (Table 3). No dracunculiasis case was found during the investigation.

Table 3: Rumor reporting and response in 2013, 2014, and Jan-March 2015

Rumors reported and investigated in 2013				
Category of Districts	**No. of rumours reported**	**% of rumours investigated within 24 hours**	**No. of rumours confirmed to be cases**	**% of individuals aware of reward**
Formerly endemic	**1**	**100**	**0**	
Never endemic	**0**	**0**	**0**	
Total	**1**	**100**	**0**	
Rumors reported and investigated in 2014				
Category of Districts	**No. of rumours reported**	**% of rumours investigated within 24 hours**	**No. of rumours confirmed to be cases**	**% of people knew about the reward**
Formerly endemic	**39**	**38/39*100 (97.4%)**	**0**	
Never endemic	**1**	**100**	**0**	
Total	**40**	**39/40*100 (97.5%)**	**0**	
Rumors reported and investigated in Jan-March 2015				
Category of Districts	**No. of rumours reported**	**% of rumours investigated within 24 hours**	**No. of rumours confirmed to be cases**	**% of people knew about the reward**
Formerly endemic	**9**	**100**	**0**	
Never endemic	**0**	**0**	**0**	
Total	**9**	**100**	**0**	

Fig 9: Rumor detection, investigation and response

2.2 Strengthening Awareness raising campaign activities

Since June 2013, WHO has been strongly supporting community awareness raising activities in the entire zone of South-Omo, SNNPR. The ZHD has intensified its efforts

with WHO's assistance to increase community awareness in formerly endemic and never endemic districts of South-Omo Zone, either independently or by integrating with other public health field interventions such as Poilo-NID, Yellow fever vaccination campaign, and mass drug administration campaigns for Trachoma. Efforts to increase community awareness on GWD and the cash reward was intensified through person to-person communication at market days, schools, churches, mosques and at villages during awareness raising campaigns and household visits by village volunteers and GWEP supporting staffs using Guinea worm promotional materials and GW movies (Table 4, 5 & 6).

A radio broadcasting message on GWD and the reward scheme was transmitted in Nyangatom language for six weeks by the local radio station three times daily.

Fig 10: Village level health education sessions in Nyangatom district

Fig 11: Awareness creation/Health Education on GWD and the cash reward in schools

Sensitization sessions on GWD-SOP in schools and public gatherings

Health Workers attending sensitization Sessions on GWD-SOP

PHEM coordinators and WHO-Supporting staffs in SNNPR attending sensitization session on GWD-SOP

Fig 12: Participants of health education session on GWD

Fig 13: Awareness creation on GWD in Market places

Fig 14: Awareness creation on GWD in public gatherings (At celebration of Ginbot 20)

Intensified awareness raising activities were performed in South Omo Zone. The following tables illustrate the number of people sensitized in various opportunities.

Table 4: Number of people reached with a message on GWD and aware of the reward in 2013

Number of people reached with H/ education (At village; market places, etc)	Number of Students sensitized	Number of Teachers sensitized	Number of Health staff sensitized	Others:
14,416	1739	36	110	87

Table 5: Number of people reached with a message on GWD and aware of the reward in 2014

Number of people reached with H/ education (at village, market places, etc)	Number of Students sensitized	Number of Teachers sensitized	Number of Health staff sensitized	Others *
23,845	1153	58	410	256

Table 6: Number of people reached with a message on GWD and aware of the reward in Jan-Mar 2015

Number of people reached with H/ education (at village, market places, etc)	Number of Students sensitized	Number of Teachers sensitized	Number of Health staff sensitized	Others *
994	85	16	8	0

Others (Zone and woreda Administrators and councils, kebele leaders, workers of other Gov't sector office, Women's group representative, NGO's)*

Advocacy

Advocacy meeting has been conducted in Nyanagtom district, Knagaten town, in July 2014, and it was aimed to engender both individual and the community participation in surveillance, rumour detection and reporting of the program activities.

Fig 15: Advocacy meeting in Nyanagtom district, July 2014

Guinea Worm IEC materials distribution

In 2013 and 2014 GWD promotional materials were distributed to district health offices (DHOs), Health units (HPs, HCs and Hospital), Health workers, students, teachers and members of the community during supportive supervision and sensitization sessions (Table 7).

Table 7: Distributed of GW-promotional materials by year, South-Omo Zone

Period	Number of distributed GW-promotional materials				
	GW-cash reward posters	GW-brochures	GW-SOPs	GW-IDs	GW-T-shirt & hats
2013	17	398	47	62	0
2014	689	908	779	807	90
Total	706	1306	826	869	90

Awareness level assessment

Efforts were made to disseminate information widely about GWD and the reward in the entire zone of South-Omo, and assessment of public awareness has been made in 2013 and 2014.

The Gov't and WHO GW-field officers have been conducting awareness survey/spot checks of the level of awareness about the reward in villages during field visits (Fig 16.)

Figure 16: Awareness level assessment in villages of Nyangatom, South-Omo Zone

With WHO's assistance, the zonal health department (ZHD) has been conducting awareness surveys during the National Immunization Days

Awareness level assessment was integrated with Polio-NID in both 2013 and 2014, in the formerly endemic and never endemic districts of South-Omo zone.

Figure 17: Integrating GW-Awareness level survey with Polio-NID in Nyangatom and South-Ari districts, November 2014

During 2013, the level of awareness on GWD and the cash reward among the interviewed individuals in South-Omo zone was found to be 3608(15%); and only 2474(10%) of interviewed individuals knew the exact amount. The assessment was conducted among 24416 individuals in all districts of South Omo Zone. The level of awareness on the cash reward among the interviewed individuals in Nyangatom district of South-Omo Zone was found to be 545(66%); and about 522(63%) of interviewed individuals knew the exact amount. The assessment was conducted among 828 individuals in Nyangatom district (Table 8).

Table 8: Level of Awareness in South-Omo Zone, 2013

Category of Districts	No of surveys conducted (sample size)	% of people can recognize GW Disease	% of people knowing about the reward system	% of people knowing the correct amount of the reward system
Formerly endemic areas	828	621 (75%)	545 (66%)	522 (63%)
None- Endemic areas	23588	5452 (23%)	3063 (13%)	1952 (8%)
Zonal level	24416	6073 (25%)	3608 (15%)	2474 (10%)

During 2014, the level of awareness on the cash reward among the interviewed individuals in Nyangatom district was found to be 1004(90%); and about 819(74%) of interviewed individuals knew the exact amount. The assessment was conducted among 1109 individuals (Table9).

Table 9: Level of Awareness on reward in Nyangatom district (2013 Vs 2014)

	2013 (Sample size=828)		2014 (Sample size=1109)	
Reward characteristics	% correct response	N	% correct response	N
Heard about reward for reporting GWD	545/828 (66%)	283	1004/1109 (90.5%)	105
knew correct amount of the cash reward	522/545 (63%)	23	819/1004 (73.8%)	185

2.3 Strengthening Reporting and Documentation

WHO has been providing technical support for EDEP data management in South Omo zone to strengthen documentation of the program activities at all levels. Existing GWEP data at zonal health department and in Nyangatom district health office were reviewed and re-organized. Existing EDEP Data at ZHD and Nyangatom district were also analysed, interpreted and presented in graphs.

Figure 18: Guinea Worm Eradication Program activities documents at ZHD, South-Omo

Part III

Logistics Support

WHO country office has donated one Motorbike, one Desk top Computer, one GPS machine and one Megaphone to the formerly endemic district (Nyangatom) of South-Omo Zone, to strengthen GWD surveillance, awareness raising campaigns, and reporting and documentation of program activities in the catchment area.

Annex

Table 10.Crossing points, Kebeles/ villages, and water sources with GPS location in Nyangatom district

S.No	Name of woreda visited	Name of kebele visited	Name of villages visited	No. of HHs received HE	No. of individual received HE	GPS Location
1	Nyangatom	Napotokoyite	Chelete			N 05° 08.532 E 036° 03.445
			Locorchele	9	13	N 05° 08.546 E 036° 03.391
			Kairo			N 05° 08.586 E 036° 03.301
2	Nyangatom	Nakriyaman	Eyekomer			N 05° 10.273 E 036° 03.200
			Edapal			N 05° 10.276 E 036° 03.260
			Nacologn			N 05° 10.247 E 036° 03.323
3	Nyangatom	Kakuta	Alempu	14	24	N 05° 22.428 E 035° 46.127
			Napataregay	16	29	N 05° 23.190 E 035° 45.946
			Eprignang			N 05° 22.485 E 035° 46.011
			Nasak	19	34	N 05° 22.619 E 035° 46.127
			Kougogole	8	15	N 05° 22.765 E 035° 46.130
			Akule			N 05° 23.379 E 035° 46.226

S.No	Name of woreda visited	Name of kebele visited	Name of villages visited	No. of HHs received HE	No. of individual received HE	GPS Location
			Ebegno village/ Water Source (BH)			N 05° 22.604 E 035° 46.697
			Kakuta Helath Post (HP)			N 05° 22.491 E 035° 46.533
			Crossing point (b/n Nyangatom/ S-Suadan (Lotimour district)			N 05° 22.328 E 035° 47.004
4	Nyangatom	Nuwayapie	Mission Camp/ village			N 05° 17.752 E 035° 51.726
			Nuwayapie Health Post(HP)			N 05° 17.514 E 035° 52.519
			Crossing point (b/n Nyanagtom and Turkana(kenya))			N 05° 17.541 E 035° 52.841
5	Nyangatom	Chare	Natumkoma	17	27	N 05° 19.633 E 036° 01.793
			Pond (Nasak)			N 05° 20.827 E 036° 02.441
			Chare HealthPost(HP)			N 05° 19.557 E 036° 01.734
6	Nyangatom	Kopria	Lodamur	9	16	N 05° 19.295 E 036° 03.369
			Kopria Health Post(HP)			N 05° 19.674 E 036° 04.379

SECTION 5

WHO supported GWEP activities in Bench Maji Zone, SNNPR

WHO supported GWEP activities in Bench Maji Zone, SNNPR

Part 1: Introduction

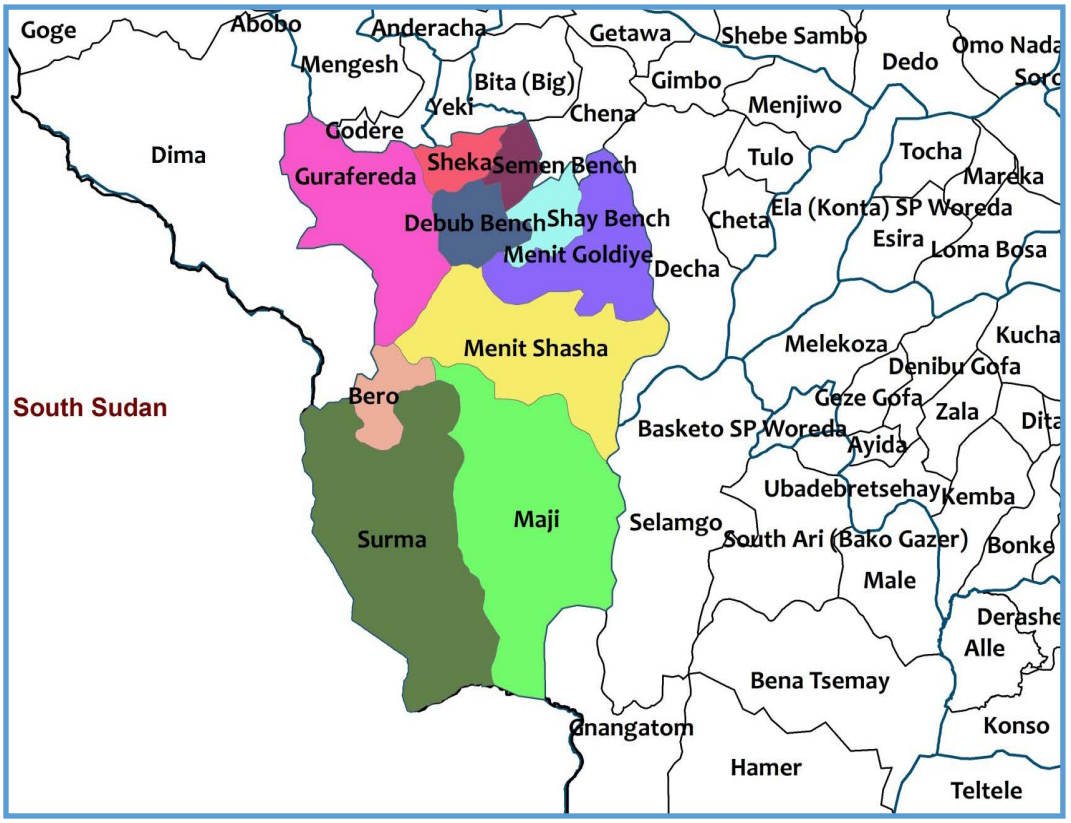
Section 5 presents major activities carried out and results achieved in strengthening the surveillance system in Bench Maji Zone, with the technical, financial, and logistical support of the World Health Organization (WHO) to the Ethiopia's Dracunculiasis Eradication Programme for the period from January 2014 to March 2015. The first part provides background information about Bench Maji zone, the epidemiological situation of guinea worm disease in the zone, and WHO Support to the programme in Bench Maji Zone. Part two highlights major activities and results achieved in strengthening guinea worm disease surveillance, public awareness of the disease and reward system, and documentation of surveillance data and programme activities.

1.1 Contextual background

Bench Maji zone is one of the 14 zonal administrations found in Southern Nations, Nationalities, and Peoples regional (SNNPR) state, located at the south west of Ethiopia and covers nearly 2 million square kilometer area. As shown in figure 1, Bench Maji zone shares common borders with the South Sudan and Gambella region in the South west, South Omo zone in the South east, Keffa zone in the East, and Sheka zone in the North east.

Bench Maji zone is divided into ten districts and one town administration (Mizan Aman town). The districts are Surma, Maji, Bero, Menit Goldia Menit Shasha, Shay Bench, Semen Bench, Debub Bench, Sheko, and Guraferda. Each district and Mizan Aman town is further sub-divided into kebeles with a total 246 kebeles (229 Rural and Urban 17 Kebeles).

Fig 1: Map of Banch Maji Zone, SNNPR



As estimated based on the 1994 census, Bench Maji zone had a total population of **804,868** in 2014, and about 86.3 per cent of the population resides in the rural areas, while the remaining 13.7 per cent lives in urban areas.

With regard to the health infrastructure in the zone, in 2014 there were 240 functional public health facilities (including 1 hospital, 39 health centers, and 200 health posts), 117 private clinics (1 higher clinic, 9 medium clinic, and 107 lower clinics), 32 drug stores, and 3 rural drug vendors. Regarding *human resource for health,* there were a total of 1065 health workers in the zone in 2014 including 13 physicians, 50 health officers, 521 nurses (all types), 406 health extension workers (HEWs), and 75 other health professionals including environmental health, laboratory, and pharmacy professionals. Table 1 shows the distribution of health workers by district in the zone.

Table 1: Distribution of health infrastructure by district (20014/15)

SN	District	Hospital	Health center	Health post	Total	Physicians	health officers	Nurses (all types)	HEWs	Other	TOTAL
1	Surma		2	0							
2	Maji		2	21							
3	Bero		2	11							
4	Menit Goldia		4	25							
5	Menit Shasha		3	23							
6	Shey Bench		7	20							
7	Semen Bench		4	31							
8	Sheko		3	24							
9	Mizan -Aman	1	1	2							
10	Debub Bench		6	28							
11	Guraferda		5	23							
	Total	1	39	208							

1.2 Epidemiological situation of dracunculiasis in Bench Maji Zone

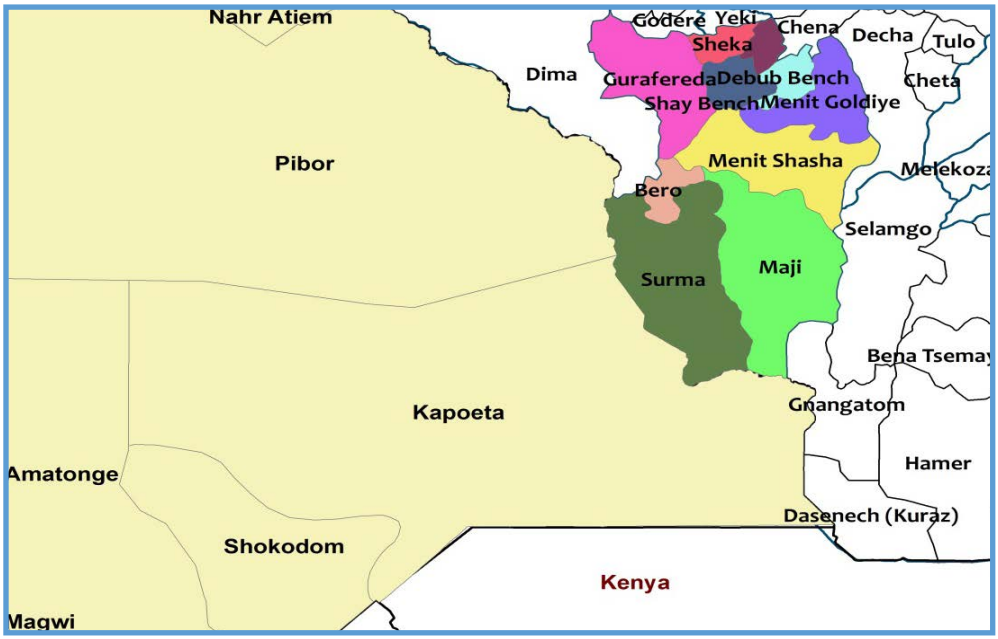
Bench Maji Zone is not known to be endemic for guinea worm disease and no locality within the Bench Maji Zone identified as endemic for the disease by the national case search conducted throughout the country in 1993 (although the Zone shares a common border with endemic areas during that time such as with Nyangatom district of Ethiopia and Eastern Equatorial State of South Sudan).

Although no confirmed indigenous case of guinea worm disease detected in Bench Maji zone, the zone judged to be at risk of receiving imported cases from endemic areas of South Sudan due to movement of people across its common border with South Sudan.

Surma Districts of Bench Maji Zone shares a common border with Eastern Equatorial State of South Sudan, which reported the greatest majority of cases from South Sudan in the past five years. The cross border movement of people into and from endemic areas in Eastern Equatorial State of South Sudan constitutes a risk of importation of cases into Surma District. In addition, the movement

of Surma People from currently endemic areas of South Sudan to the formerly endemic Nyangatom district of Ethiopia poses a risk of re-introduction of the disease into Nyangatom district.

Fig 2: Showing Bench Maji zone bordering with Endemic county of South Sudan



In case searches conducted in 2014, few people reported seeing people with an emerging guinea worm in Surma district and several people seeing in South Sudan, and Nyangatom some years ago, and some people having had the disease during their stay in South Sudan or Nyangatom. These suggest the risk of importation of cases from South Sudan and the risk of re-introduction of the disease into the formerly endemic Nyangatom district of Ethiopia, as Surma tribe moves back and forth between endemic areas of South Sudan and Nyangatom district.

Maji district of Bench Maji zone also shares a common border with Eastern Equatorial State of South Sudan as well as with Nyangatom district. Recently key informants reported the presence of geographic areas within the district used by seasonal migrants from South Sudan. Besides, key informants reported population movement from South Sudan and Surma district into Bero district.

Although there is no sufficient information to conclude existence of risk of establishing indigenous transmission in Surma, Maji, or Bero Districts as a result of imported cases, recent assessments suggested presence of stagnant water sources used for drinking purpose in several villages found in these districts. However, there is lack of information with regard to the presence of copepod species in sufficient concentration in these water sources although these districts seem to have similar ecological environment that supported endemic transmissions in South Sudan and Nyangatom District.

Overall, the available information indicate the risk of importation of cases from South Sudan and the need for strengthening the capacity of the surveillance system to detect and contain cases that might be imported into Surma, Maji, and/or Bero districts, as well as in other districts of Bench Maji zone having a common border and population movement with Surma, Maji, and/or Bero districts

1.3. The National Programme objectives Bench Maji Zone

WHO Country office has been supporting the Ethiopian Dracunculiasis Eradication Programme (EDEP) to strengthen guinea worm disease surveillance and response in Bench Maji Zone from January 2014 to March 2015, including to:

- Strengthen the capacity of the surveillance system to detect and contain imported cases including through establishment and maintenance of community based active surveillance in villages at-risk of receiving imported cases; conducting ad-hoc case search in high risk areas and zone wide case search as part of polio immunization campaign; improving the timeliness and completeness of GWD reporting by health facilities through the IDSR system; improving registration and prompt investigation of rumors; and strengthening the capacity of health workers to carry out surveillance and response activities
- Increase public awareness of the disease and correct amount of the reward for reporting confirmed case and monitoring the coverage and comprehension of messages through awareness surveys;
- Strengthen documentation of surveillance data and program activities for eventual certification

1.4 WHO Support to the programme in Bench Maji Zone

In order to support the achievement of the above mentioned objectives, WHO Country office provided comprehensive support to the programme. Specifically WHO provided (i) Technical support through technical support mission by the national program officer, assignment of full time field officer (since June 2014), short time deployment of communication consultant, provision of financial support to FMOH for the operational cost of full-time government field officer for Surma district; (ii) finical support to the Bench Maji Zone health department through the FMOH amounting 920, 620 Ethiopian Birr and FMOH for national activities benefiting the local efforts; and (iii), logistics support including provision of motor cycle to Surma district, assignment of WHO vehicle to provide full time support to the program, and short time assignment of rental vehicles, and provision of other necessary supplies.

Part 2: Major Activities and results achieved from January 2014 – March 2015

This part presents major activities and results achieved towards strengthening guinea worm disease surveillance, public awareness of the disease and reward system, and documentation of surveillance data and programme activities in Bench Maji Zone.

2.1 Strengthening Guinea-worm Disease Surveillance

Establishment and maintenance of community based active surveillance in high risk villages. Since August 2014, WHO supported Surma district health office to initiate and maintain community based active surveillance, health education, and distribution of cloth filters in elven villages at high risk of receiving imported cases from endemic areas of South Sudan due to movement of people across the border with Southern Sudan.

In order to initiate community based active surveillance and other interventions, WHO supported the conduct of rapid assessment that helped to identify and prioritize eleven villages sharing a common border/situated near borders with South Sudan and having established degree of links/movement of population with endemic areas of South Sudan (including nine villages without safe drinking water source); provision of two and half days comprehensive training for 21 village based volunteers selected from elven villages through full community participation; and provision of supplies and incentives to volunteers including medical kits (to ensure proper case management by volunteers until supervisors arrived at the village), rumor registration and surveillance booklets, guinea worm health education flip charts, posters, leaflets, recognition cards, bags, and t-shirts.

Table 2: Trained VBV and Other equipment support

SN	Name of Kebele	Name of Village	No. of VBV trained	Medical Kit	Surveillance Booklet	GW Bag
1	Anjo	Demuy	2	1	1	2
2	Borka	Village #1	2	1	1	2
3	Kidole	Morgary	2	1	1	2
4	Tulgit	Shanata	2	1	1	2
5	Bebusani	Kanda	2	1	1	2
6	Hartega	Kanda	2	1	1	2
7	Dishu Girbale	Almu	1	1	1	1
8	Moga	Dayku	2	1	1	2
9	Moga	Ganderu & Guramanie	2	1	1	2
10	Moga	Saraga	2	1	1	2
11	Nameri	Gnamani	2	1	1	2

In order to build the technical capacity of health workers to support guinea worm disease surveillance and awareness creation activities in high risk villages as well as in other villages within Surma district, WHO supported provision of two days comprehensive training for 27 health professionals working in two health centers and district health office and pastoralist health extension workers. In addition, WHO supported provision of one day training for a total of 92 people comprising district and kebeles level administration members and village leaders from 18 kebeles.

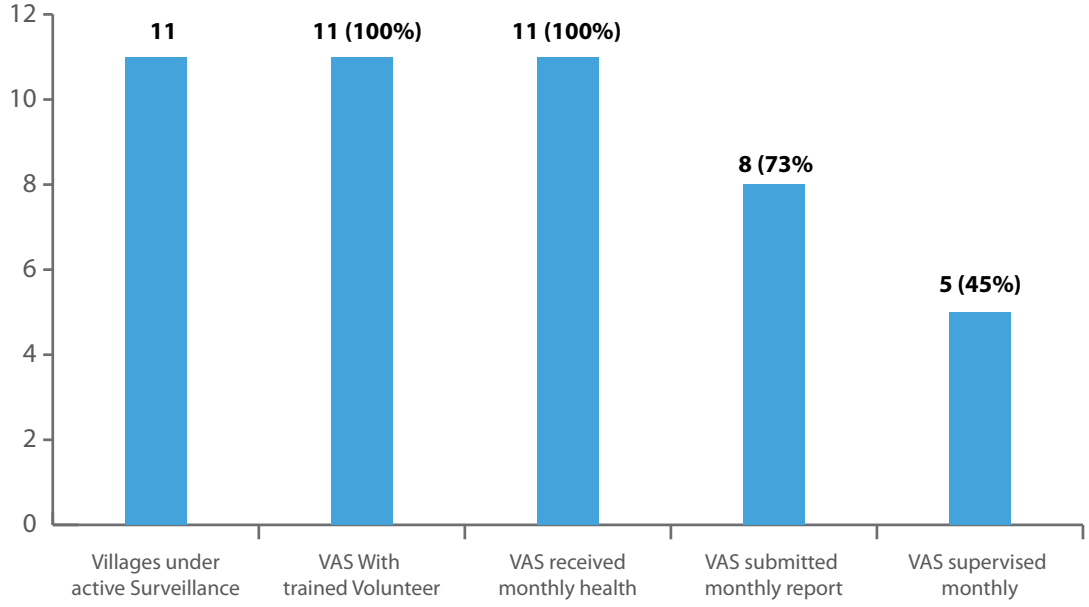
In order to strengthen the sensitivity of the surveillance system to detect imported cases both in high risk and other villages within the district WHO provided technical, financial and logistical support to the district health office to conduct ad-hoc case searches by health professionals in 23 villages through interviews with 1029 adult house hold representatives and village chiefs as well as collective interview with over 2000 adults; and conduct community and school based health education and awareness creation sessions in 18 kebeles including through use of mobile vans and video shows. In addition, WHO supported supervision of village based volunteers and organization of five district-level meetings of volunteers and supervisors to report and review progress and documentation of surveillance data, plan for improvement, and provide skill reinforcement training for volunteers.

Since the establishment of community based active surveillance in August 2014, village based volunteers conducted house to house case search and health education and distributed 880 cloth and pipe filters to households and mobile populations with health education on how to use and care for the filters. As shown in Table 2 and Figure 3, currently all villages under active surveillance have at least one trained village volunteer and received monthly health education sessions, and on average 73 percent of villages submitted monthly reports on time (due to long distance), and 54 of villages supervised monthly (due to security problem).

Fig 3: Village Volunteer training in Surma

Fig 4: Village Volunteer training in Surma, Bench Maji Zone

Fig 5: Performance indicator of villages under active surveillance



Ad-hoc case searches in high risk areas

WHO supported the conduct of ad-hoc case searches by program staff and health workers in 23 villages located in 8 kebeles of Surma district during the month of September and November 2014, through individual interviews with 1029 adult house hold representatives and village chefs using questionnaire and collective interviews with over 2000 adults. Although the team detected no active case, three people reported seeing persons with an emerging worm in Surma district 2 to 3 years prior to the search (but team unable to locate them or left search area due to security problem); four people reported having had the disease during stay in South Sudan or Nyangatom district prior to ten or more years; five people reported seeing persons with emerging worm in Nyangatom in 2007 and 2008; and 12 people reported seeing persons with emerging worm in South Sudan between 1 to 3 years prior to the search.

Fig 6: Active case search in Surma district

Table 3: Active case search as part of polio immunization campaign and using other opportunities

Kebele	villages searched	interviewed	
Anjo		189	
Duku		52	
kidole		109	
Gerbale		126	
Bebuseni		208	
Moga		180	
tulgit		162	
borka		66	
	Total	1092	

WHO supported the conduct of dracunculiasis case search and provision of brief health education as part of house to house polio immunization campaign through provision of orientation/training for vaccination teams and supervisors to recognize the disease, conduct case search using recognition cards, and deliver key messages on the disease and cash reward. During the first round campaign vaccination teams conducted case search in 77,056 houses in 8 districts and detected no rumor. During the second round campaign vaccination teams conducted case search in **108,859** houses in 9 districts and detected two rumors, but found to be non-guinea worm cases. Dracunculiasis case search also conducted through collective interview of people at the end of community and school based awareness creation sessions, as part of awareness surveys, and to some extent in market places.

Table 4: Number and percent of kebeles searched for guinea worm disease as part of the first and second round polio immunization campaign

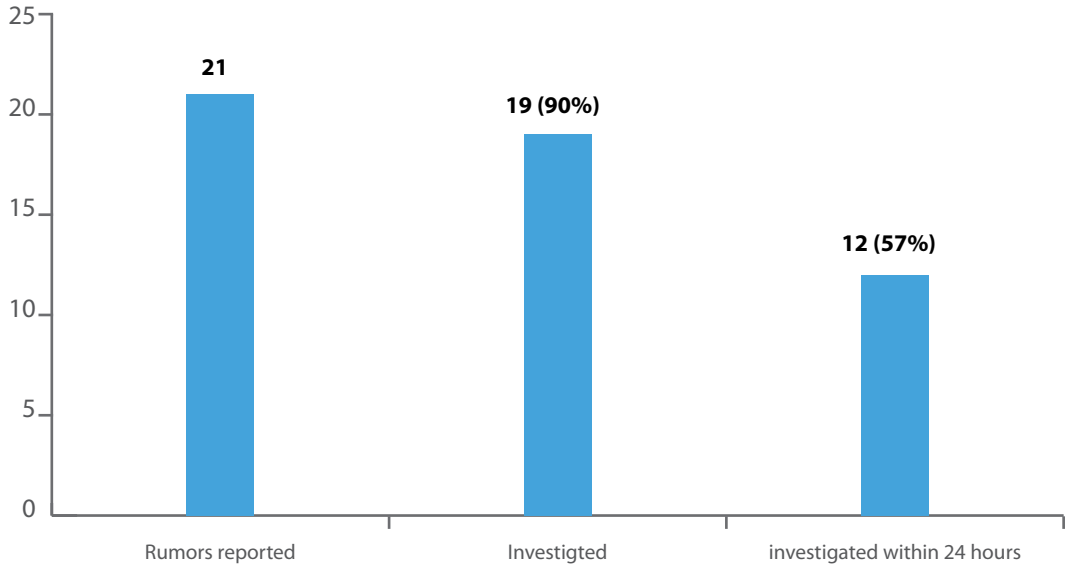
	District	Basic information		First round campaign				Second round campaign			
			Kebeles searched		Houses searched		Kebeles searched		Houses searched		
		Kebeles	HHs	No	%	No	%	No	%	No	%
1	Surma	21	6,131	8	38%	1,158	19%	0	0%	0	0%
2	Maji	22	8,436	22	100%	3,876	46%	22	100%	5,422	64%
3	Bero	12	3,051	10	83%	2010	66%	12	100%	1,625	53%
4	Menit Goldia	31	22,307	27	87%	11,300	51%	31	100%	13,960	63%
5	Menit Shasha	30	11,160	0	0%		0%	30	100%	8,311	74%
6	Shey Bench	21	29,088	0	0%		0%	21	100%	23,155	80%
7	Semen Bench	31	26,728	28	90%	15,349	57%	31	100%	12,818	48%
8	Sheko	24	12,763	24	100%	12,595	99%	24	100%		0%
9	Mizan -Aman	5	8,598	5	100%	5,848	68%	5	100%	5,850	68%
10	Debub Bench	29	27,243	23	79%	24,920	91%	29	100%	27,944	103%
11	Guraferda	23	8,791	0	0%		0%	23	100%	6,876	78%
	Total	249	164,296	147	59%	77,056	47%	228	92%	105,961	64%

Fig 7: Integrating Polio Campaign with Guinea Worm Surveillance

Rumor Detection, investigation, and response

From February 2014 to February 2015, a total of 21 rumors of guinea worm disease reported to the zonal health department (18 rumors from Surma District, 1 from Bero District and 1 from Maji District). Out of the total rumors reported, 19 (90%) rumors investigated and 11 (52%) investigated within 24 hours of the receipt of the information. The major reasons for delayed investigation were inaccessibility of villages from where rumors reported due to security problem, long distance, and lack of transportation to conduct prompt investigation.

Table 5: Rumor investigation



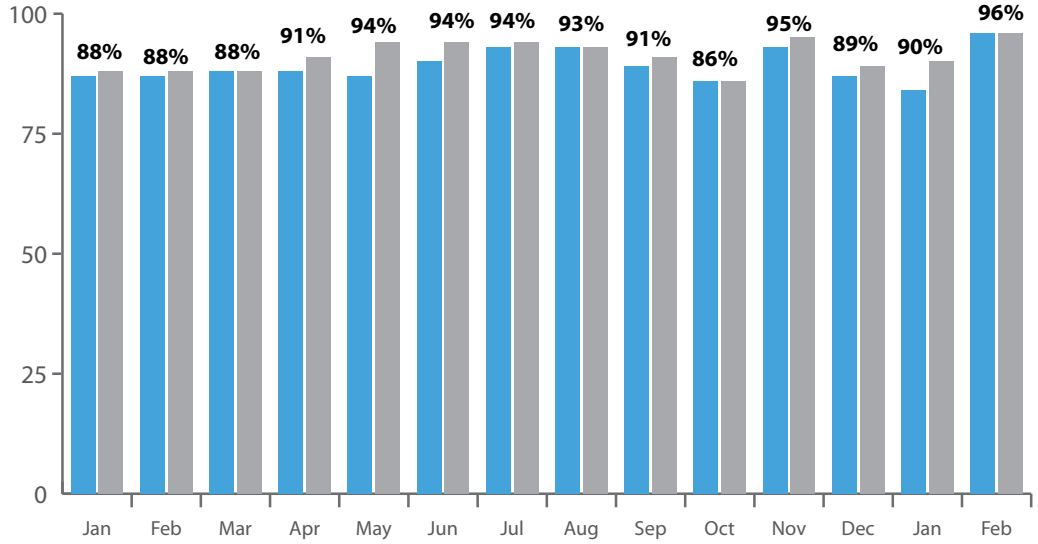
Indicators	Number (%)
Total number of Rumors reported	21
Health facilities reported rumors	2
Investigated	19 (90%)
Investigated within 24 hours	12 (57%)
No of rumours confirmed as GWD	0

None of the rumors confirmed as cases of Guinea worm disease. Detailed investigations were conducted and the following actions implemented: (i) health education to the attendants about guinea worm and its prevention(ii) controlled immersion and follow up for emergence of any worm by admitting two patients in health centers and conducting daily home visits to one patient (but no worm emerged during follow up period), (iii) awareness creation and house – by-house active case search in villages where the rumors detected for additional rumors (but no rumor detected), and (iv) interviews with suspect's family members and key informants to verify suspect report of not entering into drinking water source and village visits to verify absence of stagnant drinking water sources during the reported worm emergence, (v) Send the specimen to Atlanta through WCO

Strengthening health facility GWD reporting through the IDSR reportingsystem

As shown in the below figure, over the past one year, the completeness and timeliness health facilities reporting on guinea worm disease (including "zero" cases) through the weekly integrated disease surveillance and response system have greatly improved. In bench Maji zone 240 public health facilities (including 200 health posts, 39 health centers, and one hospital) expected to report weekly. On average over 89 percent of expected weekly reports received and 85& of expected reports received timely.

Fig 8: Timeliness and completeness of health facilities GWD reporting through IDSR from Jan. 2014 to Feb. 2015



Strengthening the Capacity of health workers to carry out GWD surveillance and response

In order to build capacity to carry out and document guinea worm disease surveillance and awareness creation activities, WHO provided technical and financial support for provision of two days comprehensive training for 161 health workers including for surveillance officers working in 11 district health offices and 39 health centers and for the greatest majority of health workers in Surma, Maji, and Bero districts. WHO also supported one day training workshops for community leaders in Surma district including for village chiefs and kebeles and district level administrative members in addition to two and half days training of 21 village based volunteers. The zonal health department and WHO also used other opportunities such as training workshops and supportive supervisions to provide brief training for 117 health workers. Besides573 health workers and 796 health development army members provided orientation training to recognize the disease, conduct active surveillance, and deliver key awareness creation messages during polio immunization campaign.

Fig 9: Capacity building and training for health workers

Table 6: Various training activities data with numbers of participants

Activities	Number
Number of surveillance officers and other health workers provided two days comprehensive training on GWD surveillance and response	161
Number of health workers provided half-day training to carry out case management, active surveillance, and awareness creation activities	117
Number of health workers provided brief training to conduct active surveillance and awareness creation as part of polio campaign	573
Number of health development team members provided brief training to conduct active surveillance and awareness creation as part of polio campaign	796
Number of village based volunteers provided 2 ½ trainingto carry out GWD surveillance and response activities in Surma district	21
Number of village, kebele, & district level leaders provided one day training to support GWD surveillance and response in Surma district	92
Number of media professionals trained to recognize GWD and deliver key awareness creation messages through mass media	21
Health workers from Surma (27); Maji (47), and Bero (20) districts 67 people (PHEM and other program officers from 11 district health office, and 1 hospital and 39 health centers IDSR focal points	1620

Number of village, kebele, & district level leaders provided one day training to support GWD surveillance and response in Surma district	92
Number of media professionals trained to recognize GWD and deliver key awareness creation messages through mass media	21
Health workers from Surma (27); Maji (47), and Bero (20) districts 67 people (PHEM and other program officers from 11 district health office, and 1 hospital and 39 health centers IDSR focal points	1620

2.2 Increasing public Awareness on the Disease and cash reward system

In order to increase public awareness of guinea worm disease and the correct amount of cash reward for reporting of cases, WHO supported the implementation of various awareness creation initiatives through a mix of communication channels including provision of face to face health education and awareness creation for over 250,000 community members and students, broadcasting of messages through local radio, and distribution of various print materials.

Number and percent of schools covered by at least one health education session and students reached, and number of people reached through house to house brief health education and awareness creation messages as part of the first and second round polio immunization campaign, and through community level group health education

Table 7: Showing health education in schools coverage

Sn	District	School covered	Students reached	People reached during 1st round polio campaign	People reached during 2nd round polio campaign	People reached at community level sessions
1	Surma	7 (29%)	983 (40%)	8,154	0	5528
2	Maji	15 (42%)	2,750 (42%)	6,096	5,575	4702
3	Bero	9 (69%)	1,784 (64%)	2900	3365	500
4	Menit Goldia	7 (13%)	2,573 (16%)	3,200	34,900	6375
5	Menit Shasha	10 (24%)	2,050 (26%)	0	25,737	4959
6	Shey Bench	10 (24%)	10,212 (36%)	0	28,050	4895
7	Semen Bench	10 (24%)	8,498 (31%)	20,547	17,016	6000
8	Sheko	10 (36%)	4,700 (34%)	27,709	0	10910
9	Mizan n	5 (18%)	2,120 (34%)	9,671	11,300	0
10	Debub Bench	6 (15%)	5,490 (18%)	21,590	28,165	3757
11	Guraferda	3 (10%)	1640 (16%)	0	13,752	0
	Total	92 (24%)	42,800 (28%)	99,867	167,860	47,626

Health education and Awareness creation sessions in schools

In the past six months at least one health education and awareness creation session conducted in 92 (24%) schools in 10 districts and 48,800 students attended the sessions.

Fig 10: Health education in schools

Awareness creation as part of polio immunization campaign

During the second round polio immunization campaign, 525 health workers and 796 health developments army members trained to deliver key messages and provided with posters and leaflets, reached 167,860 people through brief health education on the disease and cash reward. During the first round campaign vaccination teams provided brief health education for 99,867 people in 8 districts.

Fig 11: Integrating polio campaign with GW surveillance

Community level group health education

Over **47,626** community members reached using the opportunity of community conversation sessions, community gathering for soil conservation, and other public gathering opportunities.

Awareness Creation through the Local Radio

Fig 12: Awareness Creation through the Local Radio

WHO provided technical and financial support for broadcasting of announcements and educational programs through Mizan FM Radio having an estimated over 600,000 listeners within the zone and adjacent areas. Specifically WHO supported the development and pre-testing of public service announcement on guinea-worm disease and cash reward, and

broadcasting it three times a day for six weeks (42 days) during prime time and programs having high number of audiences. In addition WHO supported provision of one day training for 21 media professionals which helped them to respond to questions and additional information requests made by audiences through over 200 telephone calls following public service announcements, as well as to develop and broadcast educational programs in Bench, Dizi, Menit, Sheko, and Amharic languages using free airtime allocated for social programs.

Distribution of informational and educational print materials

Over 5000 cash **r**eward posters produced at national level distributed and displayed in public places including in schools, markets, churches, mosques, and health facilities. In addition 4000 leaflets and 1600 broachers distributed to health workers, health development army members, teachers, and target population. WHO also supported preparation of billboards and banners, and printing and distribution of t-shirts.

Fig 14: Guinea Worm materials

IEC materials distributed	
IEC materials	**Number**
ID cards	**200**
Posters	**800**
Leaflets	**5000**
Broachers	**1600**
Billboards	**3**
Banners	**2**
Calendar	**20**
T-Shirts	**110**

Advocacy

Advocacy activities conducted for 97 political leaders and health managers participated in annual health conference and other workshop to mobilize leadership and political commitment for dracunculiasis surveillance and awareness creation in Surma.

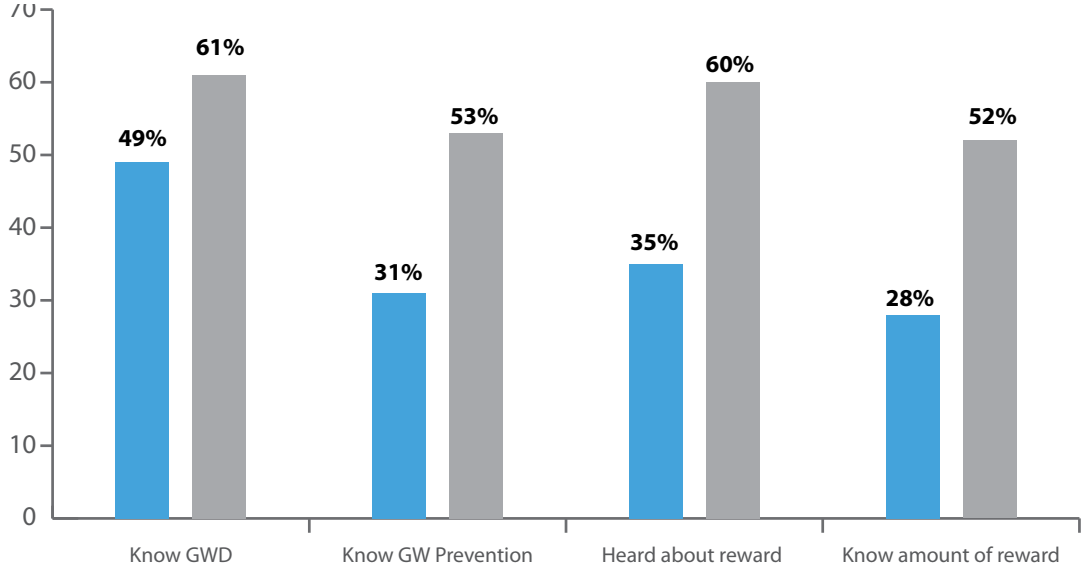
Monitoring public awareness on the disease and cash reward through surveys:

In order to monitor the coverage and comprehension of messages on guinea worm disease and cash reward system, the zonal health department and district level staff and WHO field officer conducted baseline and periodic monitoring surveys including house to house surveys among community members in various kebeles found in different districts and among students

A recent survey conducted in villages of Surma district showed significant improvement on public awareness of the disease and cash reward system, and found 79% of the households interviewed recognized guinea worm disease from picture,53% mentioned at least one prevention measure; 60% heard about the existence of reward for case reporting; and 25% reported correct amount of the reward,

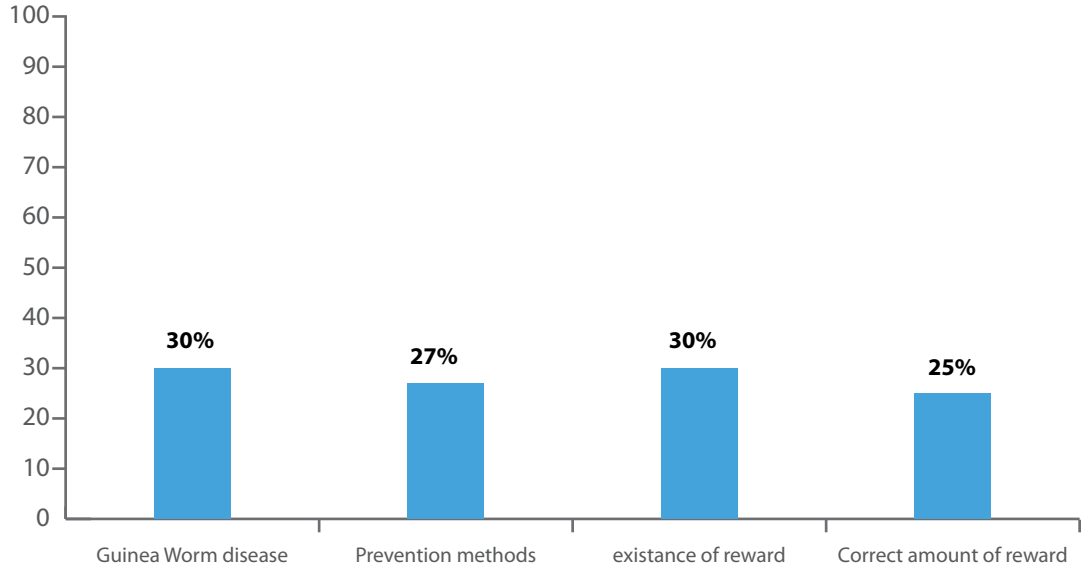
Fig 15: Awareness survey and cash reward

Figure 16: Community members awareness on GWD and cash reward in Surma District, August and November 2014



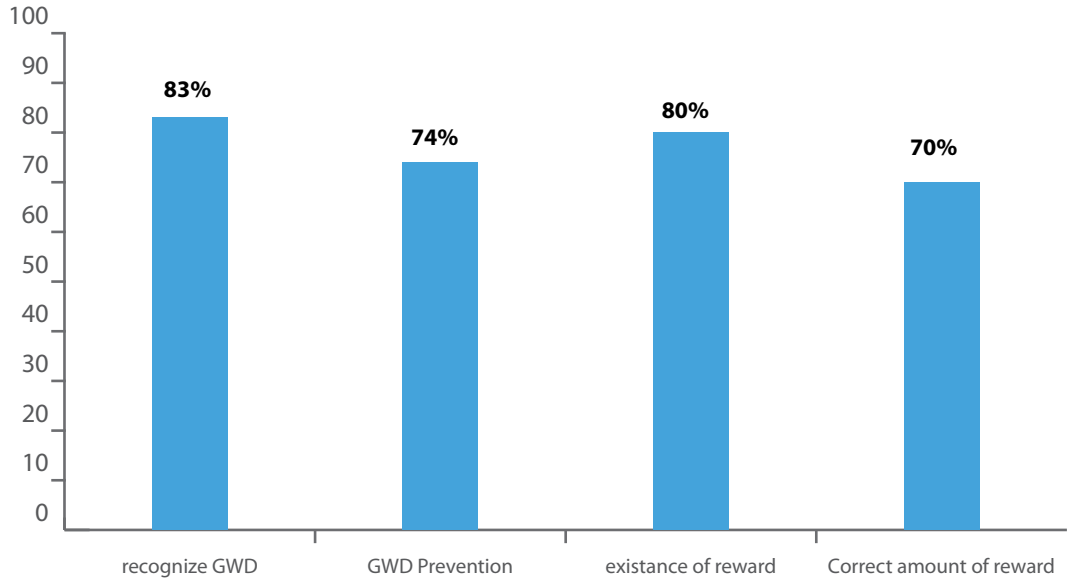
A recent survey conducted in the districts of Maji, Semen Bench, and Sheko, found that 30% of the households interviewed were aware of recognized guinea worm disease (photo), and 25% reported correct amount of reward.

Figure 17: Community members awarness on GWD and cash reward in other districts (Maji, Semen Bench, & Sheko)



Among 1382 students, 83% were aware of dracunculiasis, 74% knew how to prevent the disease, 80% had heard about the cash reward system for reporting a dracunculiasis case, and 70% reported correct amount of cash reward for reporting a dracunculiasis case.

Figure 18 Awareness survey results



3. Documentation of Surveillance Data and Program Activities

In order to facilitate documentation and investigation of rumors 500 copies of standard operating procedure and rumor registration and investigation forms distributed to all district health offices and health facilities. The GWD data are well documented with folders at the zonal health department with the support from WHO data management team.

SECTION 6
Major Challenges and Recommendations

Challenges and Recommendations to FMOH/EPHI

- Unknown sources of transmission e.g. The Umha village case of 2012 reported from Abobo district, the PRC Agnuak case of 2013 reported from Gog district and the cases from Wichini and bathor villages of Gog district in Gambella in 2014. Hence there is a need for data collection for evidence based interventions and operational research to stop transmission
- Low involvement of HEW in GWEP activities, their absence from duty station and low level of commitment particularly at regional and district levels to stop the transmission of GWD. Hence, there is a need for stringent supportive supervision by the EDEP, continued high level advocacy by the Minister of health and partners and also increased NCC field visit to advocate at all levels
- Insecurity to access most of the villages in Surma district as well as remote villages in Maji sharing borders with endemic areas of South Sudan and Bero district reported to receive seasonal migrants from South Sudan and Surma. This seriously affected conducting case search and awareness creation in these areas. The local government has worked over a decade to improve the security situation, but no significant improvement made to date. Therefore the national program should consider conducting advocacy at the highest level of the federal government to address the security situation in Surma district as well as remote villages in Maji and Bero districts.
- Due to security in Surma, the need to deploy at least two staffs accompanied by police force makes motorcycle less useful in the district. Therefore, in the near future the EDEP in consultation with partners should recognize the costs and ensure availability of full-time four wheel drive vehicle for the programme. The need for vehicle is also crucial in Nyangatom district to support supervision and strengthen cross border surveillance.
- The EDEP with partners should consider developing a full package of guidelines and tools including indicators and reporting formats specifically tailored for high risk, non-endemic, and GW free areas.
- WHO Field officer interviewed key informants and health workers knowledgeable about villages in Maji and Bero districts of Bench Maji Zone. Accordingly, these districts indicate risk of receiving imported cases and might attract the attention of evaluation and international certification teams (as described in WHO's certification guidelines and tools). Therefore, the EDEP needs reclassifying risk areas and consider including risk villages of these districts in the high risk category for enhanced surveillance to be supported by TCC.
- Monitor and ensure that all the WHO supported GWEP activities in formerly endemic and free areas are properly taken, sustained and maintained by TCC

Challenges and Recommendations specific to Gambella Regional Health Bureau

- Physical inaccessibility in some districts to carry out GWEP activities e.g. In Jor, Akobo, Wanthow, Makuye & Jikawo districts of Gambella region particularly during the rainy season. Utilizing of Helicopters going to these places for other programs by integrating with UNHCR and WFP is an option
- Lack of commitment and absence of some government GW field officers and Health Extension Workers in their respective assignment areas. Hence, stringent supportive supervision from RHB and high level advocacy is highly recommended.

Challenges and recommendations specific to South Omo Zonal Health department

- There is inadequate supervision at district, kebele, and Village levels. Hence, the Zonal Health Department should emphasize to improve both the quality and frequency of supportive supervision at all levels.
- There is weak infrastructure (Communication, transportation, safe water supply) in the zone, therefore lobbying for the construction of new safe water supply schemes in high risk villages and rehabilitation of the existing ones is crucial.
- There is delayed and incomplete reporting from health facilities. Hence, there is a need to strengthen the linkages between the health post and health center for timely reporting
- Continued risk of cross border importation of GW cases from S-Sudan especially in Nyangatom district due to high population movements across the border. Hence, strengthening cross boarder collaboration and communication at zonal and district level is important
- Insecurity due to recurrent tribal clashes in Kibish area among the cattle keeping communities of the two countries (Ethiopia and kenya). Advocacy during cross border meetings is helpful
- Lack of commitment and absence of health workers from their work place during supportive supervision and village visits. Hence, continued supervision and sensitization of health workers and close collaboration with the IDSR team at all levels is important to ensure sensitive surveillance in all districts of South-Omo zone. On top of this it is important to strengthen the capacity of PHEM coordinators, health facilities surveillance officers and HEWs on GW surveillance, reporting and documentation through refresher training and regular supervision

Challenges and recommendation specific to Bench Maji Zonal Health Department:

- In spite of the efforts made to advocate and communicate the critical role of the Bench Maji for Ethiopia's certification, the health sector and administrations commitment to the programme remains very low. Therefore, the Zonal health Department should consider high-level advocacy in consultation with EDEP including field visit by the Minster of Health together with advocacy workshop for zonal and district level administration members and health managers.
- The risk assessment and case searched conducted in Surma district do not cover all villages found in Surma district due to insecurity. Similarly the case searches conducted in Maji district remote areas sharing border with South Sudan, and formerly endemic Ethiopian district (Nyangatom), and case searched conducted in Bero district not covered remote areas where key informants reported movement of people from South Sudan. Therefore, if the security situation permits, future efforts should consider conducting comprehensive risk assessment and case search in all the above mentioned areas. The risk assessment might include assessment of availability of stagnant drinking water sources used for drinking purpose and presence of copepods in these water sources.
- The high turnover and critical shortage and low motivation of health workers in Surma district including in health centers and district health office and also the absence of health extension workers is the major challenge for the guinea worm and other health programs. Besides, limited number and motivation of staffs in Bero and Maji district health offices to support and supervise surveillance and awareness creation in remote areas was a serious challenge. The Zonal health department in consultation with the regional health bureau and EDEP should consider having full time staff (Guinea worm officer) working on guinea worm disease in Surma, Bero and Maji districts.
- The Zonal Health Department PHEP Core process has only two staff with multiple duties and responsibilities to conduct the required numerous GW activities at zonal level and devote adequate time for supportive supervision. Therefore, Zonal Health Department in consultation with the regional health bureau and EDEP should ensure availability of staffs to conduct the required numerous GW activities at zonal level and devote adequate time for supportive supervision
- Field staff observation indicated presence of stigmatizing attitudes but not sufficient to make conclusion, and needs to be properly investigated as it might prevent self-reporting of cases as well as by family members. Therefore future efforts should consider conducting qualitative study to assess existence of stigmatizing attitudes towards people infected with guinea worm disease and develops appropriate messages to respond.

Recommendations to TCC

- To utilize the human resource of WHO such as the Guinea worm field officers and communication consultants who had extensive field experience in GWEP
- Advance planning and integrating guinea worm activities into other public health programs such as Polio, NTDs etc.
- To sustain, maintain and build up on what WHO has been supporting EDEP in formerly endemic and free areas of the country by giving due emphasis on strengthening the nationwide surveillance as well as focusing on enhancing nationwide public awareness on the cash reward for subsequent certification of the country
- Low literacy level in Surma district makes it difficult to involve volunteers who can read and write and only half of volunteers can read and write. This seriously affected collection of basic information and documentation of surveillance data. TCC's experience of working with illiterate volunteers in other countries has to be adapted in Surma district.

Recommendations to WHO

- Continue the leadership in coordinating GWEP activities by closely and regularly monitoring the implementations and assisting the country for subsequent certification
- Conduct continued high-level advocacy and increased NCC field visit to advocate at all levels
- Coordinate at national level by supporting and advocating the conduct of regular national taskforce meetings as part of monitoring the implementations
- Continue supporting EDEP on strengthening refugee surveillance and cross border communication

World Health Organization

Ethiopia Country Office