



## FINAL REPORT

# EMERGENCY SERVICES ASSISTANCE IN SOUTH DARFUR, SUDAN

FOR THE PERIOD COVERING 15 AUGUST 2004 – 30 APRIL 2005

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HEADQUARTERS CONTACT PERSON: <b>Huy Pham</b> Director – International Operations 430 Oak Grove Street, Suite 204 Minneapolis , MN 55403 Tel: +1-612- 872-7060 Fax: +1 –612-607-6499 <a href="mailto:huyph@archq.org">huyph@archq.org</a>	FIELD CONTACT PERSON: <b>Jerry Farrell</b> Country Director Khartoum ,Sudan Cell: +249-9-18192332 <a href="mailto:arcsudan@yahoo.com">arcsudan@yahoo.com</a>
PROGRAM TITLE:	Life-Supporting Services in Primary Health Care, Water and Sanitation for Internally Displaced Persons (IDPs) and War-Affected Population in Darfur, Sudan
COOPERATIVE AGREEMENT/GRANT NO.:	<b>DFD-G-00-04-00218-00</b>
ORGANIZATION:	<b>ARC International</b>
COUNTRY (IES)/REGION(S):	<b>Darfur, Sudan</b>
DISASTER/HAZARD:	<b>Complex Emergency</b>
TIME PERIOD COVERED BY THIS REPORT:	<b>15 August 2004- 30 April 2005</b>

### PROGRAM OVERVIEW

PROGRAM GOAL:	Meet immediate humanitarian gaps and needs of and Reduce morbidity and mortality among IDPs and war-affected populations in the Nyala-Gareida corridor of South Darfur, through provision of emergency services assistance.
PROGRAM OBJECTIVES:	Objective #1: Primary Health Care services strengthened for and good health care practices promoted Objective #2: Access to potable Water sources improved and good Hygiene and Sanitation practices strengthened among the targeted population.
NUMBER/TYPE OF BENEFICIARIES TARGETED:	Up to 100,000 of the estimated 200,000 IDP and war-affected resident populations in the Nyala – Gareida corridor.
GEOGRAPHIC AREAS OF ACTIVITY:	the Nyala – Gareida Corridor, South Darfur , Sudan

# PROGRAM OVERVIEW AND PERFORMANCE

## I. Executive Summary

In an effort to address acute needs resulting from the Darfur crisis, ARC's focus on provision of basic health and water & sanitation facilities and services continues. The agency's implementation plans continue to meet identified urgent needs, while incorporating strategy to allow projects to transition into medium and long-term interventions. The approved proposal consists of activities that are developed in conjunction with needs assessments carried out in the target communities. Program activities are geared towards support and reinforcement of capacities of the existing health and water & sanitation infrastructure away from direct services.

This is exemplified in ARC's efforts to rehabilitate and re-supply Primary Health Care facilities; provide essential and specialized pharmaceuticals and supplies; create sanitary environments conducive to quality health care provision; and train medical professionals and auxiliary staff to expand their knowledge base and improve practical skills.

The long-standing problem of insufficient access to clean potable water and inadequate water distribution in specific areas in of the Nyala-Gareida corridor, South Darfur continues to be addressed through ARC's water and sanitation programs. ARC emphasizes working closely with the local communities, coordinating interventions with HAC, WES, UNICEF and other implementing partners in the AoR. ARC maintains focus on meeting emergency community water supply needs while seeking efficient and sustainable projects to support existing water and sanitation systems.

All in all, despite the constraints faced in getting key expatriate staffs in country to get started early in September, 2004, ARC has been able to speed up the execution of and accomplishing beyond set objective activities beginning from October, 2004.

## II. Security

The security situation during this reporting period was characterized by a number of reported incidents in the areas of operation between Nyala and Gareida. Unfortunately, our local staff Abdullah Mohamed, vaccinator from Donki Dreissa, was killed in the circumstances surrounding the Donki Dreissa attack on November 12, 2004. AU investigated his death and determined that it was an execution. Some 127 families saw their homes burned during the conflict. Several field trips had to be postponed due to security precaution following a series of incidents. ARC vehicles were stopped five times by unknown militiamen (presumably the GOS opposition groups in the area) along the road between Nyala and Donki Dreisa. The vehicles were stopped to check who we are and to know our purpose. In addition to this, ARC vehicles were stopped by SLA and told not to send one of the staff members (Eldouma, national Logistics Officer) to Donki Dreissa and other project sites.

During this reporting period, Barakture's population, a village South West of Donki Dreissa, experienced continuous attacks by Janjaweed for almost three weeks and the majority of the inhabitants spent their nights in the bush. Villagers reported 13 people killed over three weeks' period. ARC is carrying out a mobile clinic service and water & sanitation program in this war-affected community.

During January, 2005, our rental vehicles, along with the drivers, were car-jacked a number of times by local SLA groups. We held a series of meetings with community leaders and SLA representatives and these car-jacking ceased. The series of such incidents created uncertainty in use of rental vehicles. During one of the incidents, field activities were suspended for about 1 week until the vehicle was recovered and the various consultations and guarantees sought from the concerned parties. From the lessons learnt, the project activities were then limited to use of only ARC-owned vehicles. A restriction in use of unescorted rental vehicles ensued such that any rented vehicles had to be escorted by an ARC vehicle, thereby creating limitations in the number of activities we could carry out.

In general, the current security situation appears more stable than in the first third of 2005. ARC continues to review the security situation in close collaboration and coordination with UN security offices, OCHA, AU, HAC, and NGOs operating in the AoR such as ICRC and Oxfam and takes security as the

first priority. However, the security situation in other ARC's current operation areas remained tense but with no significant reported adverse effects on the beneficiaries.

### III. Areas of Activity

The current ARC's area of intervention in South Darfur lies between latitude 11°25' and 11°58' N, and longitude 24°54' and 11°58'E. This area comprises the Nyala- Gareida corridor, south Nyala town in South Darfur. The targeted beneficiaries noted in the proposal are up to 100,000 of the 200,000 in the corridor. During this reporting period, even with the security limitations, the beneficiaries covered as of April 30<sup>th</sup>, 2005 for health in the corridor is 199,135 for most Basic PHC services including extended RH with antenatal care and 84,635 for water and sanitation activities.

The breakdown of our reached beneficiaries is as follows.

<b>Name of locations</b>	<b>Activity/objective</b>	<b>IDP/resident/war-affected Population</b>
Donki Dreissa	Health and watsan	12,000 resettled IDP+10,000 war –affected resident populations in the surrounding villages
Ditto	Health and watsan	17,000 IDPs + war affected surrounding villagers
Tokomaya	Health and watsan	4,500 IDPs +war-affected
Barakature	Health and watsan	13,000IDPs and war affected - people
Khereiga	Health and watsan	3000 IDPs +2000 war-affected residents
Gareida	Health(RH support )	24,000 IDPs
Jebrona, Tabaldiat and Fulla Abu kaka	Watsan	4,000IDPs +resident war-affected communities.
<b>Cumulative Total</b>		<b>85,500</b>

#### **Additional project sites to be included as from January within the frame work of**

<b>Name of locations</b>	<b>Activity/objective</b>	<b>IDP/resident/war-affected Population</b>
Sanam el Naga	Health and watsan	14,000 IDPs + 635 war-affected resident people
El wahida (Nyala town)	Health	16,000 IDPs +37,000 war-affected residents
Fula Amnuara	Health	6,000
Jebrona, Tabaliadt and Fulla Abu kaka (including surrounding small villages)	Health	40,000
<b>Cumulative Total</b>		<b>113,635</b>

### IV. Program Performance

**Objective #1: Primary Health Care services strengthened for and good health care practices promoted among the targeted population.**

In addition to the emergency provision of health services, ARC's activities are geared towards expanding present capacities, increasing access to and improving the quality of health care services. Work was

concentrated around supporting Primary Health Care centers including extended RH services and more recently adding nutritional assessments geared towards supplemental feeding programs.

Limited secondary care assistance is provided to the referral system in the form of providing an assistant to the WHO point person in charge of IDP care and referrals and a careful monitoring of that service.

In January, ARC started full EPI vaccination services in and out of Donki Dreissa, Ditto and El Wihda West PHC clinics in addition to assisting three NID campaigns in our areas and beyond.

Supplemental feeding (which is an add-on to basic services) began in late April after two false starts. UNICEF and WFP have reacted to the needs of our population after an alarming rapid nutritional survey conducted in our service area of Sanam el Naga revealed a GAM of 46%. Unimix, the material for SFC provision, has been allocated by UNICEF for all ARC areas in an emergency effort to assist so that levels of severe malnutrition are reduced. General food distributions are being coordinated by other WFP partners in all our sites having been started or soon to start.

After an assessment and workshop by GBV Consultant Beth Vann, and an inquiry into rates of violence in the Donki Dreissa area, planning for a comprehensive program was launched. This initiative began with a three day workshop in each service area entitled "Awareness and Prevention of Violence Against Women" in coordination with a local NGO, Ahlam Charity Organization, known for its work regarding women's issues. Similar workshops with Ahlam were planned for May and June of 2005.

In Gareida as well as Nyala, 3-5 day Midwife Refresher courses were held. All ARC PHCCs were assisted with full primary RH services including clean birthing room and post partum home visits.

### Indicators and Performance Baseline Data

Objective/Results	Indicators
<p><b>Result 1:</b> Health Facilities rehabilitated</p>	<ul style="list-style-type: none"> <li>• 2 health facilities at Ditto and Donki Dreisa rehabilitated, furnished and staffed.</li> <li>• El Wihda West PHC rehabilitation continues clinic hours now extended to functioning 24 hours with referral vehicle standing by.</li> <li>• 2 health facilities at Sanam el Naga and Abu Jabra rehabilitated</li> </ul>
<p><b>Result 2:</b> Children received vaccination</p>	<ul style="list-style-type: none"> <li>• Three rounds of Polio NID campaigns supported with 3-5000 children vaccinated in each round.</li> <li>• Full vaccination coverage initiated in 3 of 5 stationary clinics with mobile cold box coverage in the other 2 stationary and all mobile clinics</li> </ul>
<p><b>Result 3:</b> Medical kits provided to PHC facilities</p>	<ul style="list-style-type: none"> <li>• 36 UNICEF Sudan PHC Kits obtained with essential medications</li> <li>• 79 UNFPA RH Kits obtained including two for Gareida Hospital for secondary care</li> <li>• WHO PHC Kits distributed to all five sites</li> </ul>

**Result 4:  
Staff trained**

- All medical workers at PHCCs trained on PHC procedures, lines of authority/accountability, Rapid Malaria check and EWARN reporting .
- Series of case management/practice trainings started with the mobile clinic staff will repeat to all clinic staff at site

❖ **Measurable Indicators**

1. PHC coverage of 1 PHCC per 20,000 population is provided in targeted gap areas
  - Ditto and Donki Dreissa health clinics serve approximately 17,000 and 22,000 people respectively.
  - Sanam el Naga and Abu Jabra clinics each serve approximately 15,000 villagers
  - El Wihda West PHC is one of two district clinics serving 52,000 people in Nyala.
2. ANC/RH is integrated into PHC services in targeted gap areas
  - 4,562 visits related to RH logged at all sites and 449 births attended.
  - ANC/RH is integrated into all the PHC activities including clean birthing rooms and post natal home visits.
  - MISP Kits distributed ensuring clean birthing and universal precautions. and condom distribution underway.
3. Epidemics/diseases (ARI, Malaria, BD, Measles, FUO, Malnutrition) are controlled, and injuries and impact of violence (e.g., GBV) are mitigated (e.g., MISP)
  - Malaria rapid test kits have been introduced in all service areas as well as the current updated treatment regime.
  - Cases of ARI are common and treated appropriately in our service areas.
  - Rapid nutrition screening in Donki Dreissa and Sanam el Naga. Supplemental Feeding Centers begun at Sanam el Naga
  - MISP in all areas of PHC, mobile clinics and further to Gareida has been considered.
4. The major causes of mortality and morbidity are monitored and managed, and reported to EWARN
  - Weekly report on morbidity and mortality submitted as EWARN from 8 sites to WHO epidemiologic department.
  - All sites recording diagnosing and treatment on each case-record available.
  - Monitoring of mortality developing through community outreach workers
5. The crude mortality rate (CMR) is maintained at, or reduced to, less than 50% the baseline rate documented for the population
  - Mortality rates from service sites are noted but unreported deaths are more frequent from villages/IDP sites thereby creating difficulty to determine CMR.
6. Priority PHC services include the most appropriate and effective interventions to reduce excess morbidity and mortality, and all members of the community, including vulnerable groups, have access to priority health interventions.
  - Full PHC services are being provided for the population served without charge.
  - A total of 43,605 medical consultations logged at all sites provided cost free with priority given to the more acutely ill patients regardless of social status.

- Referral service provided to closest hospital – 86 emergency referrals made with malnutrition and birthing problems accounting for most of these cases.
7. Community and Public health education messages provide individuals – especially children, pregnant women and older people – with information on how to prevent common communicable diseases and how to seek early care for conditions such as fever, cough, and diarrhea.
- Posters as well as trainings are aimed at hygiene and health issues with emphasis on children through awareness sessions being extended in villages through mobile clinics
  - Children Hygiene and Health Promotion series well attended by village parents as well as teachers encouraging latrine usage and good hygiene practices.
8. A standardized essential drug list is established and adhered to by the health agencies, and clinical staff are trained and supervised in the use of the protocols and the essential drug list
- A formulary is developing based on the UNICEF Sudan Kits, WHO essential drug list and the MOH-Sudan essential drug list. Protocols are in the process of being compiled using various sources including MSF, MDM, SMOH, and WHO agreed treatment regimes.
  - ARC health professional carefully tracks drug usage and is involved in trainings at all health service sites to decrease over dosage leading to potential drug reactions and resistance.

## **Performance per Activities**

### **1. Conduct 2 orientation workshops for project specific health workers for all categories**

#### **Response:**

- ARC have had 11 orientation workshops for the staff at Donki Dreissa and Ditto that brought the different groups together to reinforce lines of authority and accountability. Also most of the Donki Dreissa and Mobile Clinic staff have been to EWARNS training, Malaria rapid test training at WHO, and vaccinators refresher at an EPI update. ARC RH Supervisor has also had numerous monitoring meetings with the midwives in all locations regarding equipment and practices.
- A workshop at El Wihda West clinic targeting staffs that focused on reorganization, improved patient flow and case management was conducted in April.
- Two workshops on Awareness and Prevention of Violence Against Women were conducted in Donki Dreissa for medical workers, village leaders and a community sensitization campaign was organized.
- Sanam el Naga and Abu Jabra PHC staffs are oriented especially in nutrition priorities and improving status of vulnerable members of the population.

### **2. Conduct 2 sensitization campaigns on PHC priorities in emergency settings targeting IDP and resident community, the local health authorities, and indigenous organizations (to the extent possible)**

#### **Response:**

IMCI data was collected and is being processed in order to organize an appropriate large scale training program.

A GBV/Harmful Traditional practice workshop held in Donki Dreissa will be repeated in all sites for medical workers and community leaders ending in a community awareness session. GBV awareness sessions are also incorporated into the health education awareness sessions of both the health and watsan sectors in order to increase awareness.

ARC conducted a community sensitization regarding services and RH treatment available at the RH Center at El Wahda clinic.

- 3. In collaboration with local health authority and lead UN agencies and NGOs, establish at least 2 PHCCs and 2 mobile clinics to increase accessibility to primary health care services in under-served areas of the Nyala – Gareida corridor.***

**Response:**

A total of four PHCCs, a Reproductive Health Clinic and one mobile clinic regular service were established. The PHCCs established are at Ditto, Donki Dreissa, Sanam al Naga and El Wihda. The reproductive health clinic is established at El Wahda clinic. The mobile clinic serves IDP sites of Barakature, Tokomaya, Fula Amnuara and Khereiga. We had planned to start a second mobile clinic. But a number of car-jackings of our rental vehicles in January compelled us to run mobile clinics exclusively with ARC-owned trucks. Since we only own 4, we did not have enough to allocate to a second mobile clinic while continuing to operate wat/san, supplemental feeding, and other programs.

- 4. In coordination with other health providers in the service area, conduct morbidity and mortality surveillance, and implement management and control activities to prevent outbreaks***

**Response:**

EWARN consists of mortality and morbidity data on communicable diseases. We submit reports on each place we visit weekly and record and report to WHO weekly all cases for patients coming to clinic. As part of the outbreak efforts, Meningitis vaccine was administered to all health staff in each service site.

- 5. Provide vaccination coverage (cholera, measles, etc.) as directed by the health coordinating agency (UNICEF/MoH/WHO)***

**Response:**

Participated in our areas on the last 4 national immunization campaigns, and will start routine vaccinations when two vaccinators are fully trained to begin. ARC assisted in the vaccination of over 12,000 children in the four immunization campaigns. ARC staff traveled with UNICEF to Jebel Mara with NIDS there for three consecutive campaigns. Actively working with EPI to support and extend their services in our present units and planning for El Wihda West to expand their provision to several times weekly with the addition of electricity and a refrigerator.

- 6. Provide supervision, technical training and medicine / material support for MCH services (including ANC/RH) for 2 PHCCs in the targeted areas, according to UNICEF approved guidelines. These clinics will also provide regular health education for all clients, both on an individualized basis and for larger groups.***

**Response:**

We began ANC/RH as the first service provided in the four stationary clinics; now we are starting ANC with mobile clinics a midwife traveling weekly to each site. Recent technical training on new malaria control was reviewed and an update on Leprosy treatment for Medical Assistants in both clinics as well as mobile clinic personnel was conducted.

- 7. Train, procure and distribute 120 TBA kits to 60 trained TBAs (2 workshops for 2 PHCCs)***

**Response:**

UNFPA Kits 2 A & B now distributed to pregnant women to give to the midwife that will be assisting her delivery. Midwife kits are checked and supplemented or replaced by kits from MOH. The kits are becoming available in our area presently. We have brought all supplies and equipment for midwives up to par by having our MCH Officer check individually and supply needs directly. A 3 day workshop was conducted for 8 midwives in December, 2004 and again for groups of 15 midwives in February and April, 2005. As of end of April, 90 midwives have been trained in our area of operation by conducting four workshops.

- 8. Conduct 2 awareness training/discussion sessions related to MCH Care and the Safe Motherhood Initiative, for at least 100 IDP community leaders and members.***

**Response:**

More casual sessions have also been conducted in preparation for more detailed discussions. RH safe motherhood sensitization have been conducted for over 400 people at El Wihda and Ditto clinic, individual training at all health sites by health visitors and midwives at all operation sites by holding community gatherings.

**9. Provide supervision and on-the-job / refresher training in Antenatal and Postnatal Care, Safe Motherhood, Family Planning, Breast Feeding, Growth Monitoring and Nutrition, Oral Rehydration Therapy (ORT), for the MCH Units at the PHCCs**

**Response:**

ARC has conducted four 3-day workshops at Donki Dreissa, Ditto and El Wihda to refresh 90 midwives from all our areas of locations on RH topics. More casual sessions have also been conducted before this to assess needs.

In late December, ARC started growth monitoring and nutrition, measuring height/weight/arm circumference on all children, in anticipation for opening SFCs in collaboration with ACF at both our stationery and mobile units. We have been delivering ORT services since our opening to all clients.

**10. Provide on-the-job training on nursing procedures to health workers at ARC-supported health facilities**

**Response:**

ARC medical volunteers worked on improving the practices of all workers on record keeping, universal precautions and good hand washing techniques especially during mobile clinics. ARC medical doctor also has reviewed assessing vital signs for all nurses to assist the Medical Assistant when registering patients. Case management protocols are being collected and reviewed with providers each site. IMCI(Integrated Management of Childhood Illnesses) training initiated in two of our service areas to broaden the knowledge of and support to the health care workers.

**11. Plan and implement a community mobilization program on protection from GBV, through PHCCs and mobile clinics.**

**Response:**

Community volunteers have been trained and sent to their respective locations in our areas of operation. This activity intensified after surveying more people in our areas of operation and following training by Beth Vann, a GBV Technical Advisor associated with John Snow, Inc.

After an assessment and workshop by Beth Vann, and an inquiry in rates of violence in the Donki Dreissa area, planning on a comprehensive program was launched. The resultant initiative begins with a three day workshop in each service area entitled "Awareness and Prevention of Violence Against Women" in coordination with a local NGO Ahlam Charity Organization known for its work on women's issues. Follow up sessions are on going and planning continues.

All ARC PHCs were assisted with full primary RH services including clean birthing room and post partum home visits so as to complement efforts geared towards this.

**12. Integrate GBV services into MCH services at PHCC levels, and through workshops, OTJ training, other training/discussion sessions and sensitization campaigns as indicated above.**

**Response:**

Following the visit of Beth Vann in late February, we fully integrated GBV services into all our MCH and PHC services. As mentioned above, we have held a series of 3-day workshops with Ahlam, a local NGO and have continuous OTJ on GBV issues. ARC, with a grant from the Women's Commission, is implementing the MISP in South Darfur. This gives us multiple, daily opportunities to discuss GBV issues and sensitize more people to GBV in South Darfur.

**13. Implement referral service (standardized medical response) for GBV survivors in coordination with focal health agencies.**



**Response:**

We are aware of the matrix of services for referral and have become more involved especially in the new clinic in Nyala town with opening our RH unit. We implemented post-rape GBV referral services in all our rural PHCCs, as well as our large, urban PHC in Nyala (“El Wihda”).

**14. Implement MISIP as appropriate, consistent with Sphere standards and in coordination with health agencies in targeted areas.**

**Response:**

All areas in our service delivery are up to standard MISIP consistent with Sphere.

**15. Monitor and report cases of GBV to health services, protection and security officers.**

**Response:**

The cases we monitor and report arise from consultations at the RH unit we run in Nyala. Kits from UNFPA and WHO standards for care of GBV survivors have been discussed with health workers, and will be included in future workshops.

(For further details on number of trainings carried out, please refer to Annex A. ,2. Health )

**Constraints and Remedies:**

Unavailability of competent contractors in the project areas and refusal of many contractors to take contracts at project sites for construction and rehabilitation works, due to security reasons, has impeded the speed of the overall implementation of the project. Prices were also found to be much higher than what has been budgeted for due to high consumption of the local market materials and closure of supply road transport routes to Nyala for security reasons.

Hiring competent medical staff was a difficult task and often employees had to be imported from Nyala to villages and at times importing from as far as Khartoum and Southern Sudan. This was made more complicated by the problems of ethnicity, referring to the fact that at this point it is safer for non-Arab workers to be in the villages we are working in so that had to be considered at the time of hiring. Security was a major concern for many prospective employees. Extra incentives were needed to encourage some workers to work in under-developed areas. It goes without saying that we had to heed recommendations from local employees about where they could and where they could not work safely in rural areas.

**Success Stories:**

It is surprising to hear the village leaders express their gratitude especially directed at care being given to the women and children of the villages. It is a society where men are usually the decision makers and dominate when meetings occur. But when asked of their priorities, it is the needs of their families that often get recognized and expressed. This becomes apparent when midwives are present: on the village leaders’ mobile clinic visits, great respect is given to midwives. It is through these people that maternal and child health is being promoted as well as awareness of issues of GBV and FGM are realized and can be sensitized in time. Our staff has made many friends in the villages which enhances security and success of our health campaigns. This began with the Polio vaccination campaign assisting their children from the start to more recently conducting basic hygiene and health awareness sessions for some of the youngest children.

Antenatal, clean birthing areas and post natal visits are a vast improvement from previous practices in areas where we are serving. Prior to the arrival of ARC, women were often giving birth on their own in unsanitary conditions.

**Objective 2:- Access to potable Water sources improved and good Hygiene and Sanitation practices strengthened among the targeted population.**

**Indicators and Performance Baseline Data**

Objective/Results	Indicators
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<p><b>Result 1:</b> Improved Access to adequate supplies of potable water</p>	<ul style="list-style-type: none"> <li>• 2 (out of 2) water yard rehabilitated and fully operational with 66 taps, 2 standpipe and 10 livestock troughs</li> <li>• 24 (out of 24) Hand-Pumps repaired and operational.</li> </ul>
<p><b>Result 2:</b> Improved sanitation and hygiene conditions</p>	<ul style="list-style-type: none"> <li>• 997 (out of 800) Latrine concrete slabs produced</li> <li>• 732 latrines dug up to 3 meter depth and construction completed</li> </ul>
<p><b>Result 3:</b> Improved capacity of communities through health and hygiene training, repairs operation and maintenance and water management.</p>	<ul style="list-style-type: none"> <li>• 8 (out of 8) village health committees (VHC) formed.</li> <li>• 50 (out of 32) community health volunteers (CHV) trained.</li> <li>• 4 (out of 4) Health and Hygiene training workshop held in the villages.</li> <li>• 8 (out of 8) Village comprised of about 100,000 people received Health/Hygiene education and/or hygiene awareness campaigns.</li> <li>• 28 (out 24) hand pump technicians trained.</li> <li>• 1,450 (out of 1,000) household visits have been made by CHVs.</li> </ul>

#### ❖ Measurable Indicators:

1. Minimum maintenance of 15 liters/person/day
  - A household of eight (8) persons fetches 4 jerry cans of 20 liters per day. This works as to 16 l/p/d which is within the Sphere guideline. The cost of water from the water yard has increased from 6 SD in December 2004 to 7.5 SD in March 2005(1 US \$ = 250 SD). This increase is attributed to the dry season when alternative water resources dry up and the price goes up. The cost of water limits the amount of water a family can draw.
2. PHCC of 40 liters/person/day
  - The two PHC clinics at Donki Dreisa and Ditto rehabilitated by ARC have been connected with a water pipeline. This will go a long way to meeting the PHC guideline.
3. Minimum 1 tap stand per 200 persons within 100m from users
  - ARC rehabilitation of the water yards is to provide more taps for the public. Provision of 36 taps and a standpipe at Donki Dreisa and 30 taps and a standpipe in Ditto has increased human water outlets from the existing 12 to 68 and 10 livestock troughs.
4. A large quantity of reasonably safe water is preferable to small quantity of pure water
  - Most of the water sources in the ARC area of operation are drilled wells which are equipped with hand pumps or generators. These are completely sealed and provide relatively safe water. However, communities draw water from water catchments and ponds during the rainy season which last for about 2 – 3 months after the rainy season. ARC will encourage household chlorination in such cases.
5. At least one toilet per 20 persons
  - ARC is providing household latrines to IDPs and returnees who are living in their households. Households have about 5 to 10 persons which fall within the 20 persons per latrine guideline. The latrines are sited within range of the homesteads, and are near and accessible.
6. Walking distance to toilet is greater than 5m and less than 51m.

- Latrines are mainly for households. ARC Community Trainers are involved in siting the latrines taking into consideration the direction of wind and proximity to water sources and the kitchen. The household latrines are always next to the homestead and within 30 m of the houses.

7. No. of tap stands, bladders, wells/hand pumps

- Given that the water supply systems have elevated water storage tanks and no tinkering was carried out, bladders and tap stands were not required. However plans to replace the submersible pump in Barkatolli will require water bladder storage before a permanent tank is provided.
- 2 (out of 2) water yards rehabilitated and fully operational with 36 taps, 1 standpipe and 6 livestock troughs
- 24 (out of 24) hand-pumps repaired and operational.

8. No. of latrines constructed and No. of persons directly benefiting

- 997 concrete latrine slabs (out of the targeted 800) have been produced and distributed in Donki Dreisa, Ditto, Tokomaya, Greiga and Barkatolli. ARC aims to produce at least 800 latrines by the end of the project. Construction of 732 latrines have been completed. The others are on-going.

9. No. of hygiene and sanitation community workshops and No. of persons benefiting from the training

- Four (4) Health and Hygiene training workshops where 124 out of targeted 120 persons were offered Health and Hygiene education.
- Separate Training workshop on water management targeting the sheikhs, VHC chairpersons and technicians was held in Nyala. 30 participants from over 8 locations were trained.
- Operation and Maintenance workshop for water yard operators and cashiers was held in Gareida for 29 participants out a target of 20.

10. No. of health committees formed and trained, members learn and apply new skills and efficiently manage health facilities.

- 8 Village Health Committees consisting of 10 to 15 persons have been established in the villages. In addition 10 other persons are trained as Community Health Volunteers who undertake regular household visits.

The table 4 below shows the quantitative accomplishments versus targets for indicators of the specific water and sanitation program objectives discussed below:

**Project Output Indicators, 30 April 2005**

<b>Output Indicators by April 30, 2005</b>	<b>Comm. Total</b>	<b>EoP Target</b>	<b>% EoP Target</b>
<b>Result 1:</b>			
<b>Improved Access to adequate supplies of potable water</b>			
# Hand pump repaired (mechanical - spare parts, riser pipes, etc)	24	24	100
# Hand pump repaired (structural - Apron, troughs, drainage)	9	24	38
# Sub-mersible pumps / Genset installed	0	2	0
# Boreholes serviced / maintained / operational (Donki Dreisa and Ditto)	3	4	75
# Water Yards (Donki and Ditto) rehabilitated (standpipes, taps etc)	2	2	100
# Water Bladders installed	0	3	0
# shallow wells dug and provided with well concrete rings / constructed	0	5	0

<b>Result 2:</b>			
<b>Improved sanitation and hygiene conditions</b>			
# Latrines - Concrete slabs produced	1118	800	140
# Latrines dug up to 3 m and construction completed	980	800	123
<b>Result 3:</b>			
<b>Capacitated communities through health and hygiene training, repairs operation and maintenance and water management.</b>			
# Kitchen gardens established	3	5	60
# Village Health Committees established	8	8	100
# Persons trained in making latrine concrete slabs	75	40	188
# Community Health Volunteers (CHVs) Trained	80	32	250
# Households visited by CHVs	2500	1000	250
# Capacity building courses, water management training	1	1	100
# Persons trained in water management	30	30	100
# Villages which have received Health/Hygiene education	4	4	100
# Participants in health and Hygiene education training workshops	124	120	103
# Hand pump technicians trained (on-site refresher courses)	28	24	117
# Operation & Maintenance courses held/attended by operators	1	1	100
# Pump Operators trained	29	8	363
# People receiving potable water and health & hygiene education	110,000	100,000	110

### ***Watsan Project sites and distances (from Nyala)***

<b>S. No</b>	<b>Location</b>	<b>Distance (km) /Direction</b>
1	Donki Dreisa	52 km SSE
2	Ditto	83 Km SE
3	Tokomaya	46 km NE
4	Fulla Abukaka	5 km SW
5	Greiga	37 km SSE
6	Tabadiati	26 km NE
7	Jebrona	35 km NE
8	Barkatolli	50 km NE
9	Maiyno	47 km SSE
10	Abugarajel	26 km SSE

### **Performance per Activities**

#### **Water**

#### ***1. Provide up to 25 new water points in targeted areas (50,000 population coverage at 1/200)***

Actual performance to date: Rehabilitated 24 hand pumps and 2 water yards supplied by 3 boreholes.

The targeted output were fully achieved or even exceeded, as shown in the Table 4.- 100 % with the hand pumps and the water yards. The target of 15 liters/person/day based on SPHERE standards

has been achieved especially in urban areas with piped water. In the rural areas, a household of five fetches about 80 liters of water per day which translates to 16 l/p/d compared to the 8 liters per day before the rehabilitation work.

The following activities were accomplished at the sites:

1. Rehabilitation and repairs of the hand pumps
2. Separate watering points in the Water Yard into two sections: one for livestock and another for people.
3. Construction of standpipes installed with 30 water taps.
4. Rehabilitation / Construction of pairs of livestock troughs
5. Construction of the stand pipe for donkey carts.
6. Extension of water pipeline to the PHC clinics
7. Extension of the water pipeline to the schools.

**2. Set up water bladders and taps at targeted IDP sites in Nyala, and in Gareida corridor.**

**Response:**

Three water bladders were requested for Ditto IDP camp and Khereiga village/ IDP site to cater for both host communities and increasing number of IDPs expected in those areas, in addition to meeting increased water needs during the dry season (April to June). There being no designated serviced IDP camps in those villages, the water needs have been addressed through repair and improvement of the existing water sources at the sites. This approach is more sustainable given that the IDPs are living in villages occupied by the returnees and host community.

**3. Provide up to 25 new water points in targeted areas (50,000 population coverage at 1/200)**

**Response:**

The current project is addressing the emergency needs of the targeted communities through rehabilitation of the existing water sources which include: hand pumps, open wells and boreholes feeding into rural water supply systems (water yards). A total of 27 out of the targeted 31 water sources (4 boreholes, 25 hand pumps and 2 open wells) have been rehabilitated. Digging of 5 open wells is on-going at El Mowaro. One of the wells has struck water. Construction will commence once enough water has been encountered.

**Hand Pumps (repairs) as of March 25, 2005**

Ref	Location	Total # Available	# Repaired
1	Tokomaya	8	7
2	Fulla Abukaka	3	2
3	Greiga	7	6
4	Tabadiati	3	2
5	Jebrona	1	1
6	Barkatolli*	3	2
7	Mairno	1	1
8	Abgarajel	3	3
	<b>Total</b>	<b>29</b>	<b>24</b>

Barkatolli\* - The 3rd borehole is private and installed with a submersible pump  
ARC plans to replace one of the handpumps with a submersible pump to cater for the high water demand from IDPs in the neighboring settlements

**4. Conduct routine water quality monitoring and subsequent treatment of every water source found contaminated.**

**Response:**

Boreholes and hand pumps being the main sources of water provide relatively safe water. After installation, they are normally chlorinated and sealed, preventing re-contamination during use. A recognized centralized Water Quality Monitoring Unit is proposed for South Darfur.

A training workshop on water quality and chlorination procedures is planned to be conducted to educate the Community Trainers and Community Hygiene Volunteers on the importance of safe water and ways of disinfecting after acquiring water testing kit.

**5. Based on findings of ARC technical assessment, assist local authorities, through a UNICEF and/or a local contractor, to carry out geophysical surveys, drill, test and install up to 3 new boreholes complete with hand pumps and platform.**

**Response:**

- UNICEF's plan to support and carry out the planned drilling activities changed during the implementation, ARC has to re-program this activity, with approval from OFDA, to complete the rehabilitation of water yard and hand pumps works.
- In collaboration the GoS WES, and UNICEF, ARC identified 31 water sources which needed immediate rehabilitation to reduce the water shortage in the Nyala Gareida corridor, out of which 24 were repairable.
- Modalities of installing a submersible pump were discussed with WES and Barkatoli community in one of the boreholes which had a hand pump. The pump had fallen into the borehole and fishing-out had to be completed to ensure the borehole was open.. The orders of the submersible pumps were made in the beginning of March. However they are out of stock in Khartoum. Supplies from overseas are being awaited.
- The mechanical pump in one of the Ditto Boreholes was successfully removed. The test pumping is planned for the last week of March to determine the safe yield of the borehole. Installation of a new submersible pump and generator will follow there after. Orders of the submersible pumps and generators have been made.. This will enable replacement of the mechanical pumping system (reciprocating) with a submersible pump. The same procedure has been proposed (next phase) to replace the mechanical systems at Donki Dreisa and Dakama with submersible pumps.
- Drilling of new boreholes has been included in the next proposal. Discussions are on-going with WES and other partners on selection of the most needy sites and collaboration with the partners who have drilling equipments.

**6. Assist local authorities to identify and rehabilitate 5 existing boreholes**

**Response:**

In corroboration with South Darfur Drinking Water Corporation (SDDWC), WES and Water Equipment Ltd; ARC has completed rehabilitation of Donki Dreisa and Ditto Water Supply Systems ( each is supplied by 2 boreholes) comprising of the following:

- i) Separate yard for people and livestock and fencing of the whole water yard.
- ii) 3 public water facilities with 66 water taps
- iii) 2 stand pipes for donkey carts
- iv) 10 livestock troughs and their platforms
- v) Repair and painting of 2x 50 m<sup>3</sup>, galvanized iron elevated water tank. A new water tank for Ditto was constructed using materials which had been supplied by SDDWC.
- vi) Water pipeline to the health clinic
- vii) Metered water system to all those facilities.

Water Yards									
Ref	Location	# Water Yards		# BHs*	# Water Tanks	# Water taps	# Livestock Troughs	# Donkey standpipes	# Kitchen Gardens
		Planned	Actual						
1	Donki Dreissa	1	1	2	1	37	6	1	1
2	Ditto	1	1	2	1	31	4	1	1
	<b>Totals</b>	<b>2</b>	<b>2</b>	<b>4</b>	<b>2</b>	<b>68</b>	<b>10</b>	<b>2</b>	<b>2</b>

BHs\* | In each location, one installed with a Mechanical (reciprocating) pump and the other with a sub mersible pump.

Mechanical pump in Ditto was successfully removed. Preparation for test pumping and installing a submersible pump.

The two boreholes in either site are installed with a submersible pump and mechanical pumping system respectively. In October 2004, during the commencement of the project, the Ditto submersible pump was not operational due to the break down of the Generator. With the support of ARC, the generator was repaired in December 2004.

Extension of the water pipelines to the school in Donki Dreisa is completed. The new connection will be installed with individual water meters.

#### **7. Conduct OTJ/refresher training for the local staff and counterparts (e.g., hand pump mechanics, village level pump caretakers and water committees)**

##### **Response:**

ARC has conducted various trainings aimed at increasing the capacity of the beneficiary community such that they can operate, maintain and sustain the watsan facilities provided. Of importance was for the various communities is to produce their own latrine slabs and repair their hand pumps.

Following is a list of various trainings conducted by ARC:

During the construction and installation of hand pumps in the villages, the GoS WES had trained a couple of hand pump technician at every site. ARC conducted on-site refresher training courses to technicians during the repairs in each village. The following were given practical courses consisting of both preventive and corrective maintenance: Tokomaya - 4, Khhereiga – 12, Barkatolli -4, Tabaldiat – 4, Jebrona – 2 and Fulla Abukaka 4 bringing the total number of hand pump technicians / mechanics to 28.

Concrete slab production: 55 persons (Donki Dreisa 10 and Ditto 11, Tokomaya 9, Fulla Abukaka 2, Barkatolli 11 and Greiga 12) were trained in construction of the concrete slabs for the latrines.

Operation and Maintenance training workshop was held in Gareida for several water yards in collaboration with SDDWC, Oxfam, ICRC.

Water Management Training conducted in Nyala in conjunction with WES and SDDWC for 30 participants from over 8 locations.

Please refer to Annex A. for further details on trainings carried out.

#### **Sanitation**

Performance Indicator: Training of 40 Community Health Volunteers (CHVs), 3 women and 2 men each per village with a rehabilitated water sources; establishment and training of 8 new WES Committees; and 6 training courses in health and Hygiene education, operations and maintenance and water management.

Actual performance till end of April: Trained 75 CHVs and established 8 new VHC Committees. Conducted a total of six (6) training courses; focusing on Health and Hygiene, O&M, and water management.

The following activities were conducted in order to attain the objective:

- Community mobilization, sensitization and training in health education
- On site health and hygiene practical demonstration training
- Training in water management and formation and strengthening of village health committees. *(Please refer to Annex A for trainings carried out. It shows a summary of the type of training courses conducted, number of participants, and length of the trainings.)*

#### **Staff Training Development and Capacity Building**

##### **In-House training:**

In October and November 2004, ARC Community Trainers were offered an in-house training in adult training methodologies and organizing participatory community trainings. This improved their knowledge and ways of reaching the communities.

#### **PHAST / CHAST Training**

Materials for Participatory Hygiene and Sanitation Transformation (PHAST) and Children Hygiene and Sanitation Training (CHAST) were introduced to all the WatSan Staff.

#### **SPHERE**

Minimum Standards in Water Supply, Sanitation and Hygiene Promotion were expounded to the WatSan staff in addition to providing a printed manual of the SPHERE Guidelines.

### **Implementation Strategy Leading to Project Sustainability**

To develop a strong sense of ownership in all the project activities, the communities were allowed to decide on how they would want the activities carried out in the village. They were encouraged to carry out activities such as production of slabs and repair of hand pumps under the supervision / training of ARC technicians.

The beneficiaries were involved in the planning and implementation of the project and manage the water points thereafter. The establishment of the VHC committees at the village levels and CHVs helped to strengthen the community sense of ownership and responsibility in the management of WatSan facilities and hygiene promotion. Training every community in production of their latrine concrete slabs and constructing their latrines transferred the responsibility of the latrines to themselves. Similarly the hand pump technicians in every community are involved in the repairs of their hand pumps. Training of the community leaders, technicians and VHC chairperson in Water Management consolidated this approach and ensures continuity after the end of the project.

#### **1. Construct 500 family latrines, and 250 group latrines.**

Construction of the latrines was supported through involvement of the IDPs and host communities in the production of slabs, digging and construction of the latrines. The beneficiaries identified some 8-12 members in every community who could be trained and produce the slabs. Construction materials such as sand and gravel were sourced from the villages and the communities involved in delivering them. ARC provided implements and digging tools . Siting of the latrines was carried out by the Community Trainers together with the beneficiaries and the CHVs. Digging of the latrine was paid by the project for all the IDP and women headed households. The host communities capable of digging, dug and constructed their latrines. The concrete slabs were supplied from the production sites in the various villages.

The table below shows distribution of latrines within the various communities:

**# of Latrines (Concrete Slabs Produced) by April 30, 2005**

Ref	Site	# Latrines							
		Household	Schools			Health Clinic	Public Places	Total	
			Girls	Boys	Teachers			Planned	Actual
1	Donki Dreisa	249	6	6	4	5	2	250	272
2	Ditto	398	10	10	4	2	2	400	426
3	Tokomaya	39						50	39
4	Fulla Abukaka	0						30	30
5	Greiga	193	5	5	2	3		200	208
6	Tabadiati	0						50	30
7	Jebrona	0						50	0
8	Barkatolli	50						50	107
9	El Wahida					2		6	6
	<b>Total</b>	<b>929</b>	<b>21</b>	<b>21</b>	<b>10</b>	<b>12</b>	<b>4</b>	<b>1,086</b>	



										<b>1,118</b>
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**Response:**

- 1118 latrine concrete slabs produced and 980 latrines constructed. See attachment for breakdown.
- Production of slabs stopped in Tokomaya to allow the digging and construction to pick up. Similarly, the slabs for Fulla Abukaka will be produced at Tokomaya where sand and gravel is readily available. The community in Jebrona moved away due to lack of food and therefore no production was commenced.

**2. Construct 50 institutional latrines (VIPs) in 25 health facilities.**

**Response:**

- 5 latrines were constructed in Donki Dreisa clinic
  - 2 latrines in Ditto clinic
  - 3 latrines for Greiga,
- Planned:
- 4 in public places (Donki Dreisa and Ditto)
  - 52 in Schools latrines (Donki Dreisa, Greiga and Ditto)

**3. Conduct bi-monthly hygiene and sanitation promotion campaigns for targeted IDP sites.**

**Response:**

- Training needs assessments completed.
- 1 ToT workshop to increase capacity of Community Trainers conducted
- 8 Village health committees (VHC) were formed in each village.
- 1 Health and Hygiene education workshop conducted on Dec 7-12. 2004 for Donki Dreisa. 32 participants comprising: 17 Women and 15 men from the VHC (10) and elders ( 2).

The following Training Workshops were conducted:

- 4 Health and Hygiene education training workshops
- 1 Repairs, Operational and Maintenance of water systems.
- 1 Training workshop in Water Management.

**4. Conduct household visits to monitor latrine usage (number of latrines being used versus number of latrines available).**

**Response:**

2,500 Household visits were made where the Community Trainers carried out the following:

- i. Interviewed the family members and checked the awareness promotion by CHVs. The latter made the household visits regularly. All the households which have completed constructing the latrines and those digging have been visited in addition to other IDP households.
- ii. Fifteen percent (15 %) of the school going children in the households were not using latrines for fear of falling. ARC has embarked on awareness campaigns to encourage the communities to teach the children and encourage them to use the latrines.
- iii. Safe storage of drinking water in traditional pots which were covered is a normal practice. However, households were educated on keeping the pots and containers drawing water clean.
- iv. House cleanliness was also addressed and households advised on digging pits for proper disposal of household waste.
- v. The need to do livestock waste management, especially donkey dug, was emphasized and also livestock sheds to be away from the huts.

## Constraints and Remedies

Constraints:	Remedies:
<p><b>I. Inaccessibility / Insecurity</b> Inaccessibility of the project sites due to insecurity led to delays in implementation of the work. This also affected timely delivery of construction materials to the sites. The contractors were not able to deliver the materials on time leading to delays in completion dates.</p> <p>II) Shortage of Materials: Shortage of construction materials (cement and steel bars) lead to stoppage of work in December and part of January.</p> <p>III) Lack of submersible pumps, generators and spare parts: Repairs of hand pumps, installation of submersible pumps and generators were curtailed by lack of the equipments in Sudan.</p> <p>Most of the Generators parts are not available in Sudan</p> <p>IV) Beliefs and practices: People and livestock were drawing water from the same trough and resisted separation of the same.</p> <p>Communities afraid of using the latrines especially the children.</p> <p>V) Dependency / vested interests: Cases of high pricing of materials were experienced and the communities not willing to carry source for materials (sand and gravel) locally or construct slabs in their villages.</p> <p>vi) Construction of the latrines was affected by the dry season where some communities moved in search of food and others were not in a position of digging.</p> <p>Vii) Overcrowding at the water sources resulting in the pumps running out and frequent breakdowns.</p>	<p>I) Keep updated and alert on security developments in D especially south of Nyala in close coordination with OCHA and other Agencies operating in the area, ARC local staff and the communities. Consultation with Umda (Comm Leader) to talk to the various groups involved.</p> <p>II) Consultation with UNICEF and WES (GoS Water Dept) in to receive materials from their stores was made. Consultation with ARC to receive steel bars and cement from their stocks on Alternatives to purchase from Ed Dein also being sought.</p> <p>III) Consultation with UNICEF and WES was made to get s from their stocks. All spare parts for hand pumps were rec from WES. ARC identified an electrician from Nyala to fix the generator. ARC has made orders for submersible pumps generators through the suppliers in Khartoum. They are aw their arrival from overseas.</p> <p>ARC consulting with Water Corporation for the latter to impo parts.</p> <p>V) ARC discussed with the WES, community leaders communities the plans, designs and took time to teach convince those opposed to separating livestock troughs public stand pipes.</p> <p>Continuous training and public awareness being carried to ed the communities on the safety of latrines and the importance including school age children, in using latrines.</p> <p>V) ARC carried out a price survey of local materials and requ the communities and suppliers to go buy them. Communities encouraged and involved in identifying materials locally. artisans and pump technicians were trained to carry works in own villages / communities.</p> <p>vi) ARC consulted the partners distributing food to carr distribution. The project discussed digging payment modalitie use of local materials (grass mat) so as to inject some cas the communities.</p> <p>vii) ARC has increased the capacity of the beneficiaries to ma the water supply systems on their own. The trained techn through the support of the community leaders should carry o repairs / source parts from WES / or Nyala town. encouraging digging of shallow wells (El Mowaro) along the for alternative water sources.</p>

## **Success Story: - Water and Sanitation intervention brings life back in Barkatolli**

Barkatolli lies about 50 km south of Nyala at latitude 11°39'28.75" N and 24°54'46.61" E. It is inhabited by about 3,500 persons (returnees) . Another 10,000 IDPs live in the surrounding settlements of Shadani, Daragimo, Abu Diara, Toro and Omu Ajara. Barkatolli community is held together by Chief Isak Ali Ibrahim, with no other support from either the Government or rebels. Surrounding villages of Donki Dreisa and Sanya Deleba are controlled by the Government. The communities around Barkatolli are mainly from the Fur tribes. Their proximity to the Razagat (Mohammed), an Arab tribe to the south exposed them to several and frequent attacks. The community was afraid of escaping in either direction and they were spending the nights in the bush during ARC monthly visits in October and November, 2004.

The population had gone through several tribulations and uncertainties. From the onset of ARC activities, Barkatolli could not be visited due to insecurity. An attack in mid–October delayed the planned first visit. ARC was the first Agency to access the community on October 24, 2004. This was a hair rising experience because every one was on the alert and people started emerging from the bushes. They were surprised that ARC had dared to visit the location. This is when it came out that they actually sleep in the bush in fear of attacks which happened mainly at night and only come to the village during the day to prepare food and draw water from the operating 2 hand pumps. This was quite humbling given there were IDPs, children and women from the surrounding villages who had joined them in this night vigil. Both the host community and IDPs who had joined them were all "IDPs". ARC's visit was followed by an attack the night of Oct 25, 2004. This made the community even more afraid to visit their homes during the day. ARC maintained regular visits. Attacks also reduced in November. They got encouragement from ARC's visits to return home. By December most of the communities had returned

The affected persons were served by 2 hand pumps which were functional and an uncompleted surface dam (pond). Some other 2 private boreholes used to have submersible pumps. However the owners had removed the pumps and moved to Nyala in fear of attacks. During the rainy season, the uncompleted dam spilled water towards the settlement creating fear of floods.

These were the challenges ARC had to contend with during the provision of WatSan and Health facilities. The rainy season was over and the immediate problem was how to improve operational hand pumps and carry out consultations with the community, WES and owners of the other boreholes to have them re-installed. Repairs to improve the yield were accomplished in December 2004. One of the private owners also brought back the submersible pump. The owner of the other borehole wanted the community to rent it. This was not feasible. With the onset of the dry season, overcrowding, over pumping and breakdowns became the order of the day. One of the pipes fell into the borehole in February. ARC managed to fish-out the pump in March. Consultation was held where it was agreed that ARC would install a submersible pump in one of the boreholes with hand pumps to alleviate the water problem. Orders for the pumps and generators have been made. Water bladders will be used as temporary water storage.

During the Health and Hygiene (H&H) training, it was discovered that the community in Barkatolli had low hygiene awareness levels. There were also no latrines in the settlement. 11 persons were trained on concrete slab production. 50 slabs were produced for a start. More will be produced once the awareness campaign, digging, and construction has picked up.

A concerted effort for water and sanitation provision is required in Barkatolli. In addition to installing the submersible pumps and bladders, ARC will support construction / repair of the dam embankment to create more storage and protect the settlement from another flooding disaster. ARC has proposed to drill, other boreholes around Barkatolli / Shadani areas to alleviate the water problem. Hygiene promotion and latrine construction activities will continue.

ARC presence and interventions encouraged the return of the inhabitants. They have now commenced on their normal livelihood support activities bringing back life in Barkatolli.

## ANNEX A.

### Trainings

#### 1. Health

#### Summary of Formal Training Activities conducted during the project duration as from February 2005

MONTH	DATES	UNIT	LOCATION	TRAINING TYPE	NO.PARTICIPANTS	TYPE PART.
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<b>JAN</b>	17-19TH	RH	NYALA	Refresher-ANC,Nutrition,Harmful traditional practices, MW kits	37	MIDWIVES
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<b>FEB</b>	8TH	M	NYALA	Patient assessment and triage	8	M/Clinic staff
	9TH	HE	BRKT	Children basic health and hygiene	50	COMMUNITY
	10TH	RH	NYALA	Midwives refresher	7	Midwives
	12TH	HE	BRKT	Children basic health and hygiene	50	COMMUNITY
	15TH	M	NYALA	Upper respiratory infections	15	M/Clinic staff
	16TH	HE	BRKT	Children basic health and hygiene	50	COMMUNITY
	17TH	HE	BRKT	Children basic health and hygiene	50	COMMUNITY
	21-22ND	RH	NYALA	TBA trainings	25	TBA's
	22ND	HE	GREIGA	Children basic health and hygiene	50	COMMUNITY
	22ND	M	NYALA	Pain assessment		M/Clinic staff
	24TH	HE	GREIGA	Children basic health and hygiene	50	COMMUNITY
	25TH	HE	NYALA	Consultation on FGM	25	NGO RH staff
		26TH	HE	NYALA	Consultation on GBV	50

<b>MARCH</b>	1ST	M		Fever and vital signs	16	M/Clinic staff
	2ND	HE	GREGA	Children trainings and HH	50	Children
	7TH	M		Review on 5 trainings		M/Clinic staff
	9TH	HE	GREGA	Children trainings and HH	50	Children
	10TH	HE	GREGA	Children trainings and HH	50	Children
	12/14TH	RH	DDRESA	Awareness and prevention of GBV	37	CADRE+COMMUNITY
	13TH	HE	GREGA	Children trainings and HH	50	Children
	10/12TH	N	S/NAGA	Nutritional assessment and data collection	20	COMMUNITY
	16/17TH	HE	DDRESA	IMCI Survey Training	17	COMMUNITY
	20TH	M	WAHDA	Lectures on family planning	400	COMMUNITY
	20TH	HE	GREGA	Children trainings and HH	50	Children
	22ND	M	NYALA	Meningitis update	20	M/Clinic staff
	26-28TH	HE	GREDA	Pre and post natal management	20	Midwives
	28TH	RH		Reproductive health- anemia		COMMUNITY
	29TH	M	NYALA	Diarrhea and abdominal pain	12	M/Clinic staff

<b>APRIL</b>	4TH	HE		CHILD TRAINING		
	10-14TH	RH	NYALA	Standard management of pregnancy,childbirth,neonatal care	24	VILLAGE M/W
	12TH	M		Diarrhea and abdominal pain	20	M/ Clinic staff
	13th	HE		CHILD TR. IMCI (Integrated management of childhood illnesses)	50	COMMUNITY
	16TH	HE	S/NAGA		24	COMMUNITY

19th	M		Dispensing AND PRESCRIBING	11	M/ Clinic staff
20TH	HE	NYALA	Awareness & prevention of violence against women	415	COMMUNITY
26TH	M		Triage and health education	20	El wihda Staff

HE= Health Education  
M= Medical  
RH= Reproductive Health

## 2. Water and Sanitation

### Summary of Formal Training Activities conducted during the project duration

Type of Training	Coverage	Location	Participants			Date	Remarks
			M	F	Total		
Health and Hygiene Education:	Village health committee members, CHVs, Women Leaders, and community leaders	Donki Dreisa	17	15	31	12/07/04 to 12/11/04	
		Ditto	18	14	32	02/07/05 to 02/11/05	
		Tokomaya	17	13	30	02/20/05 to 02/24/05	Reps from Tokomaya, Tomat Hijarat, Tabara Bashama, Hilayonis Fulla Abu Noara
		Barkatolli	15	15	30	03/06/05 To 03/10/05	Reps from Barkatolli , Gasa, Krnoya, Hashaba, Shadaney, Haskanit
Operations & Maintenance Training Course	Operators and Cashiers from SDDWC / Oxfam, ICRC and ARC water yards	Gareida	29	0	29	12/1/03 to 12/7/03	Reps from Ditto, Dakama, Gareida (3 WY), Edan, Joghana and Umbalula
Water Management	Community leader (Sheik), Technician, VHC chairman	Nyala	28	2	30	12/14/03 to 12/14/03	Reps from Tokomaya, Fulla Abukaka, Greiga, Tabadiati, Jebrona, Abugarajel, Barkatolli, Nyala Town – South (7)