Water for Lakes State Programme

COMMUNITY CONSULTATIONS

FOR THE CONSTRUCTION OF LIVESTOCK WATER YARDS IN LAKES STATE
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# TABLE OF CONTENTS

List of Figures .......................................................................................................................... iii
List of Tables .............................................................................................................................. iii
List of Acronyms ......................................................................................................................... iv

## 1 Introduction: Livestock Water Yards in Lakes State ............................................................. 1
  1.1 Background to the Community Consultations ................................................................. 1
      1.1.1 Water for Lakes State Programme Objectives ......................................................... 1
      1.1.2 Aims of Assignment ............................................................................................... 1
  1.2 Methodological Reflections .............................................................................................. 2
      1.2.1 Site Selection Procedures ....................................................................................... 2
      1.2.2 Methodology .......................................................................................................... 3
  1.3 Structure of the Report ...................................................................................................... 3

## 2 Cueibet Livestock Water Yard Assessment: Drawing Lessons ............................................. 4
  2.1 Migratory Patterns and Conflict Dynamics ....................................................................... 4
      2.1.1 Intra-State Dynamics ............................................................................................. 4
      2.1.2 Changed Water Availability ................................................................................... 5
      2.1.3 Inter-State Dynamics ............................................................................................. 6
  2.2 Operation and Maintenance ............................................................................................. 6
      2.2.1 Community Evaluation and Opinions ..................................................................... 6
      2.2.2 Verbal Regulations and Application ....................................................................... 8
      2.2.3 Agricultural Activities ........................................................................................... 9
  2.3 Drawing Lessons ................................................................................................................ 9

## 3 Community Consultations in Rumbek North ...................................................................... 10
  3.1 Payieli - Wuriang Payam .................................................................................................... 11
      3.1.1 Social Divisions and Conflict Dynamics ................................................................. 11
      3.1.1.1 General Conflict Dynamics .............................................................................. 12
      3.1.1.2 External Conflict Dynamics ............................................................................ 13
      3.1.2 Water Availability and Cattle Migration ................................................................. 14
      3.1.2.1 Mobility ......................................................................................................... 14
      3.1.2.2 Cattle Population and Distribution .................................................................. 14
      3.1.3 Operation and Maintenance ................................................................................... 16
      3.1.3.1 Agricultural Activities ..................................................................................... 16
      3.1.3.2 Discussions on Operation and Management ...................................................... 17
  3.2 Pansual – Malueth Payam ................................................................................................. 19
      3.2.1 Social Divisions and Conflict Dynamics ................................................................. 19
      3.2.1.1 General Payam Information .............................................................................. 19
      3.2.1.2 Cattle Population ............................................................................................ 19
      3.2.2 Water Availability and Cattle Migration ................................................................. 20
      3.2.2.1 External Conflict Dynamics ............................................................................ 21
      3.2.2.2 Agricultural Activities ..................................................................................... 22
      3.3.3 Operation and Maintenance ................................................................................... 23
  3.3 Amok - Meen Payam .......................................................................................................... 25
      3.3.1 Social Divisions and Conflict Dynamics ................................................................. 25
      3.3.1.1 External Conflict Dynamics ............................................................................ 26
      3.3.2 Water Availability and Cattle Migration ................................................................. 26
      3.3.2.1 Cattle Population ............................................................................................ 26
      3.3.2.2 Water Availability and Migratory Patterns ......................................................... 27
      3.3.3 Operation and Maintenance ................................................................................... 28

## 4 Community Consultations in Yirol West ............................................................................ 32
  4.1 Nyakajongbaai – Aluakluak Payam .................................................................................... 32
      4.1.1 Social Divisions ..................................................................................................... 32
      4.1.1.1 Aluakluak Payam General Living Situation ....................................................... 33
4.1.2 Migratory Patterns and Conflict Dynamics ................................................................. 34
  4.1.2.1 Migratory Patterns ................................................................................................. 34
  4.1.2.2 External Conflict Dynamics .................................................................................. 34
  4.1.2.3 Internal Conflict Dynamics .................................................................................. 35
  4.1.3 Operation and Management ..................................................................................... 35

5 KEY OBSERVATIONS AND SITE RECOMMENDATIONS .................................................. 39
  5.1 Operation and Management ....................................................................................... 39
  5.2 Design and Size ........................................................................................................... 39
  5.3 Main Observations ........................................................................................................ 40

Annex I: Community Consultations Interview Guide ........................................................... 41
Annex II: Livestock Water Yard Assessment Interview Guide ............................................. 43
Annex IV: List of Community Contacts .............................................................................. 48
Annex V: Terms of Reference ............................................................................................... 50
LIST OF FIGURES

1. Locations Visited for Community Consultations and Assessment ......................................................... 2
2. Abandoned well in Barjiek, Citcok Payam ............................................................................................ 5
3. Solar-powered livestock water yard constructed by Obakki in Barjiek, Citcok Payam .......................... 7
4. Tobacco farms in close proximity to the livestock water yard in Barjiek, Citcok Payam ...................... 9
5. The corpse of a heifer has been left abandoned along the River Relief .............................................. 11
6. View of Payei Village ............................................................................................................................ 13
7. Toic around Payei Village .................................................................................................................... 15
8. Raised ground selected for the LWY located between Payei Village and Chamcuer cattle camp .. 16
9. Panlual Village as viewed from the back ............................................................................................... 20
10. Chiefs from Madhol and Panlual villages after the community consultations ................................ 21
11. A woman crosses the borders of the Toic bordering Panlual Village ................................................ 22
12. People from the different payams in Rumbek North gather in Pakam for food distribution .............. 27
13. Cattle emerge from a roadside water hole in Meen Payam ................................................................. 28
14. Paramount Chief of Meen Payam and some citizens of Amok One climb the selected LWY location 29
15. A household in Nyakajonbaai cattle camp ......................................................................................... 33
16. Galweng youth scout the area between Nyakajonbaai and Amet for a LWY location ..................... 35
17. Selected site location for the LWY between Nyakajonbaai and Amet .............................................. 37

LIST OF TABLES

1. Sub-sectional and clan divisions in Wuriang Payam ........................................................................... 12
2. Payei General Site Information and Recommendations ................................................................. 17
3. Payei Site Characteristics .................................................................................................................... 18
4. Sub-sectional and clan divisions in Malueth Payam ......................................................................... 19
5. Panlual General Site Information and Recommendations .............................................................. 23
6. Panlual Site Characteristics ............................................................................................................... 24
7. Sub-Sectional and Clan Divisions in Meen Payam ............................................................................ 26
8. Amok One General Site Information and Recommendations ........................................................ 29
9. Amok One Site Characteristics ......................................................................................................... 30
10. Nyakajongbaai General Site Information and Recommendations .................................................. 36
11. Nyakajongbaai Site Characteristics .................................................................................................. 37

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1 All photographs and graphs are made by the author. The visited locations have been designed onto an existing map of the British Geological Survey: “South Sudan South Sudan: Lakes State Detailed Transport Map” (as of 1 Mar 2013), online available at: http://reliefweb.int/map/south-sudan-republic/south-sudan-lakes-state-detailed-transport-map-1-mar-2013.
LIST OF ACRONYMS

CPA - Comprehensive Peace Agreement
LWY - Livestock Water Yard
O&M - Operation and Management
PRA - Participatory Rural Appraisal
SPLA - Sudan People’s Liberation Army
SPLA-IO - Sudan People’s Liberation Army in Opposition
UNOPS - United Nations Office for Project Services
W4L - Water for Lakes
WUC - Water Used Committee
INTRODUCTION: LIVESTOCK WATER YARDS IN LAKES STATE

1.1 BACKGROUND TO THE COMMUNITY CONSULTATIONS

This report discusses the findings of community consultations undertaken in the context of the bilateral Water for Lakes State Programme that is funded by The Embassy of the Kingdom of the Netherlands for the Ministry of Water Resources and Irrigation of South Sudan and is implemented by Mott McDonald.

1.1.1 Water for Lakes State Programme Objectives

The general objective of the Water for Lakes State (W4L) Programme is to balance the development and management of natural resources with water as an entry point in order to contribute to security and to reduce dependence on food aid. The programme aims to diversify the livelihood base of people in Lakes State through integrated development and water resource management of water for livestock, agriculture, fisheries and habitats, people and safe water and improved sanitation, and knowledge and capacity development.

1.1.2 Aims of Assignment

The community consultations described and analysed in this report were organized to address the construction and management of solar powered livestock water yards (LWY) as part of the Water for Livestock Component. As specified in the Field Reconnaissance and Scoping Mission Report (2012), the water for livestock component is intimately linked to the security and stability of rural communities and aims to considerably reduce the need for extensive cattle migration; reduce the concentration of livestock and people; and improve social stability within and between communities in Lakes State. Comprehensive analyses of the multiple conflicts in Lakes State have to include, but move beyond explanations based on resource and political competition and migration patterns. The need to accumulate wealth, poverty and unequal access to water resources as well as conflicts over women (elopement, impregnation, adultery) are contributing factors to cattle raiding and conflict. Conflict dynamics, however, are highly influenced by mechanisms of reciprocal justice and proportional retribution mechanisms which implicate individuals in wider social units and hold whole social groups accountable and punishable for individual actions. Water for Lakes State is aware of the fact that the improvement of access and availability to water cannot be seen as a conclusive resolution to conflict and is sensitive towards the possibility that the construction of new water resources can equally contribute to novel conflicts or exacerbate existing conflicts through disputes over land ownership.

The characteristics specified for the proposed site locations for livestock water yards, as designed by the Water for Lakes State Programme and drafted in the Terms of Reference (see Annex V) are:

1. The location should be in close proximity to a village or permanent settlement in order to ensure security and facilitate supervision and management and maintenance;
2. The payam should have a large indigenous cattle population and sufficient grazing area;
3. There should be little or no existing agriculture in close proximity to the proposed site location;
4. The payam should be inhabited by a relatively homogeneous community with little or no internal conflicts;
5. The location should be relatively far from the main cattle migration routes;
6. The location should be at a certain distance from the main road network;
7. The community should be prepared to actively participate in operation and management (O&M) of the livestock water yard through the establishment of water used committees (WUC).
In this community consultation report, the various locations visited will be ‘measured’ alongside these characteristics and each selected location will be evaluated using a table with the specified characteristics.

In reflection on these characteristics the researcher is of the opinion that these should be used as fluid guidelines that should not be applied in a strict and rigid manner because that would ignore the diversity of geography, environment and society. Also, the existing livestock water yard in Cueibet has shown that a comparable system can be effectively operated at a distance from a permanent settlement and that agricultural activities can take place in very close proximity to the livestock water yard without great societal conflict. The researcher will elaborate on this further in the evaluation of the selected locations.

1.2 METHODOLOGICAL REFLECTIONS

1.2.1 Site Selection Procedures

In the period between 16 and 27 February community consultations were organized with diverse groups of people, ranging from customary authorities, local government officials, galweng authorities, women representatives, farmers, cattle-less men and educated youth in Rumbek North and Yirol West counties of Lakes State. In September and November 2014, Water for Lakes organized participatory rural appraisal (PRA) workshops in Rumbek with customary officials under the supervision of Cor Verduijn\(^2\). The PRA workshops were organized during the rainy seasons and as a result of this the water expert was unable to access the locations. Out of these workshops and in discussion with the Directorate of Water Supply and Sanitation in the Lakes State Ministry of Physical Infrastructure, four payams were selected for further assessment.

![Figure 1: Locations Visited for Community Consultations and Assessment](image)

In Rumbek North, the researcher visited communities in Meen, Wuriang and Malueth payams and in Yirol West the researcher engaged in discussions with communities in Aluakuuk Payam. Community consultations were organized around the potential construction of livestock water yards in the selected locations.

payams and covered topics related to available water resources, migratory patterns, existing and hypothetically evolving conflict dynamics; the relationship between pastoralism and agriculture, and viability of community-based operation and management of the livestock water yards.

During the PRA workshops organised in September 2014 stakeholders in Rumbek Centre and Rumbek East equally selected potential sites for the construction of livestock water yards, but due to an increase in intercommunity conflict in these counties since late 2014, Water for Lakes State decided to focus on the internally more peaceful Rumbek North and Yirol West. In Yirol West the western part of Greater Yirol was selected because of the presence of Lake Yirol and Anyi in the eastern parts of Yirol East and Awerial counties.

Secondly, the researcher visited and evaluated the only existing livestock water yard in Lakes State that has been established in Barjiek in Citcok Payam, Cueibet to draw lessons to inform the future establishment of livestock water yards in other counties.

1.2.2 Methodology

The biggest share of the data presented in this report has been collected in the process of community consultations that followed a similar interview guide (see Annex I). During each of the separate community consultations the researcher was assisted by employees of the Directorate of Water Supply and Sanitation and before engagement with the communities permission was sought from local government and customary authorities. Before the actual commencement of the community consultations, preliminary, introductory meetings were organized in which the researcher introduced the envisioned project and informed communities about objectives and motivations for the community consultations and aimed to build rapport. Secondly, the insights obtained through the community consultations are substantiated with semi-structured interviews, observations and informal conversations.

1.2.3 Structure of the Report

The report is divided into three main parts: the first chapter contains an evaluation of the existing livestock water yard in Cueibet. Chapter three and four discuss and analyse the community consultations organised in Rumbek North and Yirol West. These chapters provide a socio-historical overview of the communities consulted, evaluate the four locations visited and provides recommendations on the most appropriate locations for livestock water yards to be constructed before the 2015 rainy season begins. Lastly, the report includes a work plan for the involvement of communities in the various phases related to the selection, construction and operation of livestock water yards.
CUEIBET LIVESTOCK WATER YARD ASSESSMENT – DRAWING LESSONS

In the period between January and April 2013, Obakki has constructed three livestock water yards along the border of Lakes and Warrap (Tonj East and Tonj South) states. The main motivation for a water intervention in the border area was to reduce conflict over access to water resources and prevent violent confrontations between cattle keepers who meet in the grazing lands that run along the two state borders. Inter-state violence between people from Cueibet in Lakes State and Tonj East and Tonj South in Warrap State has been recurring occasionally over the past years with casualties on both sides of the state borders. So far, one lwy has been constructed in Lakes State in Barjiek in Citcok Payam, Cueibet. Abednego Majack, the Country Director of Obakki, argues that the main reason for migration on both sides of the state borders is water and apart from the aim to quell inter-state violence between Lakes and Warrap states, the livestock water yard in Cueibet also aimed to reduce conflict with the Bongo and Jibeli in Wulu and the Agar Pakam in Rumbek North by the provision of water inside the county during the dry season.

Cueibet is divided into six payams: Abiru, Citcok (which merged with Tiap Tiap), Cueibet (which merged with Malou-Pec), Duony, Ngap and Pagor. However, some of the merged payams are still distinguished as autonomous geographical and administrative entities. The sub-section of the Gok living in Citcok is called Ruruot and Citcok Payam is divided into two bomas, called Mathiangtiit and Ramater, and exists of thirty-six villages. The water yard is established in a location about forty to fifty minutes from Cueibet Town and is reached through a small road that is overgrown with thorn bushes. The Citcok Payam headquarters, called Majak, is about a twenty minutes’ drive from the water yard. Contrary to W4L’s requirements, Obakki purposely decided to construct the livestock water yards in remote locations in order not to encourage (semi-)permanent settlement of pastoralists around the system or influence existing systems of long-distance migration and movement.

2.1 MIGRATORY PATTERNS AND CONFLICT DYNAMICS

Majack consulted with community members and leaders and partnered with the Directorate of Rural Water, Sanitation, and Hygiene and local government officials, especially Assistant Water Commissioners, in the selection of the locations and in the construction of the water yards. The location selected for the livestock water yard in Cueibet used to be a village that was vacated because of insecurity and intense cattle raiding (in two directions) between Gok and Rek in 2006. Obakki describes Barjiek as a cattle camp, but during our visit to the site location no physical evidence was observed of a cattle camp. However, scattered along the road from Cueibet Town to Citcok and further on to Barjiek there are wooden structures that can temporarily be inhabited by cattle keepers.

2.1.1 Intra-State Dynamics

According to the community members present during a haphazard evaluative discussion on the 26th of February 2015, attended by the payam administrator – who doubles as the Chairman of the WUC – the secretary-general of the WUC, chiefs, elders and various community members, Citcok Payam was selected for the construction of a livestock water yard because of the quality of the grazing land and the geographical location of Citcok in the centre of four payams: Tiap-Tiap, Pagor, Malou-Pec and Citcok. Historically, people from all the above-mentioned payams, some of which have been officially merged, have moved relatively freely and securely across the four payams. The secretary of the WUC, Moses Athian, narrates that in the past conflicts have occurred between Pagor and Tiap-Tiap, but currently there are verbal agreements between the customary and galweng authorities of the four payams that conflicting clans should not take their fights outside the borders of the payams of those who are party to the conflict. Since the different communities have begun to use the livestock water yard no violence has arisen between pastoralists from Tiap-Tiap and Pagor who come to visit the
water yard in Citcok simultaneously. Interestingly, the community members present do not mention inter-state violence as one of the motivations behind the establishment of the livestock water yard. Since its establishment, Obakki has been monitoring the systems and their operation in order to see if it significantly contributes to a reduction of conflict over access to water resources. Conversations with Obakki and community members at the lwy in Citcok Payam show that the water yards do not deter or stop cattle raids with neighbouring sections and clans. As we visit the livestock water yard there are no cattle keepers watering their cattle because of rumours of approaching Rek. Two days before our arrival the cattle keepers moved in the direction of Jerich and a cattle camp in Atudnojon, not very far from the water yard. However, it is argued that the enormous Rek have never reached the water yard and the community does not fear that there might be intentions to destroy the livestock water yard as the Rek only come to raid cattle.

Figure 2: Abandoned well in Barjiek, Citcok Payam

2.1.2 Changed Water Availability

Before the establishment of the water yard, cattle keepers from Malou-Pec, Pagor and Tiap-Tiap would graze their cattle in the toic in Citcok and wells used to be dug to water the cows and palm trees were cut down to function as troughs. People from Tiap-Tiap and Pagor used to stay in Citcok from January up to April and when the water finished all the cattle keepers used to move to Malou-Pec because of available water in a lake called Marnok and to Tiap-Tiap to access River Goro. Before people used to drive their cattle to a big toic called Lil that borders Warrap and Cueibet, but because of insecurity with Rek this has stopped and currently the Gok only move together in large groups and spend a short period of seven days in Lil. People from other payams have always been visiting Citcok and it is argued that their number has not increased since the establishment of the water yard. If there is water in other places people don’t like to be congested and they only come when other resources are dry. The people from Citcok have not been settled in one place and they still move to Malou-Pec because there is water and land for grazing and the cattle keepers like the place. “Those of cattle move, they are nomadic and they cannot be controlled in one place.” Because of the heavy rains of
2014, expectations are that visiting people might only arrive in April. People from Citcok drive their cattle to Malou-Pec in the rainy season because of the mosquitos and the swampy nature of their own area.

2.1.3 Inter-State Dynamics

Whereas relationships with the Rek from Tonj East are conflictive, the Gok have good relationships with the Tonj and Mok from Tonj South. As a matter of fact, on the day of our visit some cattle keepers from Tonj South visited Citcok. Interestingly, in conversations with communities in Rumbek North no connection is made between conflictive relations with Gok and the construction of the livestock water yard and although communities are aware of the water yards constructed in Tonj East and Tonj South, there is no knowledge about the water yard in Cueibet. Also, as far as I understand from conversations with different communities in Rumbek North, no Agar Pakam have crossed the border with Cueibet in the past years out of fear for cattle raids. Relations with people from Rumbek North are not addressed in the conversations in Citcok and it is argued that it is the people of Pagor and Tiap-Tiap who “have problems with the Pakam”.

2.2 OPERATION AND MAINTENANCE

Obakki has designed a system that is intended to be practically maintenance-free and can be completely community-run in the next few years. Obakki has been troubleshooting problems and adjustments in order to improve effectiveness and usability. The livestock water yard in Citcok was inaugurated in April 2013 and operated without problems until August 2013, when the pump became dysfunctional. Major adjustments made in the trouble-shooting period are the construction of a concrete barrier in the middle of the troughs to prevent cattle from climbing into the troughs and contaminating it, and the addition of a lower and smaller trough for calves and goats. Obakki reports that the water tank holds 10,000 litres, of which 8000 litres are distributed to the first, larger trough for cattle and 2000 litres to the second, smaller trough for calves and goats. The pump, that is operated through the solar panels pumps 8000 litres per hour into the tank. Whereas Obakki has estimated that every hour 400 cows can drink from the water yard, the secretary of the WUC believes that this number is considerably lower at 120 cows per half hour, which would add up to about 250 cows per hour. Bart Goes, during our visit to the Obakki water yard, made a quick assessment of the water tank and measured that the capacity of the tank is smaller and its content is 6000 litres.

2.2.1 Community Evaluation and Opinions

In the period since its first operation, Obakki has not experienced sabotage, misuse or theft of the systems. The last visit of Obakki to the lwy was in March 2013 and the community has been able to keep the yard running effectively without any major problems. Obakki argues that this is the result of an investment in community participation and community engagement and the careful fostering of feelings of ownership.

In email correspondence between Cor Verduijn and Sandy Kooistra, Programme Manager of Obakki, it is narrated that a small number of community members were trained on how to operate the system. However, in conversations with community members and leaders in the payam headquarters this was countered and it was argued that no training was received. Communities did not actively participate in the construction of the water yard, but provided stone and sand for the building. Obakki was not involved in the selection of the WUC. Enok Modogo, the payam administrator, describes that a nomination system was used in which chiefs and the payam administrators nominated people who volunteered for positions. Members were selected on the basis of proximity and commitment. There are five members in the committee: a Chairman, a Secretary and three members, amongst whom there is one woman.

The community complains about the fact that Obakki has “not returned to sit down and talk about the duties”. However, during the discussion it is stated by one of the elders that the children of the members are unhappy because when the members are on duty they cannot work on their farms. Currently there is no financial contribution from the host community or users because of the challenges experienced with the system and continuous repairs and improvements and Obakki has not commenced discussions about post-project management.

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3 Red elevated (~1m) water tank (cylinder): ~2.5 m high and ~1.6 m wide ---> 3.14 * 0.8² * 2.5 = ~5 m.
Whereas Obakki assumed that the water yard would be used between February and June, Moses Athian calculates that the livestock water yard is used from January to May. In that period it is stated that there is a daily presence and supervision of members from the WUC near the water yard, who also take care of the system in the rainy season.
Generally, the community is very satisfied with the livestock water yard and argues that “life is good (...) and all conditions for water have been resolved”. However, it is argued that the single hand pump is not enough because the area is densely populated and the cattle have not enough space to drink. The community suggest the addition of another two or three troughs in order to prevent congestion of cows. Because of the number of cows water sometimes gets finished and cows sleep without drinking. However, the congestion has never resulted into fighting. Also, the community argues there should be a store for spare parts in Citcoo so that people become more independent from Obakki and outside technical experts. There also is a demand for training to increase independence. Although the community has so far not yet contributed to adjustments and repair they are confident that they can independently solve arising problems and, when necessary, collect money through the chiefs to purchase spare parts and hire a technician.

In reference to the breaking down of the tab that provides water for people in March 2014, the secretary of the WUC, who is the only educated and literate member, argues that “the lwy is for educated people”. He argues that “people are used to the hand pumps because it is easy”. There is a clear discursive gender separation between the two outlets of the livestock water yard. The water tab for people is considered to be the domain of women, whilst the troughs are considered the responsibility of men. However, with the breakdown of the tab for people, women access water through the main tab that fills the troughs. This routine was already introduced before the tab for people broke down because the tab was too small and slow in providing water.

2.2.2 Verbal Regulations and Application

Because of high levels of illiteracy the WUC works with a simple set of verbal regulations on usage and maintenance and that address punishment in case of destruction. The rules are:

- One cow should be paid as a fee when you or your cows are found responsible for the breakdown of the system.
- The individual held responsible for breakdown will have to suffer social consequences as he/she deprives communities of a valuable water resource.
- The person who comes with his cattle first today will be last tomorrow.
- Every evening the troughs have to be cleaned by the WUC.

In reality, most of the rules have not been applied because there has not been any major breakdown that was caused by cattle or misuse of the water yard. Also, up until the current time, Obakki has taken full responsibility for repairs and adjustments. At the site, I observed that the troughs are dirty and mosses have grown on the concrete. This is a sign of the fact that the troughs are not cleaned regularly. However, the people present seemed not to be bothered by this.

The only rule that has been actively and successfully implemented is the ‘first today, last tomorrow’ rule and the communities using the water yards seem to respect this unwritten rule as it facilitates the effective usage of the water yard.

2.2.4 Agricultural Activities

Although abandoned by cattle, as we arrive at the site location there are a number of people who are working on small tobacco farms that have sprung up some twenty metres from the water yard. Water is carried in watering cans from the system to the tobacco fields and the farmers argue that they have benefitted from the water yard because it has earned them and income. The tobacco farmers at Barjiek used to, and continue to be engaged in rain-fed agriculture and grew g-nuts and sim sim in the rainy season. Seeds have been gathered from a community close to Cueibet Town that has been engaged in tobacco growing for a longer period of time. The tobacco plants have reached different stages of development and clearly not every farmer is as effective. Their presence is contested by the cattle keepers who challenge them by asking: “Where is your water point, this is for the animal not for farming”, but no physical conflicts have occurred and the farmers argue they only suffer “verbal violence”. Water is taken directly from the troughs and contributes to a finishing of the water. Cows and goats do destroy the crops, but only when they have matured, so tobacco seems a relatively secure crop to grow in close proximity to the water yard. The tobacco is sold in Cueibet Town and is even sold as far as Rumbeek Town. The farmers hail from six surrounding villages and as we meet with them they are engaged in their second growth since the establishment of the water yard.
2.3 DRAWING LESSONS

The following conclusions can be drawn from the assessment of the livestock water yard and conversations with communities in Citcok Payam:

- The Citcok water yard has improved the water availability for the surrounding communities and payams and is operated in a peaceful and organized manner and is perceived by the surrounding communities as effective and positively impacting livelihoods.
- The fence around the tank with solar panels is broken, which made the equipment accessible for small livestock and people. Damage, mismanagement and breakdown has not occurred because of the robustness of the system.
- The livestock water yard does not prevent people from migrating away from the payam. Existing dry season migratory patterns are still in place and people especially migrate with cattle during the rainy season because of floods and the presence of mosquitos.
- The livestock water yard has not significantly improved intra-state relationships, but the water yard has never been targeted during cattle raids.
- The water yard has attracted tobacco farmers from the surrounding villages who have established tobacco farms in close proximity to the water yard and who draw water from the yard. This has created verbal tensions between the cattle keepers and farmers, but has not evolved into a physical conflict and people seem to have established a situation in which both activities – pastoralism and agriculture - can co-exist side by side.
- Communities complain about the untransparent communication with Obakki and have unfulfilled expectations.
- Communities envision a more proactive and independent role for themselves in running the water yard and hope to gain stronger levels of independence in the future, especially with regards to the maintenance of the system and accessibility of spare parts.
RUMBEK NORTH COMMUNITY CONSULTATIONS

Within Lakes State, Rumbek North County borders Cueibet to the West and Rumbek Centre and Rumek East to the North. To the north-west, Rumbek North shares a border with Tonj East, Warrab State and to the north Rumbek North shares a border with Mayendit, Unity State and to the east a border with Panyijar, Unity State. Although the Agar Pakam from Rumbek North are considered to be one of the four sub-sections of the Agar (among Aliem Toc, Rup and Kuei), their history is different from the other sub-sections and they are often treated as a separate Dinka section. The Pakam claim a Nuer ancestry and their first prominent leader, who was called Wol and rose to fame during the Anglo-Egyptian Condominium, was born out of the marriage between a run-away Nuer man and his Dinka wife.

Rumbek North is one of the most marginalized counties in Lakes State as there are no mobile networks operating in the county. It is argued by a youth that the customary leaders banned mobile operators to work in their county because they fear it will corrupt the minds of the youth. However, Paramount Chief Kulongdit Marial Wol, who is the grandson of the infamous Wol, disputes this and advocates for networks to be established in order to “connect the county to the world”. Due to the heavy rains of last year the road to Rumbek North is in need of road rehabilitation and Paramount Chief Kulongdit states that “if the rains come before the rehabilitation starts, many people will die”. In comparison to the other counties in Lakes State, there are few market centres in Rumbek North. All the people we spoke to lamented the fact that cows have been lost to unknown diseases and the cattle population significantly decreased since the last two heavy rainy seasons. The road between Maper and Malek, in Rumbek Centre, is a silent testimony to the cattle deaths and is littered with the corpses of cows in different stages of decay.

Poth Dumic, the female advisor to the governors of Lakes and Unity states argues that there is no problem with Tonj East, Nuer and Cueibet. She describes the Agar Pakam as peaceful people “who don’t use violence unless you come to our area with force. That is when we will defend ourselves. Otherwise we allow everybody to stay with us peacefully.” However, during our visit to Rumbek North there were rumours that Gok were seen along the River Yar and in Panyang and Pannemaker cattle camps in Madol and Alor payams we met with people who were recently displaced by Nuer cattle raiders. Mayendit (Haak Nuer) and Panyijar (Nuong Nuer), two neighbouring counties in Unity State are under control of the Sudan People’s Liberation Army in Opposition (SPLA-IO). Military recruits have been drawn from both the counties, and although it argued in a Human Security Baseline Assessment on the conflict in Unity States by the Small Arms Survey (2015) that “Panyijar maintained good relations with Lakes State (…) until January 2015”, the report equally documents that raiders from Rumbek North, after having attacked and raided a cattle camp, injuring and killing multiple people in Panyijar, triggered retaliatory raids into Rumbek North. At the moment of finalizing this report in early April 2015, clashes occurred in cattle camps in Rumbek North bordering the two states, leaving more than a hundred people dead and more than sixty people injured.

The Paramount Chief confirms that the migratory patterns currently in place have been established a long time ago: “In the dry season we moved to Mayendit and when the rain came we moved on to Wunlit and Makwac [Tonj East]. These people also came to graze their cattle in Rumbek North because our land is good for grazing. Now people have nowhere to go. This has spoil the lives of people and ruined their livelihoods. Random raiding has spoil our lives.”

In the Water for Livestock Mission Report, Cor Verduijn (2014, 25) argues that the inhabitants of Rumbek North migrate to Rumbek East to access Lake Nyibor, however in my conversations with various communities no mention was made of migration into Rumbek East. One of the reasons for this might be that these past migratory patterns have not been used for many years due to insecurity in
Rumbek East in general and around Lake Nyibor in particular. Also, conflicts with the Rup in Rumbek Centre are much more recent and play a more significant role in discussion on conflict dynamics. Verduijn also states that from Rumbek North people migrate to Wulu, Billing and Mvolo (WES). Neither of these locations was mentioned by the people spoken to as locations to which people drive their cattle, neither in the dry nor the rainy season and his statements could not be corroborated by contemporary accounts. This incongruence shows that members of similar communities have diverse ideas about cattle migration patterns and (cattle) population.

As a result of the Lakes State Peace Conference organized in Rumbek in mid-February 2015 to explore strategies to end hostilities and revenge killings in the state, the caretaker Governor Matur Chut Dhuol decreed that all people from Rumbek North who are residing in Rumbek Centre have to return to their own county. However, in February 2015, the area between Rumbek Town and the border with Rumbek North was inhabited by Pakam and the houses destroyed and burned in Atet and Malek are visible remnants of the conflictive relationships between Rup from Rumbek Centre and the Pakam.

Figure 5: The corpse of a heifer has been left abandoned along the River Rel

3.1 PAYIEI, WURING PAYAM

Community consultations in Wuriang Payam were organised in two locations, in Wuriang, the payam headquarters, and Payiei, the village that has been selected by W4L. The meetings were attended by acting customary authorities as the chiefs were engaged in a polio immunization campaign and with the registration for forthcoming, payam-wide food distributions. Whereas the meeting in Wuriang was more formal and official in character, interactions with the villagers of Payiei were more erratic and less focussed.

3.1.1 SOCIAL DIVISIONS AND CONFLICT DYNAMICS
Wuriang Payam is populated by a sub-section of the Dinka Agar Pakam called Nieniel and is divided into three bomas and eight clans. Each of these clans is divided into a number of sub-clans.

Table 1: Sub-sectional and clan divisions in Wuriang Payam

Wuriang Payam has one Paramount Chief and there are two executive chiefs in each of the three bomas. Every individual executive chief has four customary chiefs and the whole payam has one galweng chief, who is assisted by one customary galweng chief. Every boma has several benj pur, or chiefs of agriculture, who settle conflicts between pastoralists and farmers.

3.1.1.1 General Conflict Dynamics

According to William Maru, the Payam Administrator in Wuriang, in 2010 there were 5000 households in the whole payam. This estimation is rather high in comparison to extrapolated data collected by Bart Goes from W4L from the 2008 population census, which estimates that in 2014 Wuriang Payam had a population of approximately 5,200 people. Wuriang Payam is the smallest payam in Rumbek North and is almost three times smaller than neighbouring Malueth Payam. William Maru believes that the population size of Wuriang has remained relatively stable over the past years, although he narrates how “the people of Wuriang have been affected by the houses that were burned in Rumbek Centre [in Apet in June 2014] (...) and were unstable during the Riek Machar crisis”. These two conflict dynamics with Agar Rup from Rumbek Centre and Nuer from southern Unity State have caused displacements in different directions. In community consultations in Wuriang it is narrated that the insecurity related to the national conflict has displaced people in the direction of Meen Payam and Rumbek Centre, whilst the incidents in Apet and related violence has resulted in the return of people to Rumbek Centre. Historically, there also has been a lot of movement within the payam and during periods of insecurity people move to the cattle camps because that is “where people defend themselves and that is where the guns are”.

All the aforementioned clans meet in Wuriang
Out of the alleged 5000 households, it is believed that 3000 are permanently settled. People migrate with cattle during both the dry and rainy seasons. There is also movement in connection to cultivation and whereas people might stay in the cattle camps during the dry season - a season in which most cattle raids occur and highest levels of insecurity are experienced - , they return to villages to farm in the beginning of the rainy season.

3.1.1.2 External Conflict Dynamics

Loc Dak, the acting *galweng* chief of Wuriang Payam, argues that “during the time of Machar [since the start of the conflict] people migrated to Chamchuer and Payiei” as the Haak Nuer from Mayendit and the Nuong Nuer from Panyijar used to “raid cattle and kill people in Wuriang. Men try to fight them and children and cattle are taken to Payiei and Panomtoch where they [the Nuer] don’t reach.” People sought refuge in Payiei from Alor, Wuriang and Maper. As described before in the general overview of conflict dynamics in Rumbek North, the Agar Pakam do not present themselves as aggressors, but as the aggressed: William Maru describes: “In January the Nuer came for the last time, but the men come from the bomas to defend the communities.” Historically there have been intermarriages between the Agar Pakam and the Haak and Nuong Nuer, but these marriage connections have halted because of the national conflict. Also, intermarriage with the Gok has stopped because of a conflict that erupted in 2004. However, intermarriage with communities in Tonj East is ongoing. In contradiction to the mentioning of the houses of people from Wuriang Payam which were burned in Rumbek Centre by the Rup, it is argued by the community members present that “Rumbek Centre [Rup] doesn’t affect us much because they are our brothers”.

Figure 6: View of Payiei Village

Whereas there are currently no agreements between the Agar Pakam and the Gok in Cueibet and the Haak and Nuong Nuer in Mayendit and Panyijar, there have been periodically renewed agreements with the communities of Rumic in Tonj East and chiefs from both states travel alongside with the cattle to mediate in and settle arising disagreements. The conflict that ended good relationships between the Agar Pakam and Gok is said to have revolved around a dog in Rumbek North that was killed with a
spear by a Gok. When the owner retaliated on a dog from Cueibet fighting arose. However, when a conflict erupted with the Nuer from Unity State Gok and Pakam joined hands to fight the Nuer, but upon return to Lakes State “the Gok turned against the Pakam and raided cattle from Akut Mayom and killed nearly 100 cows with stray bullets”. In 1991 the people from Rumbek North fled both in the direction of Tonj East and Cueibet and “generalized themselves as Dinka and stayed for many years”.

3.1.2 WATER AVAILABILITY AND CATTLE MIGRATION

3.1.2.1 Mobility

Although water - either a lack or abundance of it - is a problem in both seasons, the customary authorities in Wuriang argue that “the dry season is the main problem. If there is no water people are forced to go to the Nuer. Cows are greedy and need a big supply in order to feel comfortable. The movement to Nuer is dangerous and needs force.” The available water resources in close proximity of Payiei are two small streams, named Payiei and Panom, which have almost dried up when we visit the payam in the third week of February. In previous years the small streams around Payiei dried in December, but because of the heavy rains, water still remains there in late February. Depending on the character of the rainy season, people migrate with their cattle in the beginning, mid or late February and first drive cattle to Jou, an arm of the River Yar. River Yar is a location where historically there has been interaction with the Nuer, which since the outbreak of the conflict in December 2013 but also during various periods in the past (i.e. after the 1991 split in the SPLA) has become conflictive.

When the water resources in and around Payiei dry up, people drive their cattle to the River Rel, where they commonly stay from February to March. However, when there is insecurity in Rel because of the presence of Nuer, people move on to River Yar, where in the past there have been periodic confrontations with invading Gok. River Yar is a place where people stay from March to April. The community describes both rivers as dangerous and conflict-affected areas and in case of insecurity in both locations people return to the village and “thirst affects them”. During our visit to Rumbek North there were rumours that Gok were seen along the River Yar and in Panyang and Panmaker cattle camps in Madol and Alor payams we met with people who were displaced by Nuer cattle raiders. Rel is about three hours by foot and it takes about seven hours to drive the cattle from Payiei to Yar.

During the rainy season, from July onwards, people drive their cattle to the wet-season cattle camps in Tonj East in the neighbouring Warrap State and the people from Tonj East follow them when they return to Wuriang at the end of the rainy season in November. Relationships with the different groups from Tonj East are equivocal and there have been various instances of deadly interaction between Tonj East and Rumbek, of which the latest occurred during the census in 2010. Strong segmentary alliances exist between the people from Wuriang and Malueth and the Nieniel joined the Manuer subsection from Malueth in the fight against Tonj East. In the previous two rainy seasons Payiei has experienced heavy rain and people have been displaced with the cattle because of the presence of mosquitos that are said to be the cause of the death of cattle. Whereas the mosquitos that come during the rainy season are considered to be the leading cause of death, the floods are also perceived as beneficial to people in two ways: they allow people to stay in their own areas for longer periods of time and provide a natural security mechanism against invading groups.

3.1.2.2 Cattle Population and Distribution

Questions about the cattle population in Wuriang Payam were received with a mix of hostility and amusement and although the people present agreed that it is impossible to count the cattle, it was estimated that there are about 10,000 heads of cattle inside the payam. The issue of cattle-wealthy and cattle-less men was compared to monetary wealth: “It is like with money, some people have and some people don’t have money. Some people own cattle and others do not.” Out of the estimated and possibly incorrect number of 5000 households – which are counted on the basis of the male head of the often polygamous families -, it is argued that about 2000 men do not own cows, but the majority owns cattle wealth.

The eight cattle camps in Wuriang Payam are named Chamchuer, Ajuong, Rurbar, Chill, Panomtoch, Wuriang, Agadang and Yom. There is free movement between the cattle camps and there are no internal conflicts between the different bomas and clans in Wuriang Payam. The cattle remain in Wuriang in May and June and also in November and December, after the crops are harvested and
there are no agricultural activities. About 3000 cows with small calves remain in the village during the dry and rainy seasons and provide milk to the children. If there are no problems, these cows with small calves are driven to Panmaker along River Rel on a daily basis. The community cannot establish how many heads of cattle can graze in the *toic* in the dry season. “There are different forests where cattle can graze.

![Figure 7: Toic around Payiei Village](image)

Wuriang is where the cattle are large in number. Our cattle are many, so it cannot be enough for us.” Nyantiop Majok describes that there is a *toic* from Payiei to Kak and there are no villages in the middle. In the direction of Maper there is a *toic* from Majok to Payiei. She narrates how there is overgrazing at the end of the rainy season and that in February all the grass had been eaten by the cows. However, William Maru counters her statement and argues that there is enough grazing land for cattle to graze in the dry season.

Loc Dak argues that this year the number of cows that died was higher than the number of cows that were produced. Although the community is saddened by and fears to count the dead cows, the estimation is that about 500 cows died during the previous rainy seasons, which is about one on every twenty cows. The communities believe that the cattle are killed by mosquitoes and mention unknown diseases in which cows suffer from a shivering fit and die. Whereas the elderly members of the community argue that the numbers of the cows of the guests are less than the cows who are autochthonous citizens of Wuriang Payam, a young educated youth argued that there are up to 45,000 heads of cows in the dry season. He did not dispute the head count of the indigenous cattle population, which contradicts the fact that the cows coming in with allochthonous people do not reach beyond the cows that belong to the autochthonous citizens of Wuriang Payam. One of the elders recounts that “when the Gok disturb Malueth Payam they come to Payiei. When Madol and Alor Payam are disturbed by Nuer, they come to Payiei. Our pastures are wide, but unless during the wet season, our *toic* is not enough to graze these 45,000 cows.” However, at the same time the elders recount that in the past, when people from Madol, Alor and Malueth came to Wuriang, the *toic* was enough for everybody to graze from.
3.1.3 OPERATION AND MAINTENANCE

As we return to Wuriang, the headquarters of Wuriang Payam, from Payiei it becomes clear that there has been disagreement between one of the villagers of Payiei and the customary and government officials in Wuriang. The villager has expressed his disagreement with the site selection because he fears that an increased presence of cows around the village will jeopardize his farming activities. Unfortunately the payam authorities are unwilling to facilitate a meeting and we are unable to meet with the individual and listen to his fears. Conversations with inhabitants and observations of Payiei village confirm that the raised ground around Payiei village is intensively used for cultivation during the late dry and rainy season.

3.1.3.1 Agricultural Activities

In Wuriang, the present community members argue that agriculture is the most important activity for livelihoods and both men and women are responsible for cultivation. Only the youth move around with the cattle, but everybody else is involved in agriculture from March till the last harvest of kec in late November, early December. People are engaged in rain-fed agriculture and grow sorghum, maize, g-nuts, beans, millet, and sim sim. However, the latter two crops are only planted in Rorbar. The land is cleared in March and in April people start to sow the crops, which are harvested at differing times of the year from late August until early December. It is stated that in the past there have not been any conflicts between pastoralists and farmers as the cattle keepers have to watch and graze their cattle well. In case cows destroy the crops the executive chiefs and chiefs of agriculture (Benj Pur) intervene and the damage is compensated by the payment of money. Also, the cattle keepers know when to stay away from the villages and drive their cows away from the cultivated grounds in the directions of Alor and Kak - where similar mechanisms of resolution and compensation exist.

Figure 8: The raised ground selected for the LWY located between Payiei Village and Chamcuer cattle camp
3.1.3.2 Discussions on Operation and Management

In relation to operation and management, community members in both Wuriang and Payiei argue that training and protection are two of the most important things in the successful use of the livestock water yard. They propose that a fence with a door is constructed in order to prevent people from entering and operating the system without permission and proper training. The customary chiefs and payam authorities argue that the police and the government should be involved to ensure the protection of the system and that police should be permanently situated near the water yard. Nyantiop Majok, a female inhabitant of Payiei shows willingness of the villagers by stating that: “the villagers will guard it as their facility because it has great importance for the payam. We will make a fence of thorns to protect the farmlands and engage the Benj Pur to deal with cattle keepers that do not respect the farmers.”

In relation to financial contribution and structural payment, both communities in Wuriang and Payiei state their willingness to pay for the water as they are used to contribute for the borehole. Payment should happen at the beginning of the dry season and when people refuse to pay they will not be allowed to use the system. There will be a water committee who will establish and maintain the law and who will see to the registration of the users. Loc Dak enthusiastically speaks about the livestock water yard he has seen in Maperor, Kumic in Tonj East and says that even though he has not grazed his cattle there, he is very happy about it and thinks such a system would benefit the community greatly.

The location selected for the livestock water yard has also been allotted for a market, whose construction was supposed to begin in March 2015. However, the villagers present during the consultations stated that their preference goes to a livestock water yard and that another location will be allotted for the market.

Table 2: Payiei General Site Information and Recommendations

<table>
<thead>
<tr>
<th>Name of Location</th>
<th>Payiei, Wuriang Payam, Rumbek North</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPS Coordinates of</td>
<td>N 7 deg. 40.285 min; E 29 deg. 41.330 min.</td>
</tr>
<tr>
<td>Proposed Site Location</td>
<td></td>
</tr>
<tr>
<td>GPS Coordinates of</td>
<td>Payiei Village [N 7 deg. 40.103 min.; E 29 deg. 41.364 min.]</td>
</tr>
<tr>
<td>Locations in the</td>
<td>Chamcuer cattle camp [N 7 deg. 40.460 min.; E 29 deg. 41.330 min.]</td>
</tr>
<tr>
<td>Proximity of the</td>
<td>Chill (at the border between Wuriang and Malueth payams [N 7 deg. 39.655 min.; E 29 deg. 40.350 min.]</td>
</tr>
<tr>
<td>Proposed Site Location</td>
<td></td>
</tr>
<tr>
<td>Date(s) Visited</td>
<td>18 and 21 February</td>
</tr>
<tr>
<td>Participants in</td>
<td>• Community consultations in Wuriang</td>
</tr>
<tr>
<td>Consultations</td>
<td>Payam are attended by an ever-changing group of people with an average number of fifteen participants. Active participants include the payam and boma administrator, executive chiefs, the acting galweng chief and galweng youth, payam pump mechanics, a clinical officer and educated youth.</td>
</tr>
<tr>
<td></td>
<td>• Consultations at the proposed site location include a group of five female citizens of Payiei.</td>
</tr>
<tr>
<td>Description of</td>
<td>• Located at a raised ground that borders a toic on two sides and is situated in the middle between Chamcuer cattle camp and Payiei village.</td>
</tr>
<tr>
<td>Proposed Site Location</td>
<td>• Payiei village is about 300 metres from the proposed site.</td>
</tr>
<tr>
<td></td>
<td>• Chamcuer cattle camp is approximately 400 metres from the proposed site.</td>
</tr>
<tr>
<td>Recommendations</td>
<td>The proposed site location meets the requirements set by W4L and the researcher designates Payiei as the first priority location because a) there are no natural water resources in close proximity to Payiei between January/February and May; b) Payiei has historically been a safe location that people from the neighbouring payams migrate to in case of insecurity caused by the neighbouring Gok from Cuelbet and Haak and Nuong Nuer from Unity State.</td>
</tr>
</tbody>
</table>
### Table 3: Payiei Site Characteristics

<table>
<thead>
<tr>
<th>Site characteristics</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proximity to permanent settlement</td>
<td>Payiei village is approximately 300 metres from the proposed site location.</td>
</tr>
<tr>
<td>Size of indigenous cattle population</td>
<td>Although the people present agreed that it is impossible to count the cattle, it was estimated that there are about 10,000 heads of cattle inside the payam. There are eight cattle camps in Wuriang Payam and one of the cattle camp, named Chancuer, is approximately 400 metres from the proposed site location.</td>
</tr>
<tr>
<td>Distance from cattle migration routes</td>
<td>The proposed site location is in the middle of cattle migration routes as it borders a cattle camp.</td>
</tr>
<tr>
<td>Size and quality of grazing land</td>
<td>The proposed site location neighbours a toic on two sides and it is argued by the surrounding communities that, in case the livestock water yard is build, the toic will be able to sustain the indigenous cattle population in the dry season.</td>
</tr>
<tr>
<td>Availability of water in dry season</td>
<td>The available water resources in close proximity of Payiei are two small streams, named Payiei and Panom, which have almost dried up when we visit the payam in the third week of February. In previous years the small streams around Payiei dried in December, but because of the heavy rains, water still remains there in late February. When the water resources in and around Payiei dry up, people drive their cattle to the River Rel or River Yar. Along both rivers the communities report problems with respectively the Haak and Nuong Nuer and the Dinka Gok.</td>
</tr>
<tr>
<td>Intensity of agriculture</td>
<td>The people of Payiei village are engaged in agricultural activities between March and December on the raised ground on which the village is built.</td>
</tr>
<tr>
<td>Occurrence of internal conflicts</td>
<td>The people of Wuriang live in relative peace with the people from the surrounding payams in Rumbek North and there are no reported conflict relationships among the Agar Pakam of Rumbek North.</td>
</tr>
<tr>
<td>Occurrence of external conflict</td>
<td>As a result of increasing tensions between the people of Lakes and Unity State, people from neighbouring payams have been displaced to Payiei, which is considered to be secure from allegedly recurrently invading Haak and Nuong Nuer. There are recurring conflicts with the Dinka Gok from neighbouring Cueibet county and in the past there have been sporadic conflicts with Dinka from Tonj East, Warrab State.</td>
</tr>
<tr>
<td>Distance to road network</td>
<td>The proposed site location is about 600 metres away from a small dirt road that connects Payiei to the main road network between Rumbek and Maper.</td>
</tr>
<tr>
<td>Preparedness for Operation and Management (O&amp;M)</td>
<td>In relation to operation and management, community members in both Wuriang and Payiei argue that training and protection are two of the most important things in the successful use of the livestock water yard. The customary chiefs and payam authorities argue that the police and the government should be involved to ensure the protection of the system and that police should be permanently situated near the water yard. In relation to financial contribution and structural payment, both communities in Wuriang and Payiei state their willingness to pay for the water as they are used to contribute for the borehole.</td>
</tr>
</tbody>
</table>
3.2 PANLUAL - MALUETH PAYAM

3.2.1 SOCIAL DIVISIONS AND CONFLICT DYNAMICS

3.2.1.1 General Payam Information

Malueth Payam is populated by a sub-section of the Agar Pakam called Manuer. The payam is divided in three bomas and the Manuer Ciek, who live in Madhol Boma have nine clans; the Maluil live in

Table 4: Sub-sectional and clan divisions in Malueth Payam

Aciek Boma and have six clans; and the Manginydit inhabit Kak Boma and has eight clans. Each of the sub-sections has multiple-sub clans, but there are strong relationships of intermarriage between the various clans and there exists free and unconditional movement between the different bomas.

Malueth Payam, according to the pump mechanic, has forty-nine villages⁴ and it is estimated that each village has about fifty households, although my observation is that the size of the villages varies much. There are three executive chiefs in Malueth Payam and each boma has five customary chiefs. Each of the bomas has about 1000 tax payers, which are the heads (man) of the household, and it is deduced that the payam harbours between 2500 and 3000 households. According to the extrapolated population data of Bart Goes, Malueth Payam had approximately 14,872 inhabitants in 2014, which makes Malueth Payam the second largest payam, after Meen Payam. This combined information implies that there are between five to six members to a household.

3.2.1.2 Cattle Population

The participating community members in the community consultations in Malueth find it difficult and culturally inappropriate to count and provide numbers on the heads of cattle in the payam, but it is

⁴ A list with the names of the villages is available with Peter Kachual.
estimated that there are between 4000 to 4800 heads of cattle per boma, which would add up to between 12000 and 14400 cows in the whole payam. There are seven cattle camps in the payam, named Malueth, Aciek, Kanagal, Angok Jo, Ayiuyui, Aliech and Akot Mayom cattle camps. None of these cattle camps are owned by a certain boma and people from the payam move freely between the different cattle camps. The elders in Malueth argue that out of the 3000 households, about 700 household do not own large numbers of cows. The customary authorities in Madhol argue that there are 150 households in and around Madhol and that Panlual is made up of about 50 households. These households are scattered over a wide area and it is difficult to verify this information. Out of the estimated 200 households in Madhol and Panlual, it is estimated the 50 households do not own cows and focus on the cultivation of kec, groundnuts, maize, okra and local sorghum. However, it is emphasized that all households are engaging in agricultural activities. The estimates of cattle-less households in Malueth and Madhol correspond to each other, and it can be estimated that about one-fourth of the households in Malueth Payam is not cattle wealthy.

Figure 9: Panlual Village as viewed from the back

There is free movement between Wuriang, Meen and Malueth payams and the cattle camps in Malueth Payam are also inhabited by people from Wuriang and Meen. The movement between cattle camps is free and unproblematic. Discrimination is not allowed and the appointment of spaces is done on the basis of a first-come-first-serve principle. Commonly, tracking cattle keepers will send scouting teams ahead to search for vacancies.

3.2.2 WATER AVAILABILITY AND CATTLE MIGRATION

According to the inhabitants, the toic around Panlual is wide and can feed a large number of cattle. Makur Pou, the Executive Chief of Madhol argues that “during the time the cows did not die the cattle population was bigger than it is now, but since four years the cows started dying of unknown diseases. The flood is now two years and our cows have started to look malnourished and dry.” Ajok and Majok are identified as water resources which are close to Madhol and Panlual and it takes about three hours to drive the cows there. These sources are used from January to February. It is argued by an elderly
man in the community that before “people used to fight because water was not enough, but now it is the law that interrupts and stops people from fighting”.

Figure 10: Chiefs from Madhol and Panyijar villages after the community consultations

3.2.2.1 External Conflict Dynamics

At the moment the community consultations are conducted, it is argued that cattle have migrated in two directions: to a town near Yar River and to Rel River. Rel is about one day walking with the cattle. In Rel cattle keepers often encounter cattle wrestlers from Haak Nuer from Mayendit and Nuong Nuer from Panyijar and in the past fighting has occurred between the groups. Yar River dries up in March and from March to April people evacuate to Rel where, when Rel runs dry as well – people dig shallow wells to uproot water for the cattle to drink from. However, it is argued that “the shallow wells are not enough and cows die because of thirst or fall in the wells”. From the moment the rains start people return with their cattle to Malueth Payam and in the early rainy season all cows are in Malueth Payam in Kanagul, Angok Jo, Aciek, Malueth, Ayuiyui. However, from June to December the mosquitos kill cows and people, which results in a lack of milk, which often is the only source of livelihoods and this forces people to migrate to Tonj East or Rumbek Centre.

Makur Pou remembers how “Rup and Kuei used to come all as brother as well”, but at the moment of the community consultations there is no peaceful and understanding relationship with the chiefs in Rumbek Centre and Unity State. However, the relationships with customary authorities from Greater Tonj are much better established. It is argued that if people would not have fallen into trouble with the Nuer they would have migrated into Unity State. Makur Pou argues that it is now six years since people stopped going to Unity State because “Nuer have been raiding our cattle when they move in this direction”. The same problems arise in Tonj East and the elders of Madhol argue to be “confused by the fact that the groups from Tonj East often steal their cows as they return to Rumbek North at the end of the rainy season”. In March 2010, during the census in preparation of the 2010 elections in Southern Sudan and Sudan, groups from Tonj East burned Malueth village because of a girl that was eloped from Malueth to Wunlit. The father searched for his daughter in Wunlit and was killed, after
which people from Malueth went for revenge and many people got killed on both sides as all the sub-
sections of the Pakam joined hands with the Manuer from Malueth. However, the relationships have
been re-established and during our visit to Malueth Payam we meet with a group of cattle keepers
from Tonj East who move between Chill and the payam head quarter of Malueth. Agreements with
galweng and chiefs are re-established every year in order to maintain a good relationship with the
people from Tonj East.

The relationship with the neighbouring Gok is equally problematic and the last main conflict between
the Manuer and the Gok from Cueibet occurred in April 2013 when the Gok burned Madhol village
down at the beginning of the cultivation season. Makat Pou, the galweng chief argues that “although it
doesn’t happen yearly, we are “confused as to when the Gok will come again and take our wealth”.

3.2.2.2 Agricultural Activities

The area between Malueth and Madhol is intensive in agriculture and around every village there are
farms that have been protected by small clay dams to stop water from entering, but there are no
protection mechanisms against cattle. The farms are based on the raised grounds around the village
and during the period between March and the last harvest the cattle is taken to surrounding thick
forests and fences are built to protect the farms. The different communities visited in Malueth Payam
argue that in the past there have not been conflicts between pastoralists and farms as there are good
settlement mechanisms. Usually the chief of cultivation stands in the middle to protect the farms from
crossing cows, but the communities narrate how during the last two rainy seasons the crops have
been destroyed and people are feeding on wild fruits, like lalop and tamar hindi. The villagers perceive
their futures negatively as they have not been able to save seeds and they have no seeds for the
upcoming planting season.

![Figure 11: A woman crosses the borders of the toic bordering Panlual Village](image)
### 3.2.3 OPERATION AND MANAGEMENT

As we discuss systems of operation and management, the chiefs in Madhol argue that they cannot be held responsible for the failure of the hafirs because they were dug in the forest and because people were not included in the process of construction. The analogy of the relationship between a father and a child is used to describe the willingness and capability to manage and protect the livestock water yard: "If a person has a child he will take care of him and as he becomes old and takes over responsibilities of the father and he will start to take care of the father and will not leave the father’s properties unattended."

The chiefs agree that they want to be informed about decisions and that they want to take up full responsibility. People should be trained to run and maintain the livestock water yard and apart from the technically skilled people there should be guards who watch the water yard at all times. In order to ensure the security of the water yard a fence should be built around the pump and the solar panel. The community is willing to mix up men and women and their existing water committees have two women and three men each.

When asked how the community would respond to the forceful presence of outsiders at the water yard it is argued that: "There are laws and existing mechanism that are followed in Yar. There is respect between people from their fathers up to themselves. And new laws will have to be formed for this project." The community establishes that nobody can come and water their cattle without registration. The main responsibility is put on the police, who is argued should be in charge of guarding the water yard and who will have to settle any problems arising, together with the chiefs. However, the chiefs of Madhol question whether one livestock water yard will be enough to water all the cows from the payam and those people it will attract from outside the payam.

**Table 5: Panlual General Site Information and Recommendations**

<table>
<thead>
<tr>
<th>Name of Location</th>
<th>Panlual, Malueth Payam, Rumbek North</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPS Coordinates of Proposed Site Location</td>
<td>N 7 deg. 35.54 min.; E 29 deg. 37.777 min.</td>
</tr>
<tr>
<td>GPS Coordinates of Locations in the Proximity of the Proposed Site Location</td>
<td>Madhol [N 7 deg. 35.971 min.; E 29 deg. 38.269 min.]. Chill (at the border between Wuriang and Malueth payams [N 7 deg. 39.655 min.; E 29 deg. 40.350 min.]</td>
</tr>
<tr>
<td>Date(s) Visited</td>
<td>18 and 19 February</td>
</tr>
</tbody>
</table>
| Participants in Consultations | • Community consultations in Malueth, the headquarters of the payam attended by approximately fifteen customary authorities, village elders, educated youth and a teacher.  
• Community consultations in Madhol, attended by a changing number of participants ranging between eighteen and twenty-four customary authorities of both Madhol and Panlual, village elders, women representatives and a number of *galweng* youth.  
• Community consultations in Panlual Village attended by about five villagers. |
| Description of Proposed Site Location | • Located at the border of Panlual Village on a raised ground that does not flood in the rainy season.  
• The location borders a large toic that stretches out in all directions.  
• In the past agricultural activities have been performed at the site location, but the community says to be willing to move the agricultural activities to another location and clear the ground for the lwy. |
<p>| Recommendations | The location meets all the requirements set by W4L and the researcher advises the establishment of a livestock water yard. In the operation and management of the livestock water yard it will be important to include people from both Madhol and Panlual as to ensure good relationships between the two villages. |</p>
<table>
<thead>
<tr>
<th>Site characteristics</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proximity to permanent settlement</td>
<td>The proposed site location is situated at the boundary of a small settlement that could be characterised as a raised island in the midst of a wide toic. This means that the proposed site location is based within a permanent settlement.</td>
</tr>
<tr>
<td>Size of indigenous cattle population</td>
<td>The inhabitants of Malueth payam estimate that there are about 12000 to 14400 cattle in the whole payam and that each boma has about 4000 to 4800 cattle. This cattle population is accommodated in seven cattle camps scattered around the payam. It is observed that because of two consecutive years of flooding the cattle population has reduced significantly.</td>
</tr>
<tr>
<td>Distance from cattle migration routes</td>
<td>Panlual village is located in the middle of the cattle migration routes and cattle trek from River Yar to River Rel, which is about one day walking with cattle.</td>
</tr>
<tr>
<td>Size and quality of grazing land</td>
<td>According to the inhabitants, the toic around Panlual is wide and can feed a large number of cattle.</td>
</tr>
<tr>
<td>Availability of water in dry season</td>
<td>There are no natural water resources in close promixity to Panlual and Madhol villages. Ajok and Majok are identified as water resources which are close to Madhol and Panlual and it takes about three hours to drive the cows there. These sources are used from January to February. From here people move to Yar River, which dries up in March and from March to April people evacuate to Rel where, when Rel runs dry as well people dig shallow wells to uproot water for the cattle to drink from. This dug up water is insufficient and it is argued that cattle die of thirst.</td>
</tr>
<tr>
<td>Intensity of agriculture</td>
<td>The area between Malueth and Madhol is intensive in agriculture and around every village there are farms based on the raised grounds around the village and during the period between March and the last harvest the cattle is taken to surrounding thick forests and fences are built to protect the farms.</td>
</tr>
<tr>
<td>Occurrence of internal conflicts</td>
<td>There are no conflicts between the people of Malueth payam and other payams in Rumbek North and it is narrated that cattle keepers from Meen and Wuriang payams.</td>
</tr>
<tr>
<td>Occurrence of external conflict</td>
<td>In Rel cattle keepers often encounter cattle wrestlers from Haak Nuer from Mayendit and Nuong Nuer from Panyijar and in the past fighting has occurred between the groups. Apart from conflict relations with groups from the neighbouring Unity State, there are no understanding relationships with the Rup of Rumbek Centre and there has been outright conflict in the past with the neighbouring Gok from Cueibet county. In 2010, a conflict broke out between Dinka from Tonj East and the Manuer of Malueth village. The people of Panlual joined in the fighting, but it is argued that the two groups have reconciled and that cattle migration in both</td>
</tr>
</tbody>
</table>
Directions has been resumed.

| Distance to road network | Panlual is located at a half hour drive from the main road network between Rumbek and Maper and is inaccessible by car because of the construction of small dikes. |
| Preparedness for Operation and Management (O&M) | The chiefs, elders and galweng of Madhol and Panlual show a pro-active attitude towards operation and management and state that they want to be informed about and consulted in all proceedings and will take full responsibility. The leaders propose that technical training should be conducted and that a security mechanism will have to be designed in the form of guards and a fence. Secondly, the leaders refer to existing security mechanisms that have been implemented over the past generation that will be duplicated in the case of the livestock water yards. |

3.3 AMOK, MEEN PAYAM

Community consultations in Meen Payam were organized in Pakam, the payam headquarters. During our second visit, Pakam had become the centre of food distributions to communities from all the payams in Rumbek North and community leaders and members previously engaged with in community consultations in Malueth and Wuriang payams were present. Various community leaders and elders, gathered by Abednego Maker Warwut, the Paramount Chief of Meen Payam attended the consultative meetings that took place at a distance from the village centre. The team was received with slight distrust and community members at first refused to participate because “we are tired of giving information to foreigners, but not receiving anything in return”.

At the start of the discussion, the people present argued that the location that was identified during the consultative meetings in Rumbek is incorrect and Nyiencuei in Amok was suggested. However, after explaining the requirements, Amok One in Amok is decided on and the Paramount Chief accompanied us to the proposed site location.  

3.3.1 SOCIAL DIVISIONS AND CONFLICT DYNAMICS

Meen Payam is divided into three bomas, named Amok, Wundhiot and Meen Centre and each boma has one executive chief and five customary chiefs. There is one galweng chief for the whole of Meen and the payam falls under the leadership of a paramount chief. Meen Payam is inhabited by Pakam and is subdivided into three clans, which each exist of multiple sub-clans. The name Pakam, which is used to describe the section of the Dinka Agar living in Rumbek North, is argued to originate in what is contemporarily known as Meen Payam and has been given by the British administrators to the people living here in reference to the strength of the people. “Kam means arm and during the Anglo-Egyptian Condominium the Nuer, Gok, Rek and Luac used to come and take cattle and we used to fight them with a lot of force and were able to chase the invaders away and maintain control over the land. That is why we became known as Pakam and the name became common knowledge.”

Generally, Meen Payam is the largest payam in the county, followed by Malueth Payam. It is argued by Abednego Maker Warwut, the Paramount Chief of Meen Payam, that Amok has 10,000 households; Meen has 10,000 households; and Wundhiot has 5000 households. Combined the three bomas are made up of 25,000 households. The extrapolated data set of Bart Goes speaks of 18,594 people living in Meen Payam in 2014. These two numbers vary greatly and it is likely that the estimations of Warwut are incorrect and portray the county as more densely inhabited than might be realistically true.

5 At the time of the community consultations in Rumbek North the researcher was not aware of the requirement that specifies distance to the roadside, and although questions were raised about the proximity of the proposed location to the roadside, the researcher did not assume this issue to disqualify the location completely.
3.3.1.1 External Conflict Dynamics

According to the elders present, the only problems encountered by the people in Meen Payam are with the Nuer from Unity State and the Gok in Cueibet. An elder from Pakam, called Nuer, explains that he was given the name because his mother gave birth to him as they were on the run during fighting with Nuer and argues that there is a long history of conflict between the Pakam and the Nuer. Chol Alieth, a sub-chief in the court of the Paramount Chief narrates that “when we go to the Nuer they overtake our cattle and kill people. When we try to take back the stolen cattle from them that is when we broke our relationships.” Fighting has intensified since the outbreak of the conflict in Juba and the last fight occurred a few days before our visit in Rel.

The Gok attack people along Yar River and the elderly members of the community argue that since they were young boys the Gok have been coming to Pakam. Sometimes the relationships are conflictive, sometimes a relative peace is established. Abednego Maker Warwut argues that “the people from Rumbek Centre have problems with us and they kill people. Rup do not come with the cattle to Meen Payam.” The reason that the Paramount Chief gives are contradicting: at first he refers to the fighting that has occurred between the Rup and Pakam in the past years and then he argues that it is not these incidents, but the lack of water in Meen Payam that stop Rup from coming to Rumbek North in general and Meen Payam specifically. “If there is water [when the livestock water yard is established] we will see if the Rup come with attacks or come peacefully.”

3.3.2 WATER AVAILABILITY AND CATTLE MIGRATION

3.3.2.1 Cattle Population

Deng Mahtiang, the Deputy Paramount Chief of Meen, argues that people are very rich and one individual can have more than two-hundred heads of cattle. In Amok boma there are more than twenty-five cattle camps. Meen Centre boma has over 30 cattle camps. Wundhiot has over twenty cattle camps. Everybody owns cows. Warwut argues that “the people in the other payams have cows but they didn’t tell you the truth. You cannot come and count because then you are considered a witch. The counting of cows and children is not allowed. Even in time of census people lied about the number of children.” It is culturally unacceptable to speak about the number of cows because they might die.
Figure 12: People from the different payams in Rumbek North gather in Pakam for food distribution

In the whole of the payam, a minority of people remain behind during the dry season, whilst those with children and cattle will move around. People will only start moving when there is no water and people and cattle are “disturbed by thirst”. In the rainy season, the majority of people will remain behind and only the unmarried youth move to Tonj East and Rumbek Centre because of the disturbance of mosquitos. Historically, during the dry season the people from Wuriang, Malueth, Madol and Alor have all come to Meen Payam to graze their cattle. These people all cross through Meen Payam as they move to Rumbek North during the rainy season.

3.3.2.2 Water Availability and Migratory Patterns

Contradictory to the people in Malueth and Wuriang payams, the people present during the community consultation in Meen Payam agree that “the biggest problem we face are the mosquitos and the tse tse fly, not the absence of water”. Meen and Wundioth payam “have” Rel, which dries up in March. Equally the water holes that have been artificially constructed during the road construction dry up in March. Before the water holes were dug, there were no natural water resources apart from Rel. The water holes are shared between wild animals and cattle, and sometimes people draw water from them as well. Nowadays, when the water in the roadside holes finishes people dig shallow wells and use donkeys to water their cattle. It is counted by the people present that there are fifteen water holes in the payam, but they are argued to dry fast and “they do not help us”.

In March and April Rel and Yar dry up and when the mosquitos start to attack people, the cattle is moved to Tonj East and Rumbek Centre. In May there is small water, but in June when there is water in abundance there is too much water and mosquitos start to emerge. The disturbance of mosquitos starts in June and it becomes intense in July. In November cattle comes back to Meen Payam and the Luac and Rek come along with the Pakam. The drive to Rel is two hours and the drive to Yar is eight hours. The distance prevents people from moving to the later location and they will only move when the water in Rel is completely dried up, or when the situation around Rel is too insecure. The elders
argue that although there is a lack of water resources, there is a large toic stretching out in both the direction of Rel and Yar: “There is a lot of grass and it can accommodate all the cattle.”

As we visit Meen Payam, the Commissioner of Rumbek North has been ordered by the Governor of Lakes State to tell people to return to Rumbek North from Rumbek Centre and when asked how this will affect the people during the coming rainy season it is argued that “cattle will have to sleep in the water because there is no alternative. The only thing we can do is to raise the grounds.”

People used to cultivate mostly in Rel, but people fear to go there because of the Nuer. People now cultivate next to the houses and each household has a farm. During any normal rainy season the cultivated crops are enough to feed people, especially when the vegetable diet is supported with milk. However, as a result of the consecutive heavy rainy seasons, the cows are dying and are malnourished and they do not produce much milk. Cattle are kept away from the farms and there are particular forests for grazing. If a problem arises, the chiefs of agriculture see to compensation if farms are destroyed. However, it is argued by the galweng youth present that “people are able to prevent cattle from destroying the farms”.

![Figure 13: Cattle emerge from a roadside water hole in Meen Payam](image)

### 3.3.3 OPERATION AND MANAGEMENT

The elders present during the community consultations propose that the way to protect the livestock water yard is to select people from the water department, soldiers and benj pur to make sure that the laws established are respected. “For those who come to camp around the place, the chief will make sure they contribute and we should have a system of cost-sharing.” A comparison is drawn between the proposed livestock water yards and the existing boreholes and a fine is suggested to ensure repair.

Rules and regulations will be designed to guide the usage. The sons of here will take care of the maintenance and all sections and outsiders will be invited to use the water yard. However, it is
believed that one water yard cannot accommodate all cattle and therefore it is argued that: “If you want to complete the dry season people will have to be registered. If you make a mistake people will be charged or chased away. If people come with force the authorities are there and will be taken to court.”

When the establishment of a WUC is discussed, the male elders argue that they will “give our wives a chance. Not 25% like John Garang, but 50%.” The reason given for this is: “Women are not thieves and they don’t hate each other. They don’t play fraud or tribalism.”

Figure 14: Paramount Chief of Meen Payam and some citizens of Amok One climb the selected LWY location

Table 8: Amok One General Site Information and Recommendations

<table>
<thead>
<tr>
<th>Name of Location</th>
<th>Amok One, Meen Payam, Rumbek North</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPS Coordinates of Proposed Site Location</td>
<td>N 7 deg 32.851 min.; E 29 deg. 40.971 min.</td>
</tr>
<tr>
<td>GPS Coordinates of Locations in the Proximity of the Proposed Site Location</td>
<td>Handpump borehole in Amok village [N 7 deg 33.936 min.; E 29 deg 41.409 min.] Roadside water hole [N 7 deg 33.096 min.; E 29 deg 41.010 min.]</td>
</tr>
<tr>
<td>Date(s) Visited</td>
<td>18 and 22 February</td>
</tr>
<tr>
<td>Participants in Consultations</td>
<td>• Community consultations were organized in Pakam, the headquarters of Meen Payam and were attended by a group of approximately fifteen customary leaders, elders, galweng authorities and two elderly women. Throughout the consultations, youth would pass by, eavesdrop into and contribute to the conversations. During our second</td>
</tr>
</tbody>
</table>
visit to Meen Payam, Pakam is buzzing with people from all the surrounding payams because of food distributions and the consultations take place under a large tree at some distance from the distribution activities.

**Description of Proposed Site Location**
- Located on a raised ground that has been constructed out of the backfill of a roadside water hole.
- Surrounded by three scattered homesteads.
- In an area that is non-intensive in agriculture.
- At the border of a large, extended toic.
- Immediately bordering the main road between Rumbek Centre and Maper.

**Recommendations**
Due to its proximity to the main road, the location does not meet all the requirements and the researcher advises W4L to re-enter into discussions with the communities to identify another site-location. Out of the three locations in Rumbek North, Meen Payam has the largest cattle population, but equally has access to a large number of roadside water holes that dry up in late March, early April. The most significant problem faced by Meen Payam is the presence of mosquitos during the rainy season and the levels of flooding. The researcher, therefore, advises W4L to look into the possibilities of improving the accessibility and sustainability of water in the roadside water holes in order to solve the immediate problems related to water access and availability.

<table>
<thead>
<tr>
<th>Site characteristics</th>
<th>The proposed site location is surrounded by three homesteads, all at a distance of approximately 100 metres.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proximity to permanent settlement</td>
<td>The traditional authorities of Meen Payam were unwilling to disclose the size of the cattle population inside the payam. However, there are thirty cattle camps all over the payam and the inhabitants argue that their payam has the largest cattle population in the whole county.</td>
</tr>
<tr>
<td>Size of indigenous cattle population</td>
<td>The proposed site location is close to the cattle migration routes between Rumbek North and Rumbek Centre.</td>
</tr>
<tr>
<td>Distance from cattle migration routes</td>
<td>The proposed site location is surrounded by a toic that stretches itself out in three directions and it is argued by the inhabitants that the quality of the grass is very good in comparison to the surrounding payams.</td>
</tr>
<tr>
<td>Size and quality of grazing land</td>
<td>The natural water resource available is the River Rel, which equally dries up in March. In April people rely on water that is found by digging shallow wells and the donkeys. The problems with water availability in Meen Payam are relatively less than in the neighbouring Wuriang and Malueth payams.</td>
</tr>
<tr>
<td>Availability of water in dry season</td>
<td>In the area around Amok there is no agricultural activity. However, in Pakam, the main town in Meen Payam people engage in agriculture and there is a model garden.</td>
</tr>
<tr>
<td>Intensity of agriculture</td>
<td>Similar to Wuriang and Malueth payams, there are no internal conflicts in Meen Payam and it is argued by the customary authorities that people from the surrounding payams in Rumbek North peacefully occupy the cattle camps in Meen Payam.</td>
</tr>
<tr>
<td>Occurrence of internal conflicts</td>
<td>Table 9: Amok One Site Characteristics</td>
</tr>
<tr>
<td>Occurrence of external conflict</td>
<td>External conflicts take place with the neighbouring Nuer from Unity State and are centred around the River Rel and the inhabitants of Meen Payam encounter the Gok from Cuelbet along Yar River. These conflictual relationships have a long history that is traced back to the Condominium period. Over the past years there have been conflicts with the Rup of Rumbek Centre and the Pakam narrate that these conflict were started by the Rup. These conflictual relationships are portrayed in very ambiguous terms and are presented as less serious than with the Nuer and the Dinka Gok.</td>
</tr>
<tr>
<td>Distance to road network</td>
<td>The proposed site location directly borders the main road network between Rumbek and Maper.</td>
</tr>
<tr>
<td>Preparedness for Operation and Management (O&amp;M)</td>
<td>The elders of Meen Payam argue that the main responsibility for operation and management should lie with the chiefs, government representatives of the water department and the army. The former two will take responsibility for the daily operation and registration and the latter will maintain order and security. The customary authorities argue that one livestock water yard will not be enough to accommodate the indigenous and foreign cattle populations that are present during the dry season.</td>
</tr>
</tbody>
</table>
YIROL WEST COMMUNITY CONSULTATIONS

Within Lakes State, Yirol West borders Rumbek East to the north, Yirol East to the north-east, and Awerial to the south-east. Yirol West borders Mvolo County in Western Equatoria State to the south-west and Terekek County in Central Equatoria to the south. After the signing of the Comprehensive Peace Agreement (CPA) in January 2005, Greater Yirol was divided into three separate counties, including Yirol West, Yirol East and Awerial, and this resulted in conflict over the demarcation of borders and ownership over and access to natural resources, like rivers, lakes and grazing lands. These conflicts were settled and internally, Greater Yirol has been relatively secure. Yirol West comprises seven payams: Aluakluak, Gher, Abang, Anuol, Geng-Geng, Mapourdit and Yirol Centre. The Dinka Apak, who can be found in Aluakluak and Gher, claim to be Dinka while all the other sections of the Atuot in Yirol West claim a former Nuer ancestry (Beswick 2004, 71). Simultaneously, the ancestors of the Apak have originated from or assimilated differing ethnic groups like the Jibeli, Bari, Mundari and the Kakwa and sub-sections of the Dinka, like the Ciec and Aliab.

According to the extrapolated 2014 population data of Bart Goes, Yirol West has approximately 147,415 inhabitants. In comparison to Rumbek North, the population of Yirol West is more than double in size. Currently, Yirol West experiences relative internal peace and especially the central and western parts of the payam are rich in natural rivers and lakes. Yirol West has experienced higher levels of commercialization and has attracted traders from Sudan, Eritrea, Uganda and other East-African nations, who have contributed to the vibrancy of Yirol Town.

On the 27th of November 2014, a PRA workshop was organized in Yirol West under the supervision of Benjamin Mading Amour, the Deputy Team Leader of Water for Lakes. The report of the PRA assessment in Yirol West does not provide details on who was present during the workshop, but it argues that “the community of Yirol West selected two of their potential areas for the project sites (…) on either side of Payii River namely: Nyakajongbaai (near Atet – Aluakluak) and Nyindiet (Anuol).” Water for Lakes selected Nyakanjongbaai cattle camp in Aluakluak for this round of community consultations.

4.1 NYAKAJONBAAI, ALUAKLUAK PAYAM

The context of community consultations in Aluakluak Payam varied much from the consultations in the three payams in Rumbek North. The conversation took place under a tree bordering the cattle camp of Nyakajongbaai and was attended by about ten galweng youth who participated in the discussions on an on-and-off basis and were distracted by an ongoing game of one-two. At the time we visited the cattle camp there were no customary officials or elders present and the conversations were very chaotic in character because of the marginal attendance of a large number of young boys and adolescent girls.

4.1.1 SOCIAL DIVISIONS

Nyakajongbaai is a relatively small-sized cattle camp that was allegedly established in 1942, four to five generations back. Nyakajongbaai is situated close to Amet, a former SPLA base that was abandoned and the houses of the former soldier-residents have been re-inhabited by people from the neighbouring cattle camps. Nyakajongbaai has about a hundred places where people can sleep and can inhabit a maximum of four-hundred people. One of the young men present during the community consultation in Nyakanjongbaai explains the relationship with Amet as follows: “We are here because our villages are near and the old people stay inside the village because here [in Nyakajonbaai] there is

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no good drinking water. Our mothers are in the village. (...) These villages are for us.” An elderly woman in Amet confirms this by saying: “The cattle in Nyakajonbaai belong to us.” Nyakajongbaai is situated in Aluakluak Payam, which has recently been divided into Aluakluak and Gher payams. The inhabitants of both Aluakluak and Gher are Dinka Apak and can be divided into eight clans: Aper, Awen, Acok, Palual, Rir, Aparer, Buok and Pakwach. Nyakajonbaai has always remained relatively small because of the lack of natural water resources in close proximity of the cattle camp. However the toic around the cattle camp is large.

Figure 15: A household in Nyakanjonbaai cattle camp

4.1.1.1 Aluakluak Payam General Living Situation

The galweng youth present during the community consultations were unable to make any estimates on the size of the population in Aluakluak and Gher payams, but according to Daniel Makor, the Acting Payam Administrator there are 50,000 people in the two payams combined. However, the 2014 extrapolated population data shows that Aluakluak and Gher payams combined have a population size of approximately 28,600 people, which is about one-fifth of the total population of Yirol West. In Yirol West there are few permanent villages or settlements and the majority of the county inhabitants move between cattle camps. Daniel Makor names seven permanent villages in Aluakluak and Gher payams combined: Mapordit, Agany, Amet, Aluakluak, Atemwei, Piriya and Pakuc. The two payams harbour thirty-five cattle camps, of which Nyakajongbaai, although amongst one of the smallest cattle camps in the two payams, is considered a geographical focal point. It is argued by David Dut Major, the galweng chief, that all of the clans of the Apak visit and stay in Nyakajongbaai and there is free movement between the thirty-five cattle camps.

There are no farming activities taking place in and around the cattle camp, but only in Amet and Aluakluak. The main reason for this is the fact that the land in and around the cattle camp is low and floods during the rainy season. David Dut Major, the galweng chief, argues that there have not been conflicts between pastoralists and farmers in the past because there are people who watch the cattle. He states: “If you leave the cattle to destroy the crops in Amet, it means you destroy your own lives.”
One of the major problems that the inhabitants of Nyakajongbaai are faced with is the lack of clean drinking water and girls are sent to Amet daily to bring back drinking water from the donkey. Amet is about half an hour footing away from the cattle camp, but because the donkey is “overloaded” it takes a lot of time to fetch water and often people resolve to take water from the roadside water holes.

4.1.2 MIGRATORY PATTERNS AND CONFLICT DYNAMICS

4.1.2.1 Migratory Patterns

Nyakajongbaai, like other cattle camps in Yirol West, is not permanently inhabited and it is argued during the community consultation that people commonly move away from Nyakajongbaai in late February, early March. The given reason for communities to depart is the fact that the roadside water holes in close proximity to the cattle camp dry up and start to smell bad. This information is corroborated with the news that a number of people have left from Nyakajongbaai on the morning of our arrival because of the contaminated nature of the water in the water holes. Also, the researcher observed that one of the roadside water holes near the cattle camp had almost dried up in late February. However, the community members observe a change in the seasons because of the floods and state that in previous years the water holes dried up faster. Before the construction of the road in 2007 and the existence of roadside water holes, there used to be a number of small places where rain water would be kept. Also, conflict with the neighbouring Agar from Rumbek East is mentioned as one of the reasons to depart from the area.

From Nyakajongbaai, people move in the direction of River Payii, where people stay until “the river becomes dirty because cattle drink from it and when the grass finishes because of the congestion of cattle”. From here people follow the river Payii that runs along a toic that extends into Western Equatoria State. It is narrated that people come back to Nyakajongbaai in October and stay until February because of the “strong” grazing lands. Nobody remains behind during the rainy season because the mosquitos in Aluakluak Payam “kill the cattle, because it is cold and because of flooding”. The cattle population is highest in the early months of the dry season and there is enough grazing land to sustain all the cattle. The cattle population reduces significantly during the rainy season and flooding in September prevents people from staying with the cattle. Between Akot and Gar there is a highland named Panumanyar and also between Aluakluak and Mapordit there is a highland called Gumjaar where people migrate to during the rainy season.

4.1.2.2 External Conflict Dynamics

Before a conflict erupted between people from Rumbek East and Yirol West in 2007, people from Akot, Atiaba and Karich came up to Nyakajongbaai. Previously, the communities of Aluakluak and Gher payams used to drive their cattle up to River Naam in the rainy season and the other way around, the communities from Rumbek East used to stay with them in the dry season. David Dut states: “Intermarriage used to be common between Rumbek East, Rumbek Centre and Maper [Rumbek North]. We don’t go there anymore and this has stopped. Only townese still intermarray.” The relationships have turned conflictive and the galweng youth argue that the Agar only come to their area now to raid cattle. This happens during both the dry and rainy season, but is more intense when people are settled in the cattle camps between October and February. At the time of our conversation it was narrated that a raid from Rumbek East had occurred two weeks ago in a nearby cattle camp in which people were killed and cattle was taken away. The youth express frustration with an alleged inactive and biased position of the government and argue that the lack of response from the government has resulted in self-armament and the organization of galweng to protect the communities and cattle. David Dut Major wonders “if these things can finish or will continue. Peace attempts have been made up to four times, but these have not brought an end to the fighting”. The conflict with Rumbek East prevents the people from Nyakajongbaai and the surrounding cattle camps to follow historical migratory routes into Rumbek Center and Rumbek North and as a result of this most cattle keepers move to Western Equatoria and Central Equatoria states.

Similarly, relationships with the Nuong Nuer of Panyijar in Unity State have turned conflictive and since the beginning of the national conflict in December 2013 the communities from Aluakluak and Gher have not moved in the direction of Unity State. However, “before the beginning of the conflict in Juba there used to be exchange and this happened in a peaceful manner”. Before conflicts with Rumbek East and Unity State started people used to move to Lake Nyibor in Gher and an arm of River Payii in Mapoordit. It is about one and a half days of driving the cattle from Nyakajongbaai to Nyibor. Conflicts
of water resources do not occur along the River Payii because there is enough water to accommodate all the cattle.

In a more informal conversation with David Dut Major that takes place in Arabic as we search for a location between Nyakajonbaai and Amet, the galweng chief speaks proudly about his long-distance cattle travels to Juba, Yambio and as far as Uganda, where he has sold his cattle to in preparation of his marriages.

### 4.1.2.3 Internal Conflict Dynamics

Before a peaceful settlement was reached in 2009, movement between the three payams of Greater Yirol was limited. However, for the past years cattle have been moving freely and peacefully between all the payams of Yirol East and Awerial and old migratory patterns have been re-established. During the time of our visit to the Yirol Town, as one of the outcomes of the Lakes State Peace Conference a Greater Yirol Peace Conference was underway to ensure the continued peace between youth from the three payams.

**Figure 16:** Galweng youth scout the area between Nyakajonbaai and Amet for a location to construct the LWY

### 4.1.3 OPERATION AND MANAGEMENT

The galweng youth in Nyakajongbaai propose to establish the livestock water yard between Amet and Nyakajongbaai and not at the borders of the cattle camp as proposed by W4L. In reference to the requirements of W4L discussed at the beginning of the community consultations, they argue that because Nyakajongbaai is completely abandoned during the rainy season it would be safer to put the water yard closer to the village. The youth in the cattle camp are ready to make arrangements, but they feel they cannot take full responsibility because they cannot envision a change in settlement and migratory patterns after the establishment of a livestock water yard. The youth propose that in order to discuss systems of management, they will have to speak to the Paramount Chief of Alaukluaq and
Gher and see how they can be involved. They argue that the villagers of Amet should be made responsible for operation and management. As we briefly visit Amet, we are made to understand that although there is raised ground around the village, the villagers are not willing to give away land that is close to the village because they fear that it could jeopardize their harvest. The women present in the village propose that a location is found at a safe distance from the village. However, they ensure willingness to take up management of the water yard and propose that a house will be built next to the water yard. There are some contradictory statements about the population size in the village during the different seasons and as Malang Alony argues that people return to the villages in the rainy season to cultivate, the women in Amet argue that the population reduces in the rainy season and only ten households remain.

A number of galweng youth are selected to scout the area between Nyakajongbaai and Amet for a site location and various raised grounds are proposed in a random manner. Daniel Makor, the Acting Payam Administrator proposes to create a water user committee that is stationed in Amet and that could facilitate maintenance, but should also include members from the various cattle camps in the payams. He argues that police and wildlife can be appointed to guard the installation and protect it against invading cattle keepers from Rumbek East.

It is established by the galweng youth that people from outside Aluakluak and Gher payams will not have to pay to use the livestock water yard because “guests do not pay anything in our culture”. The communities of Aluakluak and Gher payams will have to collect money through the executive chiefs to make sure the water yard can be repaired in case it stops working. The youth give the example of a donkey a few kilometres away from the cattle camp that was destroyed by cattle keepers and say there is a need to establish systems that ensure repair when necessary. Although this might be perceived as a bad sign for local operation and management, this example cannot be taken to represent the overall potential for long-term operation inside the payam. Secondly, the youth propose that the cattle will have to be separated from each other so that they do not come to the water yard at the same time: “There cannot be any random drinking, but there needs to be an organised system”.

Table 10: Nyakajongbaai General Site Information

<table>
<thead>
<tr>
<th>Name of Location</th>
<th>Nyakajongbaai, Aluakluak Payam, Yirol West</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPS Coordinates of Proposed Site Location</td>
<td>N 6 deg. 28.297 min.; E 30 deg. 10.577 min.</td>
</tr>
</tbody>
</table>
| GPS Coordinates of Locations in the Proximity of the Proposed Site Location | Nyakajongbaai [N 6 deg. 28.544 min.; E 30 deg. 11.290 min.]
|                                   | Amet [N 6 deg. 28.356 min.; E 30 deg. 10.046 min.] |
| Date(s) Visited                   | 23 and 24 February                         |
| Participants in Consultations     | • Community consultation in Nyakajongbaai cattle camp is attended by about ten galweng youth and is presided over by David Dut Major, the galweng chief of Nyakajongbaai.  
• A separate but brief conversation is held in Aluakluak, the payam headquarters with the acting Payam Administrator, Daniel Makor and Malang Alony Malak, the Paramount Chief of Aluakluak and a number of elders who participate only marginally. |
| Description of Proposed Site Location | • Located on a raised ground that is covered in trees and plants and is about 40 metres from the main road running between Aluakluak and Yirol.  
• About 10 metres away from the proposed site location is a roadside water hole.  
• The proposed site location is in between Amet village and Nyakajongbaai cattle camp and is about 1 kilometre away from Amet and 3 kilometres away from Nyakajongbaai. |
| Recommendations                   | The proposed site location does not meet the requirements set by W4L because a) it is too close to the roadside; b) is relatively far from a permanent settlement; c) and the area around Nyakajongbaai is prone to flood during the rainy season. |
The researcher recommends W4L:

- To organise a follow-up meeting with local government and customary officials and galweng authorities of both Aluakluak and Gher payams to identify a raised location that is closer to a permanent settlement.
- In reference to the lwy in Citcok, to consider experimenting with a lwy that is operated and managed by cattle keepers in the dry season and permanently settled community members in the rainy season.
- To consider the possibility of establishing a hand pump to assist the people in Nyakajongbaai with a WASH component.

Table 11: Nyakajongbaai Site Characteristics

<table>
<thead>
<tr>
<th>Site characteristics</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Proximity to permanent settlement</td>
<td>The proposed site location is approximately one kilometre from Amet, a small permanent settlement, and three kilometres from Nyakajongbaai, a cattle camp.</td>
</tr>
<tr>
<td>Size of indigenous cattle population</td>
<td>Data not available. Aluakluak and Gher payams harbour thirty-five cattle camps.</td>
</tr>
<tr>
<td>Distance from cattle migration routes</td>
<td>The proposed site location is part of the main cattle migration routes between the different cattle camps in Yirol West, Yirol East and Awerial.</td>
</tr>
<tr>
<td>Size and quality of grazing land</td>
<td>The <strong>toic</strong> is argued to be large and of high quality and extends in all directions (Rumbek East, Unity State, Yirol East and Awerial).</td>
</tr>
<tr>
<td>Availability of water in dry season</td>
<td>There are no natural water resources in close proximity to Nyakajongbaai. With the construction of the road between Rumbek and Yirol, a number of road construction holes have been dug. Rain water in water roadside holes dries up in late February, early March.</td>
</tr>
<tr>
<td>Intensity of agriculture</td>
<td>Agriculture only takes place in the permanent settlements of Amet and Aluakluak.</td>
</tr>
<tr>
<td>Occurrence of internal conflicts</td>
<td>The internal Aluakluak Payam and Yirol West County relations are relatively peaceful and the galweng of Nyakajongbaai argue that there is free movement between the different permanent settlements and cattle camps inside the payam and to the neighbouring payams. Before a peaceful settlement was reached in 2009, movement between the three payams of Greater Yirol was limited. However, for the past years cattle have been moving freely and peacefully between all the payams of Yirol East and Awerial and old migratory patterns have been re-established.</td>
</tr>
<tr>
<td>Occurrence of external conflict</td>
<td>In the eight years there have been conflicts with Dinka Agar from Rumbek East and is centered along the River Naam and Lake Nyibor. The conflict with Rumbek East prevents the people from Nyakajongbaai and the surrounding cattle camps to follow historical migratory routes into Rumbek Center and Rumbek North and as a result of this most cattle keepers move to Western Equatoria and Central Equatoria states. Relationships with the Nuong Nuer of Panyijar in Unity State have turned conflictive since the beginning of the national conflict in December 2013.</td>
</tr>
<tr>
<td>Distance to road network</td>
<td>The proposed site location is 40 metres from the main road between Rumbek and Yirol.</td>
</tr>
<tr>
<td>Preparedness for Operation and Management (O&amp;M)</td>
<td>The galweng youth in Nyakajongbaai argue that because Nyakajongbaai is completely abandoned they cannot take full responsibility. The youth propose that for systems of management the Paramount Chief of Aluakluak and Gher has to be involved and that the villagers of Amet should be made responsible for operation and management. The women in Amet show willingness to take up management of the livestock water yard, but equally oppose the idea that the water yard will be constructed at the boundaries of the village.</td>
</tr>
</tbody>
</table>
KEY OBSERVATIONS AND SITE RECOMMENDATIONS

In positive reference to the assessment of the functioning livestock water yard that was constructed by Obakki in Barjiek, Cueibet, the researcher recommends Water for Lakes to construct two water yards in Rumbek North in order to prevent overcrowding and stress on one location. The locations that meet the requirements set by W4L and receive approval from the researcher are in order of preference: Payiei in Wuriang Payam and Panlual in Malueth Payam.

Water availability in the dry season in both Wuriang and Malueth payams is insufficient and cattle keepers experience significant levels of insecurity in their search for water access around the two main natural water resources; namely River Yar near the state border with southern Unity State and River Rel near the county border with Cueibet. The national conflict has significantly exacerbated conflict dynamics and perceptions of hostility with the Nuong Nuer from Panyijar Payam and the Haak Nuer from Mayendit Payam and limited people in dry season migration movements. Similar patterns of migration are documented among the three communities visited in Rumbek North and there exist systems of free movement and strong mechanisms of segmentary affiliation between the six payams of Rumbek North. The construction of two livestock water yards in Payiei and Panlual will most probably attract people from the surrounding payams and improve water availability in the wider Rumbek North.

The researcher advises Water for Lakes State to do further assessment in the option to experiment with a livestock water yard that is based in close proximity to a cattle camp and not to a permanent settlement. Especially in the context of Yirol West, where there are few permanent settlements this might prove to be the only option in the improvement of water accessibility and availability during the dry season. The construction of a livestock water yard in, or close to a cattle camp will have to been done in close consultation between permanent settlers and cattle keepers and solutions will have to be sought to manage and safeguard the system during the rainy season when the majority of the cattle keepers will migrate to higher grounds and seek refuge from mosquitos.

5.1 OPERATION AND MANAGEMENT

All communities – especially in reference to the construction of hafirs - emphasize that they need to be consulted and want to be informed about the construction of livestock water yards. The individuals present during the community consultations are in agreement about the fact that communities can and will take responsibility over the operation and management of the livestock water yards and that they can ensure that security is safeguarded. Often a combination of different actors - customary leaders, community members, police or army and government representatives - is proposed to take charge over the operation and protection. Generally, communities consulted are open to the idea of allowing allochthonous pastoralists to water cattle at the proposed livestock water yards and all communities emphasize that existing mechanisms of cattle migration in place will ensure peaceful usage.

Water for Lakes State questions the feasibility of and potential for fraud of a user committee that is established by and exists of mainly illiterate members. The researcher advises Water for Lakes State to design, in close consultation with the communities (see Annex III), a system of payment that is adjusted to and based upon existing cultural systems of settlement. One could envision a system of payment that is not monetary in nature, but that allows goats and cows as means of settlement. In the process of transference different forms of corruption might seep in and this might not be prevented completely. However, during community consultations, the existence of strong systems of control and enduring social consequences of fraud were mentioned as potential ways of limiting corruption.

5.2 DESIGN AND SIZE
In relation to the design of the livestock water yard, the researcher advises W4L to generally replicate the livestock watering points constructed by Obakki. The water points have been constructed in a long and laborious process of trial-and-error and in consultation with communities. Therefore, the researcher advises the Water for Lakes State Programme to reconsider the magnitude of upscaling in comparison to the existing, Obakki-established livestock water yard in Cueibet. In reference to the selected locations and overall practicability, the researcher proposes not to exceed an upscaling of three times in magnitude and expresses a personal preference of not more than two times in size. The researcher proposes to allow possibility for upscaling and use the next dry season to observe and communicate with the host and neighbouring communities and other yard users about size and possible needs for extension and/or upscaling.

In positive reference to the existing livestock water yard in Cueibet, the researcher advises Water for Lakes State to design a system where the solar panels are built on top of the water tank instead of raised above the ground. This will prevent inevitable destruction of the panels by cattle or people as the Citcok water yard has shown that a fence can and will easily be broken. Secondly, in order to prevent theft of the solar panels, it will be most sustainable to place the panels on top of a construction which is not easily accessible to the host and visiting communities and the watering cattle.

5.3 MAIN OBSERVATIONS

Below are three significant observations made during the community consultations:

- The existing livestock water yard in Barjiek, Cueibet shows that livestock water yards will not prevent movement as this is an integral part of the pastoralist lifestyle. Cattle migration cannot be prevented by singularly improving water availability in the dry season. All the communities consulted migrate in different directions during the dry and the rainy seasons. In conversation with three young cattle keepers from Madol and Malueth payams it is argued that “we will be happy to live in one place, but our cattle are very greedy, demanding. It is not easy to satisfy their thirst and hunger. That is why we move.” The same opinion is reiterated by a group of cattle keepers in Panmaker cattle camp: “The animals are very greedy. They will overgraze an area and if we don’t move, they will die. That is why we move with them in search of pastures. We would want to live in one place, like those in Maper. Now, even if we are hungry, we will have to move with our cattle in search of pastures.” Equally, a group of women in Panay cattle camp establish a direct and circular relationship between poverty and pastoralism: “we are poor because of our cows and it is poverty that makes people rely on cows”.

Although there are no problems with water availability during the rainy season, the presence of mosquitoes attracted by water - who are perceived by the communities as the major cause of death - is mentioned as the roots of cattle migration. W4L should consider independently including or collaborating with another organization on rainy season cattle health activities.

- Experiences in Cueibet provide us with a preliminary insight into the reality that the construction of a livestock water yard does not actively diminish cross-state or cross-county cattle raids, but it minimizes conflicts over water resources as incidences of contact decline.

- The Water for Livestock component should be closely connected to Water for Agriculture activities as all the communities visited experience high levels of food insecurity. The Barjiek LWY in Cueibet shows that improved availability of water for cattle can be employed for other purposes as well and communities can utilize the permanent source of water for agricultural activities. Training should be provided in how to protect farms against rain and flooding, in farming techniques and W4L should look into the possibility of assisting in the provision of seeds.
ANNEX I: COMMUNITY CONSULTATIONS INTERVIEW GUIDE

This interview guide has been designed in preparation of the LWY community consultations and has been used in conversations with various community representatives, ranging from customary authorities, local government officials, galweng authorities, women representatives, farmers and cattle-less men. The interview guide is divided into five sections but in reality there is strong overlap between the different sections, exposing an intimate interrelation between pastoralism, agriculture and water availability.

SECTION A - GENERAL PAYAM INFORMATION

1. How many households/people are living in the payam?
2. Who are the autochthonous people in the area?
3. What are the (sub-)clan-divisions in the payam?
4. How many of the people living in this payam are permanently settled?
5. How many people migrate?
6. Who amongst the community migrates?
7. In which directions do people migrate and for what purposes?
8. Is there a history of visiting clans/ethnic communities?
9. How are relationships with visiting clans/ethnic communities?
10. Are there customary/official agreements on cross-payam/countys/state cattle migration?
11. Have there been conflicts in the past as a result of allochthonous groups passing the area?
12. How have communities dealt with the presence of allochthonous groups?
13. What are the authoritative bodies in the area?
14. What is the role of the government in the county/area?
15. How are relationships with (local) government representatives?

SECTION B - CATTLE POPULATION

16. What is the approximate cattle population in the payam?
17. How many cattle camps can be found in the payam?
18. How many cows are in the payam in the dry-season?
19. How many cows are in the payam in the wet-season?
20. Do any cows come into the payam with people that do not originate from this area?
21. If yes, how many?
22. Does this lead to conflict?
23. How large is the toic/grazing area in the payam?
24. How many cows can it sustain in the dry-season?

SECTION C - WATER AVAILABILITY

25. What are the existing water resources in the payam?
26. How far is the closet dry-season cattle water point from your village?
27. How many households from how many different (sub-)clans are dependent on these resources?
28. What are the water resources used for?
29. Are the existing water sources serving multiple purposes (cattle/agriculture/household)?
30. Are there water-related conflicts in the area?
31. If yes, how are these existing conflicts addressed?
32. Do people migrate in search for water?
33. If yes, in which directions?
34. What is the social/cultural significance of long-distance cattle migration?
35. Would people be prepared to give up on long-distance migration if water resources are made available at a closer distance?

SECTION D - AGRO-PASTORALISM

36. How is land used in the payam?
37. What is the main source of livelihoods in the payam?
38. How is the division between pastoralism and agriculture in the payam?
39. How many farms are there in the payam?
40. Are farmers able to protect their farms from grazing cattle?
41. What customary/official systems are in place to monitor and control the interaction between pastoralism and agriculture?
42. Depending on the seasons, where do people commonly graze cattle?
43. Is there a shortage of grazing grounds?
44. If yes, where do people migrate to in search of grazing lands?
45. Are there land-related conflicts in the payam?
46. If yes, how do communities deal with land-related conflicts?

SECTION E - MANAGEMENT AND MAINTENANCE

47. If a water yard is established, which societal structures are in place to take up managerial responsibility?
48. Is the community willing/able to set up a water user committee for the livestock water yard?
49. Are there existing systems in place that can help with the management of water points?
50. Are there existing water committees in the area?
51. If yes, how do they function? What are the difficulties and challenges that the existing water committees encounter?
52. Is the community interested in receiving training in operation and maintenance of the lwy (solar panel and related pumps)?
53. What role does the community envision for itself in the operation and maintenance of the lwy?
54. Does the community feel it can take full responsibility over the lwy after the Water for Lakes project ends?
55. Does the community think it is possible to establish a payment system for the usage of water?
56. How would such a system look like?
57. How does the community envision ensuring the protection of the lwy?
58. How would the community regulate use of water yard by cattle herders from outside the payam?
59. How would the community control overgrazing/overcrowding and impact on farms?
60. Would the community use the water yard in the rainy season?
61. If yes, what purposes does the community envisage in the rainy season?
ANNEX II: LIVESTOCK WATER YARD ASSESSMENT INTERVIEW GUIDE

This interview guide was designed to assess the existing solar powered livestock water yard in Barjiek, CitCok Payam, Cueibet, which was constructed by Obakki. The interview guide can potentially be used in the future to assess the livestock water yards that will be established by Water for Lakes State.

SECTION A – GENERAL LWY INFORMATION

1. When was the lwy established?
2. What were the main reasons for establishment in this specific location?
3. Was the community consulted in the selection of the location?
4. Was the community consulted in the design of the lwy?
5. Which (sub-)clans/individuals were involved in the consultation process?
6. What role do the individuals that were involved in the consultation process play at present?
7. Did the community participate in the construction of the lwy?
8. Where informal/formal agreements made between the community and the operating organization?
9. Did members of the community receive training in the operation and management of the lwy?
10. Looking back on the establishment procedures, does the community feel anything should have been done differently?

SECTION B – GENERAL PAYAM INFORMATION

11. Who are the authochtonous people living in the payam?
12. How many people were permanently settled in the payam in the dry season before the construction of the LWY?
13. How many people were permanently settled in the payam in the rainy season before the construction of the LWY?
14. In both seasons, has the number of permanent settlers increased since the construction of the lwy?

SECTION C – LWY USAGE

15. Describe the daily usage of the livestock water yard.
16. Who uses the LWY?
17. What is the size of the cattle population drinking from the LWY?
18. Do cattle owners see any noticeable difference in the drinking behaviours of the cows since the construction of the LWY?
19. Has the lwy attracted allochthonous communities that used not to come to the payam before the construction of the LWY?
20. How have the autochthonous communities dealt with the presence of allochtthonous communities?
21. Does the lwy provide water for multiple usages (cattle/agriculture/household)?
22. How has the lwy influenced the livelihoods of the communities?
23. Has the LWY influenced farming practices and activities?
24. How far did people move before for the closest dry-season water point?
25. How did the LWY influence long-distance migration patterns?
26. After the LWY has been constructed, does it appear that the toic is big enough to accommodate the cattle population that drinks from the LWY?

SECTION D – LWY CONFLICT DYNAMICS

27. Has the lwy reduced existing water-related conflicts?
28. Has the community experienced conflict(s) in relation to the lwy?
29. If yes, how has the community dealt with conflict(s)?
30. Has the LWY contributed to conflicts between pastoralists and farmers?

SECTION E – OPERATION AND MANAGEMENT

31. Has a water user committee been established during/after the construction of the lwy?
32. Who has been involved in the set-up of the water user committee?
33. What procedures were used to establish the water user committee?
34. What rules and regulations were designed to manage the LWY?
35. How is the WUC functioning?
36. Are people following the rules and regulations set by the WUC?
37. Do cattle keepers pay for the usage of the LWY?
38. If yes, how does the system of payment function?
39. Are cattle keepers willing/able to pay for water usage?

40. Has the operation of the LWY been assessed by the operating organization since the construction?
41. How does the community assess the relationship with the operating organization after the construction of the LWY?
42. What possibilities for improvement of this relationship does the community see?

43. Does the WUC/community feel they are prepared and able to operate and manage the LWY independently?
44. How does the WUC/community envision to manage and operate the LWY after the end of the project?
45. What forms of support does the WUC/community think to need in order to operate and manage the LWY after the end of the project?
46. What are the main problems that the WUC/community foresees in the independent operation and management of the LWY?
47. How does the WUC/community think to solve these problems?
ANNEX III: WORK PLAN FOR LIVESTOCK WATER YARD
COMMUNITY INVOLVEMENT

W4L is apprehensive of the management component of the water interventions and this work plan helps to build enduring partnerships with and create a strong sense of ownership among communities and aims to ensure the sustainable usage of the livestock water yards.

Generally, the researcher advises to establish a system of communication and collaboration that is not based on dependency but encourages pro-activeness. Secondly, Water for Lakes will have to continuously reflect on and redress power imbalances between the W4L programme team, government bodies and representatives, customary authorities, galweng authorities and communities. This will help to develop and maintain mutually respectful and dynamic partnerships with and within communities.

1. SELECTION PHASE

In reference to future site selection procedures the researcher advises W4L to ensure:

- Participatory Rural Appraisal (PRA) workshops organized to identify site locations are conducted in an inclusive and gender-sensitive manner and it is ensured that the participants represent a cross-section of the community.
- A strong emphasis is placed on the documentation of PRA-workshops and participants will be registered in order to maintain a transparent insight in the decision-making processes.

2. PRE-CONSTRUCTION PHASE

In order to operate transparently and maintain good relationships with communities for potential future collaboration, it is advisable that the W4L-team communicates decisions made on the selected locations for the construction of LWY’s in the 2015 dry season to all the communities visited in the four locations. This could be done with the assistance of Assistant Water Commissioners and should allow for an open dialogue about and insight in the decision-making processes.

Before the commencement of the construction of the LWY, the customary authorities (paramount chief, executive chiefs and customary chiefs) and local government representatives (county commissioner, payam administrator, local representatives of the Water Directorate) of the selected locations are contacted to seek official permission to start the construction of the water yards on the selected locations and assistance and cooperation with the construction should be initiated.

3. CONSTRUCTION PHASE

In order to build a sense of ownership among the communities it is important to actively engage community members in the whole process of livestock water yard construction. This should move beyond the assistance of communities with the provision of raw materials and work force, and also involve logistics and technological and system development.

Active engagement in the construction phase will be achieved through the organization of a technical consultative meeting in which the construction plans for the livestock water yards are presented and where opportunities are provided for community members to comment on and ask questions about the design and operation of the water yards.

The technical consultative meeting should culminate in the selection of two individuals - possibly a pump mechanic or drilling officer and an individual that is not employed by the government - who will actively be involved in the construction phase and will work closely with and be trained by the technical experts who construct the livestock water yard. This will provide an opportunity for community members to build long-term capacity and establish feelings of independence. The trainees will have to be given insight into the logistics and be informed about the process of acquiring spare parts and be trained to do minor repairs and maintenance activities.

Such an approach will demand a more open-minded attitude from the technical experts and will most probably prolong the construction phase, but will be beneficial on a longer-term and will make the
intervention of Water for Lakes more sustainable. Secondly, it will contribute to generating locally-relevant technologies and services which are specifically designed for the dynamic contexts and needs of communities.

4. ESTABLISHMENT OF LWY USER COMMITTEE

During the construction of the livestock water yards and in close collaboration with the county officials and customary authorities, election procedures will be established for the establishment of water user committees that take overall responsibility for the operation and management and security of the livestock water yard. Election procedures might differ from location to location and depend on the existing mechanisms in place in the individual locations.

Simultaneous with the elections, W4L organizes community-wide dialogues in which the following topics will be discussed:

- Agriculture: how to prevent conflict by influx of large numbers of cattle in the last month of the dry season; how could the LWY contribute to agriculture in the area; multiple-purpose usage of LWY
- Usage by allochthonous communities
- Conflict prevention mechanisms
- Financial sustainability

The dialogues will help to inform the rules and regulations drafted by the WUCs. After the WUC drafts the rules and regulations, these are approved by the customary authorities and local government representatives.

Two steps are taken to ensure that the rules and regulations are communicated to potential users of the LWYs:

1. The host community, in close collaboration with local government, organizes a payam-wide meeting in which the rules and regulations established by the WUC will be presented to communities form inside the payam, but outside the village.
2. The host community, in close collaboration with representatives of the Directorate of Water Supply and Sanitation, organizes a county-wide meeting in which the rules and regulations established by the WUC will be presented to the wider society and communities from outside the payam.

During the payam-wide and county-wide meetings, systems of collaboration will be discussed and established between the different communities in order to ensure inclusive access to the water yards.

A selected educated and literate member of the community will be trained on the performance of evaluations and report writing and will be an active part of the evaluations that are conducted after the construction of the livestock water yard. This individual could be a member of the Directorate of Water or (a deputy of) the Assistant Water Commissioner. This person will be consulted and intimately involved in setting up a monitoring system.

The researcher advises W4L to organize participatory workshops with an agricultural specialist that will help to identify agricultural difficulties and in which people are informed and trained about the potential of using the LWY for agricultural purposes.

4. JOINT OPERATION AND MANAGEMENT (O&M)

In the period between the construction of the livestock water yards and the departure of W4L the focus should be on training and the active building of technological and operational capacity.

In the period of joint operation and management, Water for Lakes will conduct periodical participatory assessments on:

1. Operation and Management
2. Collaboration with W4L and community expectations
3. Influence of livestock water yard on social relationships and conflict dynamics
Periodical meetings with the WUCs and larger communities will enable W4L to identify and address (recurring) operational difficulties, managerial shortcomings and monitor the impact of the livestock water yard on social and conflict dynamics and livelihoods. The outcomes of the periodical assessments will be communicated back to the communities with the assistant of the Directorate of Water Supply and Sanitation.

5. POST-W4L OPERATION AND MANAGEMENT

At the start of the project the water user committees, technical assistants and general communities will have to be given insight into the envisioned operation by and duration of the Water for Lakes State Programme and at least half a year before departure separate evaluative meeting will have to be organized with the various stakeholders and especially the WUCs. The evaluations should address the following issues:

1. Collaboration with and operation of Water for Lakes State Programme
2. The influence of the livestock water yards on social and conflict dynamics
3. Operational assessment of the livestock water yards
4. Operational insecurities and shortcomings within the communities

In these evaluations, W4L will intimately involve the Directorate of Water Supply and Sanitation and other local government bodies. Together with the communities and government actors existing mechanisms of control will be reviewed and adjusted which will ensure the continued effective usage of the livestock water yards.

After the end of the W4L Programme, the Directorate of Water will have to continue to perform yearly assessments together with the trained evaluator of the livestock water yards and good systems of communication will have to be established in order to enable intervention of the Directorate when necessary.
ANNEX IV: LIST OF COMMUNITY CONTACTS

This list of community contacts serves as a reference for future interactions with the communities visited for the community consultations and does not include all the names of the people present during the community consultations.

RUMBEK NORTH

Interpreter:
Peter Kachual –

Kolong Marial Wol – Paramount Chief Rumbek North
Abraham Maloth Marier - Commissioner Rumbek North
Poth Dunic - Peace Advisor to the Governor

Wuriang Payam

Matuiny Chapoul – Paramount Chief of Wuriang
Marial Apac – Executive Chief of Chamchuer
Jot Marial and Maliir Maker - Executive Chiefs of Rorbar
Peter Buong – Village Administrator of Payiei Village
Malou Aget – Benj Pur in Payiei village
William Maru – Payam Administrator
Matthew Wuou – Boma Administrator of Chamchuer
Chol Mawum – Sub-Executive Chief of Chamchuer
Jot Marial – 3rd Executive Chief of Chamchuer
Loc Dak – Acting galweng of Wuriang
Madol Baai – galweng leader
Daniel Mateng – galweng leader
Nyantiop Majok – female representative of Payiei
William Akec – pump mechanic

Malueth Payam

Madol William Mading Bol - Boma administrator
Makur Pou – Executive Chief of Madhol.
Agany Nhiak Kak – Executive Chief of Aciek
Makuoal Dal Kuoc – Executive Chief of Kak
Awec Madut – Second Sub-Chief of Madhol Boma
Chut Abur – Sub-Chief
Juon Machut – village administrator Panlual
Bol Manyuan – village administrator of Madhol
Mayhant Ater – Forestry
Mawec Baai – Gol Leader of Madhol
Kachual Mabor – Plaintive in local court
Makat Pou – galweng Chief of Madhol
Daniel Aru Ngong – Sub-Chief of Gak

Meen Payam

Abednego Maker Warwut – Paramount Chief
Deng Mahtiang – Dep. Paramount Chief
Chol Alieth - Sub-Chief of Meen Payam
Daniel Maluong – Boma Administrator
Dut Dhelbeny – Court Member
Diak Madhieu – gol leader
Lang Chol – galweng leader
William Makor Malual – galweng leaders
Mamer Akec – Village elder
Mariiek Mading – Village elder
Marek Chawuop – Village elder

**YIROL WEST**

Interpreter:
Majur Chen - Assistant Water Commissioner Yirol West

John Akec - Town Counsellor
David Dut Major - Galweng Chief
Malang Alony Malak - Paramount Chief of Aluakluak Payam
Daniel Makor - Acting Payam Administrator

**CUEIBET**

Interpreters:
Dhuriak Maker – Drilling Officer
Daniel Deng – inhabitant of CieCok Payam

Emok Modogo – Payam Administrator/Chairman of WUC
Moses Athian – Secretary of WUC
Thon Maleth – Executive Chief of Ramater
ANNEX V: TERMS OF REFERENCE

Anthropologist

The Water for Lakes Program (W4L) is part of the broader bilateral program for water and sanitation between South Sudan and the Netherlands. This program is funded by the Dutch Government and has an implementation period of three years with a potential extension of 2 years and started on 1st of November 2013.

For the implementation of this program, Mott MacDonald is looking for suitable candidates for the position of anthropologist expert for a period of ~15 working days, beginning on February 16th 2015.

Background assignment

Part of program ToR is to introduce livestock water points to community beneficiaries. There is pressure to start implementing them in 2015 dry-season (Project log frame). Still, there are serious risks related to new livestock water points such as danger of increasing conflict and doubts on viability of community based O&M. So the W4L Project want to be very cautious. The livestock consultant recommended (see separate report) to start with implementing solar powered livestock water yards (lwy) and not hafirs or water holes. The W4L Team agreed with this (water holes are costly & hafirs failed in Lakes State). A solar powered lwy with one borehole is expected to be able to sustain 1,200 to 1,800 cattle in the dry season (note this is considerably lower than indicated in the report of the livestock consultant).

The W4L Team already downscaled – because of the risks – the number of pilot livestock water points for 2015 dry-season to a maximum of three.

Site characteristics for lwy:

1. not too far from a village / permanent community (to facilitate supervision and O&M);
2. sufficient grazing area (or toic) and indigenous cattle;
3. little or no existing agriculture;
4. site should be part of a larger area with a relatively homogenous community with little/no violent conflicts amongst themselves;
5. relatively far from main migrant cattle routes;
6. community should be prepared to take up ownership and O&M of the lwy in the form of a water users association.

Potential sites have been identified in Rumbek Centre, Rumbek East and Rumbek North during PRA workshops with community leaders (see reports livestock and PRA consultants). Still a field assessment has not been done yet.

The proposed list of potential pilot lwy for the 2015 dry-season has been updated by W4L Project (in discussion with Director, Water Department) taking into account the recent conflicts (increased internal conflicts in Cuiebet, Rumbek East and Rumbek Centre and attack into Rumbek North from Unity State). The Table below lists the sites that are to be considered. Please note the list maybe updated (by project or consultant during the assignment) if required.

Table: Sites considered to be reviewed for livestock water yards to be piloted in 2015 dry-season

<table>
<thead>
<tr>
<th>County</th>
<th>Payam</th>
<th>Village</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rumbek North</td>
<td>Meen</td>
<td>Pakam</td>
<td>Payam closest to Rumbek Centre (so relatively far from Maper where recent attacks took place), relatively homogenous community? shallow reported water table (20 mbs) ranked no 3 for Rumbek North PRA</td>
</tr>
<tr>
<td>Rumbek North</td>
<td>Malueth</td>
<td>Madhoi</td>
<td>relatively homogenous community? shallow reported water table (17 mbs) ranked no 1 for Rumbek North PRA</td>
</tr>
<tr>
<td>Rumbek North</td>
<td>Wurieng</td>
<td>Payiei</td>
<td>relatively homogenous community? shallow reported water table (22 mbs)</td>
</tr>
</tbody>
</table>
Yirol West**

- Aluakluak
- Nyakajongbai (near Atet)

Yirol West is relatively peaceful but Alet is not too far from Rumbek East (central and western part of Yirol has natural lakes so no high need for lwy)

- ranked no 4 for Rumbek North PRA

Rumbek East**

- Aduel
- Billing

1 lwy in Rumbek East to be considered to ‘balance’ lwy in Yirol West

- ranked no 1 for Yirol West PRA

Rumbek East**

- Atiaba
- Lake

1 lwy in Rumbek East to be considered to ‘balance’ lwy in Yirol West

- ranked no 2 for Rumbek East PRA

Cuiebet

- Citcok
- Tiap Tiap

an existing solar power lwy constructed by Obakki from which lessons can be learnt

** Especially to be considered in case Rumbek North not accessible / feasible (security)

** Qualifications:

The successful incumbent has:

- PhD/Msc. in anthropology;
- Minimum of 8 years of experience in anthropology;
- Preferably specific knowledge on Dinka;
- Experience on the use of participatory methods for community consultations and
- Strong experience in South Sudan.

** Tasks:

In close cooperation with the Water for Lakes State team, both national and international, the anthropologist will:

1. Review relevant project reports especially PRA Consultant Report and livestock consultant report.
2. Have follow-up (see W4L meeting minutes on earlier meetings) consultations on lwy with relevant ministries in Rumbek (livestock, water/works, etc.).
3. Assess the only existing (Obakki) lwy in Cuiebet in relation to community issues (O&M, conflict, etc.) and draw lessons from this for new livestock water yards.
4. Have community consultations at the proposed new lwy (table above is a guide but may be adjusted if needed) to focus on: a) exact site selection (see criteria above), b) community willingness to do O&M though a water user committee (costs recovery / willingness to pay) leading to a formal agreement between ministry & community, c) prevent that the proposed lwy causes new conflicts and how benefitting communities can handle these risks (e.g. how to regulate use of lwy by cattle herders from outside the area, control overgrazing/overcrowding, impact on farms – if any, wet-season use, etc.), d) other relevant aspects.
5. Provide recommendation on the most appropriate locations for two or three lwy for early implementation (2015 dry-season) considering an acceptable low / minimal risk for creating conflict and O&M;
6. Assess (and implement) if there is a need for further and wider communication with (some of the) community leaders to motivate the site selection for the pilot lwy for the 2015 dry-season. Especially considering possible expectations that were raised through the earlier PRA exercise.
7. A concrete work-plan for involving the concerned communities for the various phases of the lwy (pre-construction, construction, implementation phase with external support, implementation phase after hand-over).
8. Develop a final report integrating relevant feedback received.

The input of the Anthropologist will help the team to gain a better knowledge of the people and culture of the area in which the team will have to work in the coming 4.5 years. This is expected to lay a good foundation for a sensitive approach of programming and a better understanding of the local environment.