WHO staff marks the finger of a child vaccinated against polio in Juba town.

This report summarizes achievements, challenges and the way forward for the WHO South Sudan activities covering the period October - December 2012 and focuses on 9 programme areas.
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1.0 Background

1.1 The general context in the Republic of South Sudan.

The health situation across South Sudan remains fragile. There are high risks of diseases, floods and drought, low access to safe drinking water, food insecurity, poor sanitation and low literacy rates. Environmental factors contribute to the spread of illnesses such as water and vector-borne diseases like diarrhea, dysentery, typhoid, hepatitis, malaria and dengue fever. Both health and nutrition rates are much lower than averages in neighboring east and central African countries, and within South Sudan there are significant urban/rural, state, gender and socioeconomic disparities.

Health infrastructure in many states have been abandoned or destroyed by decades of conflict. For a population estimated at 8.2 million, there are just 220 doctors. Government expenditure on health has risen in the last two years but is still well below the global recommendation of $37.

In South Sudan, only 25 percent of the population is estimated to use any kind of health facility during their lifetime. Although some progress has been made in the area of immunization, the proportion of fully immunized children still remains very low. Half of all the children do not attend school. Eighty-five per cent of the South Sudanese population is illiterate (92% of women). South Sudan also has the highest maternal mortality rate in the world with more than 2,054 out of every 100,000 live births mainly due to inadequate access to primary and curative health services and low demand for and awareness of preventive services. Despite efforts to train midwives, skilled attendance at births has remained very low compared to the neighbouring countries. Under 5 mortality is 135 out of every 1,000 live births. South Sudan’s epidemiological profile is dominated by communicable diseases. Frequent outbreaks of meningococcal meningitis, acute watery diarrhea, kala azar, measles, malaria and cutaneous anthrax were reported in the last biennium. Nonetheless, all outbreaks were detected on time due to the improved surveillance system and comprehensive responses conducted. Nonetheless, poor sanitation and quality of drinking water following flooding, remains a challenge and leave open the potential for serious outbreaks during the rainy season. An outbreak of kala azar that started in late 2009 is still ongoing affecting over 17,000 people with 550 deaths.

Disease outbreaks will remain the major challenge in the 2012 - 2013 biennium. Malaria is a big risk and tuberculosis is on the rise. The risk of polio importation increases with cross-border population movements. Although HIV prevalence in South Sudan is at a low level compared to countries of southern and eastern Africa, it is the highest in the Middle East and North Africa. According to a recent report by the Joint UN Programme on HIV/AIDS (UNAIDS) and the World Health Organization (WHO), the estimated HIV prevalence among 15-24 year old women is 3 percent, but the distribution of HIV prevalence varies from region to region with the equatorial region

Reference


2. The Commission of Macroeconomic and Health, a WHO publication, states that $37 is the recommended per capita spend.

3. 1999 SMS and 2006 SHHS
having the highest, followed by Bahr al Ghazal and Upper Nile. However, these estimates are based on limited surveys and research focused on specific geographic coverage and must be used with caution.

### 1.2 The Current situation in the states

During this quarter, there were increased numbers of 1,370 returnees airlifted from Kotsi in north Sudan, the refugee influx from the Blue Nile and South Kordofan areas entering in to Upper Nile state and inter-tribal clashes in some states also increased. These posed a significant threat to the lives and livelihoods of the civilian population. As a result, the social and health services were over stretched, predisposing both the incoming and host communities to unfavorable health conditions likely to spark disease outbreaks. This situation becomes more delicate with the dire state of poor sanitation and lack of safe drinking water & sanitation facilities in the settlement areas.

In Maban county, WHO continued supporting the ongoing outbreak of Hepatitis E and the cholera vaccination exercise as one of the way of reducing the risk of cholera in the camps.

In Western Bahr el Ghazal state, Unity and Jonglei states, joint assessments were conducted to areas where scores of persons were displaced either due to inter-tribal clashes or due to the conflicts at the border areas with Sudan.

Integrated Disease Surveillance and Response is one of WHO South Sudan’s priorities. During this period, a national review meeting was held with the Ministry of Health officials from the central and state levels, NGO health partners and WHO national and International Foal point persons to devise ways to strengthen Integrated Disease Surveillance and Response in the country.

WHO continued to participate in a number of activities to increase her visibility and engage all partners and media for the success of WHO programs like polio. Among the activities conducted this period was the media orientation and sensitization on polio in the country. This was done in close collaboration with the Ministry of Health and UNICEF with funding from Rotary Club International and USAIDS.

Picture below shows the Minister of Health, Dr Milly Hussein Michael and Dr Abdi addressing Ministry fo Health, NGO partners and WHO participants during the Annual review meeting in Juba.
2.0 WHO's Major Achievements in The 4th quarter. (October-December) 2012

2.1 Emergency Humanitarian Action (EHA)

WHO fulfils its strategic objectives through six core functions, among them; providing technical support, building sustainable institutional capacity; monitoring the health situation and assessing health trends.

In the last quarter of 2012, the Emergency Humanitarian Action continued to play a leading role in preparing states for emergencies by strengthening their overall capacity to manage all types of emergencies; and respond by ensuring effective, efficient and timely action to address public health priorities to save lives and reduce suffering through training.

During this reporting period, the effects of rains in South Sudan that started in the third quarter, continued in to this quarter with further displacement and destruction of sources of livelihoods. This was mainly reported from Northern Bahr el Ghazal, Jonglei and Lakes states. In Northern Bar al Ghazal state (NBGS) alone over 6,000 people were displaced in three counties of Aweil center, Aweil west and Aweil East.

Insecurity was also reportedly on the increase this quarter mainly in the borderline states and among the cattle keeping communities. Intertribal clashes in Wau, Western Bahr al Ghazal (WBGs) state left over 30 people dead and around 3000 others mostly women and children displaced. While Rebel Militia group (RMG) activities in Jonglei state made the delivery of humanitarian services challenging especially in the remote counties of Pibor and Akobo. The onset of the dry season saw the resumption of cattle raids in Unity, Lakes and Jonglei states, these left scores of people dead and many more displaced.

The Border States particularly NBG and WBG states reported a number of incidents of aerial bombardments by suspected Sudan Armed Forces (SAF) which resulted in about 100 fatalities and many causality. Over 1000 civilians were displaced in both states. The signing of the cooperation agreements between Sudan and South Sudan opened the way for most South Sudanese initially stranded in the Sudan to make their way home. IOM chartered flights for the Extremely Vulnerable Individuals (EVI) while the rest came by barges supported by SRRC and Ministry of Humanitarian Affairs.

Hepatitis E outbreak in Maban refugee camps continued evolving with another outbreak declared in the second refugee camp of Yida. As of this reporting period, Maban had reported over 2100 cases and 62 deaths while in Yida, 70 cumulative cases and 2 deaths were reported. The ongoing outbreak of kala azar in Ayod and Old Fangak counties of Jonglei state and Koch County of Unity state also continue to pose significant health threats in 2013.

2.1.2 Emergency Health and Humanitarian Coordination

In this quarter, WHO continued providing leadership during coordination of emergency health response. The focus of WHO in emergency health response is based on its core functions of; Assessment and information management, coordination, gap identification and filling and capacity building.

In line with its core function, the program led response and recovery activities in different states through health cluster/ health sector coordination with strong inter-sectoral collaboration. A total of 33 health cluster
meetings were supported across the ten states in South Sudan during this quarter where WHO remains the secretariat. Partnerships were also strengthened with various agencies at county, state and national levels.

During the fourth quarter, the program supported Communicable Disease Surveillance and Response (CSR) program with coordination and resources mobilization for the control of disease outbreaks in emergencies. Among the diseases supported were Measles, anthrax and hepatitis E which were reported from several counties of Wau Awiel, Pariang and Maban respectively.

In addition the program supported the verification of suspected cholera, meningitis, yellow fever and viral hemorrhagic fevers. During the same period, the program also supported the response towards Hepatitis E confirmed in all the five refugee camps in Maban County. As of this reporting period, a cumulative number of 2100 cases with 2.5 CFR were recorded.

During this time, EHA also supported states and partners in the counties with critical information on pre-existing risks and capacities to guide their interventions on humanitarian emergencies by….. In addition technical and financial support was provided to the states during the development and revision of State Emergency Preparedness and Response plans and the functionality of established State Rapid Response Teams.

To better respond to flood prone areas in Jonglei state, WHO supported the State Ministry of Health (SMOH) with the development of flood action plans to support the response in the affected counties. Support was also provided to Unity, Upper Nile Jonglei and Lakes states to facilitate the development of response plans for potential conflicts there.

Through the cluster approach, collective involvement of health actors in the response to humanitarian emergencies continued during this period. Technical guidance was provided to partners and information sharing strengthened.

2.1.3 Emergency Health Assessments and Needs Assessment

In a bid to document health needs for emergency response in the affected communities, the unit continued to lead the health aspect of Inter-agency assessments and conducting separate health assessments when necessary. As a result the following assessments were conducted as seen in the table below;

<table>
<thead>
<tr>
<th>Date</th>
<th>State</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>01/10/2012</td>
<td>Northern Bahr el Ghazal State</td>
<td>Inter agency assessment for the flood response and needs assessment in Aweil West County following massive floods.</td>
</tr>
<tr>
<td>8/10/2013</td>
<td>CEG</td>
<td>Rapid health assessment for the availability of health services in Kida settlement site.</td>
</tr>
<tr>
<td>October 12th – 13th 2012</td>
<td>Lakes State</td>
<td>Inter agency assessment to Cuiobt County to assess the impact of the floods and extent of displacement.</td>
</tr>
<tr>
<td>October 17, 2012.</td>
<td>Jonglei State</td>
<td>Emergency Outbreak Assessment in Pagil Payam of Ayod County, following reports of increases Kala azar cases.</td>
</tr>
<tr>
<td>20th October 2012</td>
<td>Western Bahr el Ghazal</td>
<td>Health assessment in Jur River, Western Bahr el Ghazal to verify Suspected Anthrax cases.</td>
</tr>
<tr>
<td>15th November</td>
<td>Western Bahr el Ghazal</td>
<td>Health assessment and Verification for Suspected Measles cases in Tor East County.</td>
</tr>
<tr>
<td>Nov 17th 19th 2012</td>
<td>Unity State</td>
<td>Rapid Health assessment following reports of increased acute Jaundice cases in Yida refugee camp. Pariang County.</td>
</tr>
<tr>
<td>20th Nov 2012</td>
<td>Jonglei State</td>
<td>Rapid Health assessment after cases in Pagil Payam following an upsurge of cases.</td>
</tr>
</tbody>
</table>
actors. The table below shows assessments was conducted during this quarter.

2.1.4 Technical support during emergencies

During this period, South Sudan faced threats of Yellow fever outbreak from Sudan, Marburg and Ebola from Uganda, active outbreaks of Hepatitis E in Maban Refugee camps and Kala azar in Jonglei and Unity states. In response to Hepatitis E outbreak in Maban County, WHO strengthened its presence in Maban county to enhance surveillance and coordination of the Hepatitis E by deploying an epidemiologist in the county in order to contain the outbreak. Other humanitarian emergencies such as mass casualties from tribal clashes and inter border clashes also occurred during this period. WHO ensured timely and efficient deployment of technical officers to support these emergencies. In addition, the organization supported the states by providing technical guidelines, standard case definitions, fact sheets as well as treatment guidelines and protocols. To support the surveillance and confirmation of pathogens of potential outbreaks, WHO facilitated the transportation of over 200 samples of suspected Yellow fever, viral hemorrhagic fever, meningitis, hepatitis E, dysentery and cholera to the reference laboratory in Nairobi for confirmation.

2.1.5 Strengthening local capacities for response and emergency preparedness

WHO is committed to supporting the MOH to develop capacity and adequately prepare for emergencies so as to mitigate their effects and promote quick recovery and reduce mortality and disabilities. To achieve this, several trainings were organized in different states on emergency preparedness, management of mass casualties and surgical emergencies, management of childhood illnesses in emergency situations as well as hospital emergency response plans. The table below summarizes the trainings conducted during this quarter

<table>
<thead>
<tr>
<th>Location</th>
<th>Type of training conducted</th>
<th>Total number of participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bor hospital, Jonglei</td>
<td>Management of trauma and surgical emergencies</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>IMCI for community health workers</td>
<td>25</td>
</tr>
<tr>
<td>Rumbek Hospital, Lake state</td>
<td>Management of trauma and surgical emergencies</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>Management of childhood illnesses in emergency situations</td>
<td>25</td>
</tr>
<tr>
<td>Malakal Hospital, Upper Nile</td>
<td>Management of trauma and surgical emergencies</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>IMCI for community health workers</td>
<td>25</td>
</tr>
<tr>
<td>Bentiu Hospital, Unity state</td>
<td>Management of trauma and surgical emergencies</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>Management of childhood illnesses in emergency situations</td>
<td>25</td>
</tr>
<tr>
<td>Juba teaching hospital, central Equatoria state</td>
<td>Management of trauma and surgical emergencies</td>
<td>30</td>
</tr>
</tbody>
</table>

2.1.6 Filling Critical Gaps for timely response

As one of her core functions in humanitarian emergencies, the EHA program developed an emergency preparedness plan to strengthen its epidemic response capacity especially for the flood prone areas during 2013. To reduce response time in the event of epidemic outbreaks, huge consignments of emergency drugs, cholera and meningitis kits, laboratory and medical supplies were pre-positioned in all WHO state offices, done in collaboration with the State Ministries of Health (MOH). The prepositioning is done periodically based on information received from the field. Among the prepositioned supplies are interagency kits, trauma kits and Diarrhea kits. In this period, 26 emergency health kits were delivered to different states. Four kits were delivered to Warrap state (one each of trauma kit, interagency emergency health kit, Diarrheal kit and anesthetic kit), 9 kits were delivered to
Western Bahr al Ghazal state, among them, three trauma kits, 4 interagency emergency health kits, 1 diarrheal kit and 1 anesthetic kit), Upper Nile, Lakes and Northern Bahr el Ghazal each received 4 kits (1 trauma kit, one interagency emergency health kit, one diarrheal kit and one anesthetic kit), while Western Equatoria state received one interagency health kit. The kits supplied were very critical in the management of common illnesses among the displaced populations. It was estimated that the number could treat up to 105,000 persons in need of health care. A total of 67,400 people benefited directly from the prepositioned supplies.

In addition to regular prepositioning, the program also responded by filling in critical gaps in a number of emergencies namely; Floods, displacement due to conflict, trauma management, drug shortages in hard to reach areas and the upsurge of Acute Watery Diarrhea in key states.

As part of the core pipeline management, WHO maintained its role as core pipeline manager for the health cluster and supported the SMOH and other health actors with emergency supplies. One of EHA’s mandates is to strengthen emergency preparedness and enable states urgently respond to the critical needs of vulnerable populations. For instance during the response to the initial and acute phases of ethnic conflict reported from the states of Lakes, flooding in Warrap, Unity, Upper Nile and Jonglei state, the programme ensured availability of supplies. Other emergencies where WHO ensured availability of emergency supplies was the returnee response in Central Equatoria State, (CES), Western Bahr el Ghazal State and WBZ and Bahr el Ghazal State State.

In places with no storage facilities like Renk in Upper Nile state and in areas with very critical gaps, WHO chartered flights to deliver the much needed emergency supplies and drugs. Over all in this quarter alone, 15 flights were directly charted to various locations of South Sudan to deliver much needed supplies.

2.1.7 Service delivery for vulnerable populations.

In order to support the MOH enhance routine coverage of immunization by expanding EPI services in emergency areas, the EHA programme in collaboration with other partners ensured that all the children arriving from Sudan received measles vaccine to avoid an emergency of measles outbreak. As a result, 6,726 children were immunized for measles. New population movement leads to change of epidemiological profile in the community; this in turn may lead to the emergence of new and silent diseases.

Other activities enhanced by WHO to strengthen access to health services among the vulnerable populations include; support to mobile clinics in Apada camp, Northern Bahr el Ghazal state and in Juba, central Equatorial state, support of static health clinics in Renk, Mina and Abayok health facilities in Maban and to Relief International and Medair. A total of 16,321 patients were treated at these facilities.

To sustain continuity of health services among the refugee populations in Lasu and Ngorom, WHO supported ACROSS with emergency stocks from the core pipeline. As a result, 3,621 refugees were treated for common illnesses in the facilities supported by ACROSS.
2.1.8 Way forward

The programme will continue to support the Ministry of health at both the national and sub national level in the following priority areas:

1. Strategically preposition emergency supplies and life saving drugs to high risk and other key spots in the hard to reach areas experiencing acute emergencies;

2. Ensure that populations of humanitarian concern access emergency health services through restoring basic Primary Health Care (PHC) services and establishing mobile clinics;

3. Carry out health tracking and communicable disease surveillance in areas of concern, while taking appropriate action by detecting, responding and containing any potential outbreaks.

4. Strengthen the capacity of the state and county health authorities by providing leadership in coordination and delivery of critical health services.

5. Ensure the Health Cluster support at central and at state levels are heightened

2.2.0 Communicable Disease surveillance and Response. (CSR)

2.2.1 Epidemic Preparedness and Response Coordination (EPR)

During this reporting period, the weekly Epidemic Preparedness and Response (EP&R) meeting were regularly held at Juba with increased participation of health officers and health cluster partners. These were chaired by the Ministry of Health, Republic of South Sudan, while WHO provided secretariat services. The Epidemic Preparedness and Response meetings are a forum that bring together health officers and cluster partners involved in epidemic preparedness and response activities and review weekly surveillance data; discuss weekly alert reported across the country; and provide necessary technical advice and support to surveillance teams and health partners on outbreak verification and response. Regular monthly health cluster meetings were also organized in all the states and some high risk counties like Renk, Maban and Agok, and disease surveillance discussed regularly.

In the same quarter, an annual review meeting for Integrated Disease Surveillance (IDSR) and Response programme was held in Juba. During this period, WHO provided technical and financial support during the organization of this meeting. This was called with the aim of reviewing the status and performance level of IDSR system in South Sudan and explores ways to improve the effectiveness of the national surveillance system. A total of 55 participants from the national and state Ministries of Health, WHO South Sudan, NGOs, donors and other partners participated in the meeting. Key recommendations from the review meeting included: capacity building of health workers on IDSR, strengthened the capacity of Rapid Response teams at state and county level, enhanced integration between guinea worm and AFP into IDSR, speedy completion of the reference laboratory, installation of more HF radios to peripheral health facilities and scale up the supportive supervision at all levels.

2.2.2 Training and Capacity Building

Strengthening knowledge and skills for first line health care workers, surveillance officers, public health officers and other health managers is one
of the key mandates of WHO Country office. To fulfill this mandate WHO continued to provided support to IDSR as one of the main priority areas for WHO support in collaboration with other health authorities and partners. Health workers and other health cadres require regular refresher trainings to upgrade their knowledge and skills given their role in case management, laboratory diagnosis, reporting, investigating or responding to outbreaks or other health related emergencies. As part of the recommendation by the mid-term evaluation team in 2011, the training curriculum for integrated disease surveillance and response (IDSR) was revised and the duration of the training increased from three days to five days. During this reporting period, a total of thirteen (13) different trainings were conducted across the country, namely;

a) **Integrated Disease Surveillance**

One (1) training on integrated disease surveillance and response was supported in Bentiu, Unity state; 33 health care workers and public health officers were trained. The training aimed to re-orient the health workers and public health officers to integrated disease surveillance system and provide new knowledge and skills needed to improve outbreak investigation, disease surveillance, reporting of early warning signals of impending outbreaks and help initiate an effective response in a timely manner. All trained participants received IDSR training packages and technical guidelines for future reference.

b) **Influenza Surveillance**

Six (6) refresher trainings on early detection and rapid response to influenza like illnesses were conducted during this reporting period in Juba, Wau, Aweil, Bor, Bentiu and Torit targeting health care workers from different health facilities. A total of 198 health workers participated in the trainings. The purposes of these trainings were to enhance capacities (knowledge and skills) of health care workers on early recognition, detection and rapid response (preparedness and surveillance) to influenza like illnesses (ILI) and severe acute respiratory infection (SARI) outbreaks.

c) **Integrated Management of Childhood illnesses**

Two (2) trainings on integrated management of childhood illnesses were conducted in Bentiu, Unity state and Rumbek, Lakes state. Forty (49) primary health care workers were trained. The aim of the training was to orient frontline health care workers on the integrated management of childhood illnesses which are a major threat to the young population.

d) **Basic Surgical Care in Emergencies**

In addition, Four (4) refresher trainings on basic surgical care in emergencies were conducted in four locations of Juba Teaching Hospital (Juba), Kuwajok, Rumbek and Bentiu. A total of 99 health workers were trained. The aim of these trainings was to provide basic knowledge and skills necessary to identify and treat traumatized patients who require rapid assessment,
resuscitation and stabilization of their injuries (early recognition and timely intervention in specific life-threatening conditions). The training also aimed at providing very basic foundation on which doctors and other health cadres can build the necessary knowledge and skills for trauma management with minimal equipment without sophisticated technologies.

2.2.3 Surveillance and Epidemic Response

a) Outbreaks Investigation:

A total of sixty five (65) outbreak rumors/alerts were reported and verified by state rapid response teams during this period. Over 60% of these alerts were measles, followed by acute watery diarrhea, acute jaundice syndrome and others. Three viral hemorrhagic fever alerts were reported this quarter from Raja, Yida, and Kajo Keji, all investigated on time. The only confirmed outbreak during this reporting period was hepatitis E Virus (HEV) in Yida refugee camp, all others turned out as false alarm. Over 75% of all outbreak alerts were investigated within three days of notification. Few alerts of yellow fever cases were reported from Western Bahr el Ghazal state, Northern Bahr El Ghazal state and Unity, given that there was a major yellow fever outbreak in Darfur regions of Sudan. Specimen were collected from suspected cases and tested negative for yellow fever or any other viral pathogen.

b) Laboratory Specimen

A total of 106 clinical specimens (serum/blood, stool and CSF) were collected and analyzed at the reference laboratories in Juba for measles, Centre for Disease Centre – Kenya Medical Research Institute (KEMRI) for viral pathogens like Acute Jaundice Syndrome/yellow fever and AMREF-Nairobi for cholera and meningitis. Of these specimens, 17 serum/blood samples tested positive for measles, 27 tested positive for hepatitis E and all others tested negative for any other epidemic prone diseases. Refer to table 1 for details of laboratory specimens.

![Image]

The proportion of preliminary results received with the standard or acceptable time were below 90% target set by the Ministry of Health. Seventy one percent of measles preliminary results were received within 10 days, 83% of cholera and shigella preliminary results were received within 10 days, and 51% of Acute Jaundice Syndrome/HEV/Yellow fever preliminary results were received within 10 days of sending the specimen to reference laboratories.

c) Health Facility Reporting Performance

The number of health facilities that submitted timely and complete weekly surveillance reports
slightly increased this period as compared to the same period in 2011 and 2010. In the third quarter, the average completeness rate of reporting of health facilities was 52% as compared to 48% in the previous quarter. As shown in figure 2, Upper Nile state made remarkable improvements in the timeliness and completeness of reporting in the last few months as compared to the same period in 2011 and 2010. At the same time, the number of priority facilities (hospitals and PHCCs) submitting the weekly reports regularly increased in the 4th quarter of this year.

2.2.4 Disease Specific Surveillance Update

a) Acute Watery Diarrhea (AWD)

A total of 68,264 cases of AWD (incidence rate of 826.4 per 100,000 populations) with 85 deaths (CFR of 0.12%) were recorded across South Sudan between October - December 2012. The number of AWD cases and deaths recorded in the 4th quarter of 2012 were slightly less as compared to the previous quarter of 2012 (70,935 cases with 163 deaths). The incidence rate of AWD cases per 100,000 population recorded across the country increased considerably in October and November up to 30% then declined in December 2012. The rate of acute watery diarrhoea differs by age group, with the highest rate seen in children less than 5 years of age (42%). Upper Nile, Western Equatoria State (WES), and Unity states recorded the highest AWD cases, while WES, Jonglei, Central Equatoria State (CES), Eastern Equatoria State (EES), Jonglei and Unity states recorded the highest deaths. There was no confirmed cholera outbreak or cases, and all stool specimens cultured at AMREF reference laboratory tested negative for Vibrio cholera. Health authorities and cluster partners strongly believe that the increased diarrhea trend among children might be attributed to floods, malnutrition among children, limited health care services, population movements (returnees, refugees and IDPs), poor sanitation of food and drinks, and limited toilet facilities.

The refugee influx to Yida and Maban (Jamam, Doro, Gendrasa and Batil) camps in Upper Nile state increased the trend of watery diarrhea due to inadequate safe drinking water, poor hygiene, and limited number of latrines, poor shelter and malnutrition. As a result, the trend of AWD cases increased significantly in all refugee camps, putting the host communities and refugees at high risk of cholera and other water borne outbreaks.

The trend of acute watery diarrhoea from refugee camps in Maban and Yida was higher in the first two quarters of 2012, and slightly decreased on the fourth quarter, with very few deaths. Heavy rains and floods impacted negatively on the sanitation and hygiene practices in the refugee camps but implementing partners made extraordinary efforts to improve water and sanitation conditions among the refugees and host communities so as to reduce the water borne diseases.

b) Acute Bloody Diarrhoea

A total of 23,827 cases of ABD (incidence rate of 288.5 per 100,000 populations) with 68 related deaths (CFR 0.28 %) were reported in the 4th quarter of 2012.
below five years of age accounted for 34% of all reported ABD cases and 73% of deaths. Western Equatoria State (WES), Upper Nile and Lakes states recorded the highest AWD incidence, while WES, Warrap and Lakes states recorded the highest deaths.

The ABD trend in this quarter remains the same as compared to the previous quarter in 2012. The ABD incidence rate in Maban and Yida declined during this reporting period as compared to the first three quarters of 2012. There was no confirmed dysentery (or shigellosis) outbreak in the refugee camps or other counties across the country, despite increased trends of bloody diarrhoea in different facilities or counties.

c) Malaria

A total 331,119 malaria cases (4008.5 cases per 100,000 populations) and 369 related deaths (CFR of 0.11%) were reported across South Sudan this quarter. The malaria incidence rate slightly decreased in the fourth quarter of 2012 as compared to the previous quarters of 2012. Nonetheless, the overall incidence rate increased with over 30% as compared to the same period in 2011. The case fatality rate (CFR) in this quarter was slightly higher compared to the previous quarter and most deaths occurred in children below 5 years of age (72% of the total deaths). Central Equatoria State (CES), Upper Nile, WES and Warrap states recorded the highest cases of malaria, while Lakes, CES, EES and Jonglei states recorded the highest deaths.

The malaria trend in Maban refugee camps slightly declined in the fourth quarter of 2012 as compared to the previous quarters, while the malaria trends in Yida peaked in the fourth quarter as compared to the previous quarters. Health facilities serving host communities in Maban and Pariang counties, Upper Nile and Unity states respectively. Nonetheless, the case fatality rate due to malaria in the refugee camps was very low, due to improved health services and constant distribution of mosquito nets.

The increased malaria incidence and case fatality rate across the country is attributed to the heavy rains and subsequent flooding across the country compounded with displacement and influx of refugees and returnees.

d) Meningitis

A total of sixteen (16) suspected meningitis cases and 3 related deaths were reported during this reporting period. All reported cases were sporadic from different health facilities and counties with none of the counties crossing the alert or epidemic treshold. None of CSF specimen cultured in AMREF reference laboratory tested positive for Neisseria Meningococcal bacteria. As a result, there was no confirmed meningitis outbreak during this reporting period across the country. The majority (68%) of the suspected meningitis cases and 100% of the deaths were in children below five years of age. Unity, Upper Nile and Lakes states recorded most of the suspected meningitis cases in this quarter. Currently, all health authorities and partners are well prepared to respond in case of any outbreak. WHO and the Ministry of Health, Republic of South Sudan (MoH-RSS) prepositioned laboratory supplies and drugs to high risk states, and refresher trainings on meningitis surveillance, case management, and meningitis epidemic preparedness and response conducted.

e) Measles

A total of 264 suspected measles cases (3.2 per 100,000 populations) and 11 related deaths (CFR of 4.2%) were reported across the country through the weekly surveillance reports. WES,
CES, Jonglei and WBeG states recorded the highest numbers of suspected measles cases, while Lakes, WES and CES recorded deaths during this period. Over 70% of all outbreak alerts reported and investigated this quarter were measles. Thirty eight (38) blood specimens were collected and analyzed at measles reference laboratory in Juba. Of these specimens, 45% tested positive for measles IgM, while all others tested negative. The increased trend of measles cases was attributed to the low measles coverage, high population movement, malnutrition and poor routine immunization.

f) Cutaneous Anthrax

A total of one hundred and eighty two (182) clinically confirmed cutaneous anthrax cases were recorded with one (1) death from Jur River, Wau and Gogrial West counties during this period. Over 70% of all the reported cases were in children below 17 years of age with 65% being female. Over 90% of the cases and one death was recorded from Jur River County, with all the affected patients responding well to antibiotic treatment. The cutaneous anthrax outbreak that began in early 2011 affected two counties: Jur River, Western Bahr el Ghazal State and Gogrial West, Warrap state. The outbreak is believed to be attributed to the consumption of meat from infected dead animals. Health authorities in WBeG and Warrap in collaboration with WHO conducted intensive health education and community awareness campaigns among the affected communities to discourage people from eating dead animals.

g) Acute Jaundice Syndrome (AJS)

A total of 1,724 suspected Acute Jaundice Syndrome (AJS) cases and 42 related deaths (CFR 2.4%) were recorded in the fourth quarter, 90% of the cases and deaths were reported from Maban and Yida refugee camps. Two Hepatitis E virus outbreaks were confirmed in Maban in September 2012 and in Yida in October 2012. Of these cases, 1,667 cases and 28 deaths were recorded in Jamam, Gendrasa and Batil, and 55 cases and 2 deaths were recorded in Yida. As seen in figure 3 shows, the trend of AJS cases and deaths recorded in Maban refugee camps increased significantly in the fourth quarter as compared to the previous quarters. Over 65% of all cases and deaths reported in the fourth quarter were recorded in Batil camp. The two HEV outbreaks in Maban and Yida remain active. The Maban outbreak worsened in this reporting period.

Fifty seven (57) blood specimens were collected from suspected AJS cases across the country, and referred to KEMRI/CDC reference laboratory in Nairobi for advance analysis. Of these specimens, 47% tested positive for Hepatitis E virus while the remaining specimens tested negative. All patients who tested positive for HEV were from refugee camps in Maban and Yida. Health authorities together with UNHCR, WHO and health cluster partners have taken steps to contain the outbreak in the refugee camps including strengthening early warning surveillance, active case finding and improved case management at facility level. WASH interventions implemented by the partners in response to the outbreak include hygiene and behavioral change education, increased availability of soap, construction of
additional sanitation facilities, and effective chlorination of water at the household level.

**Figure 3: Epi-Curve of Acute Jaundice Syndrome cases in the Refugee camps and host communities in Maban County, Upper Nile, n=2590**

### h) Visceral Leishmaniasis (Kala azar)

A total of 77 kala azar cases and 4 related deaths were reported across 21 treatment facilities in four states of South Sudan. Of these cases, 58 were primary kala azar, 6 secondary/relapse and 3 post-kala-azar dermal leishmaniasis (PKDL). Although the reporting of kala azar monthly data in this quarter is incomplete, the kala azar trend has declined significantly during this reporting period (October - December 2011) as compared to the same period in 2010 and 2011. Old Fangak treatment facility reported the highest kala azar cases this period, followed by Jiech, Koch and Leer.

#### 2.2.5 Challenges

- The operating environment in South Sudan is one of the most expensive and difficult in the region due to poor infrastructure, shortage of fuel, high food prices, limited availability of transport, and high living expenses.
- The rapidly evolving humanitarian context in South Sudan and the unpredictable population movements constituted major challenges to accurate and effective plan for project implementation, especially in high risk areas.
- Heavy rains and flooding hampered access to health facilities and vulnerable groups in high risk states.
- Closure of more health facilities due to irregular drug supplies and unpaid staff salary.
- Stock out of anti-malaria drugs across the country negatively impacted the emergency response to the malaria epidemic.
- Insecurity due to recurrent tribal clashes, small rebel groups, air bombardment by the Sudan Armed forces (SAF) and road mining often compromises the effective implementation of surveillance activities and increases the organizations operational costs.
- High staff turnover at the health facilities, county and state levels negatively impacted on the continuity of health services and surveillance activities.
- Retention of qualified and highly trained health personnel was very challenging due to delayed salaries coupled with availability of highly paid employment opportunities with the UN, INGOs and other NGOs.
- The ongoing austerity measures imposed by the government has severely impacted on service delivery and staff motivation;
- Severe shortage of fuel and other commodities has negatively impacted on the performance of surveillance and others programme.
- Public health reference laboratory infrastructure and services at the central and state level.

#### 2.2.6 Recommendations

- Advocate for regular salary payment for all health workers and surveillance officer in order to ensure service continuity.
- Timely investigation and response to all outbreak alerts in high risk areas.
- Scale up of hepatitis E virus outbreak response in Maban and Yida refugee camps
- Strengthen the epidemic preparedness and response capacity and coordination of activities at all levels
- Preposition more anti-malaria drugs and other emergency supplies in high risk states to avoid unnecessary stock out of life-saving drugs
- Increase timeliness and completeness of reporting from health facilities, county and states in collaboration with state and county health authorities and partners.
- Continue to enhance the early warning surveillance in the refugee camps and preposition adequate emergency supplies in high risk states

2.3.0 Polio Eradication Initiative

During the fourth quarter, the Polio Eradication Initiative program in collaboration with MoH and other partners successfully implemented the last two rounds of Polio National Immunization Days (NIDs) culminating into four successive rounds for the year. The last two rounds were held in November and December respectively. The November round was conducted from 6-9\textsuperscript{th} whilst the December round was implemented from 4-7\textsuperscript{th}. However data from the last round is still forth coming thus consolidated compilation has not yet been done. The table below shows results of the Post campaign Evaluation of November 2012 round.

Moreover as an implementation strategy, a bottom-up micro plan were developed by the states with technical support from central level technical team. A little over 3.2 million children were reached separately during both rounds.

2.3.1 SURVEILLANCE

a) Acute Flaccid Paralysis (AFP) Surveillance

During this reporting quarter, AFP surveillance was enhanced to high level sensitivity. This was done by focusing on active case search, investigation and collection of samples from all suspected AFP cases and their contact and collection of samples from healthy children in silent counties.

As of the last week of the quarter, a total of 321 AFP cases were detected with a Non Polio AFP rate of 3.94% and stool adequacy increase to 95% far above the target of 80%. In addition there is an immense improvement in the immunity gaps of children 6-59 months. The immunity profile of children under five has increased from 76% in 2011 to 81% as of the end of December 2012.

<table>
<thead>
<tr>
<th>State</th>
<th>% Finger Mark</th>
<th>% Missed</th>
</tr>
</thead>
<tbody>
<tr>
<td>C. Equatoria</td>
<td>96</td>
<td>4</td>
</tr>
<tr>
<td>E. Equatoria</td>
<td>92</td>
<td>8</td>
</tr>
<tr>
<td>Jonglei</td>
<td>92</td>
<td>8</td>
</tr>
<tr>
<td>Lakes</td>
<td>96</td>
<td>4</td>
</tr>
<tr>
<td>N. barh el ghazal</td>
<td>96</td>
<td>4</td>
</tr>
<tr>
<td>Unity</td>
<td>91</td>
<td>9</td>
</tr>
<tr>
<td>Upper Nile</td>
<td>92</td>
<td>8</td>
</tr>
<tr>
<td>Warrap</td>
<td>85</td>
<td>15</td>
</tr>
<tr>
<td>W. Barh el ghazal</td>
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<td>9</td>
</tr>
<tr>
<td>W. Equatoria</td>
<td>95</td>
<td>5</td>
</tr>
<tr>
<td>S. Sudan</td>
<td>93</td>
<td>7</td>
</tr>
</tbody>
</table>

Graphical Representation of the National Immunization Days Data-Nov 2012
b) Measles Case Based Surveillance

During this quarter, measles case based surveillance activities were strengthened in various capacities as a means of creating sensitivity and making it more robust in timely investigation of cases. During the implementation of the November National Immunization Days, technical support from Central level.

WHO Polio Eradication Imitative provided support to Eastern Equatoria – Kapeota County to investigate rumors of measles outbreak. One technical officer from the central level visited the area and confirmed the outbreak. As at the end of November, a total of 2,026 suspected measles cases were reported with one confirmed outbreak during the quarter. It is worth mentioning that with the robust strategy put in place by the PEI program, approximately 13% of suspected cases are investigated within 48 hours of notification.

Moreover the PEI program provided capacity building for front line health workers in the detection and investigation of cases. On job training was provided for staff and training provided during the NIDs. This was used as an opportunity to coach front line staff on measles case base surveillance.
2.3.2 Maternal Neonatal Tetanus Elimination (MNTE)

During the quarter, WHO along with other partners supported the Ministry of Health to conduct the first phase of the MNTE campaign in the Equatoria regions (Central, Eastern & Western). With support of UNICEF, WHO and UNFPA, the Ministry of Health committed to eliminating maternal and neonatal tetanus from South Sudan by 2015. This will be done through phases of preventive campaigns in which tetanus toxoids vaccines will be administered to women of child bearing ages (14-49 years) and pregnant women. The campaign will be implemented in phases between now and next year (2014). The States in the Equatoria zone (Central, Eastern and Western) will conduct the second round of the campaign from January 23 – 29, and the third round in August 2013. Jonglei, Upper Nile, Unity and Warrap states will implement the first round from February 4 – 10, second round from March 9 – 15 and the third round in October 2013. The remaining states of Lakes, Western and Northern Bahr El Ghazal will implement their campaign in January, March and October 2014. Below is a table showing results of the first phase of the campaign in the three states of the Equatoria zones.

<table>
<thead>
<tr>
<th>State</th>
<th>Target</th>
<th>Total Immunized-TTI</th>
<th>Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEQ</td>
<td>348,905</td>
<td>195,142</td>
<td>55.9</td>
</tr>
<tr>
<td>EEQ</td>
<td>286,476</td>
<td>225,449</td>
<td>78.7</td>
</tr>
<tr>
<td>WEQ</td>
<td>195,709</td>
<td>167,125</td>
<td>85.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>831,090</strong></td>
<td><strong>587,716</strong></td>
<td><strong>70.7</strong></td>
</tr>
</tbody>
</table>

2.3.3 Routine EPI

a) Financial and Technical support for routine vaccination

WHO also boosted technical support to the State Ministries of Health and counties by releasing funds to support routine vaccination outreach activities in eight states. Besides, all WHO personnel at the state and counties provided technical support to the ministries in monitoring and supervision of routine vaccination activities in their respective states.

2.3.4 CHALLENGES

- Restricted movement resulting in low and minimal supervision caused by insecurity in some areas
- Influx of refugees due to conflicts in South Kordofan and Blue Nile States (in the Republic of Sudan)
- The rapid turnover of health workers still poses a challenge
The escalating living costs lately posed a huge burden on the program due to the skyrocketing costs of fuel and transportation.

The persistent lack of both accountability and ownership of the program from the health officials at different levels especially at the state and county levels hinders the success of the program.

2.3.5 Way forward

- Intensification of AFP surveillance activities in all payams and bomas to ensure early detection and circulation of wild polio virus for onward investigation as this is the only way to ensure and sustain the gains made so far.

- Support supervision on the implementation of Reaching Every County (REC) approaches for Routine EPI.

- WHO will further work with MOH/ RSS to implement polio eradication activities to maintain South Sudan’s polio free status by conducting supplementary immunization activities, routine immunization, strengthening AFP and other Vaccine preventable diseases (VPDs) surveillance.

2.3.5 Plan for the first quarter of 2013

- Provide technical & financial supports to implement routine immunization micro plans aimed at increasing RI coverage

- Maternal Neonatal Tetanus Eradication Supplementary Immunization Activities - Round 2 in phase 2 in the states of Central Equatoria state, Eastern Equatoria State and Western Equatoria state.

- Provide continuous support through training to achieve high quality measles surveillance

- Continue Stool Sample Survey from Community Children in silent counties.

- Maternal Neonatal Tetanus Eradication Supplementary Immunization Activities - Round 2 in phase 2 states (Jonglei, Upper Nile, Warrap & Unity)

- Technical and focused support supervision/monitoring visits to priority states

- Support National EPI performance review meeting (that will also deliver prizes for best performing states)

- Implementation of two rounds of Polio NIDS

- Support routine operations for AFP/Polio Surveillance

2.4.0 Guinea worm Eradication Program

During the last quarter of the year: October to December 2012, a total of 18 new cases of guinea worm disease were reported compared to 48 cases during the same period in 2011. A total of 148 guinea worm rumors were reported in guinea worm free areas. These rumors were all investigated but none was confirmed as a guinea worm case. By the end of the year, a total of 520 cases were reported in the country compared to 1,028 cases in 2011, representing a 49% reduction compared to 1,028 cases reported in 2011. Of the cases reported in South Sudan in 2012, 87% of them were reported from Kapoeta East, Eastern Equatoria state. Globally, 540 cases were reported in 2012, with South Sudan reporting 520 cases, the remaining 20 cases were reported from Chad (10), Mali (7) and Ethiopia (3).
During this reporting period, WHO through the guinea worm program supported five assessments missions in the counties of Yirol East, Yirol West, Cueibet, Jur River and Gogrial west counties. The program participated in the guinea worm cross-border meeting conducted in Entebbe Uganda. And supported a workshop in developing a communication strategy for the South Sudan GWEP and the 7th Annual Review meeting held in Juba.

2.4.1 Workshop on developing guinea worm program communication strategy for South Sudan

During the quarter, WHO hosted a workshop on developing guinea worm program communication strategy for South Sudan. The workshop held with the objectives of; orienting the Ministry of Health, Guinea Worm Eradication Programme staff, WHO staff and those from other partner agencies using the COMBI approach to define relevant behaviors to be addressed; understanding the current perceptions and communication efforts relative to guinea worm disease surveillance and reporting through designated health care providers and volunteers; identifying social cultural believes and practices that could facilitate/hinder voluntary or self reporting of guinea worm affected persons and assist the South Sudan GWEP to develop an integrated social mobilization/communication strategy with clearly delineated behavioral goals to increase the voluntary and self reporting of guinea worm cases in the health care settings and communities in the endemic areas. Additional objectives of the training included; development of implementation and working briefs either for private agencies or none governmental organization to enable the development of appropriate messages and make the best choice of media to broadcast such messages. Where appropriate such strategy may need to be integrated with the public health awareness campaigns like polio and other diseases.

In the workshop, three behavioral objectives were identified by the program as problematic challenges facing the South Sudan GWEP among them; Promotion of countrywide guinea worm disease voluntary/self reporting of guinea worm cases and suspected persons; ensuring persons with signs and symptoms of guinea worm disease understand the importance of not entering water sources anywhere in South Sudan until the wound is healed and ensuring that 100% of every person in any household is able to correctly collect water from the pond/ well using filter cloth every time they fetch water. The participants agreed that; With technical support from Dr. Everold (Communication Consultant), the MoH will develop a communication strategic plan for the South Sudan Guinea Worm Eradication Program (GWSSG) between November 2012 and February 2013; the consultant will make available a draft of the Communication strategic plan (2013-2016) for the SSGWEP, by November 30th 2013 and that the South SSGWEP with support from WHO, will invite
the consultant by January 20th 2013, for a field visit to endemic and guinea worm free areas to familiarize himself with the cultural context of the communities in the remaining endemic areas to inform the process of finalizing the communication strategic plan. Other recommendations agreed on during the meeting were; that GWEP develop an operation communication plan for 2013 by February 2013 and in collaboration with the department of health education/promotion and other partners like UNICEF work on the implementing of the GWEP communication strategy.

In addition, the program participated in a cross boarder meeting between Uganda and South Sudan in Entebbe. The meeting was called with the objectives of; reviewing country by country specific activities carried out during the 2011/2012 year to strengthen cross-border priority disease surveillance including guinea worm disease, To do a S.W.O.T analysis of interventions implemented by countries to meet the criteria for certification in the border areas and to elaborate inline of the S.W.O.T analysis, a draft joint cross-border 2012-2013 Plan of Action to strengthen surveillance, communication and coordination for guinea worm disease eradication at regional and peripheral level in the border areas.

The teams from both countries agreed to complete the mapping of priority areas for joint cross-border activities. WHO will support the countries of Ethiopia, Kenya, Sudan and Uganda with GPS sets to strengthen surveillance and improve monitoring at the boarders.

In this period, the program supported guinea worm disease assessments missions to five counties of: Yirol East county, Yirol West county, Cueibet county, Jur River county and Gogrial West county. The assessments were held with the objectives of; confirming the absence of indigenous guinea worm transmission in the counties; assessing the strength of guinea worm disease surveillance through the Integrated Disease Surveillance and Response; finding out if there were any missed cases in the previous transmission season, identifying the level of community awareness on Guinea worm disease and establishing the availability and access of the community to safe drinking water.

The teams heard of the guinea worm rumors, these were registered and investigated but no hanging worm was detected during the assessment, that more than 90% of the health workers in greater Yirol counties are demotivated as they had not receive salaries from the MOH since January 2012. This
impacted negatively on guinea worm surveillance in the two counties.

In the same period, the program in collaboration with the Carter Center supported the Ministry of Health to organize the 7th annual Guinea Worm Eradication review meeting for South Sudan. The meeting was attended by 210 participants from all the ten states of South Sudan. South Sudan reported 96% (520) of the 2012 global cases compared to 1028 cases in 2011 with the remaining 20 cases were reported from Chad (10), Mali 4, Ethiopia (3) and Niger (3) cases imported from Mali.

The participants agreed that; surveillance in Guinea worm free areas be the responsibility of the SSGWEP, managed by its director in all formally-endemic counties, the director of the SSGWEP should manage surveillance for Guinea worm including work plan development and resource allocation. It was also agreed that the management and approval of expenditures and Integrated Disease Surveillance and response (IDSR) be strengthened especially the area of active and passive surveillance to provide information on the status of active surveillance in the remaining endemic areas. Other areas agreed on in the meeting that need strengthening are; the SSGWEP and IDSR should review the current Standard Operating Procedures for areas under passive surveillance by February 2013, the programme should ensure a very clear transition plan for active to passive surveillance using tools based on past accomplishments and that the programme should make every effort to find every last case of guinea worm in order to break the transmission in 2013.

In addition to the general recommendation that were agreed on during the meeting, specific recommendations were made for various areas, among these; in Kapoeta East, the program will continue with assessments to identify new migratory routes and decide if new surveillance zones are necessary, increase communication between Regional Coordinators, incorporation and training of clinicians, pharmacists, and other health professionals in town surveillance be done, development of health education tools relative to towns like billboards, radio programs, etc. It was also agreed that SSGWEP place the whole of Kapoeta North and South under active surveillance. In Jonglei state, it was agreed that non-traditional audiences be trained to serve as Village Volunteers (VVs) and Field Officers (FO) with a focus on age-mates including school-aged children, who will support in conducting active case search. In addition, the engagement of community health promoters and medics and soldiers of Sudan People’s Liberation Army (SPLA) medics/soldiers) should be done. It was further agreed that an assessment of the seasonal cattle camp areas on the border of Central Equatoria and Lakes states be conducted, involve Integrated Disease Surveillance and Response representatives during monthly field meetings like the Field Officers meetings in order to improve communication and with support from WHO train former village volunteers from passive areas.

2.4.1 Plans for the first quarter of 2013

- Develop the 2013 guinea worm program work plan
- Request for funding to support the 2013 work plan
- Enhance IDSR while focusing on community based surveillance
- Donate one Toyota Land cruiser to the MOH to support guinea worm surveillance in the field
- Conduct Training of Trainers workshop in guinea worm free areas on guinea worm disease surveillance
- Conduct a joint cross-border planning meeting for four countries of South Sudan, (Kapøta East), Ethiopia (Nyangatom, Surma), Kenya (Turkana North& West, Loima) & Uganda (Kaabong) in Kenya.

2.5.0 Human Immune Deficiency Virus (HIV)

The HIV program reviews the progress made at the end of 2012 in up scaling health sector interventions for HIV prevention, care, treatment and support. More emphasis will be on an intervention for which WHO has a lead responsibility as defined by the division of labor in the UN Joint Team on HIV in South Sudan. These interventions include scaling up access to HIV care and treatment, and the reduction in deaths due to co-infection with tuberculosis. WHO also works in close collaboration with the Ministry of Health, UN and bilateral partners towards the elimination of mother to child transmission and improving mother and child health in the context of HIV; ensuring regular and uninterrupted supply of HIV medicines and commodities; mobilizing resources for the country and strengthening acquisition and use of strategic information.

UNAIDS estimates indicate that 16,000 new HIV infections were acquired in 2012, contributing to a total of over 150,000 people living with HIV in 2012. The number of newly infected people continues to rise mainly due to slow progress in implementing interventions for HIV prevention and suboptimal access to HIV treatment. Access to HIV testing and counseling among the general population, pregnant women and special populations is equally low. The reduction in funding during the past year greatly contributed to low access. The South Sudan House hold survey 2010, estimates knowledge of HIV status at only 4%, while coverage of HIV testing and counseling among pregnant women according to HIV program data doesn’t exceed 20%. The low access to HIV testing escalates the HIV treatment crisis.

2.5.1 Achievements reached during this quarter

a) Access to treatment and care for People Living with HIV

HIV treatment in South Sudan is mainly funded by the Global Fund. The regular grant expired at the end of 2011, though lately the country has obtained an extension of funding in form of continuity of Services. The grant enables previously enrolled patients to continue on HIV treatment but this policy doesn’t allow new patients to be enrolled. This implies that, as at the beginning of 2012, only 4,326 and 10,098 persons living with HIV accessed antiretroviral therapy and HIV care respectively by the end of 2012. This attracted a huge concern from government and partners. The World Bank through the Multi-donor Trust Fund (MDTF) and the US government through PEPFAR agreed to a limited form of funding for HIV medicines and test kits for pregnant women. All the 22 health facilities providing antiretroviral therapy remained operational with a limited scale up to over 5,000 people living with HIV. There remain a huge number of people living
with HIV who are eligible for treatment and are regularly monitored for opportunistic infections. The additional funding through the World Bank and PEPFAR commodities will allow for the scale up in 2013.

c) Planning and resource mobilization

Realizing the great need to scale up and offer quality services, WHO continued working in collaboration with UNAIDS and USG partners to mobilize resources for HIV interventions. During the last quarter, WHO worked with partners of the Country Coordinating Mechanism to develop Transitional Funding Mechanism application for the Global Fund. Negotiations are in process for the final approval of this grant which will follow the continuity of services at the end of 2013.

The South Sudan AIDS Commission (SSAC) with support from USAID and UNAIDS is leading the development of a National Strategic Framework (NSF) 2013 – 2017 for HIV. The framework consolidates individual program plans, commitments, and investments and elaborates areas needed for partner collaboration in the fight against HIV. During this quarter, WHO continued working in collaboration with other partners in the formulation of treatment, care and support sections of the NSF.

A major concern on increasing HIV prevalence among key populations especially among men having sex with men (MSM) and sex workers (SW) in the East Mediterranean region has been recorded. To address this concern, a member of WHO South Sudan attended a meeting in the Eastern Mediterranean Region. The meeting that involved six countries was organized to share experiences, develop country plans, strategies and interventions aimed at addressing the growing epidemics. The national plans developed consist of strategic actions on how to engage different stakeholders at country level, identify service delivery points, define service packages and outline steps to initiate and scale up services for Sex Workers and Men having Sex with Men.

2.5.2 Challenges

The program experienced financial and technical challenges during this quarter. Huge funding gaps to enable quality sustainable scale up of HIV services still exist, as scale up is not sustainable without HIV testing and counseling services and drugs for new patients.

Technical concerns mainly related to health systems and community systems functionality remained a challenge. The HIV programs are influenced by cost, effectiveness and availability of HIV diagnostics, monitoring, infrastructure and human resources at all levels. In a situation of minimal financial resources, delivery becomes very difficult.

2.5.4 Recommendations

WHO will continue to work in collaboration with other partners to ensure commitment and investment in combating HIV in South Sudan. In partnership with the Ministry of Health, UN partners and USG, WHO will support refresher trainings for Health Care Providers, introduce quality improvement programs in HIV treatment, continue with the forecasting and quantification of HIV medicines and commodities and promote diagnostics using new point of care. Sustained access to HIV services also needs partners to strengthen delivery systems to become more integrated thus fostering a continuum of chronic HIV care.
2.6 Tuberculosis

- WHO South Sudan provided financial support to CUAMM (DOCTORS WITH AFRICA) for the delivery of TB services in Greater Mundri County, Western Equatoria State.

- WHO provided support to the MOH for the review process of the Global Fund TB Transitional Funding Mechanism (TFM). The current Global Fund TB grant (Round 7) is expiring by the end of 2013 hence a need to secure funds for the continuity of TB services in South Sudan.

- WHO further supported the MOH with the development and printing of MDR-TB guidelines for South Sudan.

2.7.0 Secondary Health Care & Health Systems Development

The health systems development team implements activities that contribute to the attainment of WHO strategic objectives 10 and 11. This report outlines major activities carried out between October to December 2012.

2.7.1 Leadership and Governance

During this quarter, WHO continued to participate in and conduct activities that contributed to strengthening of leadership and governance in the health sector of the Republic of South Sudan.

2.7.2 Donor Coordination and collaboration

WHO participated in the H4+ (UNICEF, UNAIDS, UNFPA, WHO), coordination mechanism for Maternal Child and Newborn Health (MCHN) actions among the UN agencies. The main issue of concern was the development of a framework for collaboration and joint programming on MCNH by H4+ members. Yambio and Malakal were chosen as areas to pilot the collaboration. The implementation of MCNH activities will commence before scaling up to other states.

The organization continued to participate in the Health Development Partners (HDPs) monthly meetings convened by the Joint Donor Team. During this period the HDPs mainly focused on developing strategies to ensure that the three primary health care services delivery mechanisms; Health Pooled Fund, USAID and World Bank cater for the entire country equitably by January 2013. The other major issue discussed was the urgency to secure additional funding and mechanisms for management of essential drugs. It was agreed that all the three donors, i.e Health Pooled Fund, USAID and World Bank provide uniform services in all the state that they support. In addition the three donors agreed to source for funds to purchase drugs for the states they support.

WHO also proactively participated in the monthly Health Sector Working Group (HSWG) meetings convened by the central MOH directorate of planning and donor coordination. During this period the HSWG dialogued on options for improving the Service delivery frameworks and the local services support aid instrument within the sector. It was agreed that the Ministry of Health should commence work on improving ways of improving public financial management systems in order to enable donors channel donor funds through the government rather than through Non Governmental Organizations.
In addition the programme participated in budget meetings organized by the Ministry of Finance. The Ministry in collaboration with other partners contributed to the development of the Health Sector budget and the Sector Aid financing Plan.

### 2.7.3 Development of Policies, Strategies and reports

WHO supported the ministry of health to conduct a workshop to review and validate the Ministerial policy statement and work plan for 2012 to 2016. The workshop drew participants from all the 10 states (State Director General’s and Ministers of Health), who collectively agreed to adopt the ministerial policy statement. The ministerial policy is a strategic policy direction that the Minister issues to guide the ministry of health. Furthermore a proposal for a new Ministry of Health organizational structure was presented and deliberated on.

### 2.7.4 Human Resources for Health

In this reporting period, the organization participated in the preparatory meeting for an assessment and selection of candidates for health mid-level cadres intake 2012, convened by the Directorate of Training and professional development. Subsequently WHO supported the Directorate to carry out the evaluation of candidates for selection to health training institutions for the 2012/13 intake. This exercise involved conducting interviews in each of the 10 States and the final evaluation and selection exercise in Juba.

### 2.7.5 Maternal Child Neonatal Health

During the quarter, WHO successfully conducted interviews for midwife trainers. Seven midwife-trainers were selected for deployment in Yambio, Wau, Malakal and Bor hospital as part of the second phase of ‘strengthening emergency obstetrics care in hospitals in South Sudan’ Project.

The organization also hosted a team from WHO HQ and EMRO during this period, who were in the country to:

- Brief and support the acceleration of progress towards MDG 4 and 5 among Ministry of Health; other key Ministries; major partners including H4+
- Establish an overview of key issues and challenges in relation to accelerating progress towards MDG 4 and 5
- Brief the ministry of health officials on the upcoming High Level Meeting (HLM) for Saving the Life of Mothers and Children; accelerating progress towards achieving MDG 4 and 5 in the Eastern Mediterranean Region on 29-30 January and the technical preparatory meeting 17-18 December in Cairo.

As the outcome of the visit, all partners met pledged commitment towards Maternal and Child Health in the country. The Minister of health committed to attend the HLM. National MNCH plan of action with technical support from WHO/CO is being developed and will be presented by the minister during the HLM.

### 2.8.0 Onchocerciasis Control (OV)

The African Programme for Onchocerciasis Control (APOC) continued to support the South Sudan Onchocerciasis Taskforce (SSOTF) in a bid to establish effective and self-sustainable community-directed ivermectin treatment (CDTI) throughout the onchocerciasis endemic areas. Onchocerciasis is endemic in 9 out of 10 states in South Sudan. The CDTI strategy relies
on community participation for the distribution of ivermectin to the targeted population. Project Coordinating Officers, County OV Supervisors, Staff from Front Line Health Facilities (FLHF) facilitate the CDTI process by organising communities to participate in CDTI activities. Community selected Community Drug Distributors (CDDs) who were trained conduct community census, provided treatment with ivermectin and keep records of the households treated.

2.8.1 Monitoring and supervision of mass treatment with mectizan

During this quarter, the main activity at the different project levels was monitoring and supervision of the mass treatment with mectizan that begun in the previous quarter, by the project staff. Preliminary information obtained from the states indicated that more than 85% of all endemic communities in 9 states had been reached by the project staff. A total of 6.2 million people across the country were targeted for mass drug distribution with mectizan in 2012. A final report of achievements will be shared as soon as the final figures from the different states are received and compiled.

2.8.2 Surveillance and monitoring of adverse reactions to mectizan

As a key activity during the mass treatment exercise, surveillance and monitoring of adverse reactions to mectizan treatment is vital given that some community members are bound to react to the treatment. During this quarter, specific attention was put on Western Equatoria CDTI project due to co-endemicity with the eye worm load, as this is likely to heighten adverse reactions. During the surveillance and monitoring, no adverse effects were reported from any of the CDTI project areas.

2.8.3 Field visits for technical support to the CDTI project staff

In this quarter, WHO conducted a field visit to Warrap state, with the main objective of training staff involved in CDTI activities in addition to monitoring progress of the implementation of CDTI project activities. This visit was conducted in collaboration with Christoff Blinden Mission, an NGO that supports the Ministry of health in onchocerciasis control activities. Fifteen (15) county level CDTI project staff were trained on mass treatment, supervision, reporting and adverse reaction management in CDTI.

2.8.4 Support to the Ministry of Health to attend the Joint Action Forum (JAF)

In this reporting period, WHO also supported the ministry of health with financial support to enable the ministry team to attend the annual Joint Action Forum in Bujumbura, Burundi. The Annual Joint Forum is a top level decision making body of onchocerciasis control that is attended by ministers of health from 19 African countries where onchocerciasis control and elimination activities are being implemented. South Sudan was represented by the Hon. Minister of Health and the National Coordinator for Onchocerciasis Control program. The meeting agreed that that South Sudan needs to split from 5 to 9 CDTI projects and that the onchocerciasis control activities need to be re-launched. APOC and the South Sudan ministry of health staff are currently working on budgets and work plans for the re-launching of CDTI activities in the 9 states.

2.8.5 2013 Mectizan application

The South Sudan 2013 mectizan application was prepared and submitted to the Mectizan Donation Program (MDP) during this period. Confirmation of receipt was made and approval process is underway. The onchocerciasis control program expects that the mectizan will be received at the beginning of March 2013 from
MERCK to enable mass distribution commence in April 2013.

2.8.6 Key activities for quarter one of 2013

- Work with different authorities from 9 states to prepare individual 2013 onchocerciasis control budgets and work plans and support the process of reviewing and submitting the same to APOC Management for approval.

- Work with the states and the National Coordinator on the collection and compilation of the 2012 mass treatment figures and compile the mectizan inventory to find out the actual balances of mectizan in the country.

- Conduct field visits to the states to support the state and county level CDTI staff in planning and implementing CDTI activities.

2.10 Health promotion and prevention and, advocacy and communication

- WHO in collaboration with the Ministry of Health and UNICEF conducted a media orientation for journalist in South Sudan to create awareness of the polio programme. And updates on the status of polio shared with the media to enhance their reporting during campaigns. In addition, Information, Education and Communication materials were printed and electronic media programmes like radio talk shows, spot messages and jingles also run to strengthen the campaigns.

- To strengthen health education and promotion activities at the national level, WHO supported the Ministry with the development and designing of health education messages for Yellow fever, meningitis and Polio. These were distributed to the state health authorities in high risk states.

5.0 Conclusion

WHO will continue to invest her efforts in strengthening the governmental health system in South Sudan by supporting the Ministry of health and partners with development and emergency risk management, strengthen partnership and build new alliances for effective outbreak and disaster response. Support the cluster approach in the country and to advocate for technical support for resource mobilization for all programmes in South Sudan.