International Labour Organization

Republic of South Sudan

Child labour and education in pastoralist communities in SOUTH SUDAN

International Programme on the Elimination of Child Labour (IPEC)

ILO DWT/CO for North Africa and Country Office for Egypt, Eritrea, Sudan and South Sudan

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Acronyms

ADRA	Adventist Development and Relief Agency
AES	Alternative Education Systems
BAL	Basic Adult Literacy
CAHW	Community Animal Health Worker
CPA	Comprehensive Peace Agreement
FAO	Food and Agriculture Organization of the United Nations
FGD	Focus Group Discussion
GoSS	Government of the Republic of South Sudan
IDP	Internally Displaced Person
IEC	Intensive English Course
ILO	International Labour Organization
IPEC	International Programme for the Elimination of Child Labour
MSF	*Médecins Sans Frontières*
NBS	National Bureau of Statistics, Republic of South Sudan
NGO	Nongovernmental Organization
NRC	Norwegian Refugee Council
PHCC	Public Health Community Clinic
PHCU	Public Health Care Unit
SAF	Sudan Armed Forces
SPLA	Sudan People's Liberation Army
SPLM	Sudan People's Liberation Movement
VSF	*Vétérinaires Sans Frontières*
YEP	Youth Education Pact

Executive summary

Cattle culture and cattle camps play a significant role among many tribes in South Sudan, as the country boasts one of the largest livestock herding populations in Africa, and understanding the dynamics and inner workings of the cattle camps can help to better inform and foster inclusion for the development of this new nation. Youth—both within the five to thirteen year age range considered below the minimum age threshold for employment,[1] and between the ages of fourteen to seventeen—are highly utilized among these communities in the daily workings of the cattle camp, highly challenging the notions of child labour as established by the International Labour Organisation's fundamental conventions on child labour.

By integrating themselves into camp life, researchers have been able to gain grassroots experience among these cattle communities with regards to work and the roles of youth in the camps, the value placed on education, and the dangers and hazards for children associated with life in the cattle camps. Researchers noted deep seated cultural tendencies among the herding communities visited in which more value is placed on work experience versus traditional education, and age and bride price dictate much of decisions surrounding a child's upbringing.

Children were found to face many hazards at the camp, including danger from cattle and wildlife as well as neighbouring tribes; many youth displayed scars and burn marks from incidences with cattle and close proximity to fires at the camps. Further, exposure to animal borne diseases and cattle excreta leave children and youth vulnerable to a myriad of health issues that are difficult to delineate from labour or general camp life. Interestingly, it was found that parents often send their children to work in camps during times of scarcity to increase access to food, yet are often unaware of the risks and hazards associated with life in the cattle camps and labour at such a young age.

Though views are said to be changing, formal education does not take precedence to work in the cattle camps and the value placed on young brides with regards to bride price. Researchers found that many parents did not recognize the value in formal education, feeling that the life lessons learned from work in the cattle camps is invaluable and can supplement schooling. Attending school was identified as delaying marriage among girls, or leaving girls unmonitored, and therefore lowering bride price;[2] it also is seen as postponing dowry payments and therefore prohibiting sons (who are often dependent on this cattle gift to award the family of their own bride) and younger children from marrying in a timely manner (as traditionally, children marry in order of age). The value of female education is somewhat unknown, and sons—after participating in initiation rituals—view themselves as no longer needing to attend a rigid system (where they are not necessarily treated as adults).

Researchers found that this traditional and negative perspective towards education had begun to change as tribes have begun to recognize the value of political participation and representation—necessitating the education of youth to afford them the opportunity to run for political office—as well as market participation in times of scarcity where entrepreneurial skills can benefit the camp as a whole through the ability to generate income to mitigate food insecurity.

Based on these sentiments, and the in–depth research conducted and presented in the proceeding document, the following summarized list of recommendations can be made:

[1] ILO. 1973. ILO Convention No. 138 on the Minimum Age for Admission to Employment and Work (available at www.ilo.org/ilolex/english/).

[2] The decrease in a girl's bride value caused by attending school was mainly attributed to either; being unmonitored in school which raised suspicion of illicit activities such as prostitution; or causing girls to marry at an older age, which also decreased their value as the ideal marriage age is 15 to 16 years.

- develop and implement a multi–staged information campaign aimed at a gradual shift in public perception around the question of what the limitations should be on the working activities which children engage to support their families;
- sensitization on the value of formal education can help to challenge and better inform the notions that the experience in cattle camps can supplement children and youth attending schools;
- increased availability of the Pastoralist Education Programme (PEP) can help expose both youth and adults in the cattle camps to the value of formal education, while working in the parameters of the cultural context of these communities;
- incorporation of law and politics classes in the PEP curriculum available to older students to promote continued enrolment, as the prospect of civic engagement and political participation was a paramount reason for attending school, as tribes desire similar representation to that of their neighbours and other conflicting tribes;
- the availability of female empowerment trainings as well as fostering the formation of female–centred youth groups to help educate young girls and their parents on the value of female education, the benefits to avoiding early marriage and the roles of females as decision makers in the community;
- continued encouragement for and development of Youth Associations within herding communities, which have thus far been successful in promoting peace between inter–tribal youth to reduce cattle raids—and in turn lessen the mental stress that accompanies feeling vulnerable to raids and conflicts in the camps;
- increased access to water, through the construction of protected boreholes and wells can help ease the work of children in hauling water, and lessen the need for more bodies around camps to satisfy the water needs of cattle;
- trainings on water purification and WASH sensitization—particularly the value of soap and hand washing—can help mitigate the instances of illness among children and youth caused by their close proximity to livestock and faeces.

1. Introduction

1.1 Background

South Sudan received independence on July 9, 2011 following decades of civil war. With the signing of the Comprehensive Peace Agreement (CPA) in 2005 between the Government of Sudan and the Sudan People's Liberation Movement/Army (SPLM/A), the framework for a referendum on southern independence was established. On January 9, 2011, voters overwhelmingly chose secession and the foundation of a separate South Sudanese state.

One of the many challenges facing South Sudan as a new nation is the issue of child labour, an issue that is found throughout the county, especially in rural communities, notably in pastoralist communities. The exact rates of child labour or the risks children face engaging in labour in pastoralist communities in South Sudan are unknown, but such practices are widely considered to be commonplace. Children as young as two or three are involved in some form of work at the cattle camps and the concept of child labour generally does not carry a negative connotation. Pastoralist communities in South Sudan receive limited basic services compared to those residing in rural homesteads or peri–urban centres. This report attempts to demonstrate that children in these pastoralist communities, exposed to hazardous labour conditions, with limited access to education and health facilities, may potentially be the most marginalized hidden population within one the world's most undeveloped countries.

1.2 Purpose of this study

This study aims at developing an in–depth understanding of the child labour phenomenon in selected pastoralist communities with the aim of informing the formulation and/or revision of public policies and programmes on education and child labour elimination. Specifically, this study sets forth to assess the following dimensions of this phenomenon:

(1) the extent of pastoralist children's participation in schooling;
(2) the magnitude and nature of child labour with respect to herding of livestock in both bomas (homesteads) and cattle camps;
(3) understanding the different hazards associated with child related activities;
(4) gauging the attitude and perceptions of children, youth and their parents on education and child labour in their communities.

1.3 Methodology

This study was based primarily on the ILO-IPEC's *Manual on Conducting Rapid Assessments*,[3] with substantial amendments in order to adapt the approach to the context of South Sudan and the limitations faced by the researchers during the fieldwork phase (see Section 1.4). The study was a cross section design employing a quasi–randomized survey with respondents including children and adults selected through stratified convenience sampling. The sample was stratified along geographical area, age range, and gender. The design and process of conducting the study was developed by Forcier Consulting with close guidance from ILO-IPEC considering social and

[3] ILO and UNICEF, 2005. *Manual on Child Labour Rapid Assessment Methodology* (Geneva, 2005) available at http://www.ilo.org/ipecinfo/product/viewProduct.do;?productId=1819.

anthropological methods of collecting qualitative and quantitative data. The research considered the legal framework of the ILO Convention No. 138 on the Minimum Age and ILO Convention No. 182 on the Worst Forms of Child Labour and supplemental Recommendation No. 190.[4]

Data was collected through interviews and focus groups with the discourse itself being the objective of analysis. Interviews collected relevant quantitative data using semi–structured questionnaires, and data was coded and quantified to the greatest extent possible. The researchers did not use recording devices as informants in South Sudan have generally been found to not be comfortable with creation of a permanent record. Instead, notes were taken and written up on a daily basis. The interviews targeted both working children and adults, including those in the cattle camps, homesteads (bomas), and those attending formal schools. Data was also collected from children either in schools or cattle camps. Key informant interviews were conducted with parents of the children already interviewed, cattle camp leaders, teachers and other key informants including government officials, traditional leaders, religious authorities, schools, NGOs, youth associations, women's associations, health workers, and community animal health workers in order to substantiate and triangulate findings. To the largest extent possible, the data collection tools attempted to disaggregate data along gender lines as well as into three age groups:

- those 5 to 13 years (below the minimum age for admission to employment or work as per ILO Convention No. 138);
- those between 14 and 17 years (above the minimum age for admission to employment or work, and therefore entitled to work as per conditions included in national legislation and ILO child labour conventions); and
- young adults (18–24 years).

All interview participants were briefed on the purpose of the study and informed that participation was completely voluntary with the option to refuse any question they did not feel comfortable answering. When applicable, permission to conduct interviews was also obtained from cattle camp leaders/elders, which often entailed the researcher providing extensive explanations of the study and purpose. No compensation was provided for the interviews, and the researcher accommodated the interviewees schedule as not to interrupt their daily routine.

The following quotas were established in order to ensure data was collected along these parameters. While the research team faced significant challenges in the field, all attempts were made to interview as many informants as possible to reach the following goals.

[4] ILO Conventions and Recommendations are available at http://www.ilo.org/ipec/facts/ILOconventionsonchildlabour/lang—en/index.htm.

Table 1: Data collection methodology by type of respondent and quota

Data collection method	Type of respondents	Quota
Semi–structured qualitative interviews with children and youth	Boys and girls, categorized into two age groups, those below the minimum age (5–13) and those above the minimum age (14–17)	100
	Young men and women aged 18–24	50
Semi–structured qualitative interviews with adults	Parents	20
	Cattle–camp leaders and elders	20
	Teachers	20
	Government representatives in local authorities	10
	Civil society group representatives	10
	Other informants (TBD)	10
Focus group discussions (of 7–9 discussants)	Children aged 8–12	6 groups
	Children at cattle camp (separate groups for girls and boys)	6 groups
	Children in school (separate groups for girls and boys)	6 groups
	Children neither at cattle camp nor at school (separate groups for girls and boys)	6 groups
	Adults (separate groups for men and women)	4 groups
	Total	420

In the respective study areas, the total numbers of individuals interviewed in the survey component, in extended interviews or as participants in focus groups were as follows: Unity State–120; Lakes State–130; and Central Equatoria State–133. This is in addition to feedback from stakeholders, ministers and other government officials in Juba. More than 380 individuals from the study areas were interviewed in the survey component or as participants in focus groups. These included some 40 children and 50 young adults in each of the three study sites. About 40 other key adults' interviews were conducted and 14 focus group discussions (FGDs) with between seven and nine discussants per group. The children were classified based on categories used by the local communities in relation to the occupation and livelihoods. However, in order to target participants, the following three categories were used: boys and girls residing in the cattle camps; boys and girls only attending formal schooling; boys and girls not accessing formal schooling. These categories are not mutually exclusive and it was noted when children overlapped between these various groups. This was done in order to identify the most appropriate education delivery mechanisms for each subgroup.

1.4 Definitions and background to child labour and child labour with livestock

The focus of this project is on child labour and access to education among herding pastoralists in South Sudan. The study borrows key concepts and definitions borrowed from ILO Conventions Nos. 138 and 182 and are used for the analysis contain herein.[5]

[5] Definitions were sourced from 18th International Conference of Labour Statisticians (ICLS) Resolution on Statistics concerning Child Labour (at http://www.ilo.org/wcmsp5/groups/public/—–dgreports/—–stat/documents/meetingdocument/wcms_101467.pdf) (pages 56–66); as well as the publication: ILO-IPEC, 2011. *Children in hazardous work: What we know, what we need to do*. (IPEC, Geneva, 2011).

1.4.1 Age definition of a child to whom special protection is granted

Though concept of a child may be relative depending on social and cultural norms, this study uses the dividing line between child and adulthood as 18 years of age as referenced in major ILO Child Labour Conventions Nos. 138 and 182 and the United Nations Convention on the Rights of the Child.

In contrast, according to the South Sudan Labour Bill of 2011, a child "means any person less than sixteen years of age."[6] Furthermore, according to the "General Education Act of 2012" a child's right to education and well–being is stipulated below:

(1) basic education in public learning institutions shall be free to all citizens of South Sudan;
(2) education shall be accessible to all citizens of South Sudan without discrimination on the basis of religion, race, ethnicity, health status, gender or disability.[7]

According to the Education Act of 2012, school attendance is compulsory and "every child of school age shall attend school." Furthermore, the act states "every parent must cause every learner for whom he or she is responsible to attend a school from the first school day of the academic year in which such learner reaches the age of six until the last school day of the academic year in which such learner attains the end of Secondary four." [8] Therefore, schooling is compulsory for all children 6–17 years–old.

For the purposes of this research, the term "youth," which is normally considered between the ages of fifteen and twenty–four, is used in a much broader way by South Sudanese, whereby "youth" can refer to individuals (both married and unmarried) who are well into their thirties. Efforts were made to restrict the use of the term to those eighteen or older. When informants used the term "youth," researchers clarified the usage through follow–up questions in order to avoid including data or context that relates to adult males eighteen or older (but not older than twenty four).

1.4.2 ILO definition of child labour and South Sudan employment conditions

The term "child labour" is often defined as work that deprives children of their childhood, their potential and their dignity, and that is harmful to physical and mental development.

It refers to work that:

- is mentally, physically, socially or morally dangerous and harmful to children; and
- interferes with their schooling by:
  - depriving them of the opportunity to attend school;
  - obliging them to leave school prematurely; or
  - requiring them to attempt to combine school attendance with excessively long and heavy work.

In its most extreme forms, child labour involves children being enslaved, separated from their families, exposed to serious hazards and illnesses and/or left to fend for themselves on the streets of large cities–often at a very early age. Whether or not particular forms of "work" can be called "child labour" depends on the child's age, the type and hours of work performed, the conditions under which it is performed and the objectives pursued by individual countries. The answer varies from country to country, as well as among sectors within countries.

[6] Labour Bill 2011 p. 8.
[7] General Education Act, 2012 p. 6.
[8] ibid, p. 19.

In contrast to the above ILO definition, according to the South Sudan Labour Bill of 2012, the legal conditions for child labour is inserted below, with emphasis added for pertinent and relevant demarcations for this research.

Conditions for Children Employment

(1) No Person shall engage or permit the engagement of a child under the age of fourteen (14) years to perform work. However, this does not apply to children working in schools or other training institutions for educational or vocational purposes if the work is deemed appropriate by the minister and is an integral part of:
    a. a course of education or training for which a school or training institution is primarily responsible;
    b. a programme of training approved by the minister; or
    c. a programme of orientation designed to facilitate the choice of an occupation or of a line of training.

(2) A child that has reached the age of twelve (12) years may be engaged to perform light work, provided that such work:
    a. is not harmful to the child's health or safety, or moral or material welfare or development; and
    b. does not interfere with the child's attendance at school, the participation in vocational orientation or training programmes approved by the Minister, or the child's capacity to benefit from the instruction received.

(3) No person shall engage or permit the engagement of a child under the age of eighteen (18) years to perform hazardous work.

(4) Following consultation with registered Trade Unions and Employers" Organisations and on advice from the Council, the Minister may issue regulations authorizing the engagement of children who have attained the age of sixteen (16) years to perform specified categories of Hazardous Work, provided that:
    a. special measures are taken to ensure that the child's safety and health, and the child's moral and material welfare and development, are protected;
    b. the child receives adequate specific instructions or vocational training for the work to be performed;
    c. the number of hours and conditions of such Hazardous Work shall be as prescribed by regulations.

(5) The worst forms of child labour shall include:
    a. all forms of slavery or practices similar to slavery, such as sale and trafficking of children, debt bondage and serfdom, forced or compulsory labour, and forced or compulsory recruitment of children for use in armed conflict;
    b. the use, procurement or offer of a child for prostitution, for the production of pornography or for pornographic performances; and
    c. the use, procuring or offering of a child for illicit activities, in particular for the production and trafficking of drugs as defined in international treaties.

(6) The Government shall design and implement programmes to eliminate the worst forms of child labour, prevent the engagement of children in such labour and:
    a. provide the necessary and appropriate direct assistance for the removal of children from the worst forms of child labour and for their rehabilitation and social integration;
    b. ensure access to free basic education, and, wherever possible appropriate, vocational training, for all children removed from the worst forms of child labour;
    c. identify and reach out to children at risk; and
    d. take account of the special situation of girls.

This aligns with the ILO Conventions, where children younger than 18 are provided with appropriate allowances, given the educational, economic, and developmental components that can be gained from work and work–related experiences. The requirements are generally:

- age 13–14 for light work (or 12–13 years–old if the minimum age is set at 14 years–old);
- age 15–17 for ordinary work (a Member whose economy and educational facilities are insufficiently developed may, after consultation with the organisations of employers and workers concerned, where such exist, initially specify a minimum age of 14 years, so the age group would be 14–17 years–old);
- no person under 18 years of age shall be engaged in hazardous work.

Work in this context is an umbrella for all *productive* activities, regardless of the nature of employment. For example, farming activities for one's own family would also be included in this section, as it becomes a source of some kind of income and/or nourishment and is therefore productive. At a fundamental level, the extent to which this work can harm or hinder health—which can also be restricted by a barrier to education—makes these age delineations that much more important. It is important to note that the worst forms of child labour as stipulated in the South Sudan Labour Bill, 2012, are also in accordance with the ILO Convention No. 182 definitions of the worst forms of child labour.

1.4.3 ILO worst forms of child labour

There are certain forms of labour that are targeted for absolute elimination, with no exceptions, as any kind of child labour. These four forms defined within ILO Convention No. 182, and designated for immediate and urgent cessation. These include:

- all forms of slavery or practices similar to slavery, such as the sale and trafficking of children, debt bondage and serfdom and forced or compulsory labour, including forced or compulsory recruitment of children for use in armed conflict;
- the use, procuring or offering of a child for prostitution, for the production of pornography or for pornographic performances;
- the use, procuring or offering of a child for illicit activities, in particular for the production and trafficking of drugs as defined in the relevant international treaties;
- work which, by its nature or the circumstances in which it is carried out, is likely to harm the health, safety or morals of children.

Non–binding guidelines that can help countries define meaning of the fourth point above (that which harms health, safety, or morals of children) are also included:

- work that exposes children to physical, emotional or sexual abuse;
- work underground, under water, at dangerous heights or in confined spaces;
- work with dangerous machinery, equipment and tools, or that involves the manual handling or transport of heavy loads;
- work in an unhealthy environment, which may, for example, expose children to hazardous substances, agents or processes or to temperatures, noise levels, or vibrations damaging to their health;
- work under particularly difficult conditions such as work for long hours or during the night or work that does not allow for the possibility of returning home each day.

1.4.4 Household

For the purposes of this research, "household" was defined as "an adult decision maker and his/her children and other family members living together as a social group." This is an adaptation of a more traditional pastoralist academic definition, which identifies the adult decision maker as male. A large proportion of family groups in pastoralist South Sudan are headed not by a male but by a female, due in part to the social dislocation wrought by the long civil war but also during the post–war's period of militarization.

Geographically, the definition of the household is still fluid. Members in cattle camps live very much among their livestock, with little concept of family separation—let alone separation according to some sort of shelter (make shift tukuls do not house all of the members, where many sleep outdoors among the animals and fires). Furthermore, some households send their children—even if no cattle is owned by the family—to cattle camps because of the need to educate their children in the means of caring for cattle. It also provides children with a more readily available source of food.

1.5 Constraints and limitations

The qualitative and quantitative parts of the questionnaires were consolidated to streamline the interviewing process, which in hindsight proved short–sighted, as rarely was an entire questionnaire completed with just one (particularly child) respondent, thereby compromising the validity or usability of quantitative material. New surveys with cattle–keepers when utilizing both quantitative and qualitative research methodologies—even with the same respondents—would likely benefit from separate questionnaires (with the quantitative questionnaire being quite short but incorporating essential questions). As most "interviews" are impossible to conduct separate from a communal (group) setting, most qualitative interviews may benefit from the focus group discussion–—like setting, while not forcing awkward question asking procedures with one child asking upwards of 80 questions.

As a concept, "child labour" is not recognized by the overwhelming majority of the people interviewed in this research. Regardless of an individual's age, matters relating to work, education, and daily responsibilities were seen as the entirety of lived experience rather than a separate component. Questions regarding the impact of "child labour," as defined by the IPEC, were either ignored or met with incomprehension.

Initially, it was planned that the research would be carried out during South Sudan's dry season in order to avoid logistical challenges in accessing pastoralist communities. However, during the dry season, cattle keepers must move long distances with the cattle in search of grazing and water, thus resulting in the camps being less stationery and more difficult to access by the researchers. Communities are also more fragmented due to the increased mobility, with the wider cattle camp community breaking into smaller groups—some of which are more sedentary and others, more mobile. The timing of the fieldwork period also coincided with the closure of state–run schools: throughout pastoralist South Sudan, schools are out of term between late December and late March, conforming to dry season movement of students and their families. Because of internecine fighting and cattle raids, large numbers of people have been displaced, further adding to the fluid nature of habitation patterns as well as security concerns for the research team.

Respondent fatigue due to discontent with results of previous research conducted was a considerable problem for access into cattle camps and interviews. Specifically, a researcher in Terekeka was not welcome because camp leaders decided that the researcher should only come back if something is brought with him. In addition, nearly all interviews were conducted in communal settings, which limited the one–on–one ideal of interviewing many children but separately from one

another. Furthermore, most interviews were interrupted, either by disinterest (i.e. to wrestle), camp chore requirements, or logistical and time constraints of the researchers.

Terminology and concepts were often lost in translation. Words and phrases like “burns,” “fatigue,” “tending to cattle” are easily misunderstood, especially among other difficulties present working with local translators. For example, the concept of fatigue did not make sense, as “being tired” is something that “everyone experiences.” The concept of tending to cattle could have also been misconstrued, as cattle keepers live so closely and directly with their cattle, “tending cattle” may have often been understood as actively herding them. All cattle keepers “tend” to cattle, from tying down, applying ash, taking care of their calves (i.e. bring water), or simply moving them around.

For the purposes of this study, seven cattle camps were visited, and eleven cattle camps were represented through interviews, in a total of three locations; Mundari in Terekeka, north of Juba, Central Equatoria State; Dinka Agar, east of Rumbek, Lakes State; and Nuer in Southern Unity State. It is important to consider that every cattle camp is unique, and no two camps are alike. Therefore, one must be careful when utilizing data collected from this study to generalize cattle camps elsewhere throughout South Sudan.

2. Framework for examining child labour in pastoralist South Sudan

"You either defer some of the kids not to go to school or you suffer." Nuer father describing the conflict of whether or not to send children to school when their labour is needed for the family's basic survival, Bentiu, Unity State.

"The school is near, so I could walk. That's no problem. But how would I get food?" Wajak, aged nine, Sernum Cattle Camp, Terekeka County, Central Equatoria State.

South Sudan ratified the ILO Convention No. 138 on the Minimum Age, 1973, and the ILO Convention No. 182 on the Worst Forms of Child Labour, 1999, with the specified minimum age of 14 years under Convention No. 138, effective from April 26, 2012, when South Sudan became a member State of the International Labour Organization (ILO). In April 2013, Madam Hellen Achiro Lotara, Undersecretary for Labour in the Ministry of Labour, Public Service and Human Resource Development, said that 35 per cent of children in South Sudan are engaged in various forms of child labour (NASS); because this is hard to quantify, the number may easily well be higher.

The findings of the most recent research among South Sudanese pastoralists mirror those of the FAO's "Children's Work in the Livestock Sector: Herding and Beyond" (2013). This study reported that children working in the livestock sector are "at risk of disrupted physical, mental, moral and social development." They also face increased risk of animal–related diseases, injuries, health problems, poor sanitation and hygiene, and, in some cases, psychological stress as a result of a fear of punishment, cattle raiders or the weight of being responsible for the care of the family's capital. The report did not carry out fieldwork but was described as an "explorative desk study report," which drew on existing literature and consulted with organizations and livestock and child labour experts. As the report states:

> *Agriculture is by far the largest sector where child labour is found and one of the most dangerous in terms of fatalities, accidents and occupational diseases. Almost 60 per cent of girls and boys (aged 5–17 years) in hazardous work are found in agriculture, historically and traditionally an under–regulated sector and one in which regulation enforcement is also difficult in many countries. Livestock forms a considerable subsector within agriculture, with global demand for animal products rising. The livestock sector is one of the fastest growing segments of the agricultural economy and contributes 40 per cent of the global value of agricultural output, according to the FAO State of Food and Agriculture report (SOFA, 2009). Furthermore, livestock represents at least a partial source of income and food security for 70 per cent of the world's 880 million rural poor who live on less than USD 1.00 a day (Neely et al., 2009). Within rural environments, livestock keeping has historical, cultural and traditional roots, and the involvement of children is very common.* (FAO 2013: 5)

In the case of South Sudan, more than 85 per cent of the country's 8.26 million inhabitants are engaged in the care of livestock.[9] Most children work for the immediate survival of their families. Consistent with the report's findings, factors contributing to the high use of child labour within pastoralist South Sudan relate to poor access to education and prevailing cultural beliefs that do not recognise the benefits of a formal education. Child labour occurs within the complicated web of extended family commitments, with children seen as a means of fulfilling the wider community

[9] See: http://foodsecuritycluster.net/sites/default/files/Pastoral%20livelihood%20presentation%20UNCT%20Juba.pdf.

obligations of their parents, grandparents, uncles and aunts. To this extent, children and youth are not seen as individuals but as contributing members of a much larger lineage.

The ILO definition of Child Labour provides a framework that helps elucidate the practices of children and youth in South Sudanese cattle camps; but it is still limited, as the labour is not connected to immediate household income gain. Essentially, child labour in cattle camps is a shared and familial practice, where three–year–olds do their part in a highly structured and organized hierarchy, but never for immediate cash income, barring some caveats. In addition, cattle keepers refused to inform researchers of the number of cattle for which they were responsible, as such response is essentially a proxy indicator for the community's wealth. Identifying which cow belongs to which family is accounted for in nonnumeric methods, and children may take care of their own families' cattle just as well as those of others, furthering the disconnect between "household income" and actual child labour. At the very least, there is little concept of individuality and independent decision making of children working in the cattle camp. "Supervising cattle" is simply what is understood and necessary from a very young age.

Regardless of these contextual constructs, many of these chores that children undertake on a regular basis are of concern, especially as it relates to (1) inherently preventing them from attending school; (2) the physical risks and dangers that result from the common *hazardous* work that is undertaken on a daily basis. In Article 3 (d) of the Worst Forms of Child Labour, 1999 (No. 182), hazardous child labour is defined as "work which, by nature or circumstances in which it is carried out, is likely to harm the health, safety or morals of children," criteria that is met by those working in the cattle camps. The risks that threaten the health of these children as a result of their work include gorging by cattle horns, burns, and zoonotic diseases, while work outside the camp while herding puts children at risk of wild animal attacks, drowning while crossing rivers, exposure to the harsh elements. The risks that threaten the health of children with injuries and disease are copious, even though the extent to which these risks are derived solely from the actual labour is less than clear as there is little delineation between labour from general life in the cattle camp. The concept of time and the amount of hours devoted to work versus leisure is difficult to quantify, and statistically quantifying the harmful activities of labour provides one snapshot, but it removes the context with which these activities are undertaken. For example, wrestling or sleeping around fires at night and drinking raw milk or not purified water, though not directly related to labour, are easily just as threatening to the child's wellbeing as any camp–mandated chore. In essence, children in cattle camps are working just by being there and living in them, and are prevented from accessing education because of the persistent cultural norm to take care of what is valuable in these communities: the cattle.

3. Study locations and profile of respondents

3.1 Profile of child cattle keeper respondents

There were a number of information gathering restrictions and limitations in gathering demographic data for respondents. For example, age was nearly never known, so the 12.2 years–of–age for all cattle keeper respondent children is a collection of estimated proxy guesses. Nonetheless, the following is a preliminary overview of the research:

Information	Preliminary overview
Total number of child cattle–keepers respondents	97
Average estimated ages of children	12.2 years old
Per cent of children female	47%
Per cent of children male	53%
Total number of cattle camps visited	7
Approximate number of cattle camps represented from cattle–keeper interviews	11

Researchers estimated that the number of individuals in any given cattle camp observed during this study ranged between 100–200 individuals.

3.2 Mundari in Terekeka, Central Equatoria State

Terekeka County is located in the northern part of Central Equatoria State. It is the state's largest county and considered the most underdeveloped. The county includes ten payams and forty–nine homesteads or bomas. The Bari–speaking Mundari people live in wooded savannah along both sides of the Nile River. They are considered a marginalized minority, their total numbers believing to be between 70,000 and 100,000. Like their Dinka neighbours to the east and northeast, the Mundari are agro–pastoralists engaged in subsistence agriculture and livestock herding. Lack of services has led to migration from rural into more settled areas, including Terekeka town. The total population of Central Equatoria is 1.1 million; half of the population is below the age of eighteen; 65 per cent of the population is rural; 44 per cent of the adult population is literate; 44 per cent of the population live below the poverty line; and 58 per cent of households depend on crop farming or animal husbandry as their primary source of livelihood.[10]

During the 23–year civil war, the area's people were caught between the war's two main forces. In the 1980s the rebel SPLA entered Mundari land, leading to widespread displacement. Later, the Khartoum–based Sudan Armed Forces (SAF) occupied the region. Relations between Mundari and neighbouring Dinka peoples are considered poor, in part because of the Mundari's identification with the war–time occupying forces from northern Sudan and because of longstanding ethnicized tension. In recent years, conflict between Mundari and Murle and Dinka has led to cattle–raiding and the theft of children. The raiding is in part due to competition for grazing lands and use of water points in times of scarcity, but also reflective of wider raiding aimed at accruing wealth.

[10] Ibid.

3.3 Nuer in Bentiu, Unity State

Unity State shares its northern border with Sudan. As a front–line region, its territory continues to be vulnerable to militarised disputes between peoples living on both sides of the still–disputed border. People living in Unity State have suffered high levels of violence and war–caused displacement for more than two decades. The years since the signing of the CPA have not brought stability to the area: for the past four years rebel groups linked to northern Sudan have been active in different parts of the state. The total population of Unity is 586,000, the majority of who come from the Nuer cultural group. More than half (55 per cent) of the population is below the age of eighteen; 79 per cent of the population is rural; and 26 per cent of the adult population is literate; 68 per cent live below the poverty line; 68 per cent of households depend on crop farming or animal husbandry as their primary source of livelihood.[11] Twenty–six per cent of the 15–years–and–above population is literate, increasing to 44 per cent for the age group 15 to 24. These figures are consistent with figures for all of South Sudan.

3.4 Dinka in Rumbek, Lakes State

Lakes State is located in the geographic centre of South Sudan. The people living here are predominantly Dinka, with several sections of the cultural group present. The state capital, Rumbek, served as the headquarters of the SPLM/A in the last years of the civil war. The total population of Lakes is 696,000; half of the population is below the age of eighteen; 91 per cent of the population is rural; 18 per cent of the adult population is literate; 49 per cent of the population live below the poverty line; and 89 per cent of households depend on crop farming or animal husbandry as their primary source of livelihood.[12]

[11] National Baseline Household Survey (2009).
[12] NBS, Republic of South Sudan.

4. Access to education in pastoralist communities

Education remains a major challenge throughout South Sudan, as the country works to build a uniform educational platform. Harmonization efforts to create a Standard English based South Sudan curriculum remains an on–going process with years of low educational uptake. Because of war and the general emergency context of the country have remains plagued with a low educational base. While the idea of schools and formal education almost always solicited positive or supportive responses, schooling was viewed as an added luxury or unusual opportunity. In the case of Mundari in Terekeka County, the researcher recorded resistance to the idea of "late" admission to school, particularly in the case of girls in their mid–teens. This was also the case in Unity State, among Nuer informants, and among Dinka in Lakes State compared to relatively little resistance to the idea of late entrance for males. "Supervising" cows, as it was repeatedly described, was always the priority. If a sibling did attend school, this was made possible only by the availability of other siblings to forego school and remain within the cattle camp to protect the family's wealth.

In pastoralist communities, education has suffered from low up take in comparison to more traditional agrarian communities. While rural children in both livestock and farming based societies have roles, responsibilities, and duties that require significant effort, schooling attendance remains comparably higher in farm communities. The Government of the Republic of South Sudan Ministry of General Education and Instruction in 2008 found that 90 per cent of school–age children who do not attend school live in cattle camps. Seemingly, school attendance is not merely a product of child labour, and rather involves additional elements that field researchers investigated in the cattle camps.

4.1 The Pastoralist Education Programme (PEP)

Because of the special circumstances surrounding pastoralist communities and the unique difficulties of integrating these youth into the traditional educational model, a recent development to the Alternative Education System has been the development of the Pastoralist Education Programme (PEP).

Overview of PEP	
Beneficiaries	Those in cattle camps
Prerequisites	None
Age Group	Five and up
Duration	4 years

The overall reasoning behind PEP programmes is that if the standard educational model is adapted to fit within the unique framework of pastoralist culture, children will be more likely to attend school. PEP programmes are designed to be mobile, with a moving teacher who migrates alongside the community, providing a consistent educational presence for children. The idea is that children will be more likely to attend school if the opportunity is more readily available and the choice between school and life in the camps is less stark.

PEP teachers live with their students in the camps and structure the school programme around the camp schedule. There are no prior educational requirements and the programme is designed to last four years, in which time students follow a similar curriculum to those students attending more traditional Primary 1–Primary 4 programmes.

Across all of South Sudan, the primary foci of the P1–P4 curriculum, as well the similar PEP programmes, is to establish elementary proficiency in language and language usage (reading and writing), mathematics, as well as in basic life and entrepreneurship skills. The skills learned at this stage are considered to be the foundational elements of both livelihoods, as well the base for further educational endeavours. Since graduates of PEP programmes have already diverged from the standard educational model, PEP programmes are intended to bring enrolees to the level in which they can then enrol in more traditional primary level institutions or utilize additional AES options like the Accelerated Learning Programmes.

The current difficulties, coupled with the educational history of the country have necessitated a heavy focus on the Alternative Education System in recent years. Even so, the role PEP plays within the larger AES framework remains quite small. Nationally, PEP accounts for a mere 3 per cent of AES programmes and the small share of PEP operations in the research areas was no different.[13]

State	PEP programme among total state AES programmes (%)
Central Equatoria	1.0
Lakes	4.0
Unity	3.0

The 2012 *Alternative Education Systems Baseline Survey and Evaluation* reported that of the 170,332 South Sudan residents enrolled in AES programmes a mere 968 came from PEP programmes. Total usage of these PEP programs represents 0.56 per cent of all AES utilization, indicating a lack of uptake even when considered within the context of low PEP availability.[14]

4.2 Pastoralist children and school attendance

Children from pastoralist communities confront many of the same challenges of other South Sudanese children in receiving education, including pressure to assist the family in acquiring income either through work or marriage. Corruption among teachers has led to over packed and under supplied classrooms across the country. This is done in the form of "ghost" teachers, where teachers register under multiple names and collect salary payments for multiple teachers. High school fees and poorly trained instructors have caused high levels of dissatisfaction; this, in addition to all of the named challenges the unique characteristics of migrant pastoralist communities place children from these locales at a particular disadvantage when it comes to educational attainment.

School attendance in pastoralist communities remains low, as entire generations are being raised without education. In the Terekeka cattle camps for example, of 53 child respondents, ages 7 to 17, only 8 (15.1 per cent) indicated having had some experience with school (and not one could read or write), while nationally the per cent of cattle keeper children respondents who had some experience in school (or obtained some form of education) rose to 12 per cent.[15] During this assessment, it was found that the average age of children enrolling in schools was between an estimated 8–10 years of age; this is relatively young in South Sudan, with many students enrolling in primary school as adults because of years of war. Natural biases can be expected when asking about whether families support their children's endeavour in obtaining an education, most (85 per cent) of child respondents mentioned their families supported the goal of obtaining an education, and that it was not a lack of support that prevented them from accessing education.

[13] FN AES Baseline Survey (2012).
[14] FN AES Baseline Survey (2012).
[15] Ibid.

The main respondent identified that barriers for school attendance include a shortage of trained or qualified teachers (including vocational and life–skill instructors) and a shortage of funds to pay these teachers. For example, the conditions in Terekeka illustrate some of the barriers that are typical across the country for pastoralist cattle keepers in obtaining an education. Such barriers include peer pressure to work the cattle camps and not to attend school, a stigma regarding girls attending school coupled with societal and familial pressures to marry at a young age, and the rainy seasons making access to schools difficult. Anecdotally, numerous interviews indicated that much of the "old–fashioned" view that education was useless were being supplanted with a newer, more modern understanding of how education can correlate with higher incomes and salaries, particularly as a way of insurance for when cattle (for example) are victimized by a spate of lethal animal diseases.

Many barriers exist that prevent children from attending school outside of the cattle camps as well. Qualitative data revealed numerous reasons that children outside the cattle camps do not attend school. Such reasons include; education being poorly valued, food procurement limiting time for school, distance to school too far to travel, and village conflicts raising safety concerns in schools. Furthermore, data indicated that girls are more restricted than boys regarding school attendance. While looking after animals may limit boys from attending school, girls are limited by household chores, menstruation, taking care of younger children, cleaning, working in the markets, and being valued only as dowry. Financial problems, however, were reported as limiting both genders, as school fees greatly affect the ability to attend school.

In Terekeka proper, there are three schools: St. Stephens Episcopal, St. Mary's Catholic School, and the government–run school. The government school is transitioning from the Arabic pattern into the English pattern for education, while its secondary school is still conducting exams in Arabic. St. Mary's, a Catholic school, is conducted fully in English, and provides both primary and secondary education. St. Stephen's, run by the Episcopalians, was closed at the time of research, as it only operates a primary school (primary schools were not in session during the time of research). An NGO, the Norwegian Refugee Council, runs adult literacy programmes. There is also an NGO–run orphanage (Harvester's International), which at the time of the fieldwork was housing and educating 45 orphans.

Terekeka County has 126 primary teachers and 73 and "field" teachers, according to the Deputy Director of Education and the Education Director of Statistics. Within Terekeka Payam, there are 20 primary teachers and three secondary schools, two of which are in Terekeka town. All schools are day schools.

Table 2: Terekeka County primary school attendance[16]

Payam	Total	Boys	Girls
Terekeka	1,809	1,109	700
Rego	983	700	283
Modi	769	574	195
Region	824	509	315
Tintilo	572	402	170
Tali	1,032	953	79
Nyonji	807	612	195

According to 2010 EMIS figures, the total 2009 enrolment for Terekeka County was 6,631 pupils (68.4 per cent male; 31.6 per cent female) with an average dropout rate of 36.7 per cent, with a slightly higher rate among females at 39.3 per cent.

[16] As recorded from the Director of Statistics from the Department of Education in Terekeka County Offices.

Security conflicts resulting from intertribal clashes among other reasons, also lead to restrictions in education access. When intra–community members find themselves at odds (which can happen over marriage arrangements, for example), and when the Terekeka arbitration courts are not utilized, children of antagonistic families are prevented from going to school for protective reasons. These phenomena are more prevalent in the tri–state area of Warrap, Unity, and Lakes States.

Traditional activities often times take precedent over education. For example, young men from Nikobo boma closed schools so that pupils could attend the rite of passage tradition of initiation. An orphanage teacher informed researchers that:

> *"So young men were going to initiation, and they wanted to bring the school pupils along. Not everyone agreed. Lashes were given to schoolteachers. The resolution came about from the association and the government."*[17]

4.3 Decision–making processes regarding school attendance

Across all locations, 86.6 per cent of cattle keeper children mentioned they "wanted to go to school"; this statistic represents respondents who may not have been present at the camp directly (i.e. those who were selling milk from the camp in the market). There are reasons to believe this percentage would be higher for two reasons: (1) some of the respondents evaded the question by noting "it's too late for me now;" while (2) all respondents immediately within cattle camps admitted to wanting to go to school (but these were often also younger children who may see more opportunities).

Generally, focus group discussions with parents continually revealed that education was of extreme importance to respondents. It was only through continued discussion that is was understood by the researcher team that many respondents considered education to include the experiences gained from working in the cattle camps just as much if not more than what is learned in schools. Parents saw the cattle camps as an integral part of their children's maturation process and the place where they learned how to handle the community's most valuable resource–cattle.

Respondents, both male and female alike, also reported that children are sometimes sent to school because they cannot be trusted in the camps, and not due to a value for education or future potential. This creates the perception that some who are in school are there because they are not suitable for camp life, causing the status to be viewed as a form of estrangement rather than an opportunity. This is not universal, as reasons for deciding who goes to school is complicated and involve many factors, including the preferences of the child, the resources and wherewithal to support students (most pupils will find market labour—from boda boda driving to tea selling—to support education fees), and the need of having usually younger siblings to "replace" or "release" them from the commitment to look after the family's cattle.

Despite the social schism that inevitably is caused by having some cattle keepers in school and not others (the "real" men or women are not in school), virtually all respondents conceded numerous benefits of education. Motivations for going to school can range from the need to be able to read expiration dates on veterinary medicine packages, to be able to "improve" or "help" the community, to be able to obtain food, and—as the community mobilizer from The Adventist Development and Relief Agency (ADRA) mentioned in an interview—as a way to play a part in the national development process and represent one's community members and help navigate the changes of the growing and diverse nation of South Sudan. Some child respondents wanted to become politicians or religious figures to represent their communities. Though education can create

[17] Jallang, Tomba, volunteer teacher, interview, Terekeka, 13 February 2013.

psychological fragmentation within specific communities, it is also seen as a means to mitigate risks of marginalization on a grander scale among different communities in South Sudan.

4.4 Gender considerations in schooling decisions

Being a male in a pastoralist community brings with it very specific set of cultural mores and responsibilities often running counter to traditional educational attainment. In these communities, males as young as three or four (if not younger) are sent to the cattle camps and given the initial duty of raising small calves. As the males age, their duties continue to evolve, meaning that at the time traditional students begin their formal education pastoralist children are already undergoing a very different sort of education process. Going to the cattle camps goes beyond educational purposes, as pastoralist families depend on their children to look out for and protect the family investment. With such responsibilities, children play a critical role in the functioning of the family and can typically only go to school in instances when there are other children who can stay in the camps to look after the family cattle.

Beyond family concerns and the initial education or duty dilemma, children also face a very real cultural component that pits educational attainment against community expectations. The time spent by youths in the cattle camps is often considered a rite of passage to adulthood. Those children who attend school not only tend to miss out on very practical animal husbandry training and skill acquisition, but also lose out on the customary lessons, traditional teachings, shared history, and tribal identity that ingrains one into their community. Several interviewees reported that working in the cattle camps is what makes one “a real man.”

Once adolescent males return from the camps, they are again confronted with the opportunity to go back to school. At this point, now being “men,” adolescents many times find the hierarchical approach of schools and the teacher–student relationship to be unappealing. The reasoning is that teachers oversee children, not men. Those returning from the camps, now teenagers, are also reticent to begin a four–year educational track, especially when facing economic concerns as well as societal expectations to marry. Choosing to attend school also usually means delaying marriage; this disrupts sibling order, especially when younger family member–who have decided not to attend school–get married and have children before their older siblings who went to school.

Living in a pastoralist community also creates unique circumstances for females that impact their educational trajectory. After transitioning to solid foods, young girls are sent to the cattle camps with their male counterparts, where they will take part in the community. By the time they reach adolescence, girls will fetch water, prepare meals, and look after the other children, fulfilling many of the same conventional female–associated roles.

At the family level, even when families do decide to send some of their children to school, high fertility rates and limited financial resources typically results in “investing” in only a few children. In many cases male children will be prioritized over female children. In Bentiu, for example, parents routinely would report that they could not afford to send their female children to school.

With pastoralist tribes typically partaking in the bride price practice, girls also serve as a form of family wealth–in which the sooner a girl marries the sooner the family acquires her monetary “value” in cattle. As such, many families are resistant to sending their girls to school because it delays their marriage and the time in which the family receives wealth. This can become especially contentious when male children are left waiting for their sisters to marry, only so they can acquire the necessary capital to marry themselves–putting enormous amounts of pressure on you girls to marry. In Terekeka, for example, in formal primary schools, there was a perceived even gender balance in the early school grades. Then, particularly at the P5, both males and females begin dropping out more frequently (in part to increasing school fees at these stages), with higher female dropout rates than

males. Identified reasons included unwanted pregnancies, the social pressure of their less educated brothers to "help them out" in the camps, and marriage concerns. Once women have children, unlike fathers, they virtually never return to school (the opportunity is much greater for young fathers). Furthermore, other impeding situational norms also exist: as one school chaplain explained to the research team in Terekeka, educationalists encourage young women to not attend school during periods of menstruation (and certainly no sanitation items were available from the school). Conflict, both from neighbouring communities, as well as intra–clan conflict and gender–based violence were also commonly cited as reason females do not attend school, in part just to protect members of the family when left "unprotected" on their ways to school and away from the family or home–base.

4.5 Barriers to education and the mobile teacher model

The deteriorated economic situation is not only attributed to a lack of basic services, but also due to certain social norms and customs, including the misaligned principle of restricting females from attending school as they are considered "wealth."

This may still be true, but a number of respondents in the cattle camps have begun to identify how educated women would also be considered more "valuable" in terms of bride price potential. A big reason, however, for not educating females relates to not being able to afford sending them to school, and families not being able to wait because other siblings are also ready to marry. Marrying a daughter enables her brother to acquire the cows for himself to marry. These are a number of restricting pressures that take females out of school—that, along with early pregnancies (few return to school after marriage or after having children, which is not the same for males).

Furthermore, a religious leader in Terekeka, notes how polygamy contributes to the devaluing of children: more marriages results in more children, thereby increasing the total potential cost of educating each child. This increasing number of children lends itself to prioritizing males over females to become educated, even though local chiefs and all respondents unanimously agree that there are no sexist preferences in who goes to school. Indeed, a number of youth leaders in cattle camps indicated that part of the decision rests with the ambitions of the child, and an inquiring child will have relatively good changes in getting permission (and support) for going to school.

The deputy director of education in Terekeka County proposes that employing and training more teachers, especially mobile teachers, is needed.

Combining herding and schooling enables individuals to acquire traditional skills, including the handling of family capital (through animal husbandry, fishing and subsistence farming) and absorb cultural norms, while at the same time learning basic literacy and numeracy. Child labour used in cattle camps restricts access for both children and youth to formal education. "Mobile schools," where teachers live and work within the cattle camps can support a greater awareness of the dangers inherent in child labour and, through the spread of literacy and general knowledge attainment work to improve the conditions of child labour. Cattle camp respondents, NGOs, and government representatives uniformly support this broad strategy of increasing education, although the reasons for this support may vary among the different stakeholders. Many of the cattle keeper respondents may want to increase their knowledge for animal health reasons: being able to diagnose animal diseases more efficiently, for example, or to be able to maximize the amount of food that can be obtained. Some children expressed the need for education to be able to read animal medicine medications, while others shared ambitions to become teachers, politicians, or doctors themselves.

The ADRA community mobilizer described the increased support for education among the Mundari because of the need to complement (and compete) with Nation Building objectives. The Mundari do not want to be a community that is left out politically compared to other South Sudanese peoples,

thereby feeling encouraged to engage more substantially with education to also contribute to their communities' development and stature within the nation.

Nearly unanimously, education was considered important, but the understanding of education just as easily related to the experiences one would glean from living and working in a cattle camp. Informants described formal education as presenting a dilemma: you may marry later than those who do not go to school, even to the point where an uneducated sibling may have a family with four children before at a much younger age than an educated family member marries (assuming marriage continues in order of sibling age). This was seen as a dilemma: especially if it restricts younger siblings who have to wait in the cattle camps until the older school–attending sibling marries.

Families will also send their children to cattle camps as a place to grow up and learn about the customs and norms of their community, even if they do not own any cows. Parents from Jongor village indicated that, despite not having cows, they sent their children to the cattle camps as they can help out with cattle keeping, incentivized in part due to food scarcity, but also to acquire the expertise of handling and working with livestock—which are considered important assets for communities that highly prize their cattle and see them as wealth. The young children are usually sent to the camps escorted by their siblings, once at the camps there are women that take care of children. The camp elders/leaders also supervise children in that they administer the punishments. These children will return home to their villages in the rainy season, in part to help with cultivation but also because the cows will migrate inland away from the River Nile.

Therefore, not only is "hunger" a reason to send cattle–less children to cattle camps, but the idea that they could achieve an informal education supports this. The researcher's translator in Terekeka continually alluded to activities, including punishments, as part of the "non–formal" education implying the extent to which education, development, and identity are crafted and molded in cattle camps, fostering a dilemma with those who pursue the more formalized version of education. This schism also presents itself with young men who get "initiated," and being "real [men]," all of which can contribute to a "pull factor," including as part of peer pressure, away from education.

Many students will take time off from school to live in cattle camps during holidays. The eight students who acknowledged having been to school therefore may still over–represent the frequency with which cattle keeper children attend school, as some of these children may not be exactly permanent members of the camps. Furthermore, there is a very distinct hierarchy of who can attend school; as long as there are younger siblings that can "supervise" the family's wealth and to take the spot of the older sibling, an older relative may then attend school.

As the Terekeka County director of education noted, students from cattle camps often leave schools when the camps relocate during the rainy season and expect to graduate to the next grade the following year. This was identified as a main restricting cause of education for young cattle keepers, as it was typical to not want to retake a grade with younger students, and continue this cycle year after year. Contradicting sentiments echoed through interviews with teachers, a school chaplain, and a number of older pastoralists in the cattle camps mentioned this does not happen—that once a cattle keeper is in school, they try not to take them out half way through.

Other sources that prevent Mundari cattle keepers from attending schools include "initiation" rites of passage. During the young adolescent years, many males will be initiated over a longer period, whereby they are removed from the cattle camp and live off the land, perhaps eating goat meat. These newly initiated males may have strong influence over their peers in school, denigrating their roles as pupils and encouraging them to become "men." Furthermore, initiated youth, as it was described to the Mundari researcher, do not like to subject themselves to the authority of the teachers after this process, thereby limiting further the self–imposed barrier in attending school.

5. Magnitude and nature of child labour in pastoralist communities

Given the difficulty for pastoralist communities to conceptualize day–to–day tasks as "child labour," this study examines the magnitude and nature of child labour in two ways: (1) the percentage of time spent on labour–related tasks during the course of an "average" day through data collected in the form of time logs; and (2) details on the nature of labour–related tasks. The following section covers each of these topics in turn.

5.1 Time use among children in pastoralist communities

Ages of respondents were virtually impossible to discern, noting categories of what a child in a cattle camp commits to each day is difficult to categorize by age group. The following table provides a very broad overview of four different groups of children in cattle camps during the dry season and situated along a reliable water source (river): males and females between 5–13 years of age and males and females between 14–18 years of age.

Demographically, there are more males in the camps because the direct supervision of the cattle more easily falls towards males, though the younger the age, the more balanced the gender distribution. Essentially, what takes females away sooner from the camps is the marriage component, and although the dividing line of where married individuals—men or women—reside somewhat fluid, it is expected that females reside in their tukuls with their new–borns. Once weaned from breastfeeding, their children will often be brought to the cattle camps as food is more readily available for them.

Table 3: Time schedule at cattle camps by age and sex

Time schedule by age and sex								
Age	5–13				14–18			
Sex	Male		Female		Male		Female	
	Activity	Duration	Activity	Duration	Activity	Duration	Activity	Duration
Approximately 6:00 am—1:00 pm	Wake up near sunrise or slightly after; brush teeth with local–style tooth brushes; wash.							
	River bathing	5–30 min	Sweep floors; bathe; bathe children	5–30 min			Shake gourds of milk	4 hours
	Collect cow dung either by hand or using pots				30 minutes–2 hours			
			Production of cheese (from previous night's milking)*				Production of cheese (from previous night's milking)*	
	Clean pots for milk collection		5 min		Accounting for/diagnosing sick cows; locating missing cows*			
	Milking of cows		20 min–2 hours		Milking of cows**	20 min–2 hours		
					Health and Veterinary checks of cows	Before/after milking		
	Consumption and/or cooking of milk (with flour) for first meal of the day; elders (18 and above) may eat their first meal around midday							
Approximately 11:00 am–4:00 pm	Releasing/ untying cows (*calves*)	10–30 min			Releasing/ untying of cows	15–45 min		
	Collect cow dung either by hand or using pots				30 minutes–2 hours			
	Recreation wrestling, tennis–type games, etc.	3–5 hours	Take care of children, making jewellery	3–5 hours	Head to the market/ or recreational activities	3–5 hours	Market selling milk	Up to 8 hours
			Head home if nearby**				Head home if nearby**	
Approximately 4:00 pm–6:00 pm	Cows return/ brought back							
	Tying down of calves	30–min–1.5 hours			Tying down of cows	1 hour		
	Milking of cows				20 min–2 hours			
			Washing of pots and pans*				Washing of pots and pans*	
	Consumption and/or cooking of milk (with flour) for second and final main meal of the day							
			Bathing children*				Bathing children*	
Evening	Potential for dance with other recreational activities							
	Sleeping with potential for some to take security measures to prevent raids.							

* indicates respondents had difficulty quantifying time required

** indicates activity only occurs occasionally and is not routine

5.2 Tasks undertaken by children in cattle camps

5.2.1 Cow dung collection

Cow dung collection and cleaning is one of the main activities that any visitor to a cattle camp will encounter. This is done to remove the dung from the ground, not just for aesthetic reasons, but to allow for the matter to dry in scattered areas around the camp. After this dung is dried, it is piled in heaps around the camp for the evening fires. This activity is done throughout the morning, before and after the cattle has left for the field, and both sexes undertake this chore—including females up until their mid–teens.

The burned dung ash is also applied to the skin to help ward off insects (mosquitos). Additionally, the ash is applied to the cattle for protection or their horns for colour by older children and youth. For evening dances and for cosmetic reasons, mixed dung (i.e. with cow's urine) may also be applied to their faces. The following pictures demonstrate the colouring of the horns, the drying of the cattle dung, the burning dung piles, and the decorative ash.

According to the County Medical Officer for Health in the county offices in Terekeka, the cow dung itself has symbolic value by demonstrating wealth. Furthermore, "even faeces of children are presented around living areas to denote to visitors that "we know how to feed our children."

5.2.2 Milk collection and oil production

Milking is an integral aspect of day–to–day life, and many of the younger children engage in this process (with more females than males engaged in this, particularly the older they become). This is the primary means of nourishment for cattle keepers, usually complemented only with flour obtained in nearby villages or from the market when accessible. Typically, children aged 8–12 will milk the cows, occasionally older if they are females. The milk is collected in a plastic or metal pot, or more traditionally in a gourd. Consumption of milk occurs immediately after, if it's not cooked together with flour. The elder leaders of the camps may wait until midday to consume (with gourds of milk hanging within make–shift tukuls until then).

Because of spatial reasons, squatting under the cow's utter is deemed most suitable for children—the reason for why children milk more often than older individuals. They also often do the cooking, and this is not too gender–specific in the camps.

Qualitative data indicated that food insecurity is high, as many respondents noted that lack of food is a health risk. Cattle camps, however, seem to be a more consistent source of food, as there is milk production. Some families even send their children to work in cattle camps because they are unable to feed them at home. Milk is the primary means of nourishment, sustaining the internal camp population. When there is a surplus of milk it can be sold or traded for flour or sugar. When food is insecure, more people will move into camps as a means for sustenance. Additionally the food insecurity can spark conflict between different groups as "pastoralist cattle herders move their animals into areas controlled by rival groups."[18]

[18] Enough Project. GBV South Sudan.

Production of oil from the milk occurs seasonally, more often by women in nearby villages during the rainy season. Milk is preserved from the evening milking session overnight in gourds, and in the very early morning (around 4:00am) women will shake the gourds for up to four hours. Later, the top layer is removed from this milk, with the remaining sour milk offered to young boys (or whoever is interested in it). The top thick white milk is then preserved for the rest of the season, or until oil is needed. At that point, the preserved milk is cooked, turning it into its own oil. This oil is now hung in the gourd at the top of a tukul and whenever oil is needed to complement food, it is taken from the gourd. This is done in the rainy season, whereupon more milk is produced and the camps are located near the villages.

5.2.3 Veterinary and animal health activities

The male youth are typically responsible for the health and actual wellbeing of the cattle. Their duties in the mornings will include administering tetracycline, if available, to cattle that present symptoms of disease. According to the Assistant Commissioner for Animal Health Resources—the main veterinarian responsible in Terekeka County who leads in administering and assisting cattle camps in improving the health of their cattle—a number of Mundari cattle keepers have successfully been able to learn how to use certain available animal medications — like tetracycline — by trial and error. These men, with help from all members of the camp, will identify missing cattle and diagnose them if sick (although diagnoses may have no relationship to the actual cause of the disease). One day, the Terekeka researcher went through the cattle camp with these to identify the prevalence of the diseases. Qualitative data did not suggest than young boys or girls were involved in maintaining the health of the cattle, only the male youth reported administering the vaccinations.

5.2.4 Recreational activities

Females may make jewellery—bracelets—during recreation time, usually in accompaniment of the children they are supervising, in exchange for those who have left the camp to sell milk in the nearby villages and, if close enough, the Terekeka market.

Males of all ages, but specifically the younger ones, will wrestle for much of the day. This can be an organized competitive event, or it can happen as recreational breaks throughout the day. Other games include a tennis–styled game of hitting a makeshift ball back in forth with rods (if you fail to return it, you lose the point); enhanced wrestling competitions against other camps as tournaments; a domino game for older males; an unexplained game of sticks to “push the time”; hide and seek, particularly at night (in which young girls may partake); and sharing and solving riddles will also occur around fires before sleeping or after eating.

5.2.5 Domestic activities and child care

One of the main reasons for young women to be in cattle camps is to take care of young children and infants. From washing to feeding and generally just accompanying them—including protecting them from around camp fires (a heightened risk for infants)—there are groups of women who are continually engaged with these children, broken up only when off to sell milk elsewhere. As the responsibility to sell milk outside of the camps are given to females beginning in their early teens, it is not uncommon to see young female children of six or so taking care of the youngest of infants, even recently weaned from breastfeeding.

Washing of clothes, pots and pans is something a visitor tends to see immediately in the morning upon entering cattle camps. If situated along a river in the dry season, many young females are up to their knees in the river doing rinsing out pots for milk collection (which are often used as well for dung collection).

In particular during the rainy season, collection of water is typically accomplished by 8–18 year old young women. They haul the water from sitting pools or other open and unprotected water sources, which are also used for cleaning pots and pans and bathing (and where cattle go to drink), back to the calves and to the rest of the community members to drink. It is not uncommon for these women to travel more than an hour's distance walking time.

When it comes to cleaning the few clothes at the camp, most clean their own, though older and more authoritative males may solicit help from younger females. Needless to say, more females reside in the cattle camps than males.

5.2.6 Migration of cattle for water

For seasonal migration, depending on the camp, the time it takes to move the cattle may vary from one day to one week. The work includes tying all the property of the camp into bundles, include the few huts, and have the cattle carry them. At each overnight location during this migration, protective barriers for sleep are constructed to minimize the risks of ground–based animal or insect attacks; wood is cut for local beds, as well as firewood. Local beds are akin to raised platform constructed by tying parallel logs together.

The trip as well as the rainy season in general is considered difficult because there is little rain protection. Tents and makeshift shelter minimally exist, which have been attributed to contributing to fevers and other related diseases; the available blankets and cow hides are not considered sufficient. The travel period is also very difficult on the children, where "collapsing of children … does happen," in part due to the scarcity of water and minimally provided food, but mostly because of the heat. "Collapsed" children will then be carried or placed on the cows to ride.

Moreover, although females may sell milk less often in the rainy season, they will generally exchange this time to haul water, as camps may not be strategically located immediately at a water source as they do during the dry season. There are subsequently significant security issues, particularly when the water access is further away from the camps, as there have been patterns of sexual violence occurring around water points.[19]

5.2.7 Activities outside the camp

The labour activities are not only fluid by age, since age is relative, or by sex when young, but also seasonally. The income generating activities reflect this. If cattle camps are relatively near to the villages they represent, many of the young females and males—if they are not directly needed—may return home during the day, which may allow for helping out with domestic chores. This sometimes results in returning to the camp with cooked food other than milk. Furthermore, many children will return to their villages and help with "digging" or cultivation at the end of the dry season, before continuing on with the camp to the new rainy season location. The research methodology only broadly covers the types of activities outside of the camp, allowing for a less–than–clear picture of labour of children who spend time within but also outside the cattle camps.

One notable element of work away from the camp is that young females will often assist their mothers in producing Merisa Abyad—the local homebrew—in containers called "Tagaya," which may count as an activity sought for elimination as it relates to serving alcohol. This alcohol production rarely occurs in the cattle camps themselves.

Among the Mundari, the work needed for the movement from the river where camps stay in the dry season to more swampy areas away from the river and back is considered the hardest period when the most strenuous labour is required. The move occurs for a number of reasons: to reach new grazing pastures, to lessen mosquito bites, and to return to individual village areas or home bases.

5.2.8 Water hauling

The research team did not directly witness children hauling water, but from outside sources, it adds to the complexity and labour intensive responsibilities for children in cattle camps. According to one outside observer:

> *Children in pastoral communities may spend many months in remote, isolated areas looking after the herds and involved in heavy work, such as watering livestock. The psychological pressure of working in isolation and with long periods of absence from family, friends and community can harm a child's health.*
>
> *Herding can also involve heavy work. Herders are one of the most widespread categories of child worker in Africa. One of their principal tasks is to water their animals. When the well is deep (40 to 50 metres), water must be drawn up with the help of a team of animals. The child worker must lead the team to the end of the pumping track and then*

[19] Danish Refugee Council. July 9, 2013.

lead it back to the well often at a run. Assuming a well depth of 40 metres and a container averaging 30 litres, the child worker has to travel 27 kilometres back and forth in order to water a herd of 200 camels.[20]

Though not directly applicable to the cattle keeper communities in South Sudan, water hauling was often mentioned in interviews as another key responsibility for children, in particular when watering calves and other smaller livestock in camps. In swampy areas, i.e. during the rainy season, instead of females off selling milk in markets, many of them switch the carrying responsibility to obtaining water from ditches and lakes, not only for watering livestock but for their own water consumption needs. The younger the age, the more gender–neutral the act of carrying water or other heavy items was, but females almost always were disproportionally more likely to carry milk or water longer distances from age 12 and upwards.

5.2.9 Other (less common) activities

Other non–daily activities will include the following, though this is not an exhaustive list.

- **Cutting grass for feed (or stalks/sticks for fencing) —** Young males, including 14–year–olds, will cut stalks of grass to feed calves or cows too sick to graze themselves. The stalks/sticks can also be sold as an income generating activity in the market to make fences.
- **Slaughtering and preparing meat —** Males will do the butchering (usually of sick cows) and the females will carry the meat and place it on the sheaths for preparation and cooking (see image below).
- **Building huts —** Males will do the construction of huts.
- **Making rope —** Males will take apart woven freight bags and weave rope used to tie down the cattle.

[20] M. Bonnet: "Child Labour in Africa" in *International Labour Review* (Geneva, ILO) 1993, Vol. 132, No. 3, p. 382: quoted in ILO-IPEC: *Livestock and Hazardous Labour: Safety and Health Fact Sheet,* (ILO, Geneva, 2008). The location of this observation is in Somalia.

6. Hazards associated with child–related activities and living conditions in pastoralist communities

Differentiating and providing a sound overview of injuries and health effects attributable directly to the work of cattle herding is difficult to produce as all cattle work is contextually difficult to separate from other key activities. Nevertheless, this section attempts to differentiate between those hazards associated directly with those tasks described in Section 5 and hazards associated with the pastoralist lifestyle generally.

6.1 Injuries and illness associated with tasks

6.1.1 General cattle supervision

All cattle keeper survey participants live and are in close proximity with the cattle. Numerous scars were presented to the research team that resulted from both gorged horns as well as burns, the latter of which results from (1) trying to control livestock and falling into burning ashes, (2) the livestock spraying burning ash if they happen to trample through burning ash (particularly with sleeping individuals around), and (3) other accidents, such as falling into burning ash while playing, e.g., wrestling. Burns and scars are the two most visible results from the work of dealing with or around livestock. These two risks are heightened when female cows are in heat.

As a result of respondent fatigue, fourteen children responded to whether they had been injured while working with animals. However, out of the 14 respondents, 12 reported that they had been injured while working with livestock. The most commonly reported sicknesses and injuries among the children of the cattle camps were colds 66.67 per cent (n=6), eye irritation 77.78 per cent (n=7), and malaria 33.3 per cent (n=3). Though not represented in quantitative data, burns and scars as a result of interaction with livestock were incredibly common among the camps, even with children. Life in a cattle camp is exposes children to other potentially dangerous situations. In addition to 8 of 17 (47 per cent) children reporting exposure to fire during work, and 11 (58.8 per cent) children reported being exposed to weapons, a result of increasingly tense security situation.

In the dry season, active supervision of grazing cattle does not occur; the cattle are let to roam independently and are aided when they return to their camp. Supervision and human accompaniment is more common in the rainy season. A typical but estimated age when children begin to fully herd cattle begins at around 11, but it is a gradual process and clearly not age determined. The “supervision” risks include the probability of stepping on snakes. Though the

incidence rate is low, there is also great fear of other wild animals, including lions, leopards, hyenas and crocodiles. Particularly in the case of the latter, researchers observed a seared crocodile skin, a cow without a tail due to a crocodile attack, and heard stories of a recently deceased person floating down the river due to a crocodile attack. Immediately prior to the research period in Unity, one respondent indicated that a 12–year–old boy was killed by a leopard while supervising cattle; however, this was unable to be confirmed through other sources.

6.1.2 Cow dung collection and disease

Disease spread through contact with cattle faeces is a very real concern among both children and adults in the cattle camps of South Sudan. Nearly all children touch cattle faeces on a daily basis as they gather it for drying and burning. In addition to frequent contact with faeces, members of these communities do not practice hand washing, including washing before meals, and soap is very rare.

The combination of frequent contact with faeces and a lack of hand washing makes faecal–oral transmission of viruses, parasites, and bacteria a serious possibility, putting the children of the cattle camps at great risk of contracting a variety of different diseases whose symptoms ranging from diarrhoea and fever to death.[21]

Among the diseases that can be contracted through cattle faeces are Bovine Tuberculosis, which can lead to lung and gastrointestinal disease, and if left untreated, can be fatal.[22] Brucellosis is a dangerous bacterium that initially leads to fever, anorexia, headache, and can later cause swelling of the genitals, swelling of the heart, chronic fatigue, and arthritis.[23] Salmonella is easily spread through faeces and most often results in nausea, abdominal pain, and possibly severe diarrhoea.[24] E. Coli.is a bacteria that causes bloody diarrhoea, nausea, abdominal pains, and vomiting. Among younger children, it can even lead to kidney failure and death.[25]

6.1.3 Punishment

Children will get regularly punished (caned) if they accidentally lose a cow or cause some sort of mishap. It is difficult to quantify the frequency of this; especially as some forms of violence are not understood as violent (even by those being punished), or because it originates during recreational activities. This is partly why many of the respondents claimed never to have been punished—though asking this question was difficult as it was also asked while surrounded by camp leaders. A Mundari teacher at the Terekeka orphanage and the Adult Education Programme, stated that punishments do occur regularly for mistakes: when one child commits a mistake, the children as a group are punished.

6.2 Other risks associated in pastoralist communities

6.2.1 Access to water

In the dry season, water is often drunk and obtained directly from rivers (e.g. White Nile). In the rainy season, or when cattle keepers are further from the river, they may drink from laterite–excavated

[21] See: http://babcock.wisc.edu/sites/default/files/documents/en_fecal.pdf.
[22] See: http://www.cdc.gov/tb/publications/factsheets/general/mbovis.htm.
[23] See: http://www.cdc.gov/brucellosis/symptoms/index.html.
[24] See: http://www.cdc.gov/healthypets/diseases/salmonellosis.htm.
[25] See: http://www.cdc.gov/healthypets/diseases/ecoli.htm.

lakes, natural lakes, or water obtained from swampy areas, if not from the rare borehole set up by NGOs. In Terekeka town, for example, much of the river water is treated with chlorine; however, even this treated water, often transported in unwashed jerry cans, may sit in large and uncovered containers for days. NGO–provided or maintained boreholes are less common. After asking cattle camp parents what priorities they identify for their children for the betterment of their children (in Jongor village, Terekeka, for example) they specified 2 oft–repeated needs: (1) a greater access to schools and (2) securing a reliable source of water. In this group interview in Jongor Village, these seven mothers collect water from the murram (laterite) ditch that contains sitting, turquoise–coloured to shale brown rainwater.

In the rainy season, regardless of area, many camps migrate near their villages, year–after–year. This can have an impact on water access just as much as the dry season can. Often because these villages or areas are far from suitable locations to sell milk, it is not uncommon for young females to take more than an hour one way to collect water for watering calves and for consumption among the rest of the camp members.

The Deputy Director of Education in the County Education Department explained that a lack of water "causes tiredness," whereby during the dry season "many head to the river which increases distances," and that "everyone" does this, thereby directly limiting access to education.

The county official for social welfare and development in Terekeka County indicated that a lack of water has directly contributed to 23–recorded deaths in the previous month. The extent to which this is accurate or reflective is uncertain, but a lack of potable water is something that is repeated in numerous interviews and is a pervasive problem in cattle camps, where purified water is virtually non–existent.

Much of the water hardship is compounded further to the north in Unity and Lakes State because these areas have even hotter dry seasons and shorter rainy seasons—which also relates to food shortages. The researcher in Unity State in particular found a consistent and worrying pattern of a striving for food security superseding all other concerns. This is compounded by border and security issues, and resolutions on a national scale have yet to be achieved. See special considerations and security issues in the accompanying conflict incidence map (in Figure 1).

Risks also manifest themselves while bathing (i.e. in the river). At least among the Mundari, for example, most can swim but the risk of drowning is not irrelevant, because the transport of cattle when crossing streams and wider rivers can be strenuous, exhausting, and particularly dangerous when surrounded by large livestock and while navigating fast currents. Needless to say, the water

from the river is likely to be the cleanest water consumed, as sitting, swampy, or lake water is more typical in the rainy season. Despite this, the pots and pans—which are used both for cow dung collection and milking, are itinerantly washed with this water consistently without soap.

6.2.2 Causes of morbidity and access to health services

With access to health services low among cattle keepers, and with many respondents (both within and outside cattle camps) indicating that other diagnostic or treatment methods are tried first before attempting to go to a PHCC, obtaining a verifiable list of causes of morbidity and actual morbidity diagnoses is problematic.

A snapshot of the medical services that is provided at the main government PHCC in Terekeka Payam provides a glimpse of the types of recorded diseases and incidence rates of the surrounding communities. This information is not disaggregated by "cattle keeper" or by where the patients come from, but it provides a broad picture of the incidence rates of diseases and related morbidity. Furthermore, because this is one of the main health service providers in Terekeka, and because many cattle keepers will journey into town, (and because many community members leave town to join cattle camps), there is reason to believe the morbidity incidence rate presented in the table below is a suitable reflection of the greater Terekeka County. Findings are most likely skewed slightly toward whatever urban diseases manifest more frequently or those of greater severity. Unavailable as a comparative example is similar data for the rainy season, where incidence rates of typical diseases from malaria to pneumonia are likely to be higher.

Table 4: Rates of morbidity; PHCC in Terekeka

Age category (years)	<1		1–4		5–14		>15		Total
Sex	Male	Female	Male	Female	Male	Female	Male	Female	—
Uncomplicated Malaria, unconfirmed	16	12	35	20	31	17	28	38	197
Uncomplicated Malaria, confirmed	10	4	10	7	7	10	15	16	79
Complicated malaria, probable	0	3	0	0	0	4	0	3	10
Complicated malaria, confirmed	0	1	0	4	0	3	2	5	15
Acute Watery Diarrhea	10	6	8	4	3	7	6	6	50
Diarrhea with blood	0	0	0	0	3	0	2	0	5
Pneumonia	3	4	6	2	5	0	11	14	45
Other Resp. Infection	15	10	0	11	5	7	12	17	77
Eye diseases	0	0	2	1	0	0	2	1	6
Skin diseases	1	3	0	1	4	2	3	5	19
Genital Urinary Infections	0	0	0	0	0	3	10	16	29
STI (Syphilis)	0	0	0	0	0	2	16	27	45
Malnutrition	0	0	2	2	0	0	0	0	4
Intestinal parasites	0	0	2	0	0	2	7	5	16
Trauma, wound or burns	1	0	6	0	10	5	26	24	72
Ear infection	1	1	0	2	0	2	0	0	6
Tuberculosis, suspected	0	0	0	0	0	0	1	2	3
Bilharzia	0	0	0	0	0	2	3	2	7
Lymphatic Filariasis	0	0	0	0	0	0	1	0	1
Rabies*	0	0	1	0	0	3	3	1	8
Dental (Toothache)	0	0	0	7	0	0	2	0	2?

Age category (years)	<1		1–4		5–14		>15		Total
Sex	Male	Female	Male	Female	Male	Female	Male	Female	—
FUO	0	1	2	2	0	0	2	6	17
Total	57	45	74	56	68	69	155	192	
Typhoid 55 plus others 771									

**The above table is for morbidity. The only mortality recorded was for rabies, whereby two males and one female died (ages not recorded).*

No morbidity was recorded for the following:

Complicated malaria, referred
Anemia
Trauma, Landmines
Measles
Polio
Tetanus
Whooping cough
Guinea worm
Yellow fever
Brucellosis
Kala azar
Plague
Onchocerciasis
Leprosy
HIV/AIDS
Suspected relapsing fever
Viral haemorrhagic fever
Acute jaundice syndrome
Diabetes mellitus
Acute influenza
Hypertension
Heart/cardiac disease

The morbidity incidence rate coincides with the interviews conducted, where malaria (often conflated with fever and headache), respiratory infections (cough), and diarrhoea are the most commonly identified ailments. The majority of these incidences occur among the cattle keepers.

Table 5 below is a very rough estimate of certain diseases or incidents that child respondents alluded to in interviews, nine of which were usable for comparative purposes. The researcher in Terekeka was able to interview up to 53 children, but only four were completed on an individual basis and completely. Therefore, some manoeuvring of questions was necessary to obtain as much data without compromising accessibility to respondents. The estimated average age of all children interviewed was 12 years.

The following is needed to contextualize this information in Table 5: “colds” were explained as runny noses; respondents found the terms headache and malaria difficult to differentiate; fatigue was a foreign concept (but with probing it was readily conceded that being tired can happen all the time); breathing and eye problems were usually attributable to dusty or sandy winds, while burns may be underrepresented because it is not considered an abnormal occurrence. “Itchiness” was for unknown reasons always attributable to the water (and subsequent dryness of skin).

Table 5: Symptoms/illnesses/injuries of cattle keeper children/youth under 18 experienced in the past year, rough estimates, Terekeka[26]

Symptom/Injury	n=x
Cuts	3
Cold	6
Eye problems	7
Headache/malaria	3
Hunger	3
Fatigue	2
Bruises	3
Breathing problems	2
Dehydration	2
Itch	2
Burns	1

Although respondent fatigue during interviews was often exemplified with "we've had other people come ask questions, but we received nothing for it," there seems to be a high rate of vaccination programmes run by ADRA in the Terekeka area. A respondent from the largest cattle camp, Keji Juba, suggested that vaccination drives occur monthly. According to a community mobilizer from ADRA, teams go into cattle camps for awareness campaigns, antenatal care (ANC) and mother, new–born and child health (MNCH) care services, with provision of nets, as well as vaccination programmes. The six vaccinations given, where and when possible, are for the "six killer diseases," among them of polio, BCG, measles and TT, of which measles is supposedly seen the most often.

The other main health–related NGO in Terekeka County is the Dickey Centre with its guinea worm eradication programme, and the cycle of transmission has been broken in the area, with the last case occurring 18 months earlier (c. August 2010).

6.3 Access to healthcare services

Again, access to healthcare among cattle camps can be best inferred by looking at the healthcare facilities available in Terekeka Payam. Limitations are again closely related to those described in the previous section, where data is not disaggregated into specific numbers for those from cattle camps.

6.3.1 Health services

The main PHCC and upcoming hospital is aided by one PHCU in Terekeka itself, and although a facility exists for the operation theatre, there is no surgeon. According to the assistant health visitor of Terekeka, the PHCC has 42 affiliated Traditional Birth Attendants, 46 affiliated midwives, 2 deputy health visitors and one health visitor.

The typical duties expected from the assistant health visitor are:

(1) to help oversee the maternity ward's operation of delivering babies, or travel to places where mothers are delivering;
(2) to help with examining pregnant mothers to help prevent complications during delivery;

[26] The generation of this table required a number of interpretations as completing questionnaires was difficult. The number of child respondents, depending on the question asked, ranged from nine to 53.

(3) to increase health awareness and education, including about nutrition;
(4) to treat sick mothers including for malaria; and
(5) to "give knowledge to mothers with blood problems."

Some of the main challenges the PHCC faces include the issue of transport. One vehicle was donated to the maternity ward by H.E. the President Salva Kiir Mayardit, which is now shared by the entire PHCC; though the recurring problem of insufficient fuel undermines its utility. Furthermore, with few boats among cattle keepers specifically, it is difficult for them to reach the clinic during emergencies. The typical procedure for health problems in relatively nearby cattle camps is to address all medical problems early with traditional methods and witch doctors, which has typically included cutting the skin. Complicated cases are sent to the PHCC, but often in late stages of disease, or where a delivering mother's situation has deteriorated substantially. Nonetheless, even if the PHCC is unable to save the life of a delivering mother, the option of sending the car to Juba has been exercised before, and is theoretically always on the table.

Nevertheless, according to the assistant health visitor, cattle keepers have come to trust the PHCC and its services more—if not just by being aware. Patients with malaria symptoms are sent earlier to PHCCs than before.

A common complaint regarding the delivery setting of babies in cattle camps is that there is very little sanitation involved; new–borns are delivered not on sheets but cowhides. There is also little soap available, to the point that midwives, upon being called to help, tend to purchases soap and other small items out of their own purse before setting out. For price comparison purposes, a typical bar of soap can cost 2 SSP and a bag of charcoal can cost 5 SSP.

Among Nuer youth in school in Unity, interviewers denoted that for these in Bentiu, 62.5 per cent (n=15) have access to health care within two hours (by foot) and the rest (37.5 per cent, n=9) have access within more than 2 hours (but less than one whole day).

6.3.2 Animal health

Using Terekeka as an example, eight animal health workers serve the entire County, two in Tali and six in the county capital—severely limiting the man force animal health workers can provide to the many cattle camps. The Assistant Commissioner for Animal Resources in Terekeka County, Khamis John Conga, leads the operation out of the rented offices from the Fisheries Department in the Terekeka County Offices. The low staffing levels creates the most significant challenge for the animal health workers, followed by a lack of funds, especially for transport, relying most often on VSF (Belgium) resources for transport or funds, i.e. to vaccinate cattle.

Animal disease is a significant problem for cattle keepers and it is estimated that 1.7 million cattle die annually as a result of various infectious diseases.[27] The primary disease among livestock faced in the cattle camps is East Coast Fever (EFC), an infectious disease spread through cattle by ticks. The symptoms of EFC include swollen lymph nodes, fever, diarrhoea, haemorrhaging, and ulceration.[28] East Coast Fever has a very high mortality rate; one outbreak in Central Equatoria estimated to infect around 30 per cent of cattle. This same outbreak was estimated to have a morbidity rate of between 30 per cent to 60 per cent, meaning animals that contracted the disease but survived were left severely affected as a result of the illness.[29] EFC was identified as the primary killer among the cattle in the cattle camps and cattle that do survive are deemed substantially less valuable.

[27] UN Pastoralism Working Group (October 2012).
[28] See: http://www.phsource.us/PH/PALM/PDA/EAST%20COAST%20FEVER.pdf.
[29] See: http://www.izs.it/vet_italiana/2012/48_4/379.pdf.

Contagious Bovine Pleuropneumonia (CBPP or lung plague) is another disease present in the cattle camps and is spread through frequent contact and shared water holes or grazing areas. Hyperacute forms, which occur in 10 per cent of infected livestock, can kill in five to seven days while other forms result in shortness of breath, stunting of growth, and chronic fever and loss of appetite.[30] The stunting of growth and loss of appetite will lead to a decrease of the value of a cow and could represent a significant financial loss to the owner.

Bovine Tuberculosis is a threat to livestock among cattle keepers. Bovine TB results in weakness, loss of appetite, swelling of the lymph nodes, and in severe cases can lead to death.[31] Other diseases that affect livestock include black water fever, haemorrhagic septicaemia, helminthic/worm infections, infections from tse–tse flies, and zoonotic tuberculosis. The amounts of goats, sheep, and chickens are limited in the cattle camps, but diseases for these other forms of livestock include *peste des petits ruminants* (PPR, or goat plague) and contagious caprine pleuropneumonia (CCPP).

The stated agenda of the veterinary health services in Terekeka is to educate about zoonotic diseases and to minimize the spread by increasing best practices during livestock handling, with at least two trainings having been completed this year. Radio programmes are not utilized for good reason (as few have radios), and therefore extension workers resort to bringing pictures along with them during these training sessions.

The other main line of operation is vaccination of cattle, particularly for black water fever and haemorrhagic septicaemia, although CCBP would be included if the budget allowed for this. When vaccinating, members of the cattle camps are assisted by community animal health worker volunteers who have learned to vaccinate.

Overall, the operations are severely limited, and a principle call for aid among pastoralist communities is better livestock care and medicine. As previously noted, a great number of child respondents indicated interest in attending school to be able to read veterinary medicine labels and understand expiration dates.

A final component on the health of animals relates to security situations. In more insecure places, such as Jonglei, “insecurity…also [hampers] efforts to control outbreaks of the often fatal haemorrhagic septicaemia and East Coast fever in cattle,[32] thereby compounding the downward cycle for the need to acquire more cattle—e.g., for brideweath—resulting in a loss of more cattle to disease.

[30] See: http://www.fao.org/docrep/004/AC147E/AC147E00.HTM.
[31] See: http://www.oie.int/fileadmin/Home/eng/Health_standards/tahm/2.04.07_BOVINE_TB.pdf.
[32] See: http://reliefweb.int/report/south–sudan–republic/conflict–and–returnees–strain–south–sudan–food–security.

7. Attitudes and perceptions toward child labour and education in pastoralist communities

7.1 Attitudes toward child labour

The concept of "child labour" does not truly exist among the pastoralists of South Sudan, as the involvement of children in cattle keeping work is simply a part of life. Using children for work has been in practice for generations, and despite the education levels or position as a teacher or government official, an overwhelming number of respondents during qualitative interviews believed that the use of children in work was an acceptable practice.

Within the cattle camps of pastoralist communities, child labour is the norm and therefore is not seen by most as something that stunts the development of children. In fact, most see it as positively affecting the child's development through experiential learning. Members of these pastoralist communities typically view child labour as informal education where their children learn the trade of cattle keeping.

Hazardous labour was also a foreign concept to most cattle camp community members. During qualitative interviews, respondents recognized that there are risks involved in cattle keeping, but these risks are seen as part of their lifestyle—risks that every cattle keeper must confront and learn to deal with in order to be successful. The risk of hazardous work is justified by the informal education such experiences provide. The risks themselves are simply part of cattle keeping life, and children are expected to learn how to cope with these issues.

7.2 Attitudes toward child education

During qualitative interviews, the children and youth's views towards education were almost entirely positive, most voicing the desire to go to school and expressing education as beneficial. Despite this, very few stay in school for more than a few years, if at all, due to a variety of reasons. The high price of school fees and uniforms, distances of schools, and early marriage are all issues that children cited have stopped them from being able to attend school. For some, older siblings go while they must remain home, and others claimed that it was simply "too late."

The attitude of adults in the cattle camps towards education is very different. Among adults interviewed in Terekeka, the average education level was Primary 1. A lack of education among adults has left many members of the community with the view that education is unimportant and unnecessary to cattle keeping life. Boys and girls will be called out of classrooms by their relatives, telling them to come home to take care of the cows or watch their siblings. This illustrates the priorities of most cattle keepers; the cattle are the primary concern and education is secondary in importance.

Within the cattle camps, the parents' interest in a high bride price takes precedent over the completion of a girl's education. During qualitative interviews, respondents reported a decrease in the age of marriage for girls, who are often marrying at the age of 16. Qualitative data did not indicate a specific reason this trend, however one respondent stated that 16 years of age is preferred because men like virgins and the younger girls. Younger girls are said to be worth more cows, and therefore it is very profitable for families to marry their daughters for up to 80 cows. Once married, girls almost never return to school due to their responsibilities as a wife.

For girls, the attendance of school is not only viewed by some adults as unimportant, but actually as being negative. While at school, the girl is not under the supervision of her parents, and during this time, it is possible that she could engage in illicit activities that would decrease her value in cows. Qualitative interviews revealed that such illicit activities mainly concerned an integration of the genders, which was believed to lead to a chance of prostitution or pregnancy, Even the suspicion caused by being unmonitored while at school is enough to lower the bride price of girls in the eyes of some. In order to sell their daughters at a younger age for a higher amount of cows, some families purposefully keep them out of school. Paradoxically, however, it was frequently stated throughout qualitative data that educated girls are more valuable and therefore worth more cows.

Among young men, the tradition of initiation into manhood begins at the age of 15. They are sent out to the wilderness for two months, and upon their return, they have officially become men. After returning from initiation, these young men rarely return to school, and those who do often represent a disciplinary problem and are no longer afraid or intimidated by their teachers due to their recently acquired status as men. Education, for these, is only important until manhood. Once attained, education is no longer a priority.

Fortunately, qualitative interviews did reveal that a change in attitude toward education was occurring among community members. With a large amount of cattle having died in the last two years, some had to look for alternate ways to make money, and recognition for the positive aspects of education appears to exist among some.

Child labour within the livestock sector is both very common in rural communities as well as very dangerous. Together with agriculture, forestry, and fisheries, livestock represents nearly 60 per cent of hazardous labour done by children between the ages of 5 and 17.[33] Because it largely occurs in a rural setting, child labour in livestock is difficult to monitor as well as regulate. By performing the tasks associated with caring for animals, children are exposed to dangerous bacteria such as salmonella,[34] or E. Coli, as well as physical injuries such as lacerations, head trauma, broken bones, infections, and potentially life threatening situations. Beyond the threats to their health, children working with livestock often are unable to attend school due to their work and lack the opportunities to receive an education.

[33] IPEC, *Children in Hazardous Work: What We Know, What We Need To Know* (IPEC, Geneva, 2011).
[34] Ibid.

8. Security concerns

Upper Nile and Lakes State rank among the most conflict prone states, with each experiencing about 16 per cent (n=71 or 70) of the total conflict incidences in 2011 in South Sudan (with Jonglei State taking in about 41 per cent, n=188). In contrast to the states with the next highest incidence of conflict, such as lakes which totals about 8 per cent (n=35) of incidences, these numbers are quite high. Furthermore, Central Equatoria only had nine insecurity incidences in 2011 (2 per cent of national total), demonstrating how this cattle research is geographically differentiated regarding conflict incidences.[35] Where conflict incidence is greater—which usually involves cattle raiding and youth participation of attacks or defence—the risks are that much more pronounced for youth (in areas around Rumbek than Terekeka for example). Central Equatoria, on the other hand, is considered more secure in terms of cattle raiding, some of which may have come out of youth peace building conferences between Terekeka County, Bor County, and Awerial County Youth Associations, and peace pacts have been agreed between the Bor and Terekeka Youth Associations. Though respondents in Terekeka quoted having witnessed insecurity in their lifetimes, it is not a minor issue elsewhere, especially as it does not always related to cattle.

Overall, as the UN OCHA's humanitarian bulletin of October–December 2012 details:

> *Tensions with Sudan, inter–communal violence and non–state armed group attacks uprooted about 190,000 people from their homes in 2012. A seasonal rise in insecurity was noted from October onwards, as up to 60 per cent of the country became accessible with the arrival of the dry season. This enabled the movement of livestock in search of water and grazing areas, which historically triggers inter–communal fighting over limited resources*.[36]

The risk of inter clan clashes increases during the dry season in Lakes and Unity, as pathways open up and clashes for water sources, food, and resources can result in conflicts. But in Terekeka, conflict incidence rates can also increase in the rainy season because of livelihood clashes: cows who wander and graze on cultivated cropland can elicit violent reactions from the cultivators themselves. This, as well as the need to help cattle who get stuck in mud to get out, are the main reasons why migrating cattle need to be supervised more so during the rainy season and much less so in the dry season (which is nearer to the opposite in the more northern areas).

Throughout the course of this research, topic of actual cattle raids was raised repeatedly, but the subject was so sensitive it was difficult to discern the true nature and dynamics that bring about cattle raids; to what extent firearms are involved, how children are militarized and used as scouts, and how camps are defended. Youth and young male adults are primarily responsible to protect the camps, particularly at night, and during the rainy season from those who live off the land. The youngest age for overseeing the cattle can be as low as eleven years old, but perhaps in more insecure regions, fifteen–year–olds are counted as some of the youngest securers of their wealth.

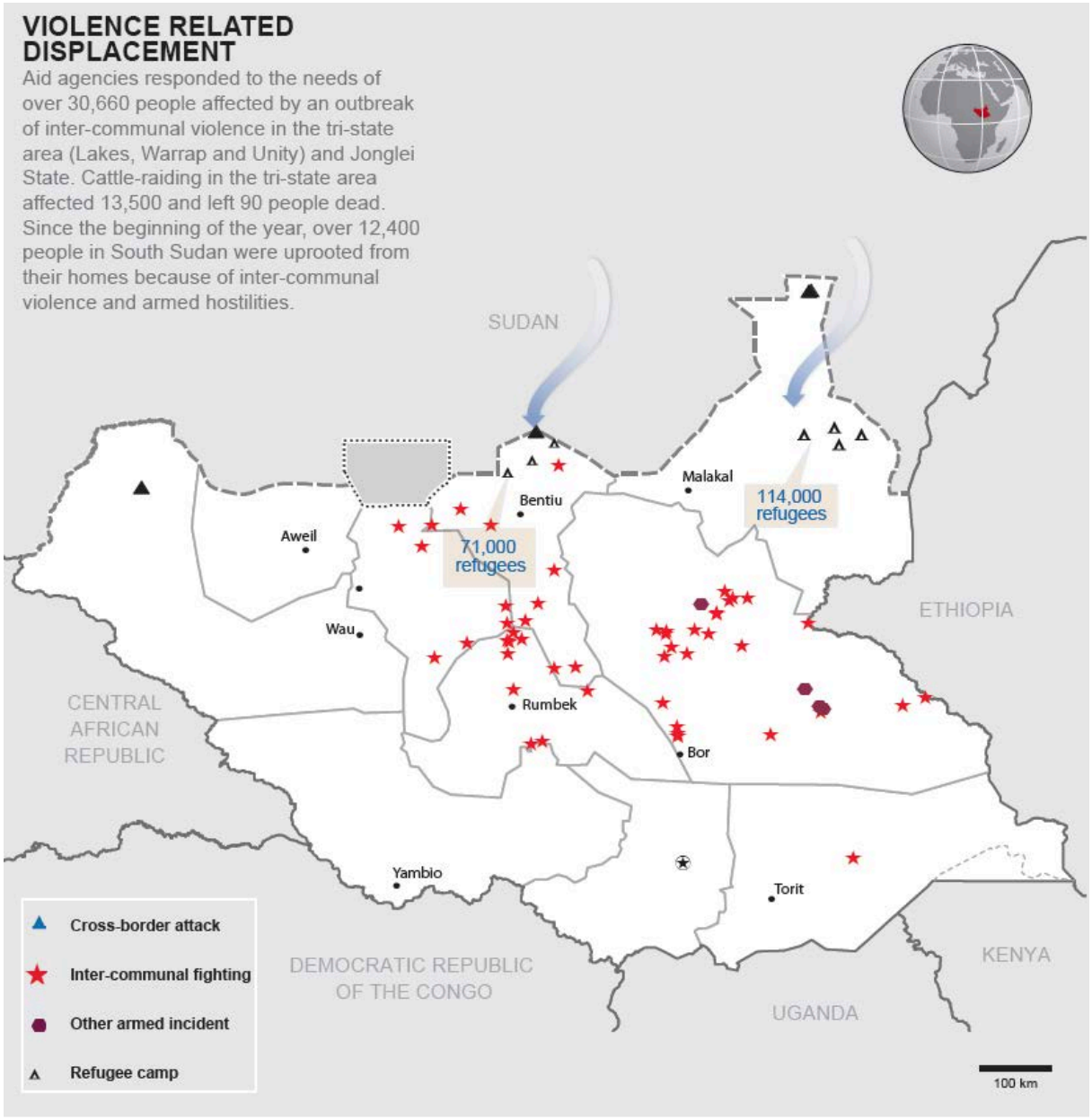
During the time of this research, OCHA states this regarding violence related displacement and death (noting its relation to cattle camps):

> *Aid agencies responded to the needs of over 36,660 people affected by an outbreak of inter–communal violence in the tri–state area (Lakes, Warrap and Unity) and Jonglei State. Cattle–raiding in the tri–state area affected 13,500 and left 90 people dead. Since*

[35] UN OCHA.
[36] Humanitarian Bulletin Oct–Dec 2012 UNOCHA.

the beginning of the year, over 12,400 people in South Sudan were uprooted from their homes because of inter–communal violence and armed hostilities.[37]

Figure 1: Map of violence related displacement (OCHA)



[37] Humanitarian Snapshot. February 2013. UN OCHA

9. Conclusions and recommendations

The government and its offices need to acknowledge that communities relying on animal husbandry for their economic and social capital are dependent on child and youth labour. It is paramount that the ILO works hand in hand with the government and other stakeholders to challenge the public perception surrounding the question of what the limitations should be on the working activities in which children engage to support their families. . If education of a child or youth is recognised as having value for an extended family then the "release" of that child or youth from labour demands in order to attend school or receive formal education will be more accepted by elders.

The expansion of mobile teaching programmes in pastoralist South Sudan should be approached as an issue of national urgency. The growing contact between rural and urban communities is fuelling the demand among pastoralists for basic literacy and numeracy skills. As social and economic conditions in post–war South Sudan continue to evolve, more and more pastoralists are recognizing the need for formal education. At the same time, the reliance on animal wealth and prevailing social norms which depend on the labour of children and youth prevent the adoption of conventional education delivery. Furthermore, it impedes the possibility of increased enrolment and school tenure among children and youth in cattle camps. As part of this expansion of the mobile teaching programme, steps should be taken to improve the conditions that mobile teachers work in (including regular payment of salaries, provision of transportation, basic field equipment, supervision, improved training and regular upgrading of skills), as well as to educate men, women, and youth about the value of education versus marriage and bride price.

Means are needed to ensure that PEP at the state level receives the resources that are being earmarked for it by the AES Directorate, and that funds are actually being spent on targeted inputs and activities. Most critical among these is the payments of teachers. There is some prospect that the new financial system being implemented in 2012 will alleviate this problem, but whether through it, or by other means, finding an institutional solution to this problem is one of the top priorities facing the programme. It is unacceptable that such a high programmatic priority under the GES is underfunded, and that teachers are not being paid.[38]

The task of challenging the cultural norms with regards to the employment of youth in cattle camps and the importance of formal education is tenuous, but achievable. An attitudinal shift is needed among elders, parents, young boys, and young girls to create systemic change asserting the value of schooling versus the life and work experience inherent in living and working in a cattle camp. The following detailed recommendations are based on the key findings presented in this report, as well as grassroots research within South Sudan's cattle camps:

- **Develop and implement a multi–staged information campaign aimed at a gradual shift in public perception around the question of what the limitations should be on the working activities in which children engage to support their families** — Work for children and youth in the cattle camp is not currently identified as child labour, but rather a natural and educational experience for these young people and their necessary roles within the family and community. The high value placed on cattle means that work in a cattle camp is interpreted as a child fulfilling his duty to protect his or her family's assets; intrinsic change addressing this cultural standard is necessary before education, female empowerment, and marriage practices can be addressed to better promote the role of children within the school. Government ministries, as well as other stakeholders, such as developmental agencies and

[38] FN AES Baseline Survey (2012), p. 58.

NGOs, need to unite and forge a common front to shift the public perception on appropriate working activities for children.

- **Sensitization on the value of formal education can help to challenge and better inform the notions that the experience in cattle camps can supplement children and youth attending schools** — Until elders and parents recognise the value of formal education in a child's cognizant development, the life experiences in the cattle camp will be seen as of similar value to that in the classroom. By informing and sensitizing those adults who never attended school to the developmental values of interaction with other youth and teachers in an educational setting, the importance of formal education can begin to take precedent within these communities. The Ministry of Education, as well as donors, developmental partners, and civil society organizations need to work toward changing the perceptions of education at various leadership levels, as well as begin encouraging formal/informal educational programmes within cattle camps.
- **Increased availability of the Pastoralist Education Programme (PEP) can help expose both youth and adults in the cattle camps to the value of formal education, while working in the parameters of the cultural context of these communities** — By providing formal education within the community context, the need to fight cultural mores to promote education becomes less necessary. Education can be directly integrated into camp life, and programs can be tailored to the desires of the community (through literacy and veterinary training, for example) to help challenge the status quo surrounding the value of education to those in cattle camps. Furthermore, the education curriculum can be specifically tailored to the necessary knowledge needed in the cattle camps. Components regarding occupational safety and health and employment can be added to the curriculum to enhance the lives of those in the cattle camps through reduction of injuries and risk management. Such programmes would hold value for the community and would be more resilient to the changing environment of the cattle camps. The Ministry of Education can ensure the availability of the educational programmes to pastoralist communities, as well as review the curriculum for relevancy and coordinate the training of various stakeholders and local leaders. Furthermore, the PEP programme should be adjusted to include more mobile schools and more volunteer led schools.
- **Creation of a PEP programme that prioritizes animals over the children** — For children in cattle camps, animals are the main priority. Animals' needs come first, and the children's needs come second. This is a reality that cannot currently be escaped; therefore an educational program needs to adhere to these norms. An educational programme must revolve around children's work schedules and cattle camp duties. A PEP programme that caters to this structure must be developed because this is the only structure with a chance of success.
- **Create an educational curriculum that serves as an entry point for introducing formal education in cattle camps** — This will include topics relevant and of importance to cattle camp life. Vocational trainings, such as veterinary training, could serve as a window to introduce formal education in cattle camps. Such educational programmes that are viewed as enhancing work performance may gain more acceptance and serve as a window for the introduction of education into the cattle camps.
- **Incorporation of law and politics classes in the PEP curriculum available to older students to promote continued enrolment, as the prospect of civic engagement and political participation was a paramount reason for attending school, as tribes desire similar representation to that of their neighbours and other conflicting tribes** — A common theme among youth—particularly boys—was the distinct connection between a formal education and a career in politics. The residents of cattle camps recognize with importance of equal representation in the government (and the protection of resources that this representation can afford), and including government, law, and politics classes into the PEP curriculum can

capitalize on an already present notion to the benefit of formal education. Perhaps the best strategy to pursue this would be to target lawmakers and political leaders, providing them with a better understanding of the PEP, and encouraging them to support this in the PEP curriculum.

- **The availability of female empowerment trainings as well as fostering the formation of female–centred youth groups to help educate young girls and their parents on the value of female education, the benefits to avoiding early marriage and the roles of females as decision makers in the community** — Breaking the stereotypes around the value of early marriage and dowry prices is essential in promoting the enrolment on girls in school and reducing their high drop–out rates. Empowering young girls, and equipping them with the understanding of the value of education, reproductive planning, how to deal with menstruation, and their ability to actively participate in civil society can help girls, young women, and mothers advocate for the enrolment of females in school. Families must also be educated on the importance of girls attending school, and not to view their daughters as merely a tool to acquire wealth through her marriage.
- **Continued encouragement for and development of Youth Associations within herding communities, which have thus far been successful in promoting peace between inter–tribal youth to reduce cattle raids—and in turn lessen the mental stress that accompanies feeling vulnerable to raids and conflicts in the camps** — Youth expressed mental anguish over the insecurities and possible violence surrounding cattle camps and cattle raids; successful peace agreements have also been reached among Youth Associations in Terekeka, Bor, and Awerial Counties, and this model should be continued. Be ceding the occurrence of cattle raids, herding communities can being to feel more secure and the necessity for a volume of youth to protect cattle will become less necessary over time.
- **Increased access to water, through the construction of protected boreholes and wells can help ease the work of children in hauling water, and lessen the need for more bodies around camps to satisfy the water needs of cattle** — Lack of accessible water provided a significant reason as to why large numbers of children and youth (particularly girls) were needed to provide cattle with the water necessary for survival. Young girls often walk hours each direction to water, and are tasked with hauling enough back to satisfy the needs for the animals' survival. Further, waterborne diseases were prevalent among children and youth, as water is often stagnant and proper treatment techniques are unknown or not carried out. Limiting the time needed to collect water, as well as increasing its accessibility will help relieve some of the work currently tasked to children.
- **Trainings on water purification and WASH sensitization—particularly the value of soap and hand washing—can help mitigate the instances of illness among children and youth caused by their close proximity to livestock and faeces** — Work in the cattle camps was deemed hazardous to children, but researches had a difficult time delineating work related hazards and stresses from the difficulties associated with life in the cattle camps. A lack in soap and hygiene practices were noted as contributing to a myriad of food and bacteria related illnesses, some of which have been fatal. Part of limiting the hazards associated with working in the cattle camps involves easing the harshness of life in the cattle camps; WASH sensitization on hand washing, cleanliness of food and water containers, and water treatment can all help decrease the instances of disease among children living in herding communities.
- **Suggestions for future research** — There is a great need for more specific and focused research on gender–based violence in the cattle camps. Future research needs to target young girls in the cattle camps, addressing such issues of violence.

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