

# Report on the NIDs against poliomyelitis 10-12 January 2005



A rented vehicle from Toker, Red Sea during the NIDs

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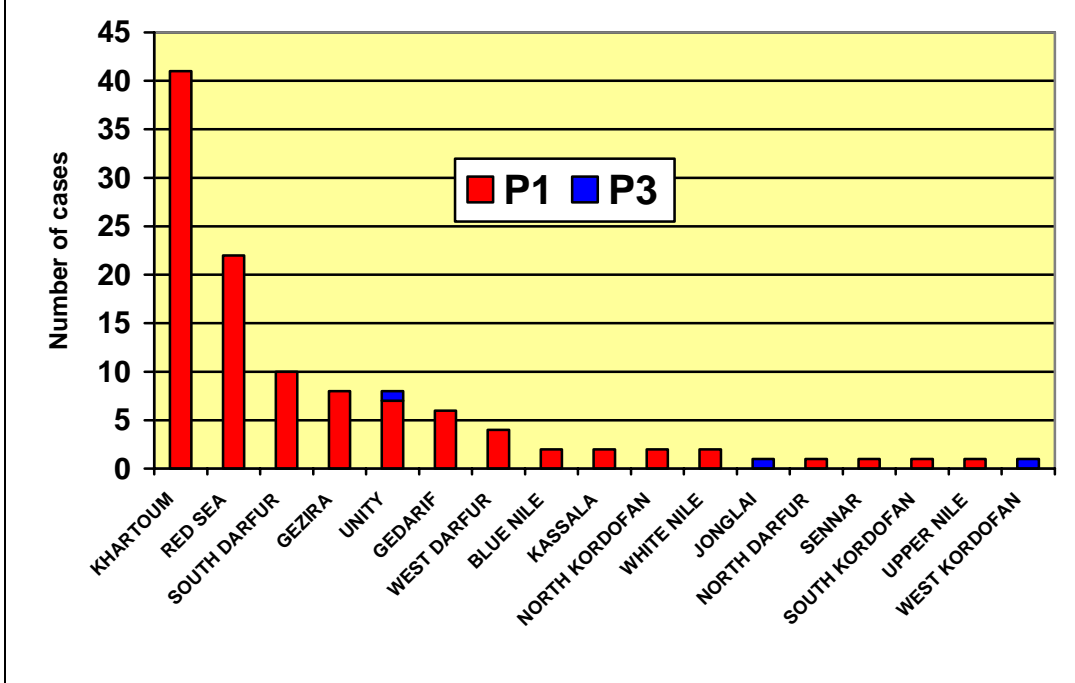
## Background

Since May 2004, Sudan reported 113 polio cases due to wild viruses (108 and 5 in North and South respectively). These cases represent a serious outbreak since the large outbreak that hit the country in 1993. The first case was detected in For Baranga in West Darfur. This area is located very close to Chad and CAR. The sequencing analysis shows evidence that it is related to an imported Chadian poliovirus coming from Nigeria. Another polio cases appeared later on in South Darfur in July and North Darfur in the beginning of August. In July, an orphan P3 was detected in West Kordofan. Two more P3 cases were detected in SPLA-controlled areas (Unity and Jongli states). It is not clear where P3 virus was circulating. It could be somewhere in southern Sudan or in one of the neighbouring countries. A third lineage of an orphan P1 closely linked to 1999 poliovirus circulated in the Chad was detected in Karari and Umbada localities of Khartoum.

As Sudan was not reporting any polio cases for the last three years (the last polio case was detected in April 2001), the appearance of first case was considered as an outbreak of polio. Therefore, MOH in collaboration with WHO, UNICEF, Rotary International and others responded very quickly and conducted two Mopping Up campaigns targeted Darfur Region in July and August 2004. West Kordofan state was added in August round because of the detection of P3 poliovirus. During these mop up rounds, 1,009,628 and 1,361,738 children were vaccinated respectively.

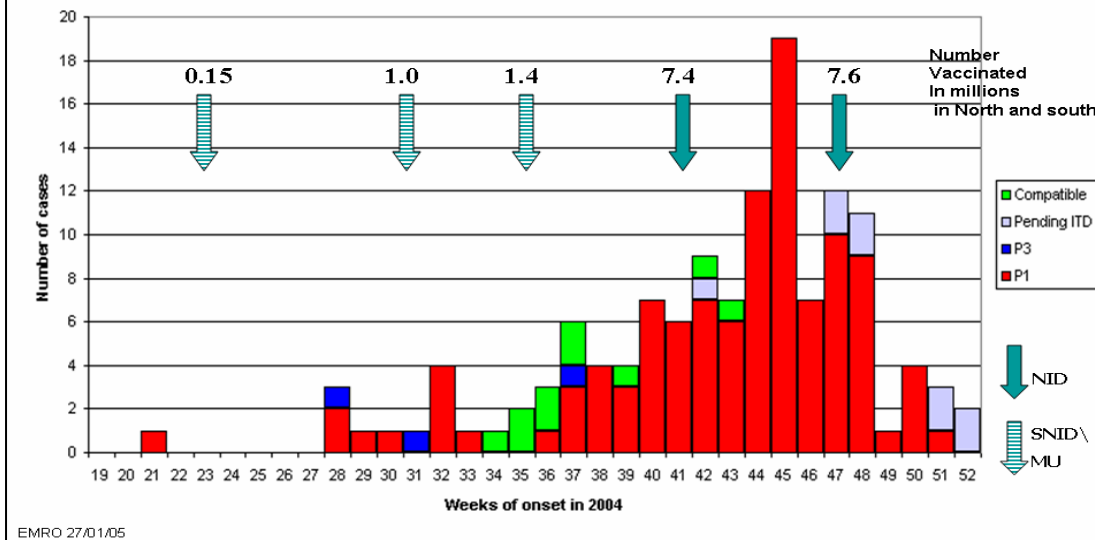
The polio outbreak, though subsided in Darfur, has spread very rapidly to other states (Khartoum, Red Sea, El Gezira, El Gedarif, Kassala, Unity, Jongli, Upper Nile, Sennar Blue Nile, North Kordofan, South Kordofan and White Nile). Figure one shows the number and type of polio cases in each state.

Figure 1. Distribution of polio cases by states, Sudan 2004



The response to the spread of this virus was aggressive. Two nation-wide vaccination campaigns were organized in October and November 2004. Figure 2 shows the occurrence of polio cases and the timing of the vaccination campaigns.

Figure 2. Epidemic curve of poliomyelitis in Sudan in relation to SIAs



EMRO 27/01/05

Quality of routine immunization programme, though has improved significantly due to the support of GAVI, UNICEF and WHO, encountered unexpected opposing factors of which the rapid security deterioration due to the war in the Darfur Region was the most serious one. This war made the civilians in Darfur to move from their villages to be condensed in camps in Sudan and Chad where they found some security. At the same time Chad had been re-infected by poliovirus of Nigerian origin which found its way to the Sudanese children in Darfur first and Khartoum in the subsequent months of 2004.

The situation was further complicated when P3 virus was detected in West Kordofan in an area bordering the southern states. The investigation of a cluster of AFP cases, including 22 polio cases, in October, November and December in Red Sea polio showed that Port Sudan town receives many people from West Africa (mainly Muslims from Nigeria, Mali and Chad) as well as people from all parts of Sudan during the months of “Omra” in Ramadan and Hajj.

The efficiency of the AFP surveillance system and laboratory performance led the polio eradication programme to immediately execute two mopping up rounds in the firstly affected states targeted more than a million children, two NIDs rounds in all Sudan synchronized with 23 African countries and southern part of Sudan in 2004 and one round in January 2005. In spite of opposing factors (insecurity, rains, population movement, etc) the programme could achieve good results.

The negotiation with the leadership of the rebels (Sudan Liberation Army and Justice and Equality movement) was successful to reach rebels’ controlled areas in North Darfur. This experience expanded to the West Darfur during the NIDs round of October. Unfortunately, the peace agreement between Government and rebels was broken when the rebels attacked Tawila locality in North Darfur and Kalma camp in South Darfur on the second day of the November NIDs round. But in January round there was no major incident happened.

### **Risk factors:**

The risk factors remained the same, as they were during the mopping up and October /November 2004 NIDs. However, some initiatives were made in West Darfur. Local staff of MOH could arrange with community leaders on both sides (Government and rebels) in order to facilitate the vaccination. The pressure exerted by the UN Special Representative of Secretary General (UN SPSG) on all armed parties brought a good result during the January 2005 campaign. He issued a press release in which he appealed to armed groups to respect the peace agreement and keep the campaign days as a period of tranquillity (see annex 1). The result in term of coverage was very good.

## **Preparation for the campaign:**

### ***Microplanning:***

The micro-plan of the January 2005 round was prepared on the basis of November 2004 plan. The experience gained during the previous NIDs was used to update the current plan. Observation of supervisors and external monitors from WHO HQ and EMRO were taken into consideration. In addition, the programme received additional technical support from EMRO 10 days before the campaign.

### ***Training:***

Training/refresher courses were conducted before January round. The training quality is always under the focus of the programme because of the turnover of volunteers and team leaders. During the January round, the additional technical support from EMRO helped to improve the training quality in the states where they are present. The main concern was volunteers in Khartoum state. The training material is now under revision following the recommendations of the external and internal supervisors and will be finalized before the February round.

### ***Social mobilization:***

The social mobilization activities were of two types according to the level of implementation. These were Federal and local activities. The degree of implementation of such activities varied from state to state. The Radio announcement and megaphone use were the most popular means of dissemination of information. The advocacy activities included the followings:

- ❖ visit of a high delegation from WHO EMRO and HQ (Dr. M.H. Wahdan, SA/RD and Dr. B. Aylward, global Polio eradication coordinator) to Sudan and their meeting with Federal Undersecretary; Wali and Minister of health in Khartoum state; Media representatives, UN Resident Coordinator, UN agencies, Rotary Khartoum Club and USAID representative.
- ❖ briefing the Walis and State Ministers of health about the polio outbreak and the immunization campaign by the UN Resident Coordinator.
- ❖ briefing of UN heads of agencies about the polio outbreak and the immunization campaign by WHO Sudan.

The federal and state activities included:

- ❖ All states organized opening ceremonies on the first day. The formal launch was in Red Sea because the Wali of the state wanted to draw the attention to problem of polio outbreak in his state.

- ❖ Production and dissemination social mobilization material.
- ❖ Use of federal and local TV and Radio for dissemination of campaign information.
- ❖ Use of community leader before and during the campaign to explain and encourage their communities to vaccinate their children.
- ❖ Use of megaphone that were fixed on the cars.
- ❖ Use of aprons gave an acceptable appearance of volunteers.
- ❖ Conducting of orientation sessions at the local level by EPI, parliamentarians and other health personnel were effective in communities that were expected to refuse to vaccinate their children.

## **Implementation:**

On 10 January 2005, the vaccination campaign started in Sudan. Vaccine administration was through house-to-house strategy. Using maps and vaccine management were improved. Registering missing children over leaf of the tally sheets was a tool to trace the defaulter either on the same day or on the fourth day. The implementation of tracing the missing children plan needs more attention and improvement in several areas especially in Khartoum and IDPs camps. The reason for not registering the defaulters remain the same (vaccinators claimed that they know the families and the area in which they are living).

### ***Launching ceremony:***

The ceremony was organised by Red Sea state Ministry of health in collaboration with teachers' union. The Wali of the state opened the ceremony. The undersecretary of Federal Ministry of health, WHO, UNICEF Rotary representatives attended the launch. For the first time the Wali rented a charter to bring the distinguished guests from Khartoum to participate in the NIDs launching ceremony. There was a carnival one day prior the launch to draw the attention of the public.

The ceremony included speeches from Federal undersecretary, state Wali, state minister of health, Port Sudan governor, WHO representative, UNICEF representative and Rotary club representative. It included dancing and singing. The subject of the songs was vaccination against polio and other immunizable diseases. At the end of the ceremony, the Wali and his guests gave the OPV drops to several children.



On 9 January 2005, the President of Sudan and many high officials including the Federal Minister of health were in Nairobi to attend the final peace agreement. Next day (10/1/2005) he and the Federal Minister of health visited Juba in Bahr Elgabal state and participated in the polio campaign launching. However, it was not planned, but it served our purpose in showing the high political involvement of Sudan leadership.

### **Supervision:**

In addition to the usual system of supervision that was used in the previous campaigns, there were more external supervisors/monitors from WHO HQ and EMRO. The supervision during the campaign is one of the key factors of ensuring good quality. However, supervision was not up to the satisfaction in some areas such as Darfur states. One reason was due to insecurity and the other one was due to poor training/capacity of available staff in the area in spite of the presence of STC and Federal supervisors. The later reason was obvious in South Darfur. Therefore this state will be a priority during the February round. The various types of supervisors included the following:

1. One team leader supervised 4-5 teams.
2. One locality supervisor supervised all activities in his locality including all team leaders and sector supervisors.
3. A number of state supervisors, depending on the number of localities in the state, supervised all localities.
4. One to three Federal supervisors supervised each state depending on the particular situation of that state. Two or three supervisors assigned to the Southern, Darfur and Khartoum states.
5. WHO/UNICEF STCS, national medical officers, STOP team members and zonal coordinators supervised their respective states.
6. External (WHO/HQ) supervisors supervised selected states.

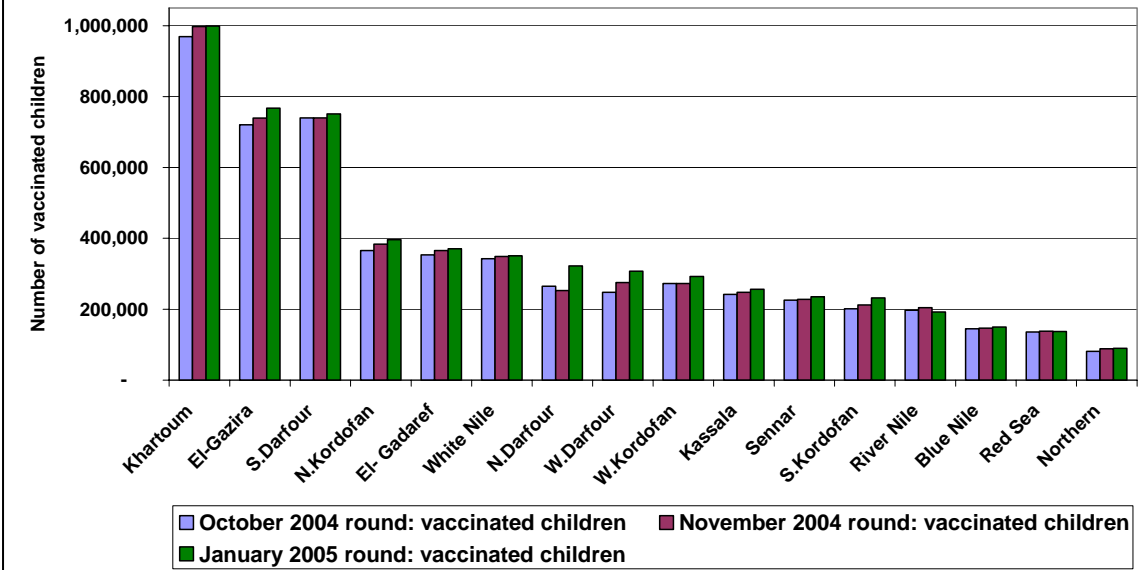
### **Result:**

From the reports of the campaign, the children under five that were vaccinated against polio in Sudan were 6,063,524 which represent 102%. As it is well known that high percent of campaign during the campaigns does not mean that all children were reached and immunized. Therefore, the writer brought the absolute numbers of children vaccinated during the last three NIDs round in order to have a better idea about the achievement of this round compared to the 2004 rounds. Table one and figures 3/4 show the total number of children vaccinated and its breakdown by states.

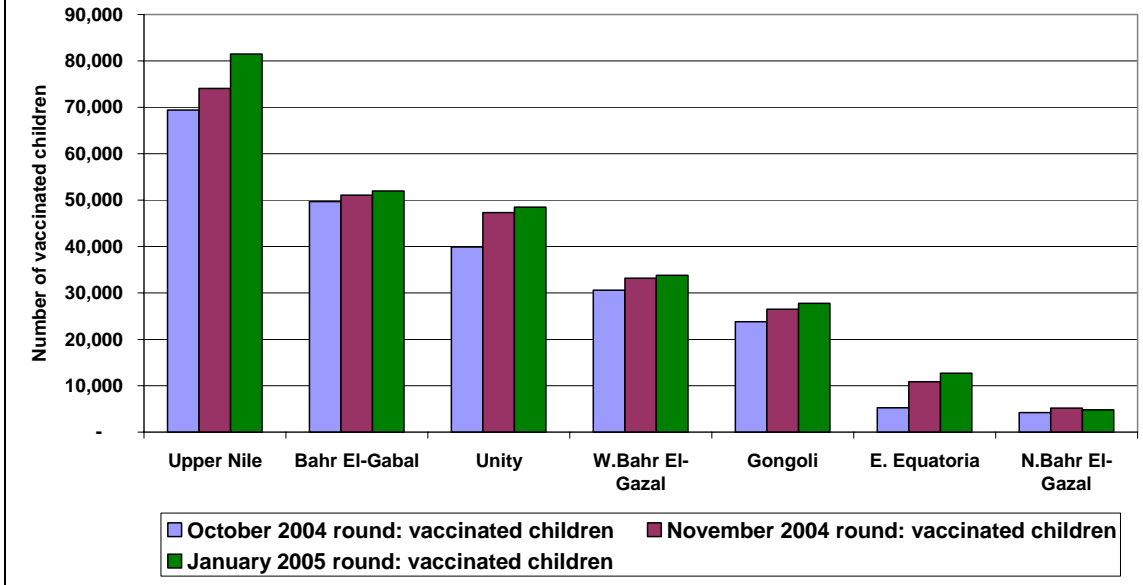
Table 1.

State	October 2004 round vaccinated children	November 2004 round vaccinated children	January 2005 round: vaccinated children
Sudan Total	5,727,403	5,888,442	6,063,524

**Figure 3. Comparison between the last three NIDs rounds, October/November 2004 and January 2005, Northern states, Sudan**



**Figure 4. Comparison between the last three NIDs rounds, October/November 2004 and January 2005, Southern states, Sudan**



The increase in vaccinated children was achieved mainly in Darfur because of the increased accessibility due to the observed period of tranquillity. In the other states the increase was due to improvement in tracing the defaulters. River Nile states achieved more than the target but less than the October/November 2004 rounds. The state could not explain why this decrease happened. Therefore, we are planning to appoint an STC to support the state in SIAs preparation, implementation and monitoring.

Annex 3 contains number of vaccinated children related to the estimated target for calculating percent coverage rates.

### ***Vaccination in the SLA area:***

All preparations were made in North Darfur to conduct the NIDs in SLA-controlled areas. OPV and other logistics were transferred to these areas by WFP Helicopter. WHO sub-office staff and UNICEF staff were moved to supervise the campaign. The campaign started 2 days earlier and prolonged until 16 January because of the logistics reasons (see annex 2).

### **Community monitoring and evaluation:**

Monitoring was conducted by WHO STCs in Sudan, WHO/HQ/EMRO staff visiting Sudan, national supervisors and independent monitors. The independent monitors were deployed from university students, teachers and UN volunteers (the later category was used for the first time!). They focussed on the high risk areas and difficult to reach areas. The missed children were vaccinated wherever and whenever it was possible by the supervisors on spot or by vaccinators who were sent back to these places either on the same day or on the fourth day according to the state plan. At the end of each day, an evaluation meeting is held by state/locality operation room in order to review the activities of the day, identify problems and put solution for the next day.

The monitoring result of each category is seen in table two.

Table 2. Result of rapid assessment by various categories of supervisors and independent monitors, January 2005 NIDs, Sudan \*

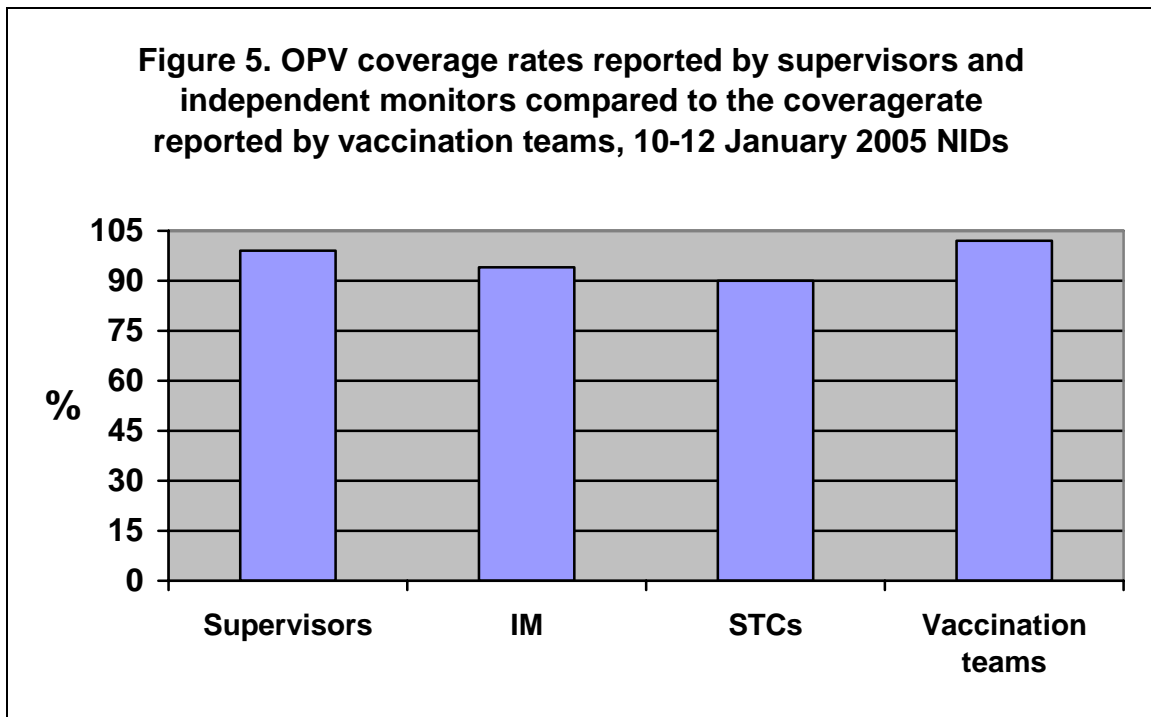
Type of monitor	No. of houses	No. of Eligible children	No. of vaccinated children	% Coverage rate
IM	16,355	24,207	22,827	94
STCs	204	564	507	90
Supervisors	7,353	16,900	16,666	99
Total	23,984	41,833	40,158	96

\* Data from some states.

Figure 5 shows the comparison between the reported coverage by vaccination teams and assessed coverage by the STCs, NMOs, states' supervisors and independent monitors

from several states. The states' supervisors are part of the EPI/MOH system while independent monitors are persons selected from outside the MOH.

**Figure 5. OPV coverage rates reported by supervisors and independent monitors compared to the coveragerate reported by vaccination teams, 10-12 January 2005 NIDs**



### **Strong points:**

1. Strong political commitment from the local authority was maintained;
2. Strong partnership with the humanitarian agencies was maintained, especially in Darfur where the launching ceremony was attended by the UN Resident Coordinator in both Government and SLA areas;
3. Involvement of community leaders in SLA areas led to increased accessibility to vaccinate more children in Darfur states;
4. The appeal of UN SRSG to the armed group to observe a period of tranquillity during the NIDs was effective;
5. Participation of technical staff from WHO/EMRO and HQ in supervision was very supportive; and
6. Allocation of resources for the defaulter tracing in the fourth day brought good results.

### **Challenges:**

1. Security:
  - Many issues of accessibility were identified during implementation and monitoring
  - Some areas remain un-evaluated in post-campaign
2. Population movements:

- Population movement is un-expected. There are many expanding recognized and unrecognized pockets and camps of IDPs and the movement remains un-calculated
  - Missed children recording and tracing needed a lot of efforts till end of campaign
3. Missed Children recording and coverage:
    - Problems of recording and tracing in moving population and IDP camps particularly in Darfur states
    - Strategies need improvement
  4. Development and use of good maps at the level of vaccinators, though improved, requires great effort to achieve.
  5. Delay in report submissions and compilation:
    - Due to extended campaign in some areas
    - Due to security concerns and road blocks in some localities

**Areas not reached:**

Locality	Administrator unit	The target (less than 5 years)	No of villages
EL fasher	El fasher rural	720	5
Maleite	Maleite	308	<b>12</b>
Um Kadada	Um Kadada	460	3
Kutum	Kutum rural (west and north)	Not estimated yet	Not estimated yet
kabkabia	Elserif	690	12
Total		2178	32

Areas under the control of rebels in the eastern zone such as southern part of Blue Nile and Hamashkoraib in Kassala are still out of reach since long time.

## **Recommendations:**

1. To improve the quality of training of team leaders and volunteers.
2. To continue the coordination with neighbouring countries in order to reach the children living in villages near to Sudan borders.
3. To increase the number of international supervisors during the next campaign.
4. To use finger marker in the IDPs camps in order to help the monitors to check the vaccination status of children.
5. To develop and use practical and useful maps by vaccination teams.
6. To put more emphasis on recording missed children and plans to vaccinate them.

## **Annex 1. Office of the Special Representative of the Secretary-General**

**Press Release 0007**

### **World third highest rate of polio cases reported in the Sudan, UN calls for observance of days of tranquillity during the vaccination campaign**

**Khartoum/Geneva/New York, 4 January 2005** – In the wake of over 100 confirmed cases of poliomyelitis in 2004, the World Health Organization (WHO) and the United Nations Children’s Fund (UNICEF) as well as national and international NGOs are joining efforts with the Sudanese Ministry of Health in order to stop the further spreading the Polio virus in the country. WHO reported that as of 31 December 2004, 105 polio have been identified in 17 of the country’s 26 states, including 40 in Khartoum alone. This represents the third load in the world, after Nigeria and India

A series of vaccination campaigns will be launched shortly. The first round of National Immunization Days (NIDs) will be conducted from 10-12 January 2005. The January campaign will be followed by at least four others in the year 2005 in the months of February, April, October and November. Efforts will also be made throughout the year to strengthen the routine immunization programme and Acute Flaccid Paralysis surveillance system in Sudan. The campaign will cover all children less than 5 years of age. Approximately 40 thousand volunteers will take part in the campaign. Three doses of the polio vaccine at six-week intervals are necessary to stop the transmission of the polio virus.

The Special Representative of the Secretary-General for the Sudan, Jan Pronk, announced yesterday that he will approach the Sudanese Ministers of Interior and Defense to call on the Government to observe days of tranquility throughout the vaccination campaign in order to ensure its successful completion. He announced also that he will be conveying the same request to the Sudan People’s Liberation Movement/Army (SPLM/A) and to the other groups in Southern Sudan as well as to the Darfur rebel groups, namely the Sudan Liberation Movement/Army (SLM/A), the Justice and Equability Movement (JEM) and the National Movement for Reform and Development (NMRD). “It is crucial that all troops and armed forces refrain from any activity that would hamper the smooth conduct of the vaccination campaign”, he said. He added that “It is in everybody’s interest that this epidemic is contained as soon as possible. Otherwise, the consequences for the Sudanese people will be disastrous. All Sudanese parties have to rise to the occasion and shoulder their responsibility towards their own people”.

The Sudan had been polio-free since April 2001. However, several factors combined to re-introduce the polio virus, which affects mostly children under five years of age and can cripple them for life. One factor is cross-border movement, which results in individuals carrying the contagious poliovirus into Sudan and exposing unvaccinated

children to the disease. Another factor is continued conflict, particularly in the western Darfur region, which has prevented access to all children under five. Third, epidemiological data suggested that polio had disappeared from Sudan, so limited resources were used in countries where the situation appeared more urgent. Finally, Sudan has relatively low routine coverage overall, with a high number of unvaccinated children who are susceptible to contracting and passing on the diseases.

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**Notes to editors:**

*The Global Polio Eradication Initiative is spearheaded by the World Health Organization, Rotary International, the US Centers for Disease Control and Prevention and UNICEF. The poliovirus is now endemic in only six countries, down from over 125 when the Global Polio Eradication Initiative was launched in 1988. The six remaining polio-endemic countries are: Nigeria, India, Pakistan, Niger, Afghanistan and Egypt.*

*The polio eradication coalition includes governments of countries affected by polio; private sector foundations (e.g. United Nations Foundation, Bill & Melinda Gates Foundation); development banks (e.g. the World Bank); donor governments (e.g. Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, the Russian Federation, the United Kingdom and the United States of America); the European Commission; humanitarian and nongovernmental organizations (e.g. the International Red Cross and Red Crescent societies) and corporate partners (e.g. Aventis Pasteur, De Beers, Wyeth). Volunteers in developing countries also play a key role; 20 million have participated in mass immunization campaigns.*

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**Annex 2. JANUARY 2005 POLIO IMMUNIZATION DAYS PLAN IN SLA AREAS – NORTH DARFUR**

<b>Date</b>	<b>Destination</b>	<b>Means of transportation of Supplies / Providers</b>	<b>Activity</b>	<b>Means of transportation for Vaccinator Teams /Providers</b>	<b>Duration of Implementation</b>	<b>Implementing Partners</b>	<b>AUCFC to show presence and Monitor areas</b>
8 <sup>th</sup> January	Dissa + Muzbat	WFP Helicopter	Drop vaccines and cold chain, Vitamin A	4 + 4 SLA land rovers (8) provided for use in their areas.	From 09 <sup>th</sup> to 13 <sup>th</sup> January.	35 + 40 vaccinator teams from SLA standing by to implement	Muzbat & Surrounding areas
8 <sup>th</sup> January	Hashaba, Bashim, Um Ajaja, KulKul, Kherban, Gabr Al Ghanam.	2 UNICEF rented trucks	- Drop vaccines and cold chain, Vitamin A - Involved in transportation of Vaccinators teams	5 SLA land rovers provided for use in their areas.	From 09 <sup>th</sup> to 13 <sup>th</sup> January.	-40 vaccinator teams from SLA standing by to implement - UNICEF-WHO: Supervisory visits in Hashaba surrounding areas.	
9 <sup>th</sup> January	Malha and Sayah	WFP Helicopter	Drop vaccines and cold chain, Vitamin A	5 SLA land rovers provided for use in their areas of Sayah.	From 10 <sup>th</sup> to 12 <sup>th</sup> January.	20 vaccinator teams from SLA standing by to implement in Sayah areas.	Sayah & Surrounding areas
9 <sup>th</sup> January	Shigill Tobaya, Thabit, Tarnet	7 rented car by Malteser	take vaccines and cold chain, Vitamin A	7 rented car by Malteser	From 10 <sup>th</sup> to 13 <sup>th</sup> January.	21 vaccinator teams from SLA standing by to implement in Shigill Tobaya, Thabit, Tarnet and areas.	Thabit & Surrounding areas
10 <sup>th</sup> January	Taweasha and Alliet (both GoS areas)	WFP Helicopter (subject to security assessment by UNSECOORD)	Drop vaccines and cold chain, Vitamin A	SMOH makes all arrangements for the implementation.	From 11 <sup>th</sup> to 13 <sup>th</sup> January.	SMOH Vaccinator teams.	

13 <sup>th</sup> January	Korma and surrounding areas( Kobe, Kafod, Tega, Hamra, Um ashir, Um Leona, East-Jaber	- 2 UNICEF rented trucks move from Hashaba to Korma - 1 Truck and 2 UN vehicles move from Fasher to Korma	- Drop vaccines and cold chain, Vitamin A. - Supervision and follow up.	5 SLA land rovers provided for use in their areas.	From 13 <sup>th</sup> to 17 <sup>th</sup> January.	-18 vaccinator teams from SLA (Hashaba areas) standing by to implement in Korma areas. -MSF-Belgium arranging/supervising for vaccination in Korma town. - UNICEF-WHO: supervisory visits in surrounding Korma areas.	Korma/Kafod Surrounding area
13 <sup>th</sup> January	Tawilla, Dali town & Dali IDPs camp + Surrounding areas.	7 rented car by <b>Malteser INGO</b>	take vaccines and cold chain, Vitamin A	7 rented car by <b>Malteser INGO</b>	From 13 <sup>th</sup> to 16 <sup>th</sup> January.	- 9 vaccinator teams from SLA standing by to implement in Tawilla, Dali town & Dali IDPs camp + Surrounding areas. - UNICEF-WHO: Supervisory visits in Tawilla, Dali town & Dali IDPs camp surrounding areas.	Tawilla & Surrounding area

## Annex 1.

State	Target	Vaccinated children	Percent coverage rate	Infants vaccinated for the first time	%
Bahr El-Gabal	50,693	51,961	102.5	1134	2.2
Blue Nile	138,684	150,123	108.2	3091	2.1
E. Equatoria	10,033	12,704	126.6	0	-
El- Gadaref	346,236	370,187	106.9	3804	1.0
El-Gazira	692,388	767,322	110.8	11263	1.5
Gongoli	20,763	27,772	133.8	1134	4.1
Kassala	249,772	256,725	102.8	0	-
Khartoum	1,066,071	998,740	93.7	29	0.0
N.Bahr El-Gazal	3,778	4,809	127.3	186	3.9
N.Darfour	383,396	323,332	84.3	4569	1.4
N.Kordofan	364,203	396,472	108.9	5406	1.4
Northern	89,461	90,069	100.7	0	-
Red Sea	136,008	137,354	101.0	2078	1.5
River Nile	187,175	192,139	102.7	0	-
S.Darfour	671,809	751,137	111.8	14359	1.9
S.Kordofan	196,562	232,264	118.2	5525	2.4
Sennar	222,609	235,354	105.7	1112	0.5
Unity	42,332	48,476	114.5	2494	5.1
Upper Nile	75,857	81,484	107.4	2286	2.8
W.Bahr El-Gazal	29,323	33,768	115.2	582	1.7
W.Darfour	350,493	307,385	87.7	5219	1.7
W.Kordofan	267,872	292,521	109.2	6515	2.2
White Nile	344,753	350,901	101.8	5768	1.6
Sudan Total	5,940,271	6,063,524	102.1	76554	1.3