WATER FOR RECOVERY AND PEACE PROGRAM EQUATORIA (WRAPP EQUATORIA)

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FINAL REPORT

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Acronyms

CALO-SS	Community Aid Link Organisation - South Sudan
CARD	Community Agency for Resource and Development
CAWP	Community Action Water Program
CBO	Community-Based Organization
CRDF	Community Rehabilitation and Development Foundation
CDO	Community Development Officer
CDS	Christian Development Services
CPA	Comprehensive Peace Agreement
GoSS	Government of Southern Sudan
IDP	Internally Displaced Person
INGO	International Non-Governmental Organization
KDI	Kapoeta Development Initiative
LRDA	Losolia Rehabilitation and Development Association
NGO	Non-Governmental Organization
ODI	Overseas Development Institute
O&M	Operation and Maintenance
PRA	Participatory Rural Appraisal
RUTAD	Rural Transformation and Development
RWH	Rainwater Harvesting
SMART	Social Mobilization, Awareness and Rehabilitation Team
SWMC	Sustainable Water (and Sanitation) Management Committee
SWDS	Semi-urban Water Distribution System
TDA	Toposa Development Association
VSF-Germany	Veterinaires Sans Frontieres - Germany
WASH	Water Sanitation and Hygiene
WRAPP	Water for Recovery and Peace Program

EXECUTIVE SUMMARY

The Water for Recovery and Peace Program (WRAPP) began in late 2004, after Pact Sudan received funding from OFDA for programming in Greater Upper Nile and Greater Bahr el Ghazel Regions. The WRAPP Equatoria program was proposed to extend the experience, the approach and the high level of achievements of the original WRAPP program into Eastern and Central Equatoria States, thus expanding the WRAPP program area to 9 states out of the 10 states in Southern Sudan and three areas. It began in April 2007 and, after two extensions, ended on June 29, 2009.

The WRAPP Equatoria program has been implemented in 7 counties of Eastern Eqatoria and 4 counties of Central Equatoria States. The activities of the WRAPP Equatoria program have been achieved through partnerships with Sudanese NGOs, INGOs and private sector contractors, with a strong focus on enhancing the capacity of local partner organizations. WRAPP Equatoria has accomplished the following major achievements: 92 new boreholes drilled, 70 borehole repaired, 19 springs protected, 22 hafirs expanded, 21 hand dug wells constructed, one eco-san public toilet and one school pit latrine installed, 280 household latrines dug, two rainwater harvesting schemes improved, and 23 different livelihoods improvement activities carried out. A total of more 230 Water and Sanitation Management Committees (WSMCs) have been established and took over the management of the facilities installed or rehabilitated. The program through this OFDA fund is estimated to have benefited over 100,000 people including 30,000 returnees. OFDA's funding through the WRAPP Equatoria project also allowed Pact to leverage funding from other sources to achieve additional activities in Equatoria Region including: 14 boreholes (plus 5 under another OFDA award), 3 public latrines, 24 borehole rehabilitations and 2 SWDS schemes, estimated to be providing safe potable water and improved sanitation to over 30,000 people.

1 INTRODUCTION

Background

Eastern and Central Equatoria are characterized by limited access to potable water, local and cross-border inter-communal clashes, pressures of returning populations on water and food, and eroded livelihoods opportunities. Pact conducted an extensive assessment in the region in 2006 and found many gaps in the water development program in the two states.

Justification for targeted intervention in Eastern and Central Equatoria was driven by limited access to water resources and by the acute lack of well-coordinated planning and information sharing by local government and NGO/UN organizations for water resource development.

Objectives

The goal of expanding Pact's Water for Recovery and Peace Program (WRAPP) into Eastern and Central Equatoria State was to improve access to sustainable, safe water for rural and peri-urban communities and returnees in Eastern and Central Equatoria through provision of 90 functioning boreholes, 30 hand-dug shallow wells, and 7 rain and surface water harvesting pilot activities. Borehole and hand dug well construction was designed for sustainability based on a cost-recovery plan linked to community-based

livelihoods activities that would contribute to covering the costs of long-term borehole upkeep. Additionally, Pact put special emphasis on conflict mitigation, gender awareness and borehole management committee formation.

The program anticipated to impact 139,000 people (96,900 community residents and 42,100 returnees) as beneficiaries of the project. The anticipated activities and outcomes in the original 12 month WRAPP Equatoria program in Eastern and Central Equatoria are summarized below:

- 90 functioning boreholes and 30 hand-dug shallow wells.
- Seven quick-impact rain and surface water harvesting pilot projects.
- Water services impacting 139,000 people (estimated 96,900 community residents and 42,100 returnees).
- 120 sustainable water management committees (SWMCs) established.
- Eight county water associations (CWAs) established as advocacy and coordination entities.
- Increased regional capacity of Sudanese NGOs/CBOs to manage and replicate rainwater harvesting.
- Improved community-based water operations and management capacity.
- A significant reduction in inter-community conflict.
- Demonstrated community ownership and management of water resources.
- Ability to sustain the water delivery project through a community-based cost-recovery plan.
- Livelihoods activities around boreholes that generates income for operations.
- Increased inclusion of women in community affairs (50% of SWMC leadership are women).

2 METHODOLOGY AND ACTIVITIES

Management, Partnership and Coordination

The program has been managed by a field project coordinator based in Kapoeta town assisted by a WRAPP trainer, a technical officer, hygiene and sanitation promoter and community development officers for each of the two states, Eastern Equatoria and Central Equatoria. The WRAPP management in Juba provided project leadership, technical support, monitoring, reporting and financial management.

WRAPP started assessments in Eastern and Central Equatoria in May 2007. These assessments included coordination with all other water sector implementers in the region and with local authorities at the county level, Ministries of Physical Infrastructure at the state level, and the Ministry of Water Resources and Irrigation at GoSS level. The program assessments considered environmental issues, distributional equity, technical feasibility and impact on peace and conflict issues. Traditional and local authorities have also helped to finalize the assessments with the final identification of the borehole locations to be drilled and other inputs and support.

The assessments included a review of organizational capacity and identification of Community Based Organization (CBO) partners. Once selected, CBO's social mobilization and technical teams were given start-up training and continuous follow-up training to support their field activities. Once identified, CBOs joined in participating in the joint field assessments together with county authorities.

In addition to training and involving CBOs in assessments, Pact also provided a series of grants to many CBOs as implementing partners working at the community level. These subgrants, coupled with

contracts to drilling agencies, were the principal mechanism for implementation of field activities. Partners were engaged in five key functional areas:

1) Construction of new boreholes, hand dug wells and rehabilitation of existing broken hand pumps and boreholes. Nine drilling agencies were contracted for the construction of 92 boreholes, 6 CBOs constructed 21 hand dug wells, and two CBO partners were issued a grant for the rehabilitation of 70 hand pumps and borehole platforms.

2) Rain/surface water harvesting by expansion of community hafirs and development of springs and rock and roof catchments. Seven grants were issued under the rainwater harvesting component to 5 different CBOs.

3) Establishment and management of sustainable community water management committees, training in gender equity, and development of and training in borehole livelihoods activities to cover operating costs of the hand pumps. A total of more than 230 community management committees have been established.

4) Sanitation program with the construction of two eco-san public and school latrines and support for the construction of 295 household latrines. Most household latrines were constructed jointly with the hand dug well component and each community where hand dug wells were installed has received 10 plastic slabs for latrines.

5) Livelihoods programs were implemented by issuing one large subgrant to CHF International to manage and distribute 18 small grants to community associations, and by issuing 5 other livelihood grants to CBO partners.

Training

Pact's first means of capacity-building for local partners and communities is through trainings. Major trainings conducted over the course of this award include:

1. Two Training-of-Trainers (TOT) for Social Mobilization, Awareness, and Rehabilitation Team (SMART) members of CBO partners in Central and Eastern Equatoria.
2. Training for hand dug well technicians.
3. Livelihoods trainings for each livelihoods program supported, including technical training for butchers in Kapoeta town (total of 23 trainings).
4. Hygiene and hygiene management training to the management committee of the eco-san latrine in Kaya.
5. Hygiene and sanitation promotion training in Kit One and Lopit for household latrine construction promoters and recipients of latrine slabs.
6. Hygiene and sanitation training to communities engaged in the improvement of hafirs.
7. Hygiene promotion events at three schools.

TOT training for SMART team members revolves around borehole operation and maintenance, hygiene and sanitation, environmental issues, and peace and conflict issues that commonly arise over borehole construction. The knowledge acquired by the SMART teams in these trainings flows down to the communities through replication at the individual community level. A total of 230 water management committees have been trained and mobilized by SMARTs since the start of the program.

Trainings for hygiene and sanitation and public and household latrine management occur alongside the construction of and household and school/public latrines to fully engage the communities in the

construction process and ensure their full adoption of the latrines. The same is true of hygiene training around improved hafirs.

Field Activities

Field activities are primarily implemented directly by partners and contractors, with strong coordination with and monitoring by Pact field and technical staff.

Borehole Drilling:

Distribution of new boreholes across communities was decided by the local authorities in each county in consultation with payam administrators and both formal and informal leaders. The selected communities were fully involved in the actual site selection within their village. Participatory decision-making methods are used and special attention is paid to having adequate representation by women's groups and that all is done in consultation with the SWMC. In places with low water tables or otherwise difficult geology, sites were identified by geologists after extensive geophysical study, and the water committee and women's groups were informed of the decisions and reasons.

Communities are mobilized to contribute in-kind support, provide security to drillers, complete fencing and participate in hygiene awareness education. Community participation and contribution in this program was high. Both social mobilization and drilling teams expressed satisfaction with the way communities participated in most sites. Communities were able to contribute sand, gravel, and fencing materials, gave unskilled labor during the drilling process, provided food to the drillers, fetched water, provided burnt bricks, and dug the mud pits required for drilling of the boreholes.

WRAPP has supported the drilling of a total of 92 boreholes in 9 counties in Eastern and Central Equatoria States under this award. Breakdowns by geography and driller are provided in the annexes.

Hand Dug wells:

In June 2007, under a small grant from Pact, the International Federation of the Red Cross (IFRC), together with the Pact field staff, conducted an assessment in five counties and submitted their report and proposed budget to Pact. Although IFRC was the original partner identified to construct 30 shallow hand dug wells and 100 household latrines, they were significantly delayed in getting approval from its Geneva headquarters. Ultimately WRAPP was forced to cancel the partnership and implement its own hand dug well and household latrines construction program through its partner CBOs. Pact issued a number of grants to six CBOs with a program more oriented towards local capacity-building than the original IFRC proposal, which depended greatly on direct implementation by IFRC. The new approach involved an in-depth Training-of-Trainers (TOT) for multiple CBOs and subsequent grants to those CBOs to implement their own hand dug well projects.

The hand dug well TOT was organized and co-facilitated by Community Action Water Program (CAWP), under a small grant from Pact, and two WRAPP trainers and the WRAPP engineer in a central location in Yei County, Central Equatoria State. The 12 technicians invited to the workshop were drawn from six CBOs from both Central and Eastern Equatoria states; CAWP, CALO-SS, CDS, CRDF, CARD, and RUTAD. The content of the TOT was adapted to be highly interactive and practical, and was based on materials used throughout Africa. It covered the major themes of: community mobilization for water source management; sanitation and hygiene promotion; the working mechanisms of hand pump (installation and troubleshooting common problems); gender sensitive water and sanitation related project planning and management; and hand dug well construction (from site selection to the installation of hand

pump). At the end of the training WRAPP used the experience to develop its own training manual on hand dug wells and related shallow well construction and development, which will be used for similar trainings in the future and is available to be shared by sector partners.

Through the hard work of the technicians, under close supervision and mentoring of the WRAPP field staff, the project was successfully completed in June 2009. The success of this activity has shown that effective training and mentoring can produce capable local technicians from people without any background in the technology they're asked to implement.

Spring Development:

CBO partners in Morobo county of Eastern Equatoria State came to Pact with proposals for spring development, and after field assessments confirmed the big potential for this intervention, WRAPP issued three grants to two CBOs. The CBOs constructed a total of 18 spring improvements and established water and sanitation management committees around each spring. Although unfortunately one improved spring went dry afterwards as the subsurface flow changed course, the other 17 springs continue to function properly, and in most cases producing the equivalent or more of what a hand pump deep well can produce, with the additional advantage of 24 hour flow.

WRAPP has also conducted assessment on the environmental impact and contamination risk of springs built downstream of dense population settlements, and the CBOs have conducted awareness campaigns on safe sanitation in communities living on the catchments of the spring flow.

Rehabilitation:

Although the program did not initially include rehabilitation of hand pumps, in WRAPP's assessment at the end of 2007, Kapoeta South county and communities in the outskirts of Juba town were identified to have a number of hand pumps broken and platforms that required rehabilitation. Since these counties were not slated to receive new boreholes, Pact issued two grants for the rehabilitation of 70 boreholes and hand pumps in these areas; 28 rehabilitations by COMPASS in Juba County and 42 rehabilitations by LRDA in Kapoeta South. In addition LRDA facilitated the establishment of new SWMC for 6 boreholes drilled in Kapoeta South by Pact under previous funding where the community management had been identified as inefficient or where most of the previous committee members had left the community. The rehabilitation of 42 hand pumps in Kapoeta South is believed to have contributed to the functioning of more than 70% of the boreholes in Kapoeta South, as measured by SNV.

Rain/Surface Water Harvesting:

Under a grant from Pact, Galcholo, the local partner in Budi County in Eastern Equatoria, improved and rehabilitated the rock catchment in Kimatong. Under a prime award from USAID/OTI, Pact and Galcholo constructed the original rock catchment in 2005; the structure, however, does not have sufficient storage capacity for the amount of water that the entrapment flaps collect, causing runoff into the community. Galcholo, with the supervision of Pact technical staff, built two new ferro-cement tanks of 50 cubic meters capacity each and extended the entrapment flaps to take full advantage of the existing rock formation's water collection capacity. A new, extended plumbing network and some minor repairs on the dam have also been undertaken. Community education in Kimatong to increase knowledge and awareness of sanitation and hygiene issues has also been conducted.

The outcome of this work has increased water storage—the only water supply during the dry season—and an improvement in the quality of water since more water can pass more quickly from the open dam

into covered tanks. The water from the tanks serves two primary schools and one health facility in Kimatong.

Similarly, Losolia Rehabilitation and Development Association (LRDA) built a roof water catchment for two schools in Namura Nyang and Nachila Bur payams in Kapoeta South County. The schools had a school feeding program that was significantly hindered due to lack of water since there was no water source in the area. The provision of water through rainwater harvesting has contributed to the smooth implementation of the feeding program and was reported to have increased enrollment of young children, particularly girls. The project was implemented between March and June 2008.

Improvement of Community Hafirs:

Jie Payam of Kapoeta East County, Eastern Equatoria state, is located in the extreme northwest corner of the county. It has had no access to its neighboring towns for years, and the minority tribe of Jie people has been isolated from any trade and development activity with the neighboring populations. There are no sustainable water sources in the entire Jie Payam, and several attempts at drilling of boreholes have failed in the past. At times the whole community has migrated north to the Buma area in Jonglei state in search of water which led to bloody conflict with their neighboring communities and kidnapping of children. The assessment carried out in Jie confirmed that rainwater harvesting (water pans/dams) could be the only option for the provision of water to communities. Hundreds of existing community dug hafirs were identified and the WRAPP assessment indicated that upgrading these hafirs was the most feasible option, so Pact issued a grant to Kapoeta Development Initiative (KDI) to deepen and upgrade 22 existing hafirs.

KDI mobilized about 500 people from the Jie community to enhance the water storage capacity of these communal hafirs (owned by groups of households). KDI provided digging tools, food and non-food items, such as clothes, as incentives to the communities who have engaged in the excavation and deepening of the hafirs. The work took a total of 2 months. KDI also provided hygiene and sanitation education to the communities to protect and safely use the hafirs. Independently, the Carter Center has a presence in the area, and this has contributed to a high awareness by communities of the dangers of guinea worm and preventive measures.

Livelihoods Support:

Livelihoods grants were issued to NGOs and CBOs to train water management committees in cost-recovery methods and to develop appropriate livelihood initiatives, linked to sustainable water management.

Under the local livelihood activities, five grants were issued to support: (1) marketing of vegetable products, (2) construction of a warehouse for storing food items, (3) start-up of a nursery, (4) milk production and food preparation, and (5) butcher stalls and a slaughterhouse. A sixth grant was issued to CHF to distribute funds and train and manage 18 local livelihood activities centered on the water points supported by Pact, as described further below.

Market Access and Food Storage

SNV and Christian Development Services (CDS) began a partnership to improve the marketing of vegetable products from Nagichot to larger markets in the region, and Pact was able to support this effort through complementary funding for community organizing and infrastructure development. One grant was provided to CDS to allow them to facilitate the formation of a marketing committee of 7 members,

including 3 women and support the committee as it works with SNV and to develop a marketing and business plan. Through a second grant from Pact, CDS also constructed a food storage facility in their compound in Chukudum for storing vegetables and other products collected from the farmers before delivering them to the market. CDS also hired trucks to assist in the transport of vegetables from Nagishot to Chukudum and larger commercial centers like Kapoeta.

Pact water activities in Nagichot, including water shed management and spring protection, are also a strong complement to the direct livelihoods activities. These improved sources of water will assist farming activities during dry seasons, thereby reducing farmers' dependence on timely rain and increasing the quantity of goods to be sold in the market.

Nursery

In Chukudum, Budi county, the river coming from Nagichot had recently begun to dry up by the end of the dry season. Locals say that this river used to flow throughout the year and that the drying up was being caused by deforestation in Chukudum and in Nagichot, mainly related to excessive cutting of trees for firewood and building, and slash and burn methods of subsistence farming. The livelihoods project in this community had the triple goal of supporting livelihoods, increasing awareness regarding the forest cover's direct correlation to water supply, and reclaiming the Chukudum hillside vegetation cover in pursuit of the long-term goal of increased forest cover and a sustainably improved water supply.

Under a grant from Pact, Christian Development Services (CDS), a CBO from Chukudum, established a nursery to create a low-cost local source for seedlings both for reforestation and for fruit production. The nursery promoted planting of 7 different types of fruits including orange, lemon, tangerine, and bread fruit for local consumption and commercial production, along with the planting of trees, shrubs and other plants to improve the vegetation and forest cover in the surrounding watershed. A total 37 different species of tree and fruit seeds certified by the GoSS Ministry of Agriculture and supplied from Kenya were given to the nursery as start-up inventory. CDS also carried out a variety of awareness raising activities among the local population and organized training for local farmers in sustainable agro-forestry techniques. A consultant was hired to conduct a survey of the area's indigenous forest and produce a list of locally indigenous trees and their uses, and then trained nursery staff to promote effective planting and utilization of these plants.

Milk Production and Food Preparation

A partnership agreement was reached with Land O'Lakes to jointly support a cooperative with materials and training to expand their processing of milk and other food products for the consumer market. Land O'Lakes agreed to conduct training for the women of the cooperative focusing on the sanitation and hygiene component of milk production and effective use of the material used in milk storage and sale, and WRAPP agreed to procure the equipment and materials. Despite some delays in identifying and contracting with venders who would be able to supply the necessary materials, WRAPP was able to procure and deliver these to the cooperative; however, Land O'Lakes unexpectedly withdrew its support to the cooperatives, and planned trainings were suspended.

Slaughterhouse and Butchers Training

One of the main issues in Kapoeta involves sanitation and hygiene surrounding the use of the local slaughterhouse and the unsanitary manner in which meat is sold at the market stalls. In addressing these issues, WRAPP worked in collaboration with SNV and VSF-Germany, who constructed the Kapoeta

slaughterhouse in 2004 and renovated a new one in 2007. A grant was issued to KDI to mobilize the butchers association, coordinate trainings with SNV and construct facilities. WRAPP and KDI worked with the local butchers association and individual butchers to address hygiene and sanitation issues and provided support to infrastructure improvements that would contribute to more sanitary conditions. A shelter was constructed by KDI for butchers to sell meat in a sanitary manner, and sanitation kits were provided consisting of cutting slabs, meat storage units for insect contamination protection and jerry cans to ensure the butchers would have water for cleaning. The butchers were taken through training on hygiene and sanitation and how to handle and sell meat in a sanitary manner. The meat market is now used and managed by the butchers association.

Water Related Income Generation Activities (WIGA) by CHF

Women for Women International (WfW) was the originally proposed grantee for this activity; however, this partner became unresponsive to Pact's requests to formalize an agreement and did not mobilize to initiate an assessment or work in Equatoria, causing considerable delays in meeting the goals of this activity. As a result Pact opened discussions with the CHF International, which had extensive and ongoing experience with livelihoods projects in Equatoria, and CHF submitted its proposal for Water Related Income Generation Activities (WIGA) in Lainiya county in July 2007. After approval by OFDA of the change in partnership, Pact funded CHF's activities in Lainiya county and later extended support for work in Morobo county, where the project also drilled numerous new water points.

CHF conducted an initial assessment in communities that had been directly impacted by Pact's water-related activities to determine what type of income-generating activities would benefit them and elicit requests from communities for this support. They received several proposals and selected 18 for funding. CHF provided management training, and where needed, specific skills training, for the group members. Several livelihoods activities ranging from carpentry, beekeeping and fish farming have been included in the program. Further information about CHF's WRAPP funded program can be found in their final program report, included in the annexes.

Sanitation Components:

Public Latrines

The initial plan for a public latrine in Kapoeta town included the granting by local authorities (or a private donor) of land for this purpose, however it was discovered that land is too valuable a commodity in this strategic location, and thus could not be negotiated without cost. A second possibility was to move the construction of a latrine to the Kapoeta South primary school in Kapoeta town, where the girls toilet built by GTZ had collapsed, and this had kept some girls from coming to school. WRAPP was approached by the school administration and the request was supported by local authorities, so WRAPP provided a subgrant to the local NGO KDI to construct a single block Mobilet (prefabricated latrine) with four cubicles and two washrooms for girls. The facility has helped increase girls enrollment the school and community have greatly appreciated the investment. School administrators have taken full charge of its management.

An eco-san public latrine was also constructed in the border town of Kaya, after the planning for Numule town was unsuccessful due to similar land allocation dispute that couldn't be resolved by the local authorities. Eco-san latrines are designed to separate liquid waste from solid waste and allow it to be drained to a soak-away pit. This process allows for solid waste recycling into fertilizer and also helps to significantly reduce odors by allowing the sludge to dry quickly in shallow pits which are augmented by

heat intensifying metal sheets. Installing an eco-san latrine at the border crossing in Kaya is strategic for two reasons. The high population density and constant flow of truck drivers, who often spend the night outside any formal accommodations, made the previous lack of available public latrines a considerable public health hazard. Eco-san latrines were a particularly appropriate technology as they are common in Uganda, and so the population of Kaya and those traveling through Kaya were more comfortable with this style of latrine, and therefore more apt to utilize it. A 7-day training on hygiene and sanitation and management of eco-san latrine was provided by Pact training staff as well as the eco-san specialist who constructed the latrine to Kaya Health Department staff, teachers, youth and women's group members. The 20 training participants elected a committee who is responsible for the management of the eco-san.

WRAPP now has a plan to scale up construction of eco-san latrines based on the experience in Kaya.

Household Latrines

A total of 295 household latrines have been constructed by members of the beneficiary families through facilitation, training, and construction monitoring by local CBOs. The program was based on a demand driven approach whereby households willing to dig a pit and construct the super structure are provided with either plastic or concrete slabs. The household latrine construction coordinated by the Acholi Women Development Association (AWDA) in Kit One village of Magwi County has been amongst the biggest success stories in the WRAPP Equatoria program, and hundreds of additional households who didn't get the chance to participate in this project have requested slabs to complete their own latrines. The hygiene and sanitation trainings in these communities were received with high enthusiasm, and a number of returnee families have also benefited from the program. 75 households who built household latrines in Magi and Lafon county also have hand washing facilities.

Environmental Compliance and Water Quality Testing

Throughout the implementation of this project, WRAPP conducted environmental impact assessments, in line with USAID requirements. In addition, arsenic testing has been conducted at 79 new water sources.

The program took considerable efforts to carry out a systematic environment assessment of each activity before it was initiated. Physical on-site assessment of planned activities were carried out during site identification with the involvement of local communities, and remedies were recommended where environmental concerns were raised in projects such as spring development and hafir expansion.

The program included training Pact as well as partner staff in USAID's environmental compliance requirements; coordinating with local government on findings and recommendations; and monitoring each project site for compliance to USAID's environmental requirements as well as following environmental recommendations made by Pact's environmental officer. All the boreholes were tested for levels of arsenic contamination in the water as part of borehole handover from drillers to community committees, and all tested negative.

Practices that promote water quality were also promoted through environmental education, which created awareness on the best practices for conservation around water catchments. WRAPP also coordinated with local partner NGOs to strengthen hygiene and sanitation messages as pertain to sanitary means of water collection, transport and storage.

Finally, in WASH coordination and planning forums Pact Sudan has advocated for environmental impact assessment and sharing experiences with other stakeholders.

3 IMPACTS AND RESULTS

The provision of water points in most locations has spurred local development in terms of expanding market centers and building of schools and health facilities. Wherever the program supported provision of new water points it has promoted peaceful coexistence of host communities and returnees by minimizing competition over scarce water resources. The project was always introduced to the host communities with discussion with all stakeholder groups about the importance of making sufficient water available to everyone, and the importance of equitably sharing this resource.

The program has seen a significant involvement of women and youth. In most communities where the youth and women have been culturally sidelined in decision-making, the project has been able to give them voice and a forum for engagement in issues affecting their lives. Youth and women benefit through this new opportunity to be involved in decision-making, and through the knowledge acquired and their direct use of the new facilities; all of this has contributed to their economic and social empowerment.

The local technical capacity at the community level to attend and repair hand pumps has been improved and enhanced through on the job training during installation by drillers, and pre- and post-training by the social mobilization team. Supply of spare parts and tools by the drillers at the end of the drilling program has increased the availability of stocks at the local level, and communities have been able to make their own repairs when pumps are broken. The many experiences shared with field staff of communities repairing their hand pumps have provided clear evidence that the capacity for operations and maintenance has been effectively transferred to the local end user level. The impact of this local capacity-building approach on the sustainability of this project is considerable. Anecdotal evidence of proper management and follow up on maintenance by the users in communities supported by WRAPP contributing to a sustainable life of the water sources contrasts against numerous observed cases of other water points drilled in the area, but left without any community management in place, and often found in disrepair and no-longer functioning.

The program also supported permanent resettlement of returnees. Most returnees have been reluctant to return to their original home villages due to the lack of services there. Although there has not been systematic quantitative data collected on the actual number of returnees, the WRAPP field staff, through their interaction with communities, estimated that more than 30% of the beneficiaries of this program are returnees from Uganda, Kenya, Congo and other neighboring countries. Many returnees from Khartoum and major towns within Sudan have also been members of the returnee community covered in this program.

The impact of the entire WRAPP program on community livelihoods comes from both the direct livelihood support to increase income generation, and from the many benefits of additional water points. The public health benefits of clean and more abundant water sources contribute to less sickness and therefore more productive days. Children in the more than 200 communities provided with new and rehabilitated water points and sanitation facilities were relieved from the extra burden of searching for water and are now able to attend school. Women have expressed their happiness as well with this burden relieved and claim that they have been using the time saved for additional livelihoods activities such as farming, trading and taking care of their homes.

The table below summarizes planned versus actual achievements:

Table 1: Summary of Targets Planned and Achieved

No	Activity	Planned	Achieved
1	New boreholes	90	92
2	Shallow hand dug wells	30	21
3	Spring development	--	19
4	Rehabilitation/repair of boreholes and hand pumps	--	70
5	Surface/rainwater harvesting	7	24
6	Establishment of sustainable water and sanitation management committee	127	230
7	Establishment of County Water Associations	8	--
8	Household latrines	200	295
9	School and public latrines	--	2
10	Livelihoods activities/grants	10	6 *

* One out of the six grants was issued to CHF, and this grant consisted of 18 small grants issued and managed by CHF.

The program surpassed its targets in 4 out of 7 activity areas, and achieved outstanding results in 3 additional areas that were not originally planned for in the project, but that have contributed considerably to meeting the goal of the project. It implemented only 70% of shallow hand dug wells originally planned, and did not ultimately participate in the establishment of County Water Associations, as this was carried out by other organizations as described below. In livelihoods activities, the number of activities actively carried out by Pact masks the many achievements of the small grants program managed through a subgrant to CHF, which Pact believes likely achieved far above the original target in this area.

The WfW partnership was originally slated to support to the establishment and capacity-building of County Water Associations (CWAs). This CWA program was taken up by SNV as part of their long term funding and program support to Eastern Equatoria State County Water and Sanitation Departments in greater Kapoeta area and Ikotos. The Government of Southern Sudan has also restructured the local governments and the establishments of County WASH Departments has been under review by the concerned Ministries at GOSS level. Since the end of 2008, the Ministries of Physical Infrastructure (MPI) at the state levels have started assigning Water, Sanitation and Hygiene (WASH) Officers at the County level. Roles and responsibilities have not yet been clearly defined. However, WRAPP has been closely working with the Ministry of Water Resources and Irrigation (MWRI) at GOSS level and MPI at the state levels and actively participating and contributing to strategy development and capacity building needs identification with the newly established WASH departments at the County levels.

More than 100,000 people have benefited from the program. The table below summarizes the estimated number of people that have directly benefited from the program and comparison is presented with the proposed beneficiary figures in the original proposal.

Table 2: Geographic Distribution of Activities

Sub-region	Est. Pop. (residents & returnees) directly served by WRAPP (Proposed)	Ethnic Pop. Impacted by WRAPP	Est. Pop. served*	New boreholes	Rain & surface water harvesting	Hand Dug wells	Spring Protection	Rehab. of hand pumps
Eastern Equatoria State								
Kapoeta East	30,500	Toposa, Nyangatum	8,640	12	22			

Kapoeta North		Toposa	6,000	12				
Kapoeta South		Toposa	21,300		2			42
Lafon	17,300	Pari and Lopit	5,000	7		3		
Budi	7,350	Didinga, Lango	8,500	13	1	1	2	
Ikotos	7,350		3,500	7				
Nimule	14,500	Madi	1,500			3		
Sub-total	77,000		54,440	51	24	7	2	
Central Equatoria State								
Juba-east	18,700	Mundari, Madi	14,500	1				28
Lainya	14,550	Bari, Pajulu	5,000	10				
Morobo	10,250	Moru	18,500	10		10	17	
KajoKaji	18,500	Kuku	7,000	10		4		
Sub-total	62,000		45,000	41		14	17	
Total	139,000		99,440	92	24	21	19	70

* Population figures are difficult to come by and the available figures are not reliable. A multiplier of 500 people per water point has been used for both new boreholes, rehabilitations, hand dug wells and spring development. A population figure of 120 beneficiaries per hafir is considered for the communal hafir upgrading in Jie, Eastern Equatoria. However, the assumption of more than 1,000 beneficiaries in the original proposal was found to be much higher than realistic numbers for service by such technology options. Hence the actual population figure in the final report is less than the proposed number although the number of actual facilities built is much higher than the proposed quantity.

Although WRAPP Equatoria was originally scheduled for implementation over a 12-month period, the volume and diversity of interventions required an additional 15 months of implementation to complete. The table below shows a breakdown of activity by fiscal year.

Table 3: Summary of WRAPP Programming Achievements by Financial Year

Financial Years	New boreholes	Repairs/ Rehabs	RWH	Spring Development	Livelihoods grant to CHF (18 grants to SWMCs)	Local livelihoods grants to CBOs	Hand dug wells	Sanitation and household latrines	Sanitation and public/ school latrines
FY 2007	49	0	6	5	0	1	0	0	
FY 2008	34	70	18	8	18	3	1	9	1
FY 2009	9	0		6		1	20	286	1
Total	92	70	24	19	18	5	1	295	2

The WRAPP Equatoria has made an undeniable immediate impact on people's access to water, but the long term impacts of permitting return of refugees and IDPs, facilitating access to education, supporting sustainable livelihoods, and promoting community organization for development and peaceful decision-making will ultimately be the lasting image of this project.

4 Prospects for Sustainability

The program was built on what WRAPP calls the three pillars of sustainability of a water point: financial (cost recovery), community management, and protection of the environment. From the very inception of the program, WRAPP has focused on awareness-raising within the larger community and specialized management training for the water and sanitation management committees. The trainings have inculcated a sense of ownership and self-reliance in the communities that have benefited from the program. The project has witnessed the continuation of service of the water points through community contributions both in-kind and in cash to revive broken water facilities. The reality is also that most communities still face the challenge of accessing spare parts while having the technical capacity and confidence to repair their water points.

As much as communities have demonstrated capacity to maintain pumps and their willingness to pay for spare parts and services, the lack of a well established supply system of the spare parts, even at the state level, has left many hand pumps broken that could have easily been repaired. Lack of a standardized Operation and Maintenance (O&M) approach has disoriented and discouraged individual support by organizations operating in the region. Free spare parts distribution by UNICEF on an adhoc basis from Juba to agencies that have the capacity to deliver them and restore water points has been a factor in the delayed establishment of an alternative supply chain mechanism. Setting up of a properly functioning and sustainable supply distribution system should be a crucial factor in future programming in the Equatoria region. WRAPP sees the establishment of a nation-wide working O&M mechanism supported by a sound and standardized strategy for the water sector led by the Ministry of Water Resources and Irrigation (MWRI) as the corner stone for a sustainable approach to the water sector in Southern Sudan. In the meantime WRAPP's approach will remain one of transitional support by providing spare parts through drillers during drilling; continuing to train communities on operation, maintenance and management; and stocking spare parts for emergencies and critical needs. WRAPP is planning to introduce distribution of spare parts through CBO partners by setting up a cost recovery mechanism where the partners are expected to distribute parts to communities at an agreed rate and reuse the revenue to buy more spare parts.

5 CHALLENGES, LEARNING AND RECOMMENDATIONS

Challenges

Drilling conditions in Equatoria are significantly more complex than other regions of Sudan. More than 70% of all unsuccessfully drilled boreholes in the national water point database are in the Equatoria region. Drilling in Equatoria must be supported by extensive hydro-geological and geophysical investigation. There was no existing detailed study, map or information on the geology of the Equatoria region. The program relied on individual knowledge of drillers and professional geologists' advise and support to conduct geophysical studies in some areas suspected to be challenging and with scarce possibility of finding ground water. There needs to be a comprehensive study and mapping of the Equatoria region by the Ministry of Water Resources and Irrigation (MWRI). The program encountered a total of 26 dry boreholes. Second attempts succeeded in getting successful wells in 14 communities and in at least one case the third attempt yielded a good yield well. Multiple drilling attempts were costly, however, for both the drilling contractor and WRAPP.

The capacity level of CBOs in southern Sudan is quite low, and an average course of training was often insufficient to ensure that CBOs were prepared to carry out field activities adequately. The six CBOs selected to promote and implement hand dug wells didn't have any previous experience in construction of hand dug wells, and therefore required an extensive training and technical support. Logistical complexities delayed organizing of the training, and the 2008 dry season was over before the start of construction by the CBOs.

In many cases construction materials, particularly for hand dug wells, had to be procured from neighboring countries, which carries its own challenges. Equipment not always in stock in the market at the required moment, tax and custom issues and transportation delays all pushed back the date when equipment and materials were delivered to the project site. Weak commitments and momentum by low capacity CBOs can also be a frustration.

Lessons Learned

Through the request of OFDA, an external performance evaluation of the WRAPP program was conducted in early 2008 by the Water Policy Program of Overseas Development Institute (ODI). The purpose of the evaluation was to assess the appropriateness, effectiveness, impact and sustainability of the WRAPP approach and formulate key lessons learned and strategic recommendations. The evaluation included observations from the WRAPP Equatoria program, which was in its early stages during the evaluation. WRAPP tried to address and incorporate the recommendations from the evaluation in the approach to this program throughout the implementation period.

WRAPP has been able to demonstrate that hygiene and sanitation awareness coupled with the installation of improved water facilities can trigger behavior changes in the community that will subsequently lead to a demand and initiative for sanitation facilities. At the same time WRAPP also discovered the importance of creating awareness about hygiene and sanitation in advance of the implementation of water facilities. This approach can guarantees a more enthusiastic participation, which leads to a higher level of acceptance and ownership by a larger group of community members, and supports greater sustainability of the program by reinforcing the link between water, sanitation and hygiene.

Most returnees have been exposed to the practice of using sanitation facilities and knowledge of hygiene awareness during their stay in either refugee camps or towns in neighboring countries. Returnees spearheaded the construction of household latrines in their host communities. They replicated what they had learned from outside and assisted in spreading hygiene and sanitation messages. Their active involvement was critical to spurring organic demand for improved sanitation.

A key lesson learned is the benefit of resolving disputes that may arise during program implementation through traditional courts following community accepted culture norms. This involves communities in matters pertaining to issues around the program intervention and in a format they understand and find highly credible. This reinforces local authority and legitimizes local means of dispute resolution which can be critical to avoiding violent conflict over water and other resources and issues.

Recommendations

WRAPP has gained a great deal of experience in piloting cost effective and appropriate technology options for water and sanitation programs. Shallow well rehabilitation and construction, spring development, rock catchments, livelihoods support at water points and manual auger drilling of shallow

wells (currently being piloted by WRAPP in Northern Bahr el Ghazal State under the BRIDGE project) are among the most feasible options driven by community demand. WRAPP recommends expansion of these components with a focus on utilizing local materials and capacity for future programs.

There are a number of plastic well liners left from this project and the CBOs have the equipment provided by Pact with the technicians trained on hand dug well construction. Pact will be looking for immediate new funding opportunities to utilize the materials and capacity already built from this program.

Semi Urban Water Distribution Systems are the right technology options in fast growing population centres such as Kajo Kaji, Kapoeta, and Lopit. There was a big demand by the communities for the installation of water yards or SWDS. WRAPP in future projects in the Equatoria Region will include SWDS as a component.

Pact observed that community management of public latrines didn't yield positive, sustainable outcomes. WRAPP does not intend to continue the construction of public latrines until there is an improvement in the general public's attitude toward public latrines. Some places like Kapoeta town have shown positive progress in maintenance and use by privatizing their public latrines, and WRAPP has been in discussion with community management committees and local authorities to convince them to privatize their public latrines. WRAPP will continue to discuss with the local administration in Kaya to privatize the eco-san public latrine built in this program.

Although WRAPP was begun as an emergency response to the critical immediate need for water points in Southern Sudan, its continuation over the past 5 years has allowed word of the project to reach many more communities in need of assistance than the project is able to serve. The extended interaction of the program over two and half years in Eastern and Central Equatoria have made it popular among the communities who have witnessed the positive impact, and WRAPP has not been able to fully respond to such strong community driven demand for livelihood, water and sanitation facilities due to limited funds and the ending of the program. There is obvious need for continued funding of WASH improvements throughout southern Sudan.

ANNEXES

Annex A: Bright Spots

Annex B: Summary of Planned and Achieved Activities

Annex C: Summary of new boreholes drilled by driller and CBO

Annex D: Detail of Achievements by Location and Partner

Annex E: WRAPP Equatoria Performance Indicators

Annex F: Photos

Annex G: WIGA Final Report from CHF International

Annex A: Bright Spots

The following are short success stories written throughout the project that illustrate spontaneous learning, community involvement and demand, the geographic context and challenges, and ultimate impact of the WRAPP methodology.

Building on Peace in Lauro

Lauro is a market town at the base of the Didinga Hills, in Budi County. In the long, complex history of conflict between the Toposa and the Didinga of the area, it has served as both a flash point and as a place of trading and settling disputes. Providing basic services—especially health and water—has been high on the government's priority list for some time now, and peace meetings in the area consistently call for the same; however, due to insecurity and some political resistance, this had until now proved impossible. Taking advantage of a recent peace initiative, Pact has drilled an additional borehole in Lauro. Residents in nearby villages are now preparing to come back, and Lauro, if the peace holds, is set to become a major population and economic center.

Lafon Community in Action

Of all of the places WRAPP drilling in Equatoria, Lafon is undoubtedly the most difficult. With difficult geology and very swampy terrain, it poses huge obstacles for drillers. New Sudan Services and Supply (NSSS), our contracted driller, drilled seven boreholes before the rains forced them to remove their rig from the area. In addition six out of the 13 drilling attempts made were dry. They left, however, before constructing the platforms. NSSS returned the following season to complete the platforms. They completed five but found it impossible to move their truck to the sites of the remaining two, which lay on the other side of a large swamp. Fortunately, Community Relief and Development (Pact's local partner) mobilized community members to carry all of the cement, stones, bricks and tools three hours—much of it wading through waist-deep water—to the sites. NSSS then successfully built the platforms. This is triumph of community spirit and is an example of how aid and development can come together. Both NSSS and CRDF should be applauded.

Gemeza Payam of Terekeka County has never had a borehole

The people of this area have been fetching water from the Nile River, a brutally long walk from the village, or nearby ponds during the rainy season. This resulted in many cases of water related diseases in the area. The Nile River, the meeting point of herders taking their animals for grazing and water, is where conflict erupts when there is no other source of water. Because of the continued conflicts in the area, the communities have moved away from the river, making their long trek to find water nearly impossible. Pact has drilled 10 boreholes in the area on the Eastern side of the Nile, which has helped reduce the distance and time required to fetch water. The hygiene and sanitation situation of the community has improved as people are able to find enough nearby water to use for washing and bathing.

Spring improvements make a big difference for communities

Kaya is a congested trading town in Central Equatoria on the border with Uganda. The town's population has been growing since the signing of the Comprehensive Peace Agreement, as the returnees and Sudanese diaspora flow in from neighboring Uganda. This rapid growth has placed a huge pressure on the limited existing resources in the area, causing conflict among the women over water sources. This has forced the population to look for water from unprotected sources, including unprotected springs, which exposes them and their families to dangerous water related diseases. Pact was able to protect 10 springs in the area, thereby reducing the conflict over access to improved water sources in the community. The fear of water related disease has reduced and overcrowding at water points have somewhat reduced, with a decline in conflicts reported.

Demand-Driven Household Latrines in Kit One

Kit One is a small community in Magwi County comprised of Acholi returnees who had been living in Ugandan refugee camps during the war. Having been sensitized to household latrines during their time in Uganda, the community responded very enthusiastically to the household latrine project implemented by AWDA (Acholi Women's Development Association). In addition to the 20 pits dug for the project, 40 other families also dug pits. In light of this demand-driven response for sanitation, WRAPP modified the grant to AWDA to add materials so that the additional 40 latrines can be built as well. In addition WRAPP delivered 15 plastic slabs from other areas where the CBOs have failed to distribute the slabs to household and supplied to AWDA. The 15 slabs were used to complete house hold latrines successfully.

Introduction of Improved Technology for Hand Dug Wells

In Eastern and Central Equatoria, hand dug wells are a commonly used form of accessing water in areas with high water tables. Traditional open hand dug wells however, are unhygienic with exposed surface water and high potential for contamination. In addition, they are prone to collapsing and present a public safety hazard. By training CBO partners in how to build modernized hand dug wells, using plastic liners and installing a hand pump, Pact has both built the capacity of CBO partners to be able to continue to implement this new technology, as well as bringing safe water sources to 21 communities.

Annex B: Summary of Planned and Achieved Activities by State

		Eastern Equatoria		Central Equatoria		Total	
No.	**Activity**	**Planned**	**Achieved**	**Planned**	**Achieved**	**Planned**	**Achieved**
1	**New and rehabilitation of water Sources**	**70**	**102**	**50**	**100**	**120**	**202**
1.1	Boreholes	40	51	50	41	90	92
1.2	Hand Dug wells	30	7	--	14	30	21
1.3	Spring Development	--	2	--	17	--	19
1.4	Rehab of BHs and hand pumps	--	42	--	28	--	70
2	**Water harvesting**	**5**	**24**	**2**	**0**	**7**	**24**
2.1	Pilot rainwater harvesting	5	--	2	--	7	--
2.2	Upgrading of Community Hafirs	--	22			--	22
2.3	Rock and roof water harvesting	--	2	--	--	-	2
3	**SWMC and CWA establishment**	**84**	**130**	**54**	**100**	**138**	**230**
3.1	WfW - CWA	4	--	4	--	8	--
3.2	SWMC establishment (around boreholes, springs, rehabs, etc.)	50	123	50	86	100	209
3.3	SWMC and CWA establishment for hand dug wells	30	7	--	14	30	21
4	**Sanitation & hygiene**	**154**	**156**	**50**	**141**	**194**	**297**
4	WfW	4	--			4	--
4.2	Household latrines - CBOs	50	155	50	140	100	295
4.3	Household latrines - IFRC	100	--	--	--	100	--
4.4	Public/School latrines	--	1		1	--	2
5	**Livelihoods**	**--**	**5**		**18 ***	**--**	**23**
5.1	WIGA						
5.2	Livelihoods grants to CBOs	--	4		18	--	22
5.3	Livelihoods grants to CBOs	---	1			--	1

*Pact issued one large grant to CHF. CHF in turn distributed the fund and managed 18 small grants.

Annex C: Summary of new boreholes drilled by driller and CBO

No.	Drilling Contractors	CBOs	Locations (County)		Completed BH
			Eastern Equatoria	Central Equatoria	
1	Danish Refugee Council	ASTAD		Lainya	10
2	HYDRO water well drilling	RUTAD		Kajo Keji	10
3	New Sudan Services and Supply (NSSS)	TDA	Kapoeta East & Budi		9
4	NSSS	Galcholo	Budi		1
5	New Sudan Services and Supply	CRDF	Lafon		7
6	NSSS	MANA	Ikotos		7
7	Presbyterian Church East Africa (PCEA)	KDI	Kapoeta North		12
8	Life Services International (LSI)	Galcholo / CDS	Budi		7
9	East Africa Aquatec	KDI	Kapoeta East		3
10	East Africa Aquatec	CDS	Budi		5
11	OVADA	Pact	Juba	Juba School	1
12	PARAD	Accomplish		Terekeka	10
13	MEDIC (JB Drilling)	Loketa		Morobo	10
	Total				92

Annex D: Detail of Achievements by Location and Partner

	Implementing Partners and Activities - Eastern Equatoria																	
		Kapoeta East		Kapoeta North		Kapoeta South		Lafon		Budi		Ikotos		Nimule (Magwi)		Total Eastern Equatoria	
No.	Activities	Planned	Achieved	Planned	Achieved	Planned	Achieved	Planned	Achieved	Planned	Achieved	Planned	Achieved	Planned	Achieved	Planned	Achieved
1	New and rehabs of Water Sources	25	12	--	12	--	42	25	10	5	16	5	7	10	3	70	102
1.1	New boreholes	WWR - 10	NSSS - 9 EAA - 3	--	PCEA - 12			WWR - 10	NSSS - 7	SFM - 5	LSI - 7, EAA - 5, NSSS - 1	SFM - 5	NSSS- 7	SFM - 10	--	40	51
1.2	Hand dug wells	IFRC - 15	--					IFRC - 15	CRDF - 3		CDS - 1				CARD - 3	30	7
1.3	Spring Develop-ment										CDS, Nagishot spring - 2					--	2
1.4	Rehab of boreholes and hand pumps						RBS - 42										42
2	Water harvesting	5	22	--	--	--	1	--	--	--	1	--	--	--	--	5	24
2.1	Pilot RWH	TDA - 5														5	--
2.2	Community hafir upgrading		KDI - 22													--	22
2.3	Rock and roof water harvesting						LDRA 1 (Kapoeta school)				Galcholo - 1					--	2
3	SWMCs and CWAs	31	34	--	12	--	48	31	10	11	16	--	7	11	3	84	130

3.1	WfW - CWA	Wfw - 1						Wfw - 1		Wfw - 1				Wfw - 1		4	--
3.2	SWMC establish-ment (BHs, Springs, rehab, etc)	TDA - 15	TDA - 9, KDI – 3, KDI -22	--	KDI - 12		LDRA - 6 (CHF BHs), RBS - 42	LRDA - 15	CRDF - 7	MANA - 10	Galchh olo -7, CDS 8		MANA – 7	LRDA - 10		50	123
3.3	SWMC and CWA establish-ment for HDW	IFRC - 15	--					IFRC - 15	CRDF - 3		CDS -1				CARD - 3	30	7
4	Sanitation & hygiene	66	--			--	1	66	30	11	20			11	105	154	156
4	WfW	1	--					1	--	1	--			1	--	4	--
4.2	Household latrines -CBOs	TDA - 15						LRDA - 15	CRDF -15, LOWID A – 15	MANN A - 10	CDS - 20			DOT - 10	AWDA – 75, CARD - 30	50	155
4.3	Household latrines - IFRC	IFRC - 50						IFRC - 50								100 latrine s	--
4.4	Public/ School latrines						KDI - 1 (Kapoet a - school)									--	1
5	Livelihood					--	2			--	3					--	5
5.1	WIGA																
5.2	Livelihood grants to CBOs						KDI - Meat Market -1				CDS – vegetab le 1, Nursery 1, Food storage 1					--	4
5.3	Livelihood grants to CBOs						Milk produc-tion (Coop) 1									---	1

	Implementing Partners and Activities - Central Equatoria												
		Juba East		Terekeka		Lainiya		Morobo		Kajo Keji		Central Equatoria Total	
	Activities	Planned	Achieved	Planned	Achieved	Planned	Achieved	Planned	Achieved	Planned	Achieved	Planned	Achieved
1	New and rehabilitation of Water Sources	10	29	--	10	15	10	10	37	15	14	50	100
1.1	Boreholes	SFM - 10	OVADA - 1	--	PARAD - 10	JB - 15	DRC - 10	JB - 10	JB - 10	SSDO - 15	HYDRO - 10	50	41
1.2	Hand Dug wells								CAWP - 6, CALO - 4		Rutad - 4	--	14
1.3	Spring Development							--	CAWP 10, CALO 7			--	17
1.4	Rehab of hand pumps and plat forms		COMPASS -28									--	28
2	Water harvesting					2*						2	--
2.1	pilot RWH					TBI - 2						2	
2.2	Upgrading of Community Hafirs												
2.3	Rain water harvesting												
3	SWMC and CWA establishment	11	29	--	10	16	10	11	10	16	10	54	100
3.1	WfW - CWA	1				1		1		1		4	--
3.2	SWMC establishment (BHs, Springs, rehab, etc)	JWSDO -10	Pact -1, COMPASS – 28	--	ACCOMPLISH - 10	ACORD - 15	ASTAD - 10	SFM - 10	Loketa–10, CAWP 10, CALO 7	SSDO - 15	Rutad - 10	50	86
3.3	SWMC and CWA stab- lishment for HDW								CAWP 6, CALO 4		Rutad – 4,	--	14

4	Sanitation & hygiene	10	--			15	--	10	101	15	40	50	141
4.1	WfW												
4.2	House hold latrines - CBOs	JWSDO -10		--		ACORD - 15		SFM - 10	CAWP- 60, CALO - 40	SSDO - 15	RUTAD – 40	50	140
	House hold latrines - IFRC											--	--
4.3	Public/School latrines								HESKY – 1 Eco-san			--	1
5	Livelihhod					--	8	--	10			-	18
5.1	Wfw												
5.2	Water-Related Income Generation Activities (WIGA)						CHF - 8		CHF - 10			-	18
5.3	Livelihood grants to CBOs												

* Although the technical narration shows 10 rain water harvesting activities, the actual plan and budget allocation was only for 7.

Annex E: WRAPP Equatoria Performance Indicators

Sanitation and Hygiene Promotion Indicators	Target Benchmark	WRAPP Indicator
Number of water & sanitation committees revitalized, trained or established	All new or rehabbed water points have WMC	WMC established and trained in all 232 water points (92 boreholes, 70 repairs, 17 springs, 21 HDWs, 22 hafir expansions, 6 new MWC established to existing boreholes)
Average increase (in percentage of people) in good hand-washing practices	25% increase in hand washing	Hygiene training impacts not yet monitored. However, the hand wash practice in Kit one area, Magwi County have high achievement rate
Number of public latrines constructed	3 public latrine	2 public latrines
Water Indicators		
Geo-coordinates of every protected water point established	All new or rehabbed water points	More than 97% have coordinates
Number of beneficiaries receiving water from protected water points	500 beneficiaries per water point	Average approx. 500 beneficiaries per water point
Increase in water quantity available	20 liter increase in daily consumption	Average increase 10 (liters/person/day)
Average reduction in time spent collecting water per household	2 hour reduction in time for collecting water	Average approximate reduction was 1.5 hours
Percentage of water points with 0 coliforms/100ml at commissioning	0% testing positive for coli forms	Biological testing done on random samples
Number of water points completed (boreholes, hand-dug wells, & SWDS)	215 water points programmed	130 new water points completed to date
Number of water points constructed in environmentally sound manner	100% environmentally safe	95% constructed in environmentally safe manner
Percentage of residents accessing water locally	100% local water access	Estimated at approximately 95%
Percentage of returnees accessing water locally	100% local water access	Estimated at approximately 95%
Livelihoods Success Indicators		
Number of water point-related businesses established	4 livelihoods programming	Qualitative data only. 18 income generating business established under the CHF grant.
Contribution to sustainable water provision attributed to livelihood activities	All new or rehabbed water points	Qualitative data only
Gender Equity Indicators		
Numbers of women active in Community Water Management Committees	40% women involved in SWMCs	Approximately 25% female representation
Number of individuals (disaggregated by gender) trained in O&M	40% women involved in O&M	Approximately 15% female representation

Annex F: Photos

One of the two ferro-cement storage tanks in Kimatong.


New borehole in Ikotos County.

A newly constructed borehole in Lafon.

Household latrine in Kit One supported by AWDA (Mrs. Rebecca, AWDA leader, on the right). Walls and roof was later built by the households.

Protected spring, Boyo, Kimba Payam, Morobo.

Roof catchment tank, Namorunyang school, Kapoeta South, built by LRDA.

Eco-san public latrine constructed in Kaya (Uganda-Sudan border town). Constructed at the Truck parking yard to also serve immigration and customs offices.