

**Sustainability of community WATSAN facilities, S. Sudan***Y. Mesfin, and A. Duncan, Kenya*

SOUTH SUDAN HAS an estimated population of 6–8 million people and is diverse in language, ethnic groups, and natural resources. It covers an area of about 1.72M Square Km. with an estimated population density of 8 per square Km. The country has been unstable due to an intermittent civil war since 1955 with casualties estimated at over two million people. This war has created a series of problems ranging from the near total destruction of infrastructure, cyclical famines, internal and external displacement as well as a constant sense of insecurity resulting in a widespread reluctance to invest in permanent infrastructure construction and ownership. Access to safe water and sanitation facilities is extremely limited with an estimated 19% of households having to walk an average of 3 hours (return) to fetch water during the dry season (CRS 2000).

The country is separated into a southern and northern sector by the UN agencies co-ordinating humanitarian interventions by NGOs. The following table outlines the Human Development Index (HDI) indicators of Sudan but should be taken as representing only the northern government controlled areas (UNDP 2001). The southern sector of Sudan has been effectively cut off from the government-controlled north for almost 20 years, therefore the southern equivalent would be significantly below these figures.

The following table shows estimated statistics of the Lakes State region of south Sudan (CRS 2000).

In response to the situation in southern Sudan, many international and indigenous non-governmental organisations intervened to implement emergency programs including food distribution, provision of potable water and basic health services. The Catholic Relief Service (CRS) operations in the area started in late 1998 as a response to the famine situation and has since developed into an integrated food security program incorporating preventative health care and education, rehabilitation of existing hand dug wells and agricultural diversification. However the emergency nature and readiness of the operations remains due to their proximity to the front lines of the civil war in the oil fields of Western Upper Nile.

**A brief description of how water and sanitation projects have been implemented by NGOs in Bahr El Ghazal region - South Sudan**

NGOs, including CRS, operating in the southern sector of the country have placed excessive emphasis on the rapid

**Table 1. Human development index HDI indicators of Sudan**

Country and ranking	Life expectancy at birth	Adult literacy	Primary, secondary, tertiary education enrolment	GDP per capita US\$	Life expectancy index	Education index	GDP index	HDI value	GDP per capita (PPP US\$) rank minus HDI rank
Sudan (138)	55.6	56.9	34	664	0.51	0.49	0.32	0.439	19

**Table 2. Statistics of the Lakes State region of S. Sudan**

<b>Total population</b>	6-8 million
<b>Life expectancy</b>	54
<b>Adult literacy rate</b>	
Male	< 5%
Female	< 2%
<b>Main causes of morbidity and mortality</b>	Malaria, respiratory disease, TB, diarrhoea / dehydration, tetanus, child birth
<b>Potable water availability</b>	Rural < 5%
<b>Access to sanitation</b>	Rural < 1%

establishment of protected water points with little or no community interaction or participation within the process. This approach has placed too much emphasis on implementing water systems, ignoring core issues like education to build and facilitate community participation and to ensure behavioural change towards water, hygiene and sanitation. Very limited training is also given, either to the community or the local authorities, with regard to pump maintenance preparation and financial sustainability of the water and sanitation facilities. Recent assessment reports indicated that this situation has led to substantial numbers of the water and sanitation facilities that had been constructed within emergency programs becoming non-functional or just not used within a very short spaces of time (OLS 2001). Although this approach is perceived to be justified in certain areas within the south due to the “emergency” nature of the interventions, their application needs to be reviewed in order to find a solution to the behaviour change and sustainability of the maintenance of the water and sanitation points within conflict environments.

Organizations such as CRS, which have changed their programming from quick emergency interventions to longer-term rehabilitation programs such as the on-going water and sanitation initiatives, have not as yet taken into account the many elements within the existing social dynamics. For example cultural aspects that need to be tackled as foundations for sound sustainability are not addressed. Again little consideration and resources have been allocated to building the existing local capacities to ensure longer-term sustainability of the interventions. Community prioritisation of existing problems are either not fully analysed or considered with appropriate weight both within the design stage of the project plan or the implementation.

NGOs must design programs that allow communities to realize their existing potential, participate in all phases of the programs and must assume full ownership on the established water and sanitation facilities. Cost recovery strategies within conflict situations are complicated and to a large extent ignored, as it has been perceived that the communities have alternative prioritisations for the cash available within the household. This received wisdom however needs to be challenged, as without this element of sustainability there appears to be limited scope for either on-going supply of spares and repairs of water facilities or more importantly community ownership of and responsibility for the facility.

### **Sustainability of community water and sanitation systems**

As briefly addressed above, the approaches which most agencies use to implement water and sanitation projects rarely achieve their intended objectives, are unsustainable and have little impact on improving the communities’ health. The major challenges have been: addressing community participation; actively engaging in local capacity building; improving the sense of ownership and maintenance

of the developed water points; achieving changes in sanitation practices and above all making the project sustainable. The following approaches mentioned here have been recommended by CRS internal evaluations of the on-going water and sanitation programs. Increasing emphasis and organizational commitment is required in the following areas if real progress on sustainability is to be attained.

#### **Community participation and ownership**

The concept of community participation and empowerment is unfortunately a new concept to NGOs working in south Sudan due to the perception of the “emergency hit-and-run” nature of the country. This is further exacerbated by the common insistence of communities for direct payment or other forms of payment in kind before providing assistance in the rehabilitation or construction process.

Due to logistical and donor constraints that have been faced by the programme in the past direct payment have been made to communities in order to ensure that work is carried out. This only further entrenches the practice both within the community as well as the NGO world of south Sudan.

CRS has started to tackle this problem by engaging in more in-depth discussions and comprehensive agreements with the participating communities prior to commencement of any work; this is being facilitated through water committees that are formed in conjunction with the programme. These committees also nominate individual members to participate in additional training for health education, maintenance and operational procedures.

#### **Needs assessment**

The disconnect between the current depth of the needs assessments being carried out and the community prioritisation of their situation has resulted in the community beneficiaries being “done unto”, rather than being empowered to improve the quality of their lives. This has directly resulted in the perpetual cycle of poor commitment to interventions and subsequent failure of the project. Cultural and social aspects of lives within the project area also need greater weight and attention given, for example in Bahr el Ghazal Region where the community’s are mostly agro-pastoralist, who settle at cattle camps during the dry season. These cattle camps or “toic” (Dinka tribal language) can be up to a one-week journey from the home village of the community where the water and sanitation interventions usually take place. The water demand in these cattle camps has usually not been considered where as this would probably be the higher priority for the communities as they spend greater amounts of their time in these locations than at their home farms.

Consequently greater levels of commitment and time needs to be given to this fundamental project development tool to ensure the inclusion of opinions and ideas of the local community as well as the assessing the appropriateness of potential interventions.

### Local and institutional capacity building

An improving aspect of the water and sanitation interventions by CRS has been the commitment to identifying and building local capacity to manage and maintain the facilities put in place by the organization. This initiative however has in-itself highlighted several new problems for the programme:

- The level of educational attainment gained by the population within the operational area is extremely low due to the disruption caused by the on-going conflict. This has resulted in most identified community pump mechanics and Payam pump mechanics having had only basic primary education if any is reached at all. Payam is an administrative boundary that will contain approximately 15 villages. This has severely restricted the initial capabilities of the mechanics and has extended the required training timescale considerably.
- Once mechanics, and other technical personnel, are trained they are highly susceptible to “poaching” by other NGOs. Local mechanics either community based or supplied by the local authority are not paid and therefore the incentive to accept paid employment elsewhere is very high.
- Community based preventative health educators have been given a small incentive to carry out the education work within their community. This has been found to be completely unsustainable both in relation to the long-term financial cost to the program as well as more importantly the continuation of these services once the incentive is withdrawn. Recent experience has indicated that all health education work within one location of the operational area collapsed immediately after the withdrawal of CRS.
- The supply and pricing of spare parts within these conflict areas is a major constraint to even the short-term sustainability of these interventions. The operational area of Lakes State is approximately a one-week journey by road from the nearest supplier in northern Uganda, this situation increases the real cost of spares by approximately 150-200%. If, as hoped, traders will take over this role of supplying the spares there will have to be either a significant increase in the disposable income available within households or re-building of the 500km access road to Uganda. Both of these options are clearly some way off.

All of these points provide major constraints to the implementation and sustainability of water and sanitation project. However working through the established water committees is helping the programme identify appropriate solutions to the problems of high turn over of local technical staff, supply of spare parts etc. This methodology is starting to provide alternatives for retaining trained community members through better selection of potential trainees.

### Operation period

Timeframes allocated to emergency interventions also require serious revision; the normal hit-and-run strategies, which last from 2 days to 2 weeks in unstable areas can significantly contribute to the growing dependency of the population. The perceived lack of time available for community consultation and more importantly training, disempowers already vulnerable populations. Populations within conflict areas need to be seen as active participants in their own assistance. This builds their capacity to prioritise and implement projects directed to stabilising or improving the quality of their lives. Consequently operational timeframes should either be extended to incorporate sufficient opportunity for real dialogue and training with the community or be extended over several consultation and training visits. A combination of both types of visit would greatly increase the impact and sustainability of water and sanitation projects within south Sudan.

### Cost recovery

This is by far the most difficult aspect of the sustainability formula for south Sudan. As stated above, the market access to spares is highly restricted and costly. Within the foreseeable future there is no real alternative to the on-going supply of spares by NGOs.

Since 2000 - 2001 all site development, maintenance, spares and technicians had been entirely supplied by international NGOs with no expectation of community contribution or cost recovery. A number of NGOs have initiated a cost recovery strategy for established water points within the Lakes State, this is still a relatively new concept for the area and resistance has been seen from the participating communities who have found it difficult to understand why they should pay for services that were previously free. As a result of these experiences CRS is embarking on the formation of water committees that have the responsibility of establishing rules for use and setting the cost structure and method of collection of user fees. This is still in a rudimentary stage but is expected to contribute considerably to the community perceptions and use of the established water and sanitation facilities.

### Conclusion

Emergency water and sanitation programmes in south Sudan are learning some painful lessons that the development orientated NGOs identified and accepted over a decade ago. Community participation and buy-in to programmes is equally or sometimes more important than when working in non-conflict areas. The main recommendations from the CRS water and sanitation programme are:

- Spend more time understanding and talking to the communities and allow them to contribute to the identification and design of the project.
- Allocate resources, time, personnel and money to training both for maintenance and hygiene education to

promote the establishment of appropriate local management structures for the facilities.

- Understand that people affected by conflict will be resistant to invest time and resources into infrastructure development. They will probably have seen everything that they had destroyed or lost in the conflict and will fear that it will happen again to the new development.
- Re-visit the communities regularly to up-date training and provide support to the water committees, nobody sees Santa Claus as a good role model.

## References

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