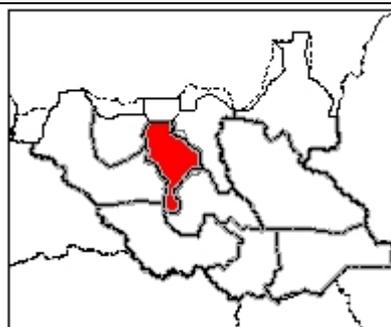
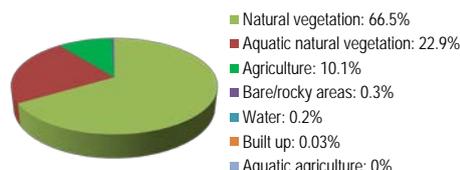


4. Warrap State (Capital: Kuajok)

A. Basic Information	
Population (2008) ^a	920,045 (4 th)* Male: 443,665 Female: 476,380
Projected Population (2013) ^b	1,193,365 (3 rd)
Area ^c	33,962 km ² (9 th)*
No. of Counties, Payams and Bomas (2009) ^d	6 Counties 47 Payams 139 Bomas
Food secure population (2012) ^b	63% (5 th)
Access to improved drinking water (2009) ^e	52% (6 th)
Literacy rate (15-24 years old) (2009) ^e	27% (8 th)
Primary school gross enrolment rate (GER) (2010) ^f	68% (6 th)

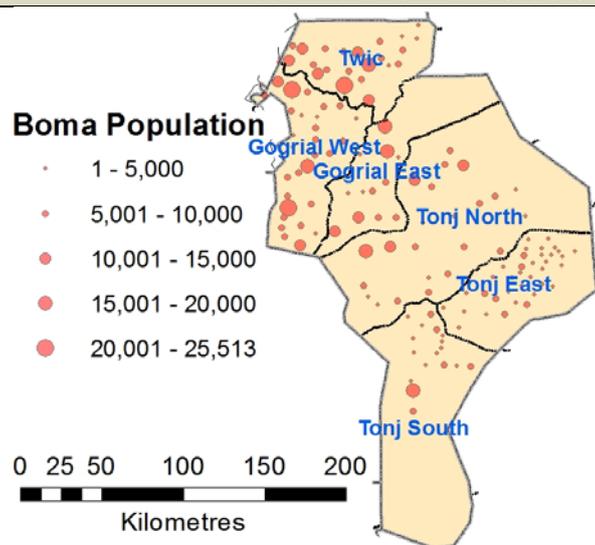


Land cover^g



Source: ^a SSCSE. 2010. Southern Sudan Counts: Tables from the 5th Sudan Population and Housing Census, 2008; ^b WFP. 2013. ANLA; ^c FAO. 2011. Land Cover Atlas of the Republic of South Sudan; ^d Original data source of NBS. 2012. NBHS 2009; ^e NBS. 2012. NBHS 2009; ^f MoE. 2010. EMIS; ^g NBS. 2011. South Sudan Statistical Yearbook 2011. *Data of Abyei excluded

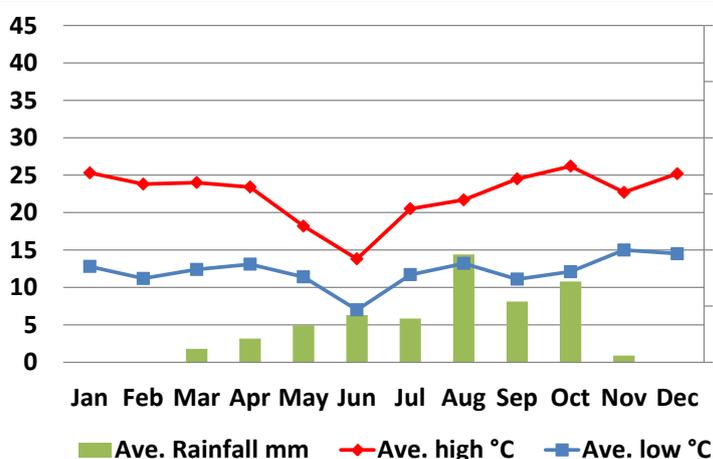
Administrative districts (counties)



County	Estimated Population (2013) ^a	Pop. density (ppl/km ²) ^b
Gogrial West	287,790	59.9
Twic	249,103	62.8
Tonj North	184,203	16.9
Tonj South	132,828	19.7
Tonj East	129,333	34.8
Gogrial East	123,688	32.1

Source: (Map) NBS; (Table)^a WFP. 2013. ANLA; ^b Land scale data applied from FAO. 2011. Land Cover Atlas of the Republic of South Sudan.

Climate chart (Kuajok)

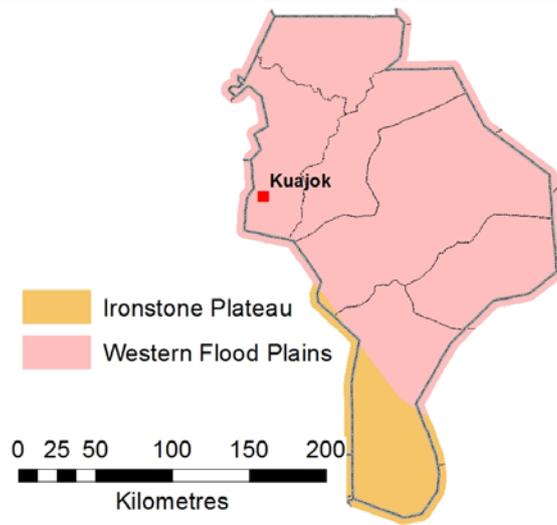


Annual ave. high temp.	N/A °C
Annual ave. low temp.	N/A °C
Average temperature	N/A °C
Ave. annual precipitation	N/A mm

Source: Meowweather.com. 2013. Weather history of Kuajok. <http://www.meowweather.com/history/Sudan/na/8.3166667/28/Kwajok.html> (accessed on 25th August 2013)

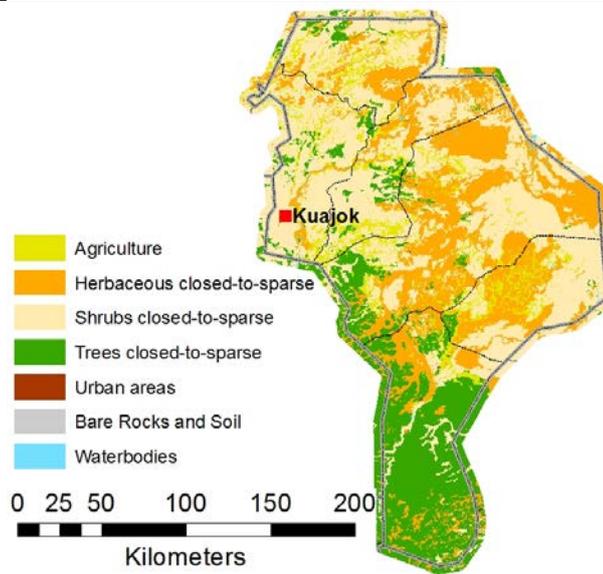
Warrap State

Livelihood zones



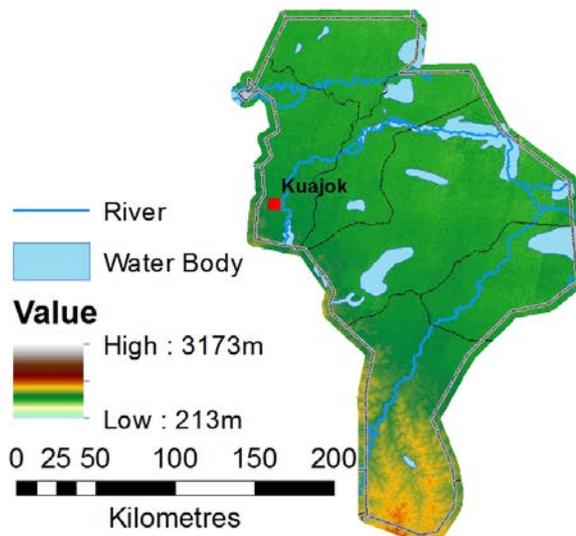
Source: NBS.

Land cover



Source: FAO. 2011.

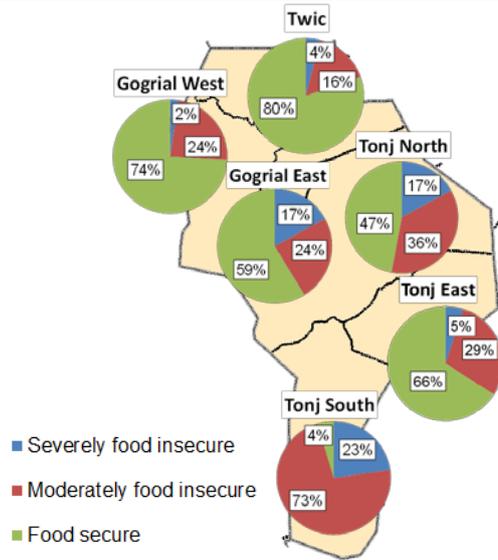
Topography



Source: NBS.

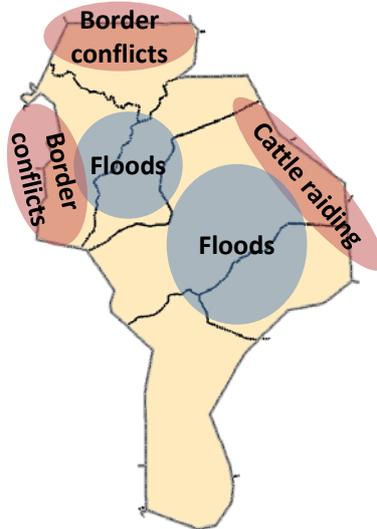
Warrap State

Estimated food security status by county (2013)



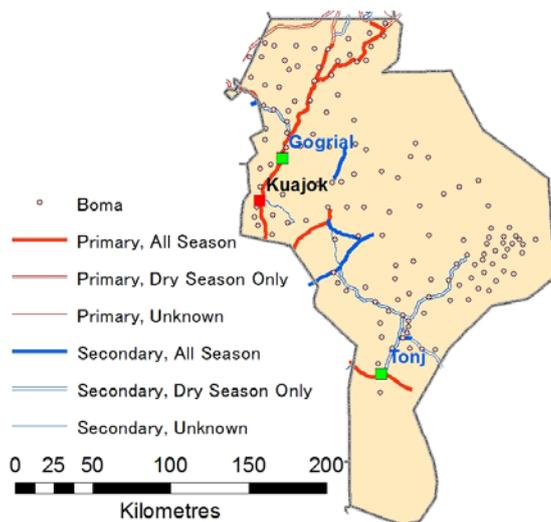
Source: WFP.2013.ANLA.

Insecurity and natural disaster



Source: CAMP survey team 2013.

Road and Boma location



Source: Road (WFP. 2013), Boma location (NBS).

State Ministry of Agriculture and Forestry (MAF)																																																	
Organogram			Staff																																														
<pre> graph TD Minister --> DG[Director General] Minister --> MO[Minister's office] Minister --> MA[Minister's Advisor] DG --> DA[Directorate of Agriculture and Production] DG --> DF[Directorate of Forestry] DG --> DPT[Directorate of Planning, Research and Training] DG --> DAF[Directorate of Administration and Finance] </pre>			<p>Breakdown of information not fully available</p> <table border="1"> <thead> <tr> <th>Section</th> <th>Number of staff</th> </tr> </thead> <tbody> <tr> <td>Minister's office</td> <td>8</td> </tr> <tr> <td>Directorate of Agriculture and Production</td> <td>54</td> </tr> <tr> <td>Department of Agriculture</td> <td>(-)</td> </tr> <tr> <td>Department of Plant Production</td> <td>(-)</td> </tr> <tr> <td>Department of Extension</td> <td>(-)</td> </tr> <tr> <td>Department of Soil Development</td> <td>(-)</td> </tr> <tr> <td>Department of Mechanization</td> <td>(-)</td> </tr> <tr> <td>Department of Horticulture</td> <td>(-)</td> </tr> <tr> <td>Department of Food Security and Inventory</td> <td>(-)</td> </tr> <tr> <td>Directorate of Forestry</td> <td>30</td> </tr> <tr> <td>Department of Afforestation</td> <td>(-)</td> </tr> <tr> <td>Department of Utilisation</td> <td>(-)</td> </tr> <tr> <td>Directorate of Planning, Research and Training</td> <td>20</td> </tr> <tr> <td>Department of Planning</td> <td>(-)</td> </tr> <tr> <td>Department of Research and Training</td> <td>(-)</td> </tr> <tr> <td>Department of Monitoring and Evaluation</td> <td>(-)</td> </tr> <tr> <td>Directorate of Administration and Finance</td> <td>74</td> </tr> <tr> <td>Department of Administration and Finance</td> <td>(-)</td> </tr> <tr> <td>Department of Establishment</td> <td>(-)</td> </tr> <tr> <td>Department of Account</td> <td>(-)</td> </tr> <tr> <td>Department of Procurement</td> <td>(-)</td> </tr> <tr> <td>Total</td> <td>186</td> </tr> </tbody> </table> <p>Source: State MAF.</p>	Section	Number of staff	Minister's office	8	Directorate of Agriculture and Production	54	Department of Agriculture	(-)	Department of Plant Production	(-)	Department of Extension	(-)	Department of Soil Development	(-)	Department of Mechanization	(-)	Department of Horticulture	(-)	Department of Food Security and Inventory	(-)	Directorate of Forestry	30	Department of Afforestation	(-)	Department of Utilisation	(-)	Directorate of Planning, Research and Training	20	Department of Planning	(-)	Department of Research and Training	(-)	Department of Monitoring and Evaluation	(-)	Directorate of Administration and Finance	74	Department of Administration and Finance	(-)	Department of Establishment	(-)	Department of Account	(-)	Department of Procurement	(-)	Total	186
Section	Number of staff																																																
Minister's office	8																																																
Directorate of Agriculture and Production	54																																																
Department of Agriculture	(-)																																																
Department of Plant Production	(-)																																																
Department of Extension	(-)																																																
Department of Soil Development	(-)																																																
Department of Mechanization	(-)																																																
Department of Horticulture	(-)																																																
Department of Food Security and Inventory	(-)																																																
Directorate of Forestry	30																																																
Department of Afforestation	(-)																																																
Department of Utilisation	(-)																																																
Directorate of Planning, Research and Training	20																																																
Department of Planning	(-)																																																
Department of Research and Training	(-)																																																
Department of Monitoring and Evaluation	(-)																																																
Directorate of Administration and Finance	74																																																
Department of Administration and Finance	(-)																																																
Department of Establishment	(-)																																																
Department of Account	(-)																																																
Department of Procurement	(-)																																																
Total	186																																																
Budget			Strategic plan																																														
<table border="1"> <thead> <tr> <th>Category</th> <th>2011/12 Budget</th> <th>2011/12 Outturn</th> <th>2012/13 Budget</th> </tr> </thead> <tbody> <tr> <td>Salaries</td> <td>(Data not available)</td> <td>(Data not available)</td> <td>(Data not available)</td> </tr> <tr> <td>Operating</td> <td>(Data not available)</td> <td>(Data not available)</td> <td>(Data not available)</td> </tr> <tr> <td>Transfers</td> <td>(Data not available)</td> <td>(Data not available)</td> <td>(Data not available)</td> </tr> <tr> <td>Others</td> <td>(Data not available)</td> <td>(Data not available)</td> <td>(Data not available)</td> </tr> <tr> <td>Capital</td> <td>(Data not available)</td> <td>(Data not available)</td> <td>(Data not available)</td> </tr> <tr> <td>Overall total</td> <td>989,211</td> <td>835,803</td> <td>(Data not available)</td> </tr> </tbody> </table> <p>Source: State MAF. Unit: SSP</p>			Category	2011/12 Budget	2011/12 Outturn	2012/13 Budget	Salaries	(Data not available)	(Data not available)	(Data not available)	Operating	(Data not available)	(Data not available)	(Data not available)	Transfers	(Data not available)	(Data not available)	(Data not available)	Others	(Data not available)	(Data not available)	(Data not available)	Capital	(Data not available)	(Data not available)	(Data not available)	Overall total	989,211	835,803	(Data not available)	<p>Warrap Strategic plan (2013-17)</p> <p>Objective To give direction to the state ministry and partners on what they aspire to achieve in the next 5 years in line with both the national and state policies and plans, taking into account of lesson learnt of various key activities</p> <hr/> <p>Budget Plan (Information not available)</p> <ul style="list-style-type: none"> ● Attain sustainable managements of Forest Reserves ● Value addition of wood and non-wood forest resources ● Produce adequate timber to meet rural, urban and/or export demand ● Increase production and productivity by 20% for 400,000 farmers ● Improve market infrastructure, value addition of products and creation of small and micro enterprises <hr/> <p>Activities</p> <ul style="list-style-type: none"> ● Survey, demarcate and rehabilitate forest reserves ● Regulate illegal tree felling and charcoal burning, also control forest fires ● Accelerated afforestation and reforestation ● Creation of small agro based businesses and income generation activities ● Establish market information system <p>Source: State MAF.</p>																		
Category	2011/12 Budget	2011/12 Outturn	2012/13 Budget																																														
Salaries	(Data not available)	(Data not available)	(Data not available)																																														
Operating	(Data not available)	(Data not available)	(Data not available)																																														
Transfers	(Data not available)	(Data not available)	(Data not available)																																														
Others	(Data not available)	(Data not available)	(Data not available)																																														
Capital	(Data not available)	(Data not available)	(Data not available)																																														
Overall total	989,211	835,803	(Data not available)																																														
Services provided by State MAF and local government																																																	
<p>(Technical advice)</p> <ul style="list-style-type: none"> ● Technical advice is provided mainly by extension officers at county and payam level. <p>(Seed and tool provision)</p> <ul style="list-style-type: none"> ● Seeds and tools are provided in cooperation with NGOs. (The majority of the farmers use local seeds and traditional tools.) <p>(Demo farm and field day= visit to field to share best agricultural practices)</p> <ul style="list-style-type: none"> ● Demo farm is installed in some areas. <p>(Tractor hiring)</p> <ul style="list-style-type: none"> ● State ministries do not provide tractor hiring service. 																																																	

B. Crop			
Services provided by DPs and NGOs			
Organisation	Activities	Area	Target
FAO	<ul style="list-style-type: none"> • Agricultural development • Seed and tool provision • IDPs and returnees support 	All counties	Vulnerable groups
World Concern project	<ul style="list-style-type: none"> • Food security • Provision of seeds and tools • Training for farmers • Provision of ox-plough attachment and training 	Gogrial West and East Counties	Vulnerable groups
World Vision	<ul style="list-style-type: none"> • Implement nutrition improvement program 	All counties	Children
International Relief Development	<ul style="list-style-type: none"> • Support agricultural development 	All counties	Farmers union
*There are a number of DPs and NGOs in the state. The above information collected by CAMP team is shown as examples.			
Services provided by private sector			
<p>(Tractor hiring service)</p> <ul style="list-style-type: none"> • There are few tractor hiring service providers. (SSP 200/feddan for ploughing.) <p>(Agro-dealers)</p> <ul style="list-style-type: none"> • Agro-dealers are not found in the state. <p>(Financial institution)</p> <ul style="list-style-type: none"> • Financial providers for farmers are not found in the state. 			

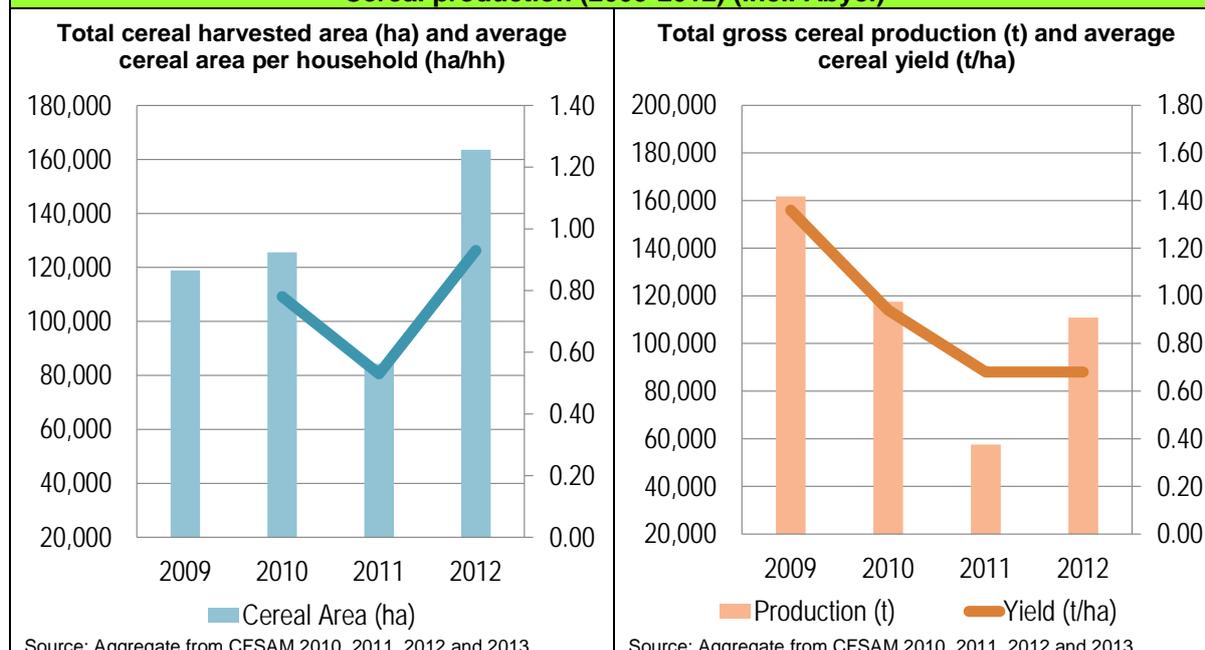
Warrap State

Market						
Agricultural products and their origin (Kuajok, May-June 2013)						
(Crop)			(Others)			
Item	Type	Origin	Item	Type	Origin	
Sorghum	Import	Uganda	Tomato	Import	-	
	Domestic	Warrap State		Domestic	Warrap State	
Maize	Import	Uganda	Okra	Import	-	
	Domestic	-		Domestic	Warrap State	
Maize flour	Import	Uganda	Jew's mallow	Import	-	
	Domestic	-		Domestic	Warrap State	
Groundnut	Import	-	Onion	Import	Sudan	
	Domestic	Warrap State		Domestic	-	
Sesame	Import	-				
	Domestic	Warrap State				
Millet	Import	Sudan				
	Domestic	-				
Source: CAMP survey team 2013. *This is not a representative sample.			Source: CAMP survey team 2013. *his is not a representative sample.			
Market price (Retail price, Kuajok, May-June 2013)						
Item	Unit	Price (SSP)				
		Low season		High season		
Sorghum (Import)	Sack (50kg)	Dry season	170	-	270	Rainy season
Maize (Import)	Sack (100kg)	Dry season	150	-	300	Rainy season
Maize flour (Import)	Sack (50kg)	Dry season	180	-	250	Rainy season
Tomato (Domestic)	Piece	Rainy season	5	-	5	Dry season
			10 pieces		6 pieces	
Okra (Domestic)	Basket	Dry season	45	-	50	Rainy season
Jew's mallow (Domestic)	Basin	Rainy season	15	-	30	Dry season
Source: CAMP survey team 2013. *This is not a representative sample.						
Transportation cost (Kuajok, May-June 2013)						
Type	Unit	Currency	Cost			
Transport cost (Uganda-Kuajok)	Truck	Ush	30,000			
Porterage (on/off loading)	Truck	SSP	1,000			
Source: CAMP survey team 2013. *This is not a representative sample.						
Taxes and charges (Kuajok, May-June 2013)						
(Trader/ retailer)						
Type	Cost (SSP)	Frequency				
Licence	1,000	Annually				
Rent	1,700	Monthly				
Market cleaning fee	30	Monthly				
Police service	30	Monthly				
(Retailer)						
Type	Cost (SSP)	Frequency				
Rent table	40	Monthly				
Market cleaning fee	10-30	Monthly				
Police service	10	Monthly				
Source: CAMP survey team 2013. *This is not a representative sample.						

Crop production		
Farming household (%) (2012) (incl. Abyei)	87	Survey area 
Farming household (No.) (2012) (incl. Abyei)	175,114	
Total cereal area (ha) (2012) (incl. Abyei)	163,603 (1 st)	
Cereal gross yield (t/ha) (2012) (incl. Abyei)	0.68 (7 th)	
Gross cereal production (t) (2012) (incl. Abyei)	110,886 (4 th)	
Average cereal area per household (ha/hh) (2012) (incl. Abyei)	0.93 (6 th)	

Source: FAO and WFP. 2013 CFSAM.

Cereal production (2009-2012) (incl. Abyei)



Crop production by livelihood zone

Ironstone Plateau		Western Flood Plains	
Major agricultural products			
Crop	Vegetable	Crop	Vegetable
Sorghum	Tomato	Sorghum	Tomato
Rice	Jew's mallow	Rice	Jew's mallow
Cash Crop	Okra	Maize	Okra
Groundnut	Onion	Cash Crop	Onion
Sesame	Eggplant	Groundnut	Eggplant
	Carrot	Sesame	Carrot
	Cabbage		Cabbage

Cropping calendar

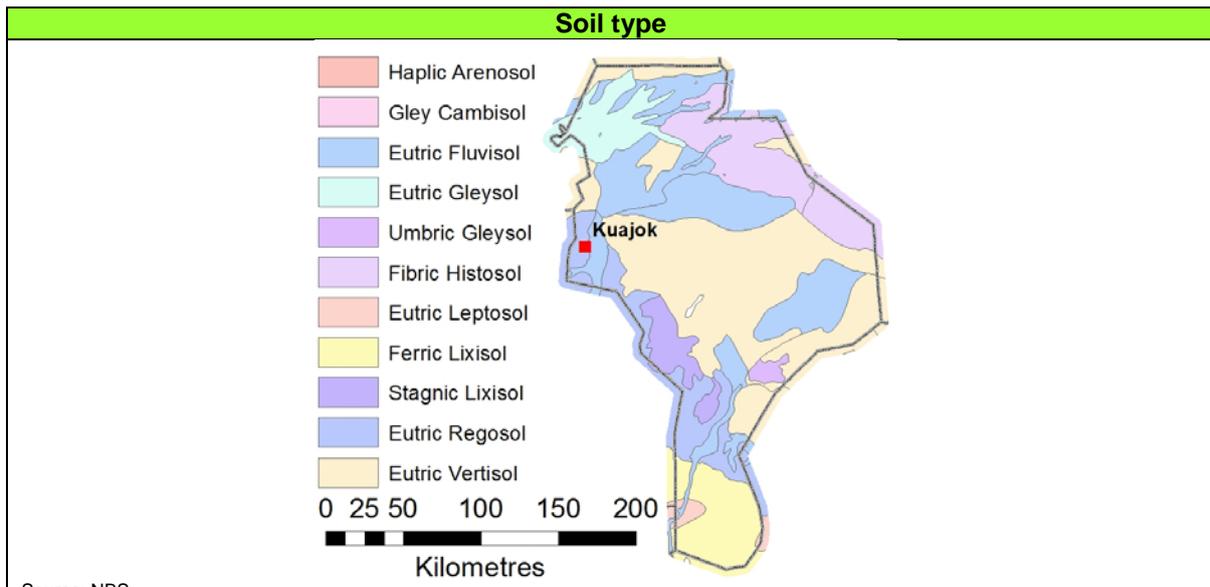
Crop	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Maize		H		L	S			H	H	S		H
Sorghum (long)		H		L	L	S						
Rice (NERICA)		H		L	S			H	H	S		H
Groundnut				L	S			H	S			H
Cassava											H	H
Sesame					L	S		S	H		H	
Bean					L	S			H			
Tomato	T	L	L	S	T			H	S	T		H
Cabbage				L	S	T			H			
				L	S	T			H			

Data not available

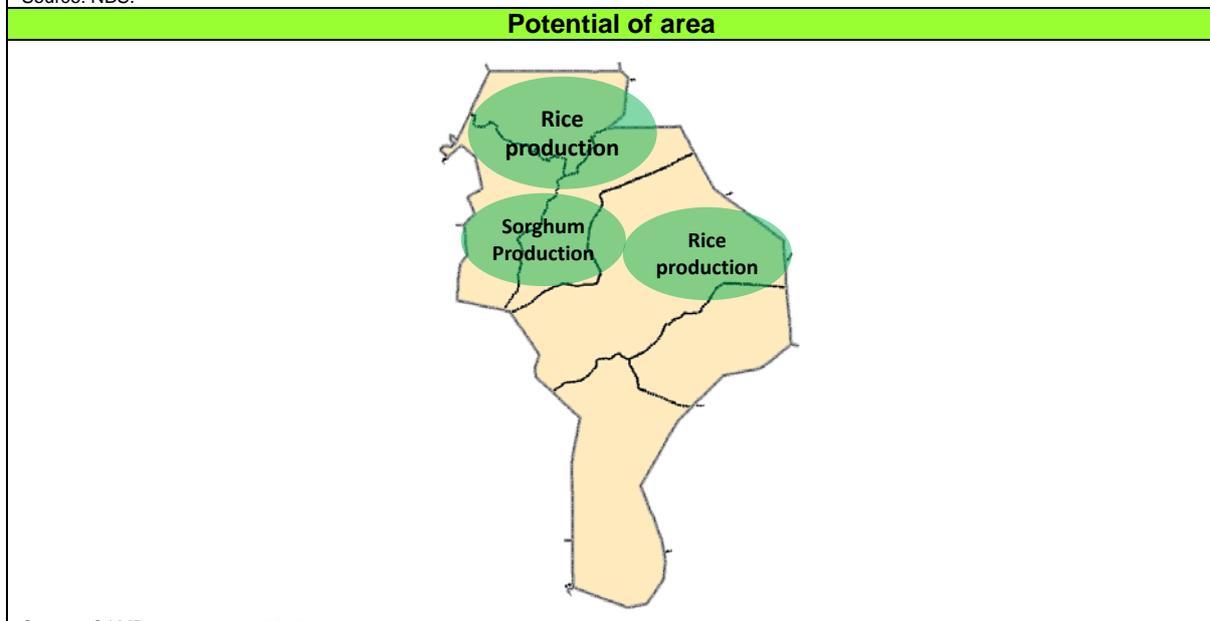
Legend: L Land preparation, S Sowing, T Transplanting, H Harvesting

Source: CAMP survey team. 2013

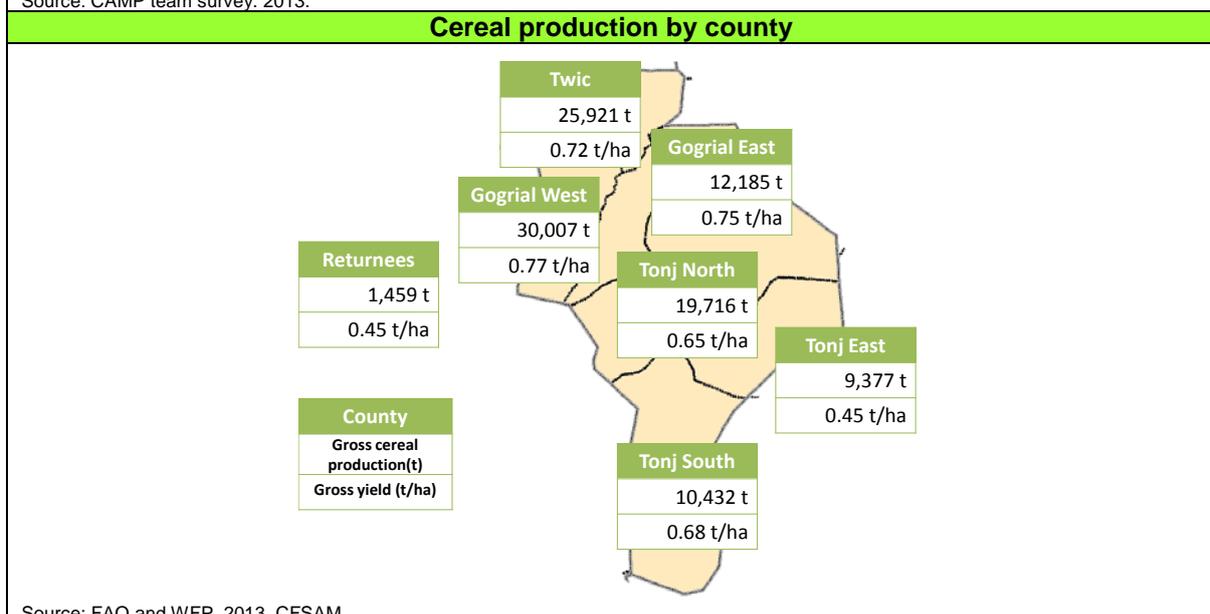
Warrap State



Source: NBS.



Source: CAMP team survey. 2013.



Source: FAO and WFP. 2013. CFSAM.

Cross cutting issues	
<p>(Land)</p> <ul style="list-style-type: none"> • Land boundary issues among pastoralists • Conflict along the state borders <p>(Gender)</p> <ul style="list-style-type: none"> • Gender disparities are confirmed in terms of property ownership. <p>(Security)</p> <ul style="list-style-type: none"> • Cattle raiding and tribal conflict occur occasionally. <p>(IDPs and returnees)</p> <ul style="list-style-type: none"> • In general, land is allocated for IDPs and returnees but their living standard is relatively lower than the state average. <p>(HIV)</p> <ul style="list-style-type: none"> • The infection rate has not surveyed. 	
Opportunities	
<p>Crop</p> <ul style="list-style-type: none"> • Vast unutilized land • Suitable soil for cultivation • Abundant labour force 	
Challenges	
<p>Overall</p> <ul style="list-style-type: none"> • Feeder roads are not well established. • Poor access to financial institutions • High tax rates • High transport costs • High labour costs 	
<p>Crop</p> <ul style="list-style-type: none"> • Poor access to agricultural inputs especially improved seeds • Underdeveloped agricultural extension system • No effective pest and disease control methods • Inadequate post-harvest facilities lowers profit of farmers 	

C. Forestry**1. On-going and proposed projects****1-1. List of on-going projects**

Project name	Objectives/activities	Duration	Annual cost
Bee keeping (funded by GIZ)	Improve framers' livelihood through introduction of bee keeping	Ended in 2013	(Information not available)
Agro-forestry	Introduce and train agro-forestry to famers	(Information not available)	(Information not available)
Afforestation	Develop plantation	(Information not available)	(Information not available)
Central seedling	Propagate seedling for plantation	(Information not available)	(Information not available)

Source: CAMP team survey, 2013.

1-2. List of proposed projects

Project name	Objectives/activities	Duration	Annual cost
Afforestation	Develop plantation	(Information not available)	(Information not available)
Bee keeping	Generate income for farmers through honey production	(Information not available)	(Information not available)
Agro-forestry	Train farmers on sustainable land use	(Information not available)	(Information not available)

Source: CAMP team survey, 2013.

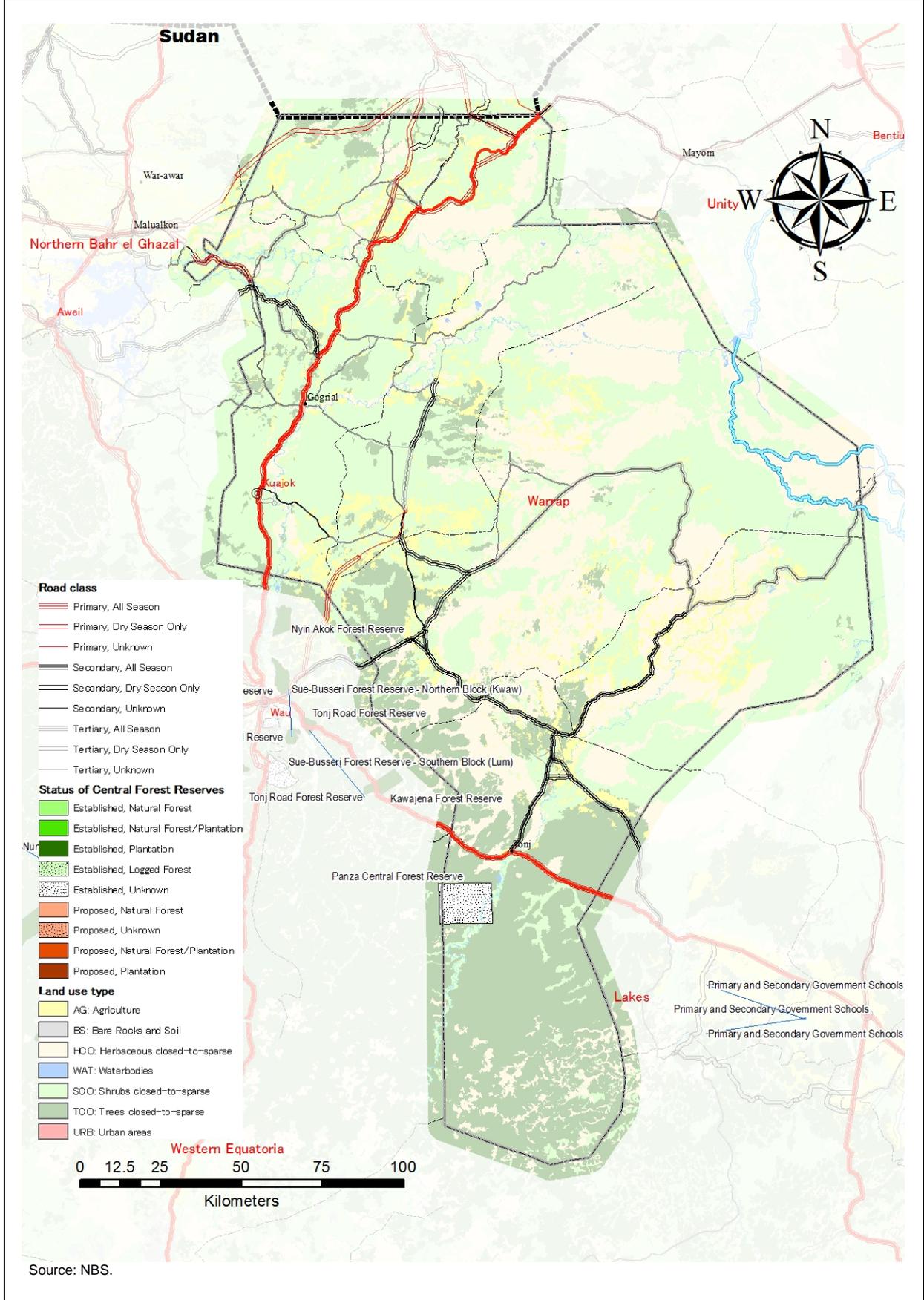
2. Land cover percentage to total area

County	AG	TCO	SCO	HCO	URB	BS	WAT	Total area	Total area (ha)
Gogrial East	23.5%	7.4%	45.1%	23.6%	0.1%		0.4%	100.0%	385,666
Gogrial West	17.3%	8.5%	63.0%	10.6%			0.6%	100.0%	480,375
Tonj East	17.5%	2.0%	47.0%	33.3%			0.2%	100.0%	372,103
Tonj North	9.9%	8.3%	39.4%	42.2%	0.0%	0.0%	0.2%	100.0%	1,088,644
Tonj South	4.5%	64.2%	13.0%	17.9%	0.1%	0.2%	0.2%	100.0%	672,967
Twic	14.1%	5.4%	58.0%	22.5%			0.0%	100.0%	396,444
Total	12.7%	18.3%	41.1%	27.5%	0.0%	0.0%	0.2%	100.0%	3,396,199

Source: FAO, 2011. Land cover atlas of South Sudan. Rome.

Legend: AG=Agriculture, TCO=Tree closed-to-sparse, SCO=Shrubs closed-to-sparse, HCO=Herbaceous closed-to sparse, URB=Urban areas, BS=Bare Rocks and Soil, and WAT=Waterbodies.

3. Location of Central Forest Reserves and land cover in 2009



State Ministry of Animal Resources and Fisheries (MARF)																																					
Organogram			Staff																																		
<pre> graph TD Minister --> DG[Director General] DG --> D1[Directorate of Finance and Administration] DG --> D2[Directorate of Livestock Development] DG --> D3[Directorate of Fisheries] DG --> D4[Directorate of Extension, Research and Training] </pre>			<p>Breakdown of information not fully available</p> <table border="1"> <thead> <tr> <th style="text-align: center;">Section</th> <th style="text-align: center;">Number of staff</th> </tr> </thead> <tbody> <tr> <td>Directorate of Finance and Administration</td> <td style="text-align: right;">31</td> </tr> <tr> <td>Department of Accounts</td> <td style="text-align: center;">(-)</td> </tr> <tr> <td>Department of Procurement</td> <td style="text-align: center;">(-)</td> </tr> <tr> <td>Department of Human Resource</td> <td style="text-align: center;">(-)</td> </tr> <tr> <td>Department of Planning</td> <td style="text-align: center;">(-)</td> </tr> <tr> <td>Department of Administration</td> <td style="text-align: center;">(-)</td> </tr> <tr> <td>Directorate of Livestock Development</td> <td style="text-align: right;">23</td> </tr> <tr> <td>Department of Animal Production</td> <td style="text-align: center;">(-)</td> </tr> <tr> <td>Department of Animal Health</td> <td style="text-align: center;">(-)</td> </tr> <tr> <td>Directorate of Fisheries</td> <td style="text-align: right;">56</td> </tr> <tr> <td>Department of Fisheries</td> <td style="text-align: center;">(-)</td> </tr> <tr> <td>Department of Fisheries Production</td> <td style="text-align: center;">(-)</td> </tr> <tr> <td>Directorate of Extension, Research and Training</td> <td style="text-align: right;">3</td> </tr> <tr> <td>Department of Research and Training</td> <td style="text-align: center;">(-)</td> </tr> <tr> <td>Department of Extension</td> <td style="text-align: center;">(-)</td> </tr> <tr> <td>Total</td> <td style="text-align: right;">113</td> </tr> </tbody> </table> <p>Source: State MARF.</p>	Section	Number of staff	Directorate of Finance and Administration	31	Department of Accounts	(-)	Department of Procurement	(-)	Department of Human Resource	(-)	Department of Planning	(-)	Department of Administration	(-)	Directorate of Livestock Development	23	Department of Animal Production	(-)	Department of Animal Health	(-)	Directorate of Fisheries	56	Department of Fisheries	(-)	Department of Fisheries Production	(-)	Directorate of Extension, Research and Training	3	Department of Research and Training	(-)	Department of Extension	(-)	Total	113
Section	Number of staff																																				
Directorate of Finance and Administration	31																																				
Department of Accounts	(-)																																				
Department of Procurement	(-)																																				
Department of Human Resource	(-)																																				
Department of Planning	(-)																																				
Department of Administration	(-)																																				
Directorate of Livestock Development	23																																				
Department of Animal Production	(-)																																				
Department of Animal Health	(-)																																				
Directorate of Fisheries	56																																				
Department of Fisheries	(-)																																				
Department of Fisheries Production	(-)																																				
Directorate of Extension, Research and Training	3																																				
Department of Research and Training	(-)																																				
Department of Extension	(-)																																				
Total	113																																				
Budget		Strategic plan																																			
Category	2011/12 Budget	2011/12 Outturn	2012/13 Budget																																		
Salaries	2,757,398	(Data not available)	2,757,398																																		
Operating	295,158	(Data not available)	41,319																																		
Transfers	0	(Data not available)	0																																		
Others	10,000	(Data not available)	0																																		
Capital	974,335	(Data not available)	409,937																																		
Overall total	4,136,891	(Data not available)	3,208,654																																		
<p>Source: State MARF. Unit: SSP</p>																																					
<p>Warrap State Strategic plan (2012-15)</p> <p>Objective</p> <ul style="list-style-type: none"> • Ensure efficient and effective use of available resources in the achievement of rapid growth of the Sector • Align objectives and initiatives of the State MARF with national policies and strategies • Provide the basis for increased synergies among all actors in the development of the Sector • Provide a basis for monitoring and evaluation <p>Budget (Information not available)</p> <p>Plan</p> <ul style="list-style-type: none"> • Increase livestock production and productivity • Strengthen control of livestock diseases through effective disease surveillance • Improve milk and meat hygiene • Improved diagnosis, treatment, vaccinations, and control of livestock movements • Enhance the empowerment of fisher folk and traders with awareness, skills and organisation in fish production, preservation and marketing • Increase the capacity of fisheries and staff to provide services <p>Activities</p> <ul style="list-style-type: none"> • Promote dairy and poultry farming and also hide and skin • Inspect meat at slaughter houses and slabs • Establish diagnostic lab facilities (including the purchase of equipment and consumables) • Carry out vaccination campaigns • Procure and maintain adequate stocks of drugs, vaccines, materials and equipment • Mobilize fishermen and traders into groups and build their capacity • Train fisher folk in the use of new technology in fish production and preservation • Recruit and train fisheries staff (long and short term) <p>Source: State MARF.</p>																																					
Services provided by State MARF and local government																																					
<p>(Animal production services)</p> <ul style="list-style-type: none"> • Provide technical advice • Operating slaughter house • Supervise auction yard, butcheries and milk associations • Provide training for extension workers <p>(Animal health services)</p> <ul style="list-style-type: none"> • Provide treatment and vaccination to livestock keepers • Provide community dialogues and awareness • Deliver training for CAHWs (Community Animal Health Workers) 																																					

D. Livestock**Services provided by National government institutions**

Organisation	Activities	Target	Period
Marial Lou Livestock Training Centre	Training	Animal Health Auxiliary	5 months
	Training	Stock Persons	4 months

*Certificate courses also exist in subjects of animal health auxiliary, animal husbandry, livestock extension, and outreach.

Source: CAMP survey team. 2013.

Service provided by DPs and NGOs

Organisation	Activities	Area	Period
CONCERN International	<ul style="list-style-type: none"> Silage making for livestock keepers 	Warrap	1 week
VSF (Vétérinaires Sans Frontières) - Belgium	<ul style="list-style-type: none"> Install restocking programme for vulnerable groups 	Marial Lou	(Information not available)
VSF (Vétérinaires Sans Frontières) - Germany	<ul style="list-style-type: none"> Provide veterinary drugs Deliver trainings to CAHWs Organise poultry groups 	(Information not available)	(Information not available)

Source: CAMP survey team. 2013.

*1 There are a number of DPs and NGOs in the State. The above information collected by CAMP team is shown as examples.

*2 CAHW: Community Animal Health Worker

Services provided by private sector**(Agro-Vet. dealer)**

- Provide veterinary drugs and technical and practical information

(Slaughter house)

- Manage slaughter house

(Auction yard)

- Provide quality control for slaughtering animals in cooperation with veterinary personnel

(Milk association)

- The association is mainly managed by women.
- Provide milk collection and processing (filtering and boiling) services

Livestock population

Type of Animal	Population in the state
Cattle	3 million (estimate)
Sheep and goat	2 million (estimate)
Poultry	4 million (estimate)
Duck	2,000 (estimate)
Donkey	900 (estimate)
Pig	144 (estimate)

Source: CAMP survey team. 2013.

Warrap State

Livestock diseases		
Type of Animal	Type of disease	Outbreak area in last 2 years
Cattle	Black quarter	Tonj North County (Year information not available)
	Haemorrhagic septicaemia, Anthrax, Contagious bovine pleuropneumonia, Ticks	There was no outbreak in the last 2 years.
Goat	Peste des petits ruminants, Mange, Internal and external parasites, Ticks	There was no outbreak in the last 2 years.
Sheep	Contagious caprine pleuropneumonia, Internal and external parasites, Ticks	There was no outbreak in the last 2 years.
Poultry	Newcastle disease, Gumboro disease, Foul pox, Internal and external parasites	There was no outbreak in the last 2 years.
Zoonosis	Rabies	Gogrial West County (Year information not available)
	Tuberculosis, Brucelosis	There was no outbreak in the last 2 years.

Source: CAMP survey team. 2013.

Animal health issues
<ul style="list-style-type: none"> • Limited drugs, vaccines and equipment • Low numbers of CAHWs • CAHWs are not well equipped and not active. • Delay in vaccines provision due to poor communication • Services are not provided on time due to poor infrastructure especially roads. <p>*CAHW: Community Animal Health Worker</p>

Market	
Type of livestock and livestock product	Market
Cattle	All counties
Sheep and goat	All counties
Poultry	All counties

Source: CAMP survey team. 2013.

Market price						
Item	Unit	Price (SSP) (range)				
		Low season				High season
Cattle	Head	Rainy season	700-1,000	-	1,500-3,000	Dry season
Calf	Head	Rainy season	200	-	300	Dry season
Sheep or goat	Head	Rainy season	200-250	-	300-500	Dry season
Meat (beef)	1 kg	Rainy season	15	-	20	Dry season
Meat (sheep and goat)	1 kg	Rainy season	20	-	30	Dry season
Chicken	Chicken	Rainy season	30-40	-	40-60	Dry season
Milk (fresh)	600ml	Rainy season	10	-	15	Dry season
Egg	Each	Rainy season	1	-	2	Dry season

Source: CAMP survey team. 2013
*This is not a representative sample.

Taxes and charges

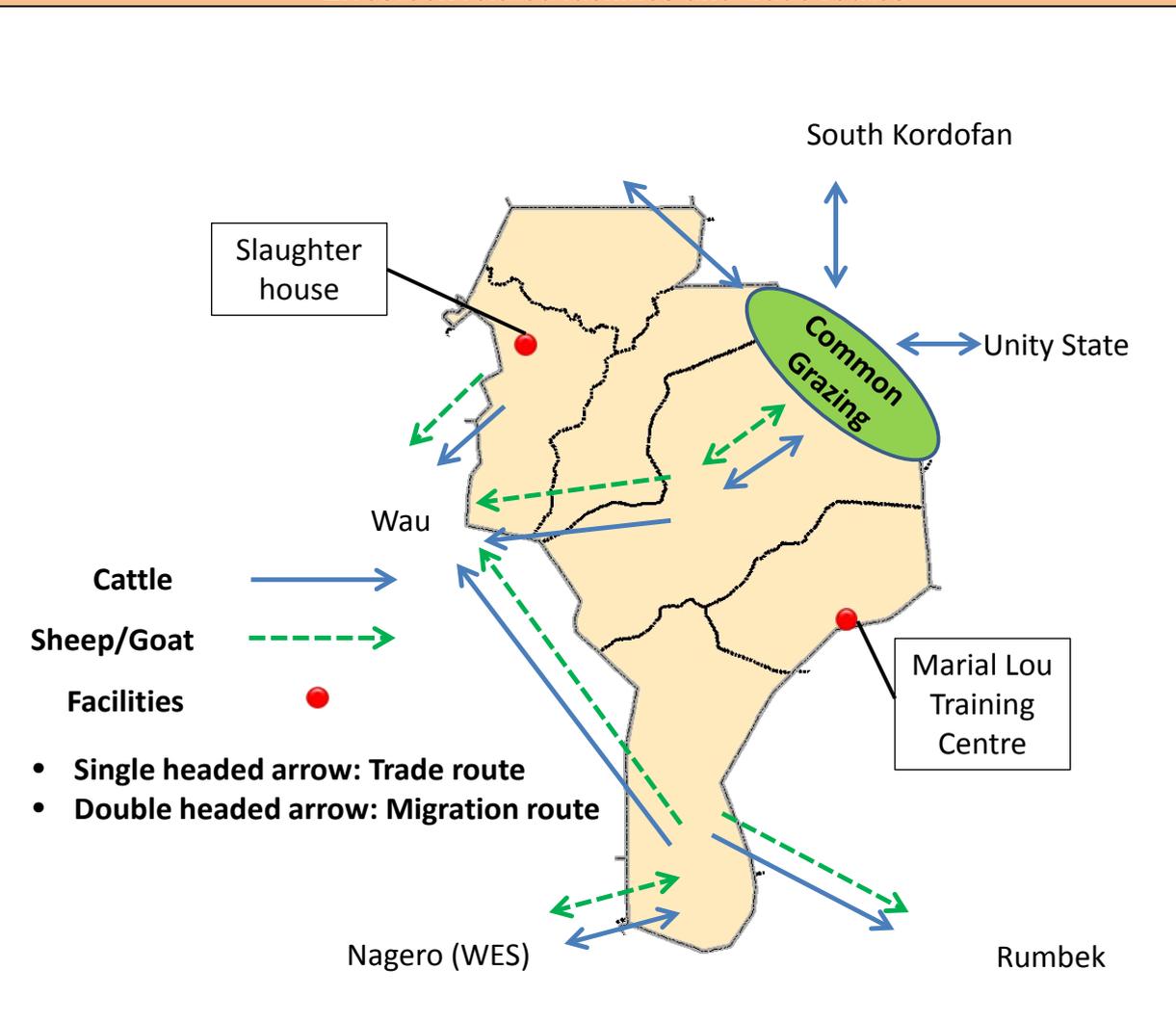
Type	Cost (SSP)	Frequency
(Information not available)	(Information not available)	(Information not available)

Major livestock species and products by livelihood zone

Ironstone Plateau		Western Flood Plains	
Type of Animal	Breed	Type of Animal	Breed
Bull	Local zebu	Bull	Local zebu
Cow	Local zebu	Cow	Local zebu
Heifer and calf	Local zebu	Heifer and calf	Local zebu
Goat	Local	Goat	Local
Sheep	Local	Sheep	Local
Livestock products		Livestock products	
<ul style="list-style-type: none"> • Meat • Hide and skin • Egg • Milk and yoghurt 		<ul style="list-style-type: none"> • Meat • Hide and skin • Egg • Milk and yoghurt 	

Source: CAMP survey team. 2013.

Livestock related facilities and trade routes

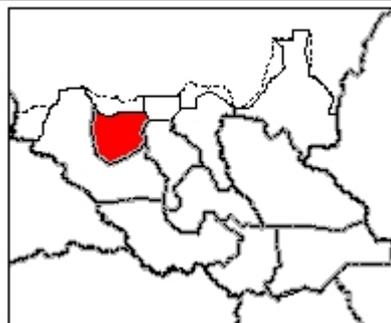


Source: CAMP survey team. 2013

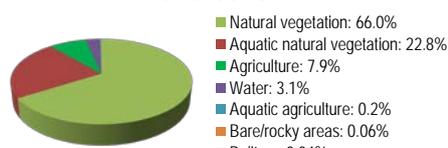
Cross-cutting issues
<p>(Land)</p> <ul style="list-style-type: none"> • Competition over common grazing area along state border with Unity State and international border <p>(Migration)</p> <p>Following cattle movements are confirmed.</p> <ul style="list-style-type: none"> • Misseriya people from Sudan entering Warrap State with their cattle • Dry season grazing/watering areas in Akop Payam in North East Warrap • Dry season migration at River Tonj, towards Western Equatoria State • Trade animals are taken to Wau and Rumbek. • During the movement, sometimes conflicts occur with other livestock keepers. <p>(Conflict and insecurity)</p> <ul style="list-style-type: none"> • Conflicts occur along the state border with Unity and Lakes States mainly in dry season for grazing and water. • Cattle-raiding occurs at common grazing areas especially when cattle keepers go back to their home villages. <p>(Gender disparities)</p> <ul style="list-style-type: none"> • Low women participation in decision making • Unequal ownership rights <p>(Drought and floods)</p> <ul style="list-style-type: none"> • During flood, cattle move to higher grounds in Gok areas. • During drought, cattle move to wet land where water and pasture are available.
Opportunities
<ul style="list-style-type: none"> • Land availability for livestock development • Huge livestock population enabling export • The large number of cattle attracts investors.
Challenges
<ul style="list-style-type: none"> • Limited drugs and vaccines • Slaughter house is located in remote area. (The slaughter house is about 6 km from Kuajok which makes meat inspectors difficult to conduct their duties.) • Road infrastructure is very poor especially during rain seasons. • Poor pasture and water during dry season

5. Northern Bahr el Ghazal State (Capital: Aweil)

A. Basic Information	
Population (2008) ^a	720,898 (6 th) Male: 348,290 Female: 372,608
Projected Population (2013) ^b	971,243 (6 th)
Area ^c	29,819 km ² (10 th)
No. of Counties, Payams and Bomas (2009) ^d	5 Counties 38 Payams 168 Bomas
Food secure population (2012) ^b	49% (9 th)
Access to improved drinking water (2009) ^e	66% (3 rd)
Literacy rate (15-24 years old) (2009) ^e	40% (6 th)
Primary school gross enrolment rate (GER) (2010) ^f	74% (5 th)

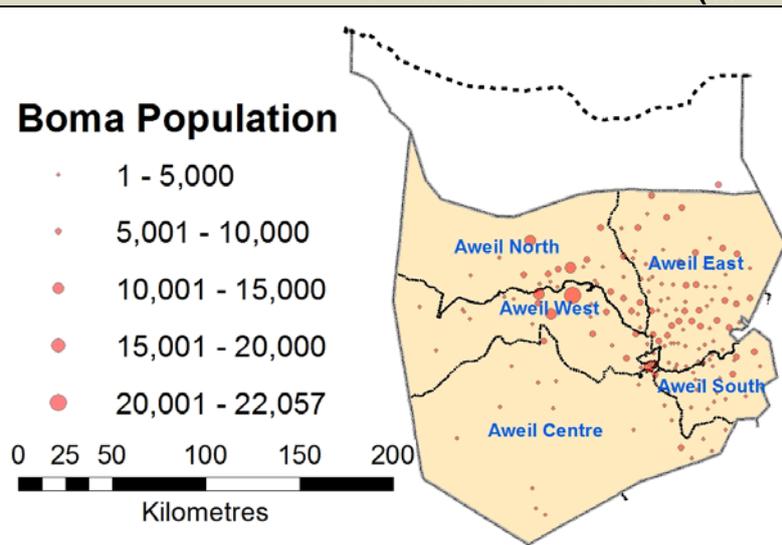


Land cover ^g



Source: ^a SSCSE. 2010. Southern Sudan Counts: Tables from the 5th Sudan Population and Housing Census, 2008; ^b WFP. 2013. ANLA; ^c FAO. 2011. Land Cover Atlas of the Republic of South Sudan; ^d Original data source of NBS. 2012. NBHS 2009; ^e NBS. 2012. NBHS 2009; ^f MoE. 2010. EMIS; ^g NBS. 2011. South Sudan Statistical Yearbook 2011.

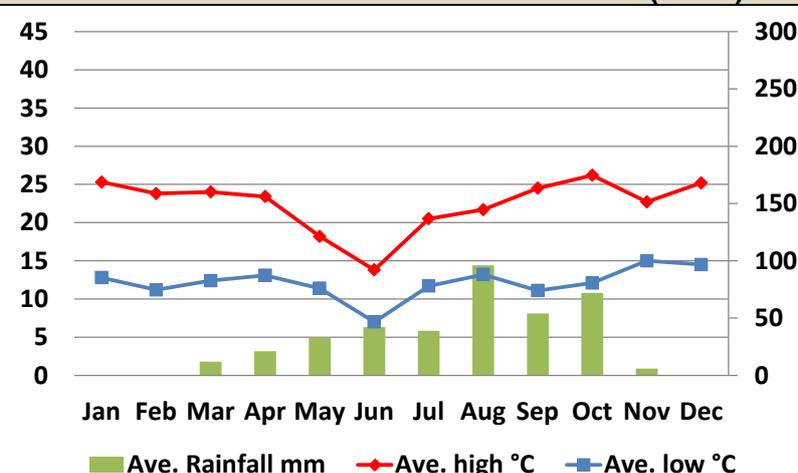
Administrative districts (counties)



County	Estimated Population (2013) ^a	Pop. density (ppl/km ²) ^b
Aweil East	363,210	61.3
Aweil West	191,545	38.1
Aweil North	161,068	25.3
Aweil Centre	147,579	13.5
Aweil South	83,021	53.9

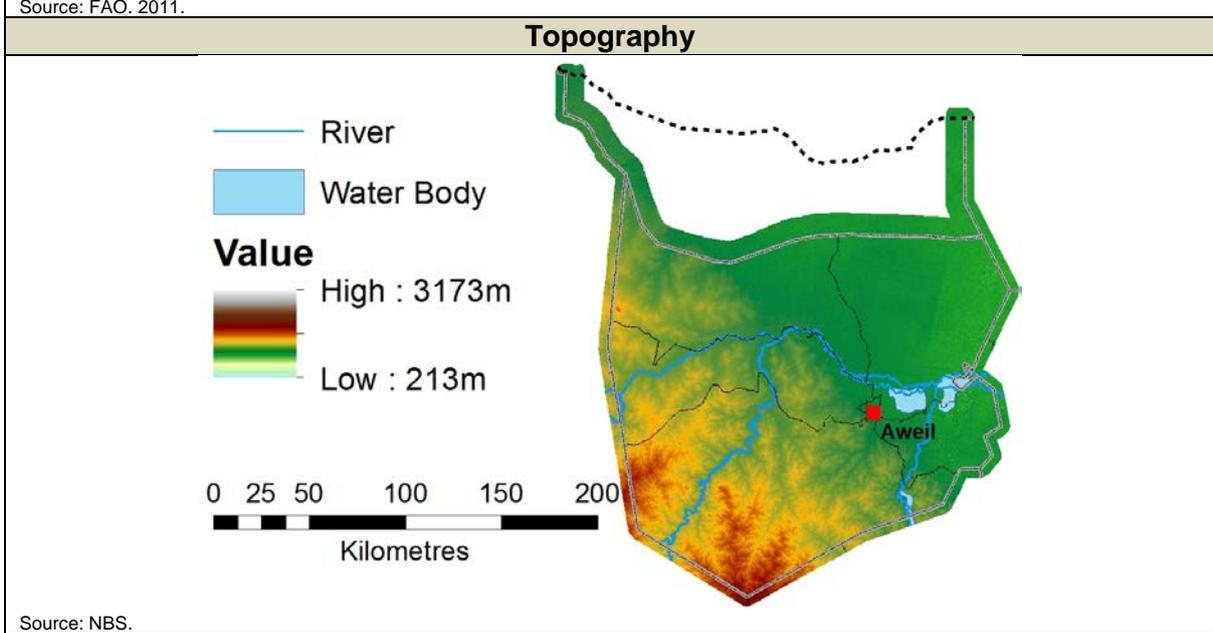
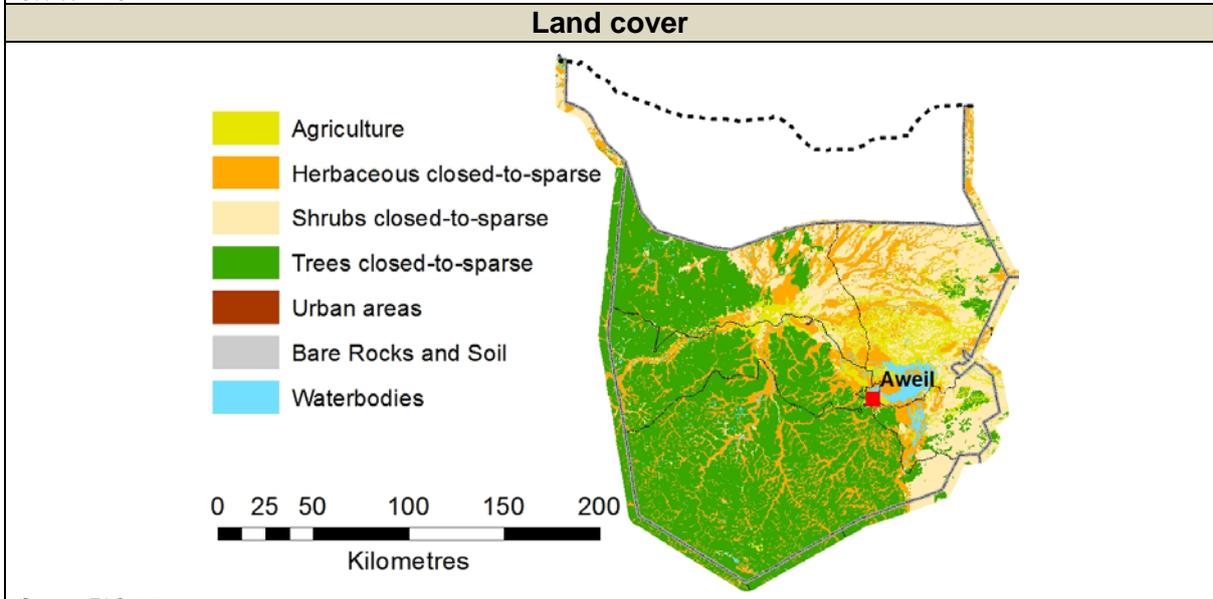
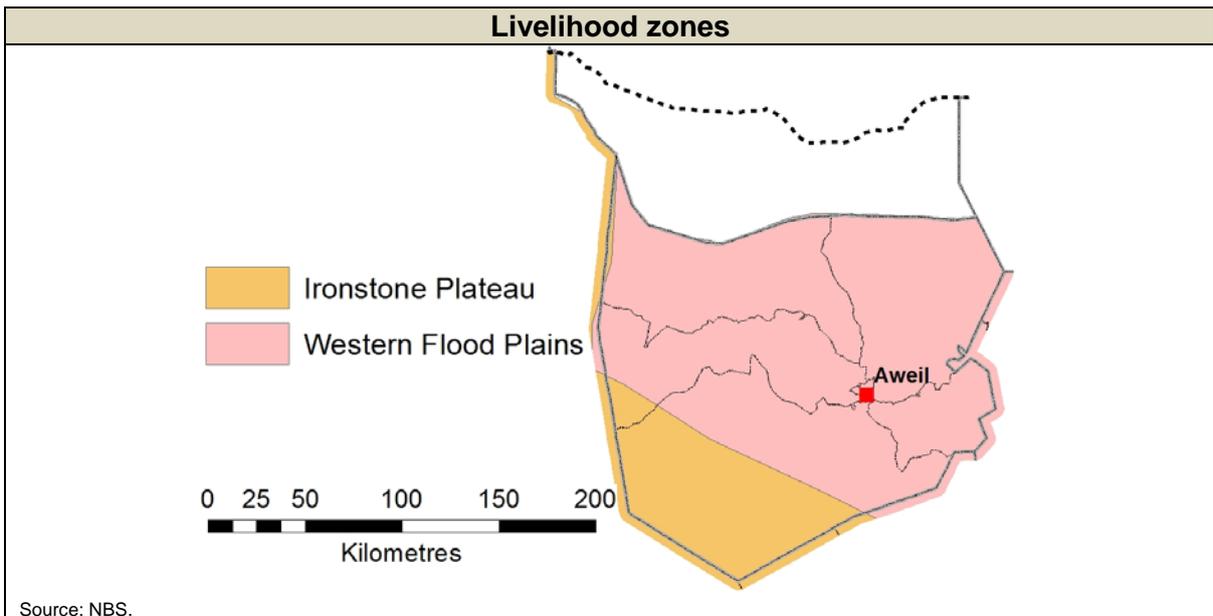
Source: (Map) NBS; (Table)^a WFP. 2013. ANLA; ^b Land scale data applied from FAO.2011. Land Cover Atlas of the Republic of South Sudan.

Climate chart (Aweil)

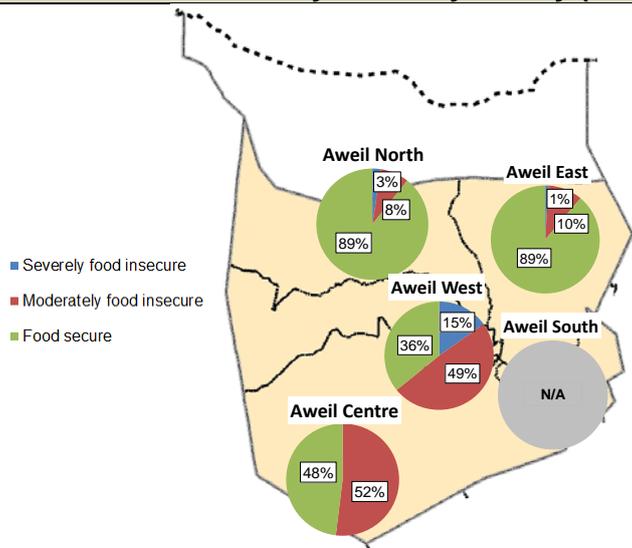


Annual ave. high temp.	N/A °C
Annual ave. low temp.	N/A °C
Average temperature	N/A °C
Ave. annual precipitation	N/A mm

Source: Meowweather.com. 2013. Weather history of Aweil. <http://www.meowweather.com/history/Sudan/na/8.7666667/27.4/Aweil.html> (accessed on 25th August 2013)

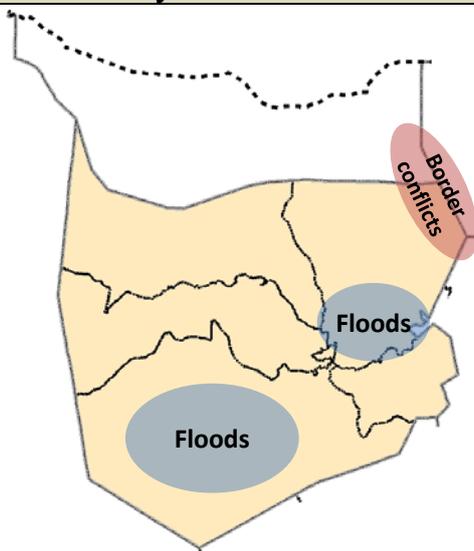


Estimated food security status by county (2013)



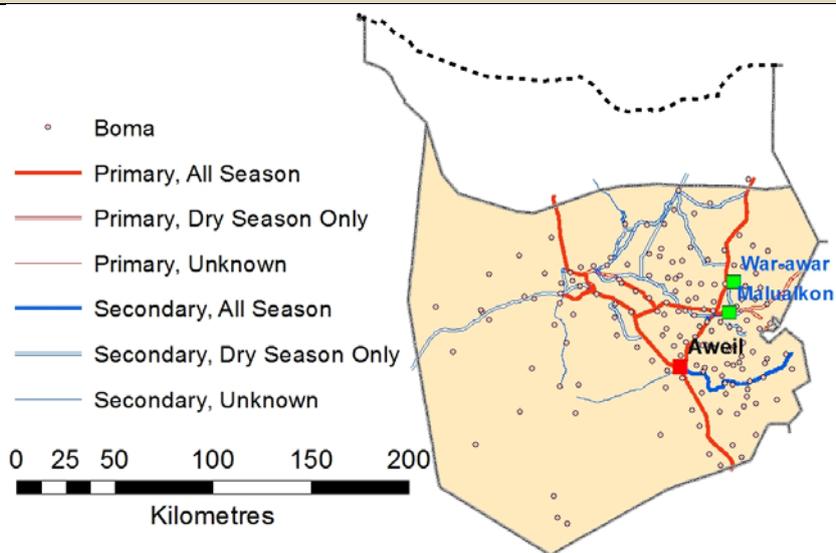
Source: WFP.2013.ANLA.

Insecurity and natural disaster



Source: CAMP survey team 2013.

Road and Boma location



Source: Road (WFP. 2013), Boma location (NBS).

State Ministry of Agriculture and Forestry (MAF)																																													
Organogram			Staff																																										
<pre> graph TD Minister --> DG[Director General] DG --> D1[Directorate of Agriculture and Extension Services] DG --> D2[Directorate of Forestry] DG --> D3[Directorate of Plant Protection] DG --> D4[Directorate of Planning and Economics] DG --> D5[Directorate of Administration and Finance] </pre> <p>Source: State MAF.</p>			<p>Breakdown of information not fully available</p> <table border="1"> <thead> <tr> <th>Section</th> <th>Number of staff</th> </tr> </thead> <tbody> <tr> <td>Directorate of Agriculture and Extension Services</td> <td>53</td> </tr> <tr> <td>Department of Plant Protection</td> <td>(-)</td> </tr> <tr> <td>Department of Agriculture Extension</td> <td>(-)</td> </tr> <tr> <td>Department of Mechanization and Irrigation</td> <td>(-)</td> </tr> <tr> <td>Department of Agronomy</td> <td>(-)</td> </tr> <tr> <td>Directorate of Forestry</td> <td>-</td> </tr> <tr> <td>Department of Forestry and Extension</td> <td>(-)</td> </tr> <tr> <td>Department of Survey and Inventory</td> <td>(-)</td> </tr> <tr> <td>Department of Industry and Non-wood</td> <td>(-)</td> </tr> <tr> <td>Department of Forestry Utility and Mills</td> <td>(-)</td> </tr> <tr> <td>Department of Natural Conservation</td> <td>(-)</td> </tr> <tr> <td>Directorate of Plant Protection</td> <td>-</td> </tr> <tr> <td>Directorate of Planning and Economics</td> <td>2</td> </tr> <tr> <td>Department of Research and Training</td> <td>(-)</td> </tr> <tr> <td>Department of Project Formulation</td> <td>(-)</td> </tr> <tr> <td>Department of Statistics and Data Management</td> <td>(-)</td> </tr> <tr> <td>Directorate of Administration and Finance</td> <td>9</td> </tr> <tr> <td>Department of Finance</td> <td>(-)</td> </tr> <tr> <td>Department of Administration</td> <td>(-)</td> </tr> <tr> <td>Total</td> <td>64</td> </tr> </tbody> </table> <p>Source: State MAF.</p>	Section	Number of staff	Directorate of Agriculture and Extension Services	53	Department of Plant Protection	(-)	Department of Agriculture Extension	(-)	Department of Mechanization and Irrigation	(-)	Department of Agronomy	(-)	Directorate of Forestry	-	Department of Forestry and Extension	(-)	Department of Survey and Inventory	(-)	Department of Industry and Non-wood	(-)	Department of Forestry Utility and Mills	(-)	Department of Natural Conservation	(-)	Directorate of Plant Protection	-	Directorate of Planning and Economics	2	Department of Research and Training	(-)	Department of Project Formulation	(-)	Department of Statistics and Data Management	(-)	Directorate of Administration and Finance	9	Department of Finance	(-)	Department of Administration	(-)	Total	64
Section	Number of staff																																												
Directorate of Agriculture and Extension Services	53																																												
Department of Plant Protection	(-)																																												
Department of Agriculture Extension	(-)																																												
Department of Mechanization and Irrigation	(-)																																												
Department of Agronomy	(-)																																												
Directorate of Forestry	-																																												
Department of Forestry and Extension	(-)																																												
Department of Survey and Inventory	(-)																																												
Department of Industry and Non-wood	(-)																																												
Department of Forestry Utility and Mills	(-)																																												
Department of Natural Conservation	(-)																																												
Directorate of Plant Protection	-																																												
Directorate of Planning and Economics	2																																												
Department of Research and Training	(-)																																												
Department of Project Formulation	(-)																																												
Department of Statistics and Data Management	(-)																																												
Directorate of Administration and Finance	9																																												
Department of Finance	(-)																																												
Department of Administration	(-)																																												
Total	64																																												
Budget			Strategic plan																																										
Category	2011/12 Budget	2011/12 Outturn	2012/13 Budget																																										
Salaries	(Data not available)	(Data not available)	(Data not available)																																										
Operating	(Data not available)	(Data not available)	(Data not available)																																										
Transfers	(Data not available)	(Data not available)	(Data not available)																																										
Others	(Data not available)	(Data not available)	(Data not available)																																										
Capital	(Data not available)	(Data not available)	(Data not available)																																										
Overall total	(Data not available)	(Data not available)	(Data not available)																																										
<p>NBG State strategic plan (2012-15)</p> <table border="1"> <tbody> <tr> <td>Objective</td> <td>(Information not available)</td> </tr> <tr> <td>Budget</td> <td>(Information not available)</td> </tr> <tr> <td>Plan</td> <td>(Information not available)</td> </tr> <tr> <td>Activities</td> <td>(Information not available)</td> </tr> </tbody> </table>				Objective	(Information not available)	Budget	(Information not available)	Plan	(Information not available)	Activities	(Information not available)																																		
Objective	(Information not available)																																												
Budget	(Information not available)																																												
Plan	(Information not available)																																												
Activities	(Information not available)																																												
Services provided by State MAF and local government																																													
<p>(Technical advice)</p> <ul style="list-style-type: none"> • Technical advice and training are provided to farmers in cooperation with NGOs. <p>(Seeds and tools provision)</p> <ul style="list-style-type: none"> • Seeds and tools are provided to farmers in cooperation with NGOs. <p>(Demo farm/Field day= visit to field to share best agricultural practices)</p> <ul style="list-style-type: none"> • Demo farms are installed in some areas. <p>(Tractor hiring service)</p> <ul style="list-style-type: none"> • Tractor hiring services are provided to farmers but the services do not meet the farmers' need since the number of tractors is not enough. • Animal traction is widely introduced in the state. 																																													

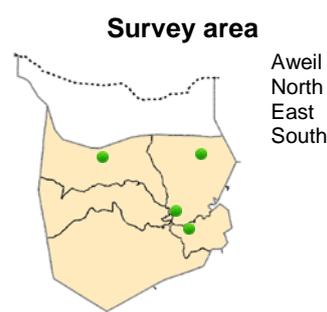
B. Crop																					
Services provided by DPs and NGOs																					
Organisation	Activities	Area	Target																		
NRC (Norwegian Refugee Council)	<p>Following supports are provided to farmers especially IDPs and returnees.</p> <ul style="list-style-type: none"> • Farmers' school • Land preparation • Seeds and tools provision • Pests and diseases control • Water pump (foot and motor) provision • Ox-plough attachment provision <p>In addition, a voucher system is installed to develop local black smiths and agro-dealers when seeds and tools are provided to farmers.</p> <p>The voucher is only available in local agro-dealers and black smith stalls at Agro-fairs organised by NRC.</p>	Pilot areas in NBG State	Vulnerable groups (especially, IDPs and returnees)																		
DRC (Danish Refugee Council)	<p>Following supports are provided to farmers especially IDPs and returnees.</p> <ul style="list-style-type: none"> • Farmers' school • Seeds and tools provision • Soil and water conservation • Animal traction (ox-plough) 	Aweil North and Centre Counties	Venerable groups (especially, IDPs and returnees)																		
<p>*There are a number of DPs and NGOs such as FAO and ADESO (African Development Solution) in the State. The above information collected by CAMP team is shown as examples.</p>																					
Services provided by private sector																					
(Tractor hiring service)																					
<ul style="list-style-type: none"> • There are some private tractor hiring services. • The charge for ploughing service is SSP200/feddan. 																					
(Agro-dealer)																					
<ul style="list-style-type: none"> • Improved seeds, liquid fertilizer and pesticides are available in specialised shop which also sells veterinary drugs. The prices are shown below. 																					
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 33%;">Name</th> <th style="width: 33%;">Origin</th> <th style="width: 33%;">Price (SSP)</th> </tr> </thead> <tbody> <tr> <td>Tomato</td> <td>Kenya</td> <td>50 (small can)</td> </tr> <tr> <td>Okra</td> <td>Kenya</td> <td>50 (small can)</td> </tr> <tr> <td>Cabbage</td> <td>Kenya</td> <td>50 (small can)</td> </tr> <tr> <td>Sprayer (2 litre)</td> <td>China</td> <td>10</td> </tr> <tr> <td>Sprayer (16 litre)</td> <td>China</td> <td>30</td> </tr> </tbody> </table>				Name	Origin	Price (SSP)	Tomato	Kenya	50 (small can)	Okra	Kenya	50 (small can)	Cabbage	Kenya	50 (small can)	Sprayer (2 litre)	China	10	Sprayer (16 litre)	China	30
Name	Origin	Price (SSP)																			
Tomato	Kenya	50 (small can)																			
Okra	Kenya	50 (small can)																			
Cabbage	Kenya	50 (small can)																			
Sprayer (2 litre)	China	10																			
Sprayer (16 litre)	China	30																			
<ul style="list-style-type: none"> • Tools (e.g. hoe and maloda) made by local black smiths are available in the market. • The prices are between SSP 15 to 40. • Fruit tree seedlings, improved seeds (including seeds in FAO package) and fertilizer (Urea) are also available at the local vendors. 																					
(Financial institution)																					
<ul style="list-style-type: none"> • (Information not available) 																					

Northern Bahr el Ghazal State

Market						
Agricultural products and their origin (Aweil, May, 2013)						
(Crop)			(Others)			
Item	Type	Origin	Item	Type	Origin	
Sorghum	Import	Sudan	Tomato	Import	Sudan	
	Domestic	-		Domestic	NBG State	
Maize flour	Import	Uganda	Onion	Import	Sudan	
	Domestic	-		Domestic	-	
Rice	Import	Sudan, Thailand, India	Okra (Dried)	Import	Sudan	
	Domestic	NBG State		Domestic	-	
Wheat flour	Import	Sudan	Eggplant	Import	-	
	Domestic	-		Domestic	NBG State	
Groundnut	Import	-	Green pepper	Import	-	
	Domestic	NBG State		Domestic	NBG State	
Irish potato	Import	Sudan	Jew's mallow	Import	-	
	Domestic	-		Domestic	NBG State	
			Pumpkin	Import	-	
				Domestic	NBG State	
Source: CAMP survey team 2013.			Source: CAMP survey team 2013.			
*1 This is not a representative sample.			*1 This is not a representative sample.			
*2 NBG: Northern Bahr el Ghazal			*2 NBG: Northern Bahr el Ghazal			
Market price (Retail price, Aweil, May 2013)						
Item	Unit	Price (SSP) (range)				
		Low season			High season	
Sorghum (Import)	Sack (50 kg)	June-Oct	90 -	130	May-Sep	
Rice (Import)	Sack (25 kg)	Dec-May	120 -	150	July-Nov	
Maize (Import)	Sack (50 kg)	Dec-May	180 -	200	July-Nov	
Wheat flour (Import)	Sack (25 kg)	Dec-May	80 -	150	July-Nov	
Tomato (Import)	Box	Nov-Apr	450 -	500	May-Oct	
Eggplant (Domestic)	1kg	May-Oct	7 -	10	Nov-May	
Irish potato (Import)	Sack (100 kg)	Nov-Apr	600 -	700	May-Oct	
Onion (Import)	Sack (100 kg)	Nov-Apr	350 -	400	May-Oct	
Green pepper (Domestic)	1kg	Aug-Oct	25 -	30	May-Aug	
Source: CAMP survey team 2013.						
* This is not a representative sample.						
Transportation cost (Aweil, May 2013)						
Type	Unit	Currency	Cost (range)			
Porterage (On/off loading)	Sack (100kg)	SSP	2-3			
Transport cost for Groundnut (Aweil North to Aweil Centre)	Sack (50kg)	SSP	20			
Transport cost for Sorghum (Aweil North to Aweil Centre)	Sack (50kg)	SSP	30			
Source: CAMP survey team 2013.						
* This is not a representative sample.						
Taxes and charges (Aweil, May 2013)						
(Trader/retailer)						
Type	Cost (SSP) (range)		Frequency			
Licence	850		Annually			
Rent	950		Monthly			
Development tax (Tax rate not available)	700		Monthly			
Market cleaning fee	30		Monthly			
Police service	10		Monthly			
(Retailer)						
Type	Cost (SSP)		Frequency			
Rent	400		Monthly			
Development tax (Tax rate not available)	600		Every 3 months			
Market Cleaning fee	30		Monthly			
Police service	10		Monthly			
Source: CAMP survey team 2013.						
* This is not a representative sample.						

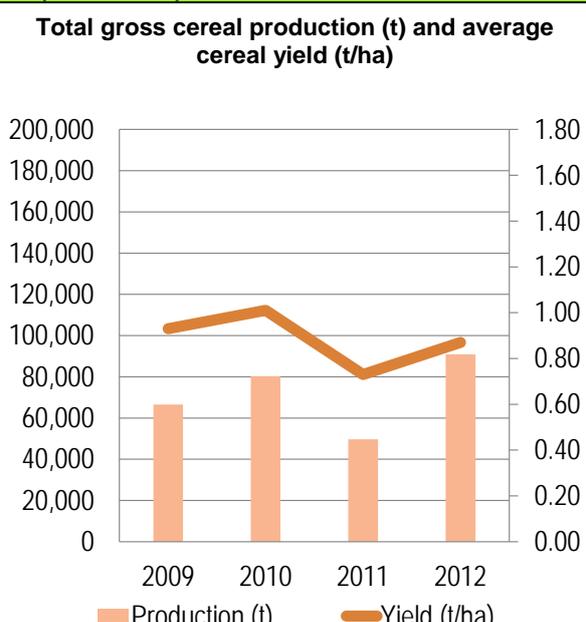
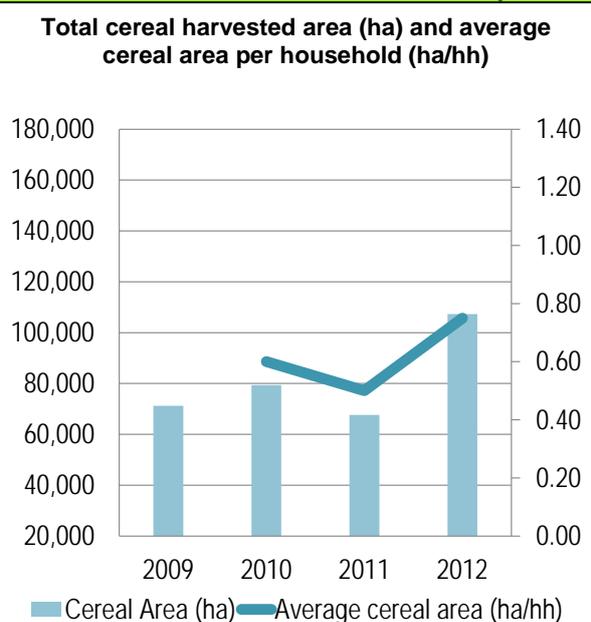
Northern Bahr el Ghazal State

Crop production	
Farming household (%) (2012)	83
Farming household (No.) (2012)	143,553
Total cereal area (ha) (2012)	107,274 (6 th)
Cereal gross yield (t/ha) (2012)	0.87 (6 th)
Gross cereal production (t) (2012)	90,911 (5 th)
Average cereal area per household (ha/hh) (2012)	0.75 (7 th)



Source: FAO and WFP. 2013 CFSAM.

Cereal production (2009-2012)



Source: Aggregate from CFSAM 2010, 2011, 2012 and 2013.

Source: Aggregate from CFSAM 2010, 2011, 2012 and 2013.

Crop production by livelihood zone

Western Flood Plains		Ironstone Plateau	
Major agricultural products			
Crop	Vegetable	Crop	Cash Crop
Sorghum	Tomato	Sorghum	Groundnut
Maize	Okra	Maize	Sesame
Rice	Eggplant	Rice	Vegetable
Bean	Jew's mallow	Cassava	Tomato
Cash crop	Pumpkin	Millet	Okra
Groundnut	Onion	Bean	Eggplant
Sesame			Jew's mallow
Cowpea			

Cropping calendar

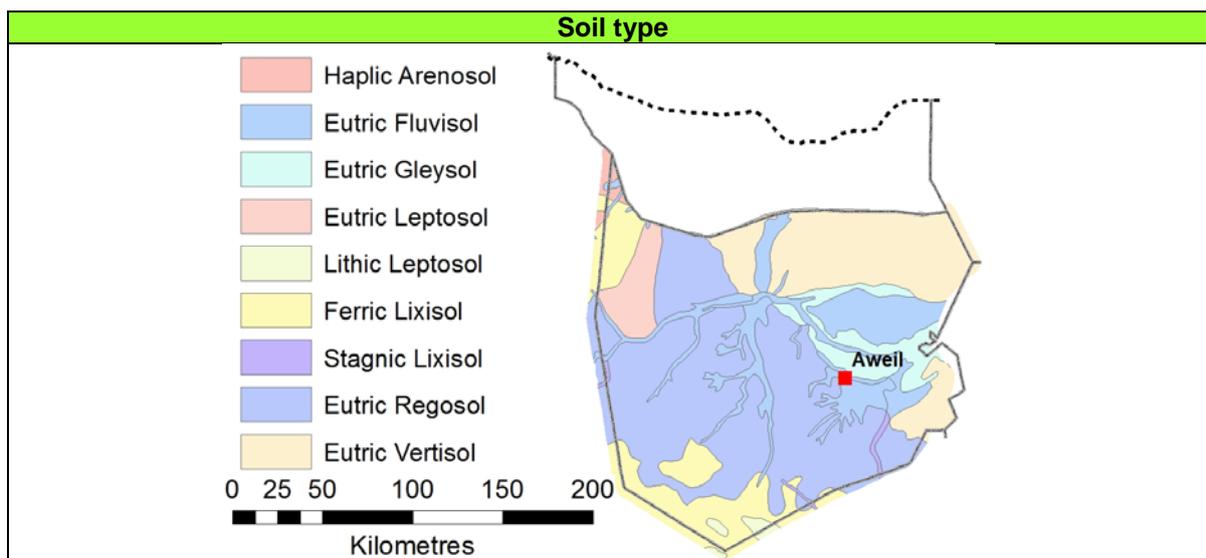
Crop	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Sorghum		L	L	L	S	S	S			H	H	H
Rice		L	L	L	S	S	S			H	H	
Sesame		L	L	L	S	S	S	H	H	H		
Groundnut			L	L	S	S	S		H	H	H	H

Source: CAMP survey team. 2013

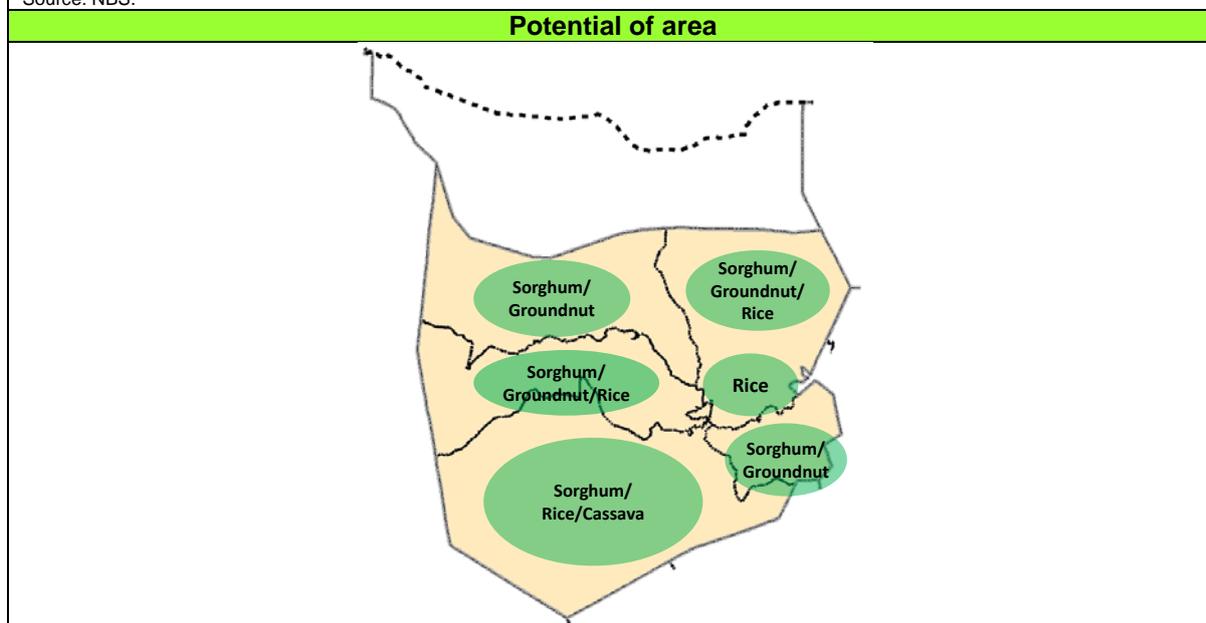
Crop	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Maize		L	L	L	S			H	H			
Sorghum		L	L	L	S			H	H			
Rice		L	L	L	L	S	S	S			H	H
Bean		L			S	S	H	H				
Groundnut		L	L	L	L	S	S	S		H	H	
Sesame		L			S			H				

Source: CAMP survey team. 2013

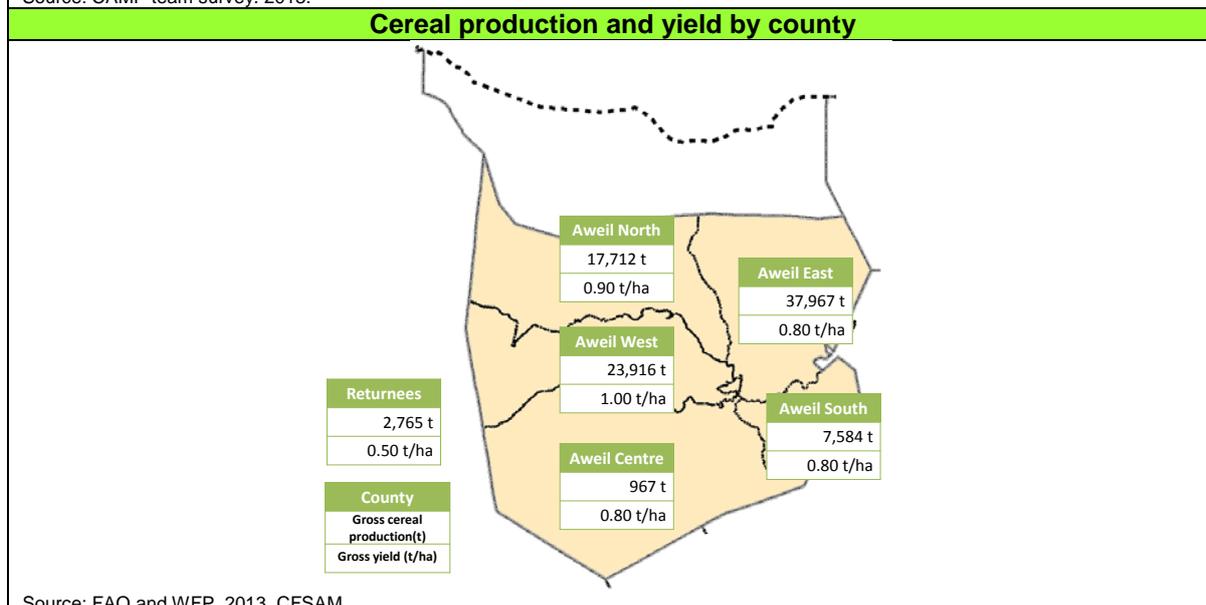
Northern Bahr el Ghazal State



Source: NBS.



Source: CAMP team survey, 2013.



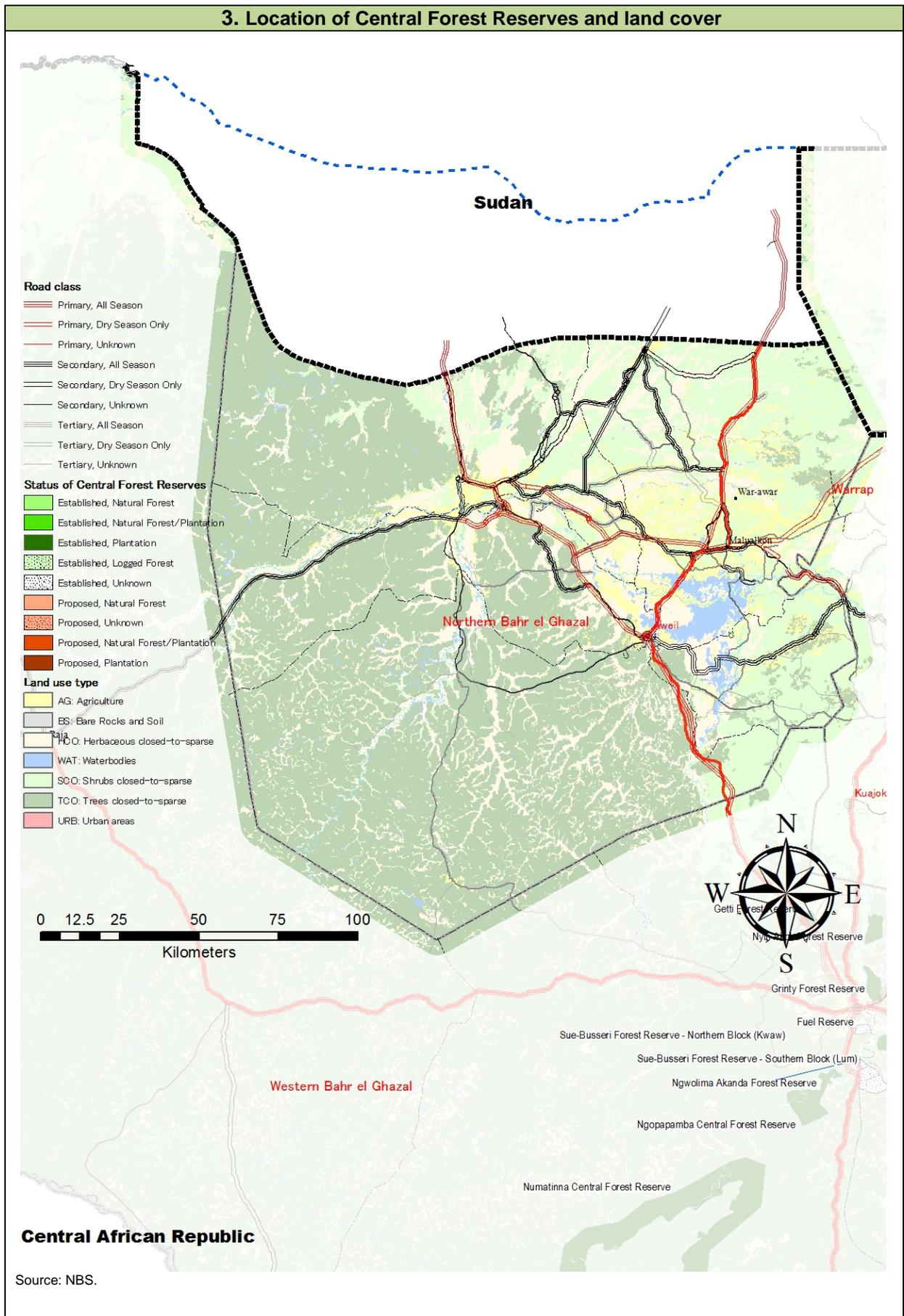
Source: FAO and WFP, 2013. CFSAM.

Cross cutting issues
<p>(Land)</p> <ul style="list-style-type: none"> • Border conflict occurs occasionally. <p>(Gender)</p> <ul style="list-style-type: none"> • Women take important roles in agricultural production. • They have a voice in village meeting but decision making is done by men in many cases. <p>(Security)</p> <ul style="list-style-type: none"> • There are few security issues except the border conflict. <p>(IDPs and returnees)</p> <ul style="list-style-type: none"> • Reintegration process is successfully conducted but more support is required to improve their living standards. <p>(HIV)</p> <ul style="list-style-type: none"> • The infection rate is not surveyed.
Opportunities
<p>Crop</p> <ul style="list-style-type: none"> • Vast unutilized land • Suitable soil for cultivation • Abundant labour force
Challenges
<p>Overall</p> <ul style="list-style-type: none"> • Feeder roads are not well established. • Financial services are not available for many farmers. • High tax rates • High transport costs • High labour costs • Heavy rain
<p>Crop</p> <ul style="list-style-type: none"> • The number of the State MAF staff is limited due to financial constraint. • Training opportunities for the state staff are limited. • Poor access to agricultural inputs • Underdeveloped marketing system • Underdeveloped agricultural extension system • Means of transport for extension services are insufficient. • Drought and flood occur frequently. • No effective pest and disease control methods • Inadequate post-harvest facilities lowers agricultural product.

Northern Bahr el Ghazal State

C. Forestry									
1. On-going and proposed projects									
1-1. List of on-going projects									
Project name	Objectives/activities					Duration	Annual cost		
(Information not available)	(Information not available)					(Information not available)	(Information not available)		
(Information not available)	(Information not available)					(Information not available)	(Information not available)		
1-2. List of proposed projects									
Project name	Objectives/activities					Duration	Annual cost		
Gum acacia production	Develop gum acacia production and the market system					(Information not available)	(Information not available)		
Lulu oil processing	Generate income from lulu oil production					(Information not available)	(Information not available)		
Plantation development	Develop timber production by plantation					(Information not available)	(Information not available)		
Saw mil building	Increase timber production					(Information not available)	(Information not available)		
Non-forest production development	Increase non-forest production (e.g. Tamarinds and lulu)					(Information not available)	(Information not available)		
Source: CAMP team survey. 2013.									
2. Land cover percentage to total area									
County	AG	TCO	SCO	HCO	URB	BS	WAT	Total area	Total area (ha)
Aweil Centre	0.6%	77.8%	2.8%	17.0%		0.2%	1.7%	100.0%	1,094,999
Aweil East	21.2%	2.9%	47.0%	21.1%	0.0%		7.8%	100.0%	592,928
Aweil North	8.0%	53.8%	18.7%	18.1%	0.0%		1.3%	100.0%	637,184
Aweil South	13.9%	22.8%	35.7%	22.1%	0.0%		5.5%	100.0%	154,130
Aweil West	7.5%	65.7%	3.4%	21.4%	0.2%	0.0%	1.9%	100.0%	502,638
Total	8.1%	52.9%	16.8%	19.0%	0.0%	0.1%	3.1%	100.0%	2,981,879
Source: FAO. 2011. Land cover atlas of South Sudan. Rome. Legend: AG=Agriculture, TCO=Tree closed-to-sparse, SCO=Shrubs closed-to-sparse, HCO=Herbaceous closed-to sparse, URB=Urban areas, BS=Bare Rocks and Soil, and WAT=Waterbodies.									

3. Location of Central Forest Reserves and land cover



Source: NBS.

Northern Bahr el Ghazal State

State Ministry of Animal Resources and Fisheries (MARF)																					
Organogram	Staff																				
<pre> graph TD Minister --> DG[Director General] DG --> D1[Directorate of Finance and Administration] DG --> D2[Directorate of Planning and Budgeting] DG --> D3[Directorate of Animal Health] DG --> D4[Directorate of Animal Production] DG --> D5[Directorate of Fisheries] DG --> D6[Directorate of Extension] </pre>	<table border="1"> <thead> <tr> <th>Section</th> <th>Number of staff</th> </tr> </thead> <tbody> <tr> <td>Classified staff</td> <td>31</td> </tr> <tr> <td>Directorate of Finance and Administration</td> <td>(5)</td> </tr> <tr> <td>Directorate of Planning and Budgeting</td> <td>(2)</td> </tr> <tr> <td>Directorate of Animal Health</td> <td>(14)</td> </tr> <tr> <td>Directorate of Animal Production</td> <td>(1)</td> </tr> <tr> <td>Directorate of Fisheries</td> <td>(9)</td> </tr> <tr> <td>Directorate of Extension</td> <td>(-)</td> </tr> <tr> <td>Unclassified staff</td> <td>25</td> </tr> <tr> <td>Grand total</td> <td>56</td> </tr> </tbody> </table> <p>Source: State MARF.</p>	Section	Number of staff	Classified staff	31	Directorate of Finance and Administration	(5)	Directorate of Planning and Budgeting	(2)	Directorate of Animal Health	(14)	Directorate of Animal Production	(1)	Directorate of Fisheries	(9)	Directorate of Extension	(-)	Unclassified staff	25	Grand total	56
Section	Number of staff																				
Classified staff	31																				
Directorate of Finance and Administration	(5)																				
Directorate of Planning and Budgeting	(2)																				
Directorate of Animal Health	(14)																				
Directorate of Animal Production	(1)																				
Directorate of Fisheries	(9)																				
Directorate of Extension	(-)																				
Unclassified staff	25																				
Grand total	56																				

Source: State MARF.

Budget			Strategic plan
Category	2011/12 Budget	2011/12 Outturn	2012/13 Budget
Salary	(Data not available)	(Data not available)	(Data not available)
Operating	(Data not available)	(Data not available)	(Data not available)
Transfers	(Data not available)	(Data not available)	(Data not available)
Others	(Data not available)	(Data not available)	(Data not available)
Capital	(Data not available)	(Data not available)	(Data not available)
Overall total	(Data not available)	(Data not available)	(Data not available)
			<p>NBG State Strategic plan (2012-16)</p> <p>Objective</p> <ul style="list-style-type: none"> Ensure efficient and effective use of available resources in the achievement of rapid growth of the sector Provide the basis for increased synergies among all actors in the development of the sector Provide a basis for monitoring and evaluation <p>Budget (Information not available)</p> <p>Plan</p> <ul style="list-style-type: none"> Increase awareness of the investment in livestock and fisheries in NBG State Increase the capacity of the staff to provide services Enhance availability of appropriate infrastructure facilities and equipment Increase livestock production and productivity Strengthen control of livestock disease, effective disease surveillance and reporting, improve diagnosis, treatment, vaccination and control of livestock movement Empower farmers and livestock traders, awareness and skills in managing livestock disease and in milk and meat hygiene Improve knowledge and skills in livestock and fisheries management Enhance rate of acceptance of new livestock and fisheries technologies through awareness campaigns, training and better organisation <p>Activities</p> <ul style="list-style-type: none"> Implement livestock disease surveillance and reporting system Carry out vaccination campaign and maintain adequate stocks of drugs, vaccines, materials and equipment Establish diagnostic laboratory facility (including the purchase of equipment and consumable) Train livestock officers on dairy, poultry, range land, hides and skins and bee keeping Train fisheries in modern technology of fish production, preservation and marketing <p>Source: State MARF.</p>

Services provided by State MARF and local government

(Animal production services)

- Provide extension services on animal production
- Deliver useful technical advice at livestock market
- Train farmers regarding poultry management

(Animal health services)

- Conduct education activities to livestock keepers and butchers on animal health
- Provide vaccination and treatment to livestock keepers
- Support drugs cost for livestock keepers
- Disease inspection and control
- Training of CAHWs (Community Animal Health Workers)

D. Livestock**Services provided by National government institutions**

No national government institutions are in the state.

Services provided by DPs and NGOs

Organisation	Activities	Area	Target/ (Period)
VSF (Vétérinaires Sans Frontières) - Swiss	<ul style="list-style-type: none"> • Training to CAHWs • Supply of drugs • Restocking programme 	<ul style="list-style-type: none"> • Aweil East and West Counties • Aweil town and Nyamlel Counties 	1989-2013
Concern	<ul style="list-style-type: none"> • Training to CAHWs • Technical advice • Organise field school 	<ul style="list-style-type: none"> • Aweil West and North Counties 	2001-2013
Tearfund	<ul style="list-style-type: none"> • Technical advice • Goat restocking programme 	<ul style="list-style-type: none"> • Aweil Centre Counties 	2000-2013
ADESO (Africa Development Solution)	<ul style="list-style-type: none"> • Restocking programme • Technical training 	<ul style="list-style-type: none"> • Aweil West, North and Centre Counties 	2005-2013
GIZ	<ul style="list-style-type: none"> • Training in auction management • Build butcheries • Establishment of slaughter house 	<ul style="list-style-type: none"> • Aweil East and South Counties 	2009-2012
UMCOR (United Methodist Committee on Relief)	<ul style="list-style-type: none"> • Goat restocking programme for cattle keepers especially returnees 	<ul style="list-style-type: none"> • Aweil West and North Counties 	2013-2013
FAO	<ul style="list-style-type: none"> • Support the community 	<ul style="list-style-type: none"> • Maduny and Maper 	(Data not available)
AECOM	<ul style="list-style-type: none"> • Support in livestock water by constructing water points. • Construct three offices 	<ul style="list-style-type: none"> • Jaach • Majok Yithiou, Rum-aker and Jaac 	(Data not available)

Source: CAMP survey team. 2013.

*CAHW: Community Animal Health Worker

Services provided by private sector**(Agro-dealer)**

Following services are provided by an agro-dealers:

- Technical advice
- Awareness of livestock diseases and importance of vaccination
- Animal treatment

(Slaughter house)

Slaughter house in Aweil town is outsourced to private company by State government.

- Provide transport services for butchers
- Provide security at livestock market
- Operate slaughter house

(Livestock association/Traders)

- The association operates the livestock market.
- Provide feed crops

Livestock population

Type of Animal	Population in the state
Cattle	1,500,000
Goat	1,800,000
Sheep	1,300,000
Poultry	2,500,000
Horse	300
Donkey	500-600

Source: GIZ LPMP Baseline assessment (2009) and CAMP survey (2013)

Northern Bahr el Ghazal State

Livestock diseases		
Type of animal	Type of disease	Outbreak area in last 2 years
Cattle	Contagious bovine pleuropneumonia	June, 2013 (Area data not available)
	Black quarter, Haemorrhagic septicaemia, Trypanosomiasis, Anthrax	There was no outbreak in the last 2 years.
Sheep and goat	Peste des petits ruminants	July, 2013 (Area data not available)
	Contagious caprine pleuropneumonia, Tick borne diseases, Mange, Sheep pox	There was no outbreak in the last 2 years.
Poultry	Newcastle disease, Gumboro disease, Infectious poultry disease	There was no outbreak in the last 2 years.

Source: State MARF.

Animal health issues
<ul style="list-style-type: none"> • Lack of laws and regulations • Livestock cross border movement • Limited number of staff • Trans-boundary disease

Market	
Type of livestock and livestock product	Market
Cattle and small ruminant market (auction)	Majok livestock market, Warwar livestock market, Malekalel livestock market and Aweil auction yard
Cattle, sheep and goat market border with Kordofan and Darfur	Nyamlel livestock market
Cattle, sheep and goat market in villages	All over

Source: State MARF.

Market price					
Item	Unit	Price (SSP)			
		Low season		High season	
Poultry	1.5 kg	Dec-Apr	20	-	40 May-Sep
Yoghurt	500 ml	Dec-Apr	4	-	4 May-Sep
Milk (fresh) at cattle camp	600 ml	Dec-Apr	1	-	3 May-Sep
Milk (fresh) at market	600 ml	Dec-Apr	4	-	6 May-Sep
Bull (big)	400 kg	Dec-Apr	2,000	-	2,800 May-Sep
Bull (medium)	280 kg	Dec-Apr	1,200	-	1,850 May-Sep
Bull (small)	200 kg	Dec-Apr	750	-	850 May-Sep
Heifer	180 kg	Dec-Apr	1,800	-	2,300 May-Sep
Heifer (medium)	(Data not available)	Dec-Apr	1,500	-	1,500 May-Sep
Sheep and goat	75 kg	Dec-Apr	250	-	300 May-Sep
Donkey	300 kg	Dec-Apr	800	-	900 May-Nov
Horse	500 kg	Dec-Apr	1,500	-	1,600 May-Nov
Honey	600 ml	Dec-Apr	7	-	10 May-Nov
Meat (beef)	1 kg	(Data not available)	16	-	16 (Data not available)
Meat (sheep and goat)	1 kg	(Data not available)	25	-	25 (Data not available)
Egg (exotic)	Each (40 g)	(Data not available)	1	-	1 (Data not available)
Egg (local)	Each (30 g)	(Data not available)	1	-	1 (Data not available)
Milk tea	1 cup	(Data not available)	2	-	2 (Data not available)

Source: CAMP survey team. 2013.

* This is not a representative sample.

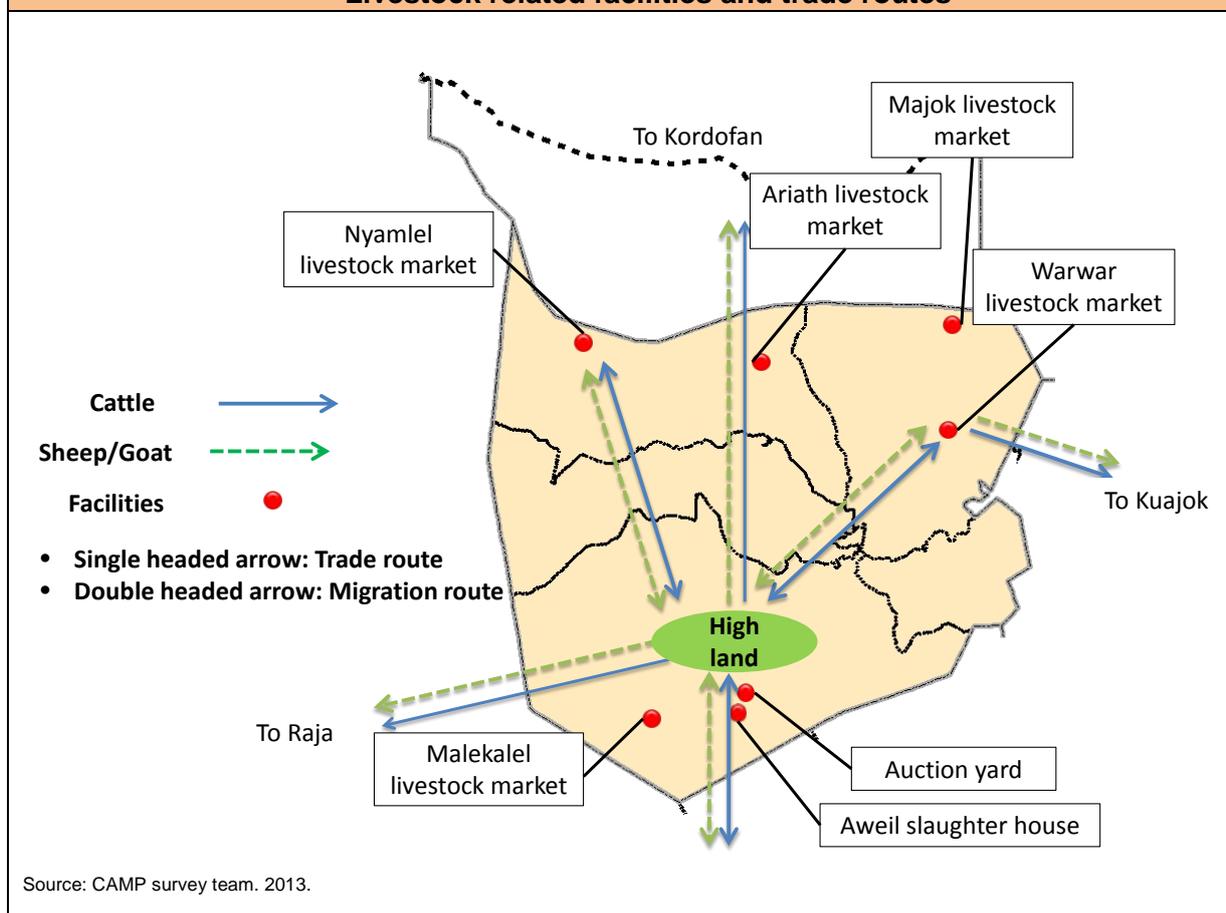
Taxes and charges		
Type	Cost (SSP)	Frequency
Inspection fees for cattle, sheep and goat (paid by buyer)	3(sheep or goat) 7(cattle)	Daily
Holding ground (cattle, sheep and goat) (paid by buyer)	1(sheep or goat) 3(cattle)	Daily
Movement permit for cattle, sheep and goat (paid by livestock keeper)	3(sheep or goat) 10(cattle)	Daily
License (trader)	1500	Annually
Health certificate (butcher)	250	Every 6 months
Keeping of animal (at auction yard paid by buyer)	10	Daily
Harding (at auction yard paid by buyer)	1	Daily

Source: CAMP survey team. 2013.
* This is not a representative sample.

Major livestock species and products by livelihood zone			
Western Flood Plains		Ironstone Plateau	
Type of Animal	Breed	Type of Animal	Breed
Cattle	Local	Cattle	Local
Sheep and goat	Local	Sheep and goat	Local
Poultry	Local	Poultry	Local
Donkey	Exotic		
Horse	Exotic		
Livestock products		Livestock products	
<ul style="list-style-type: none"> Milk Meat Egg Hide and skin 		<ul style="list-style-type: none"> Milk Meat Egg Honey 	

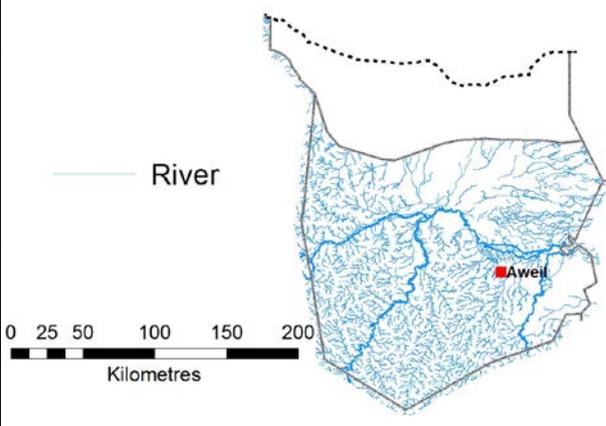
Source: CAMP survey team. 2013.

Livestock related facilities and trade routes



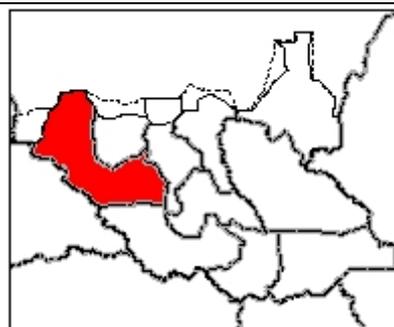
Source: CAMP survey team. 2013.

Cross-cutting issues
<p>(Land)</p> <ul style="list-style-type: none"> • No conflict over the land in the field of animal husbandry <p>(Migration)</p> <ul style="list-style-type: none"> • Seasonal migration can be found in the state, searching pasture and water for livestock. <p>(Conflict and insecurity)</p> <ul style="list-style-type: none"> • Cattle raid by people from north has become a major source of insecurity in the state. • Causes of conflicts are mainly related with scarce natural resources. <p>(Gender disparities)</p> <ul style="list-style-type: none"> • Woman cannot own livestock except poultry. • Widows can own the cattle of late husband but cannot decide what to do with them. <p>(Drought and floods)</p> <ul style="list-style-type: none"> • Incidence of floods has become a recurrent disaster in Northern Bahr el Gazal State.
Opportunities
<ul style="list-style-type: none"> • Higher demand for poultry meat • Storage facility and stand at slaughter house • Improvement of meat quality to meet market demand • Improvement of hides and skins quality and establishment of local tannery • Availability of fodder crop • Establishment of check point for vaccination
Challenges
<ul style="list-style-type: none"> • Limited number of technical staff • Few capacity building opportunities • No laws and regulations or law enforcement for animal movement and trade • Lack of pasture during dry season • No market price control in livestock sector • Lack of milk market during the rainy season • Higher cost of taxation and revenue • Inadequate transport and infrastructure facilities • Insufficient extension service delivery • Low milk production from local milking cows • Tsetse flies infestation in pasture areas • Trans-boundary livestock disease due to cattle randomly entering from North • Inadequate vaccines and drugs • Conflicts among the pastoralists

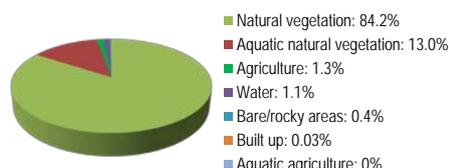
E. Fisheries					
Numbers of fishing households (ANLA 2012)		9,950			
Fish production	Unknown. NBG State fisheries are very seasonal, and there are no large permanent flowing rivers. There is no ice availability in the state.				
Fish exports	A large amount of "Mandesha" travels across the border to Sudan but the exact quantities are unknown. Small fish from rivers and lakes are dried and sold in towns.				
Fish imports	Small pelagics from Uganda and Kosti for preparation of Mandesha. Dried fish from Bentiu and Upper Nile State. Large trade up from Uganda through Yei of small pelagics.				
Seasonality	Mainly a late wet season and dry season fishery, with fishing households cultivating and tending livestock during the wet season. In the dry season the waters retreat to small rivers and lakes which are heavily fished by those living nearby and in fishing camps.				
Landing sites	Scattered near rivers and lakes. Mostly seasonal.				
Gears	Cast nets, long lines, cover pots, spears, gill nets (poisons reported).				
Vessels	Planked and dugout palm log canoes.				
Informal taxation	Mainly a problem for importers of pelagics from Uganda.				
Investment	Low. Small traders and fishing households. Larger importers of fish from Uganda and other states in South Sudan have large stocks and high investment in storage facilities.				
Aquaculture					
There is no aquaculture in the state though one entrepreneur is reported to be building ponds. These have not yet been stocked. Water supply, skills and seed will be a problem for large scale aquaculture in the future, and the temperatures may be too high in the hot season.					
Post-harvest and marketing					
<p>Fish is often offered for sale fresh and if not sold then dried. No fish smoking was observed by CAMP survey team. Much of the small fish produced is dried and then pounded to make a compressed product called "Mandesha" (various spellings). This is very popular locally.</p> <p>(Photo: Mandesha in Aweil market)</p> <p>Of interest is that in Aweil, for several years, the dried fish is sold by the rotl (450gms) an Arab measure of weight. (fresh fish is sold by the piece)</p> <p>Prices of sun dried fish in Aweil (2013) are given below.</p>					
Species	Presentation	SSP/kg	Species	Presentation	SSP/kg
Alestes	Sun dried	60.98			
Uganda pelagics	Sun dried	26.63			
Clarius anguillaris	Sun dried	53.33			

6. Western Bahr el Ghazal State (Capital: Wau)

A. Basic Information	
Population (2008) ^a	333,431 (10 th) Male: 177,040 Female: 156,391
Projected Population (2013) ^b	446,123 (10 th)
Area ^c	103,408 km ² (2 th)
No. of Counties, Payams and Bomas (2009) ^b	3 Counties 15 Payams 86 Bomas
Food secure population (2012)	46% (10 th)
Access to improved drinking water (2009) ^e	45% (8 st)
Literacy rate (15-24 years old) (2009) ^e	50% (3 rd)
Primary school gross enrolment rate (GER) (2010) ^f	80% (2 nd)

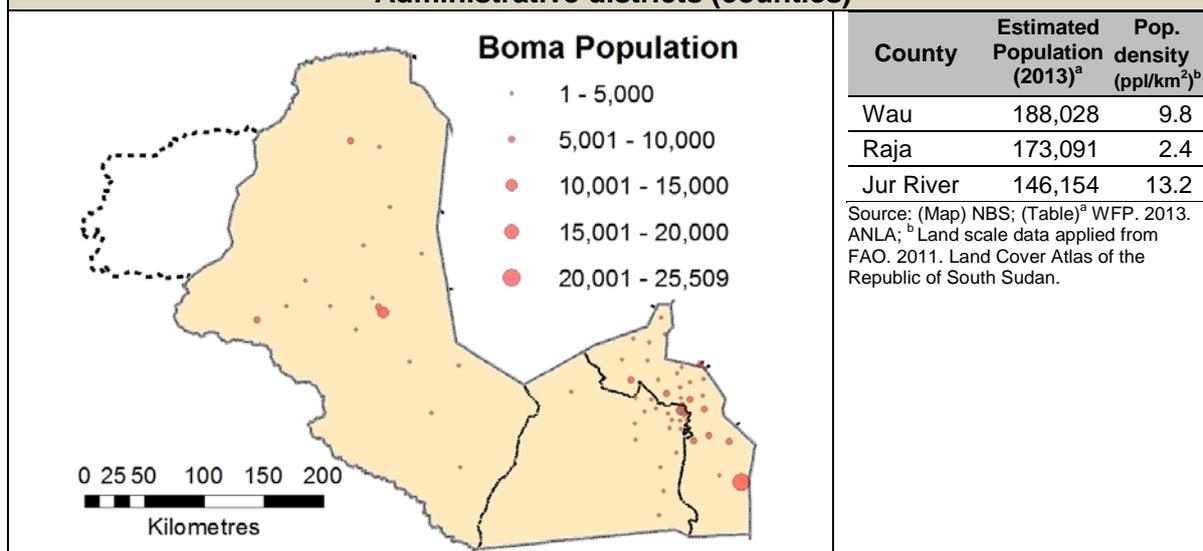


Land cover ⁹

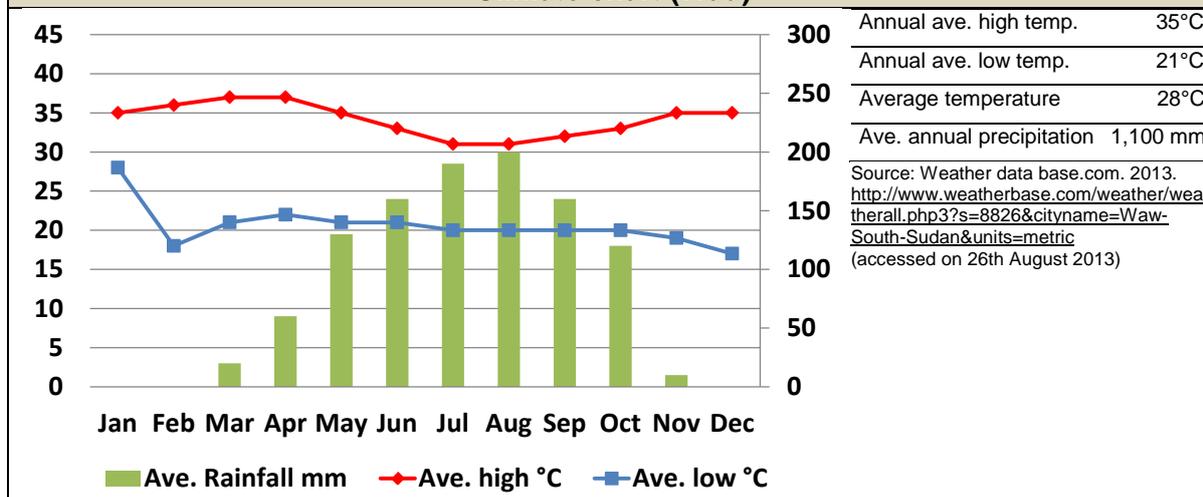


Source: ^a SSCSE, 2010. Southern Sudan Counts: Tables from the 5th Sudan Population and Housing Census, 2008; ^b WFP, 2013. ANLA; ^c FAO, 2011. Land Cover Atlas of the Republic of South Sudan; ^d Original data source of NBS, 2012. NBHS 2009; ^e NBS, 2012. NBHS 2009; ^f MoE, 2010. EMIS; ⁹ NBS, 2011. South Sudan Statistical Yearbook 2011.

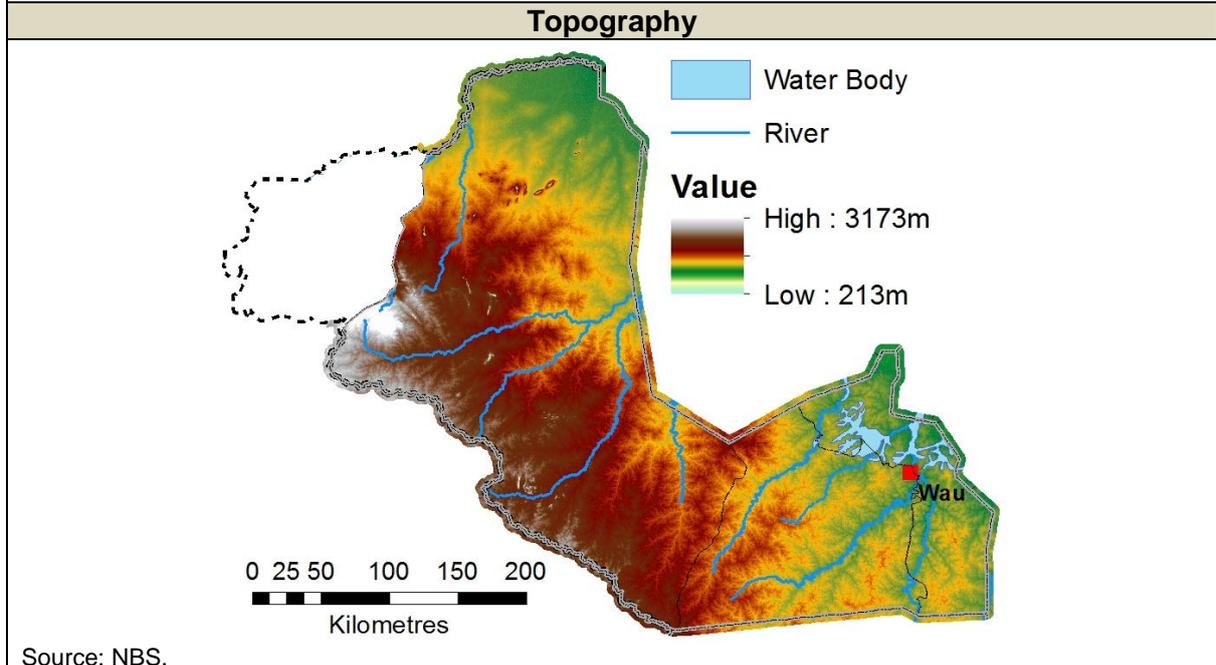
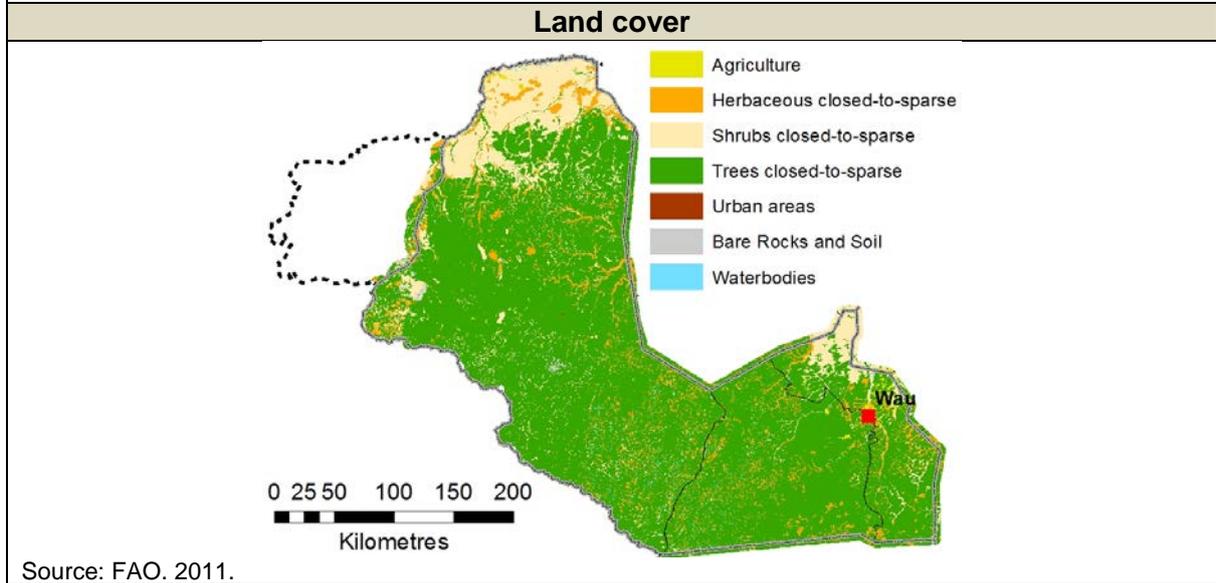
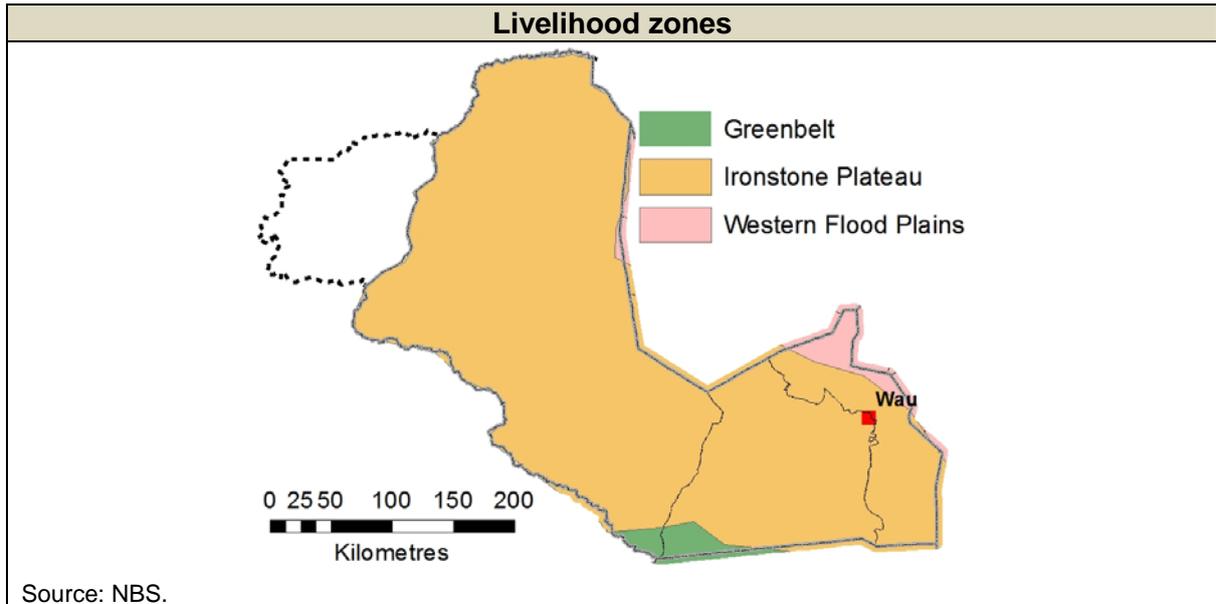
Administrative districts (counties)



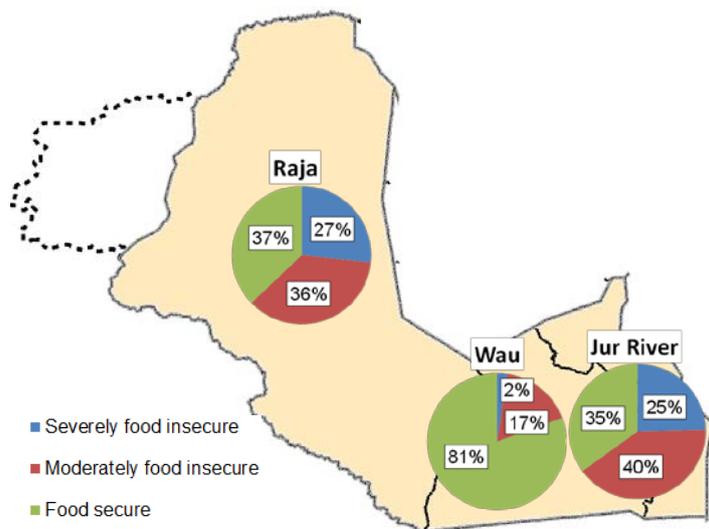
Climate chart (Wau)



Western Bahr el Ghazal State

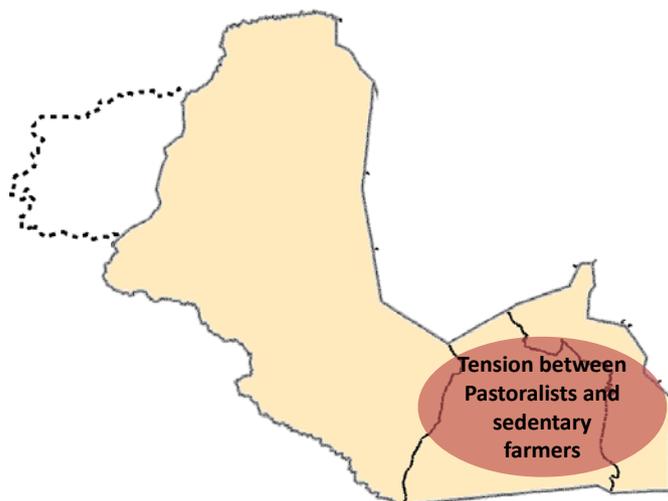


Estimated food security status by county (2013)



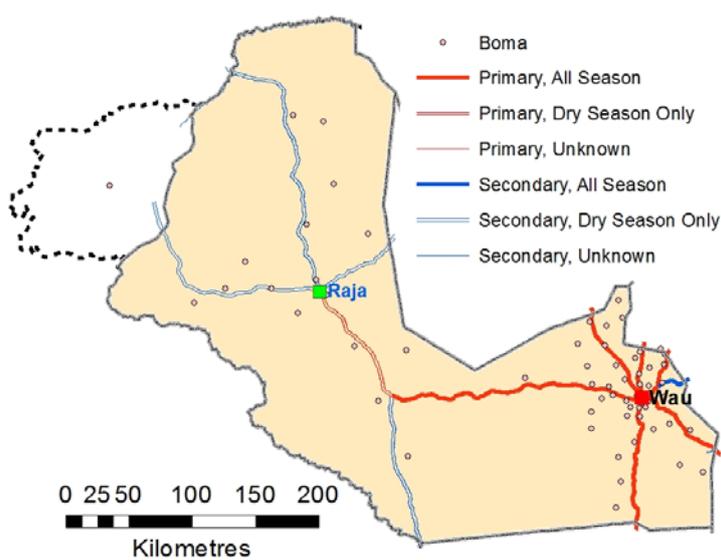
Source: WFP. 2013. ANLA

Insecurity and natural disaster



Source: CAMP survey team. 2013.

Road and Boma location



Source: Road (WFP. 2013), Boma location (NBS)

State Ministry of Agriculture, Forestry and Irrigation (MAFI)																															
Organogram			Staff																												
			Breakdown of information not fully available <table border="1"> <thead> <tr> <th>Section</th> <th>Number of staff</th> </tr> </thead> <tbody> <tr> <td>Directorate of Administration and Finance</td> <td>72</td> </tr> <tr> <td>Directorate of Planning</td> <td>13</td> </tr> <tr> <td>Directorate of Agriculture</td> <td>113</td> </tr> <tr> <td>Directorate of Forestry</td> <td>185</td> </tr> <tr> <td>Directorate of Irrigation and Water Resources Development</td> <td>1</td> </tr> <tr> <td>Directorate of Planning and Agricultural Economics</td> <td>-</td> </tr> <tr> <td>Directorate of Environment and Soil Survey</td> <td>-</td> </tr> <tr> <td>Directorate of Extension and Rural Advisory Services</td> <td>-</td> </tr> <tr> <td>Total</td> <td>384</td> </tr> </tbody> </table> Source: State MAFI.	Section	Number of staff	Directorate of Administration and Finance	72	Directorate of Planning	13	Directorate of Agriculture	113	Directorate of Forestry	185	Directorate of Irrigation and Water Resources Development	1	Directorate of Planning and Agricultural Economics	-	Directorate of Environment and Soil Survey	-	Directorate of Extension and Rural Advisory Services	-	Total	384								
Section	Number of staff																														
Directorate of Administration and Finance	72																														
Directorate of Planning	13																														
Directorate of Agriculture	113																														
Directorate of Forestry	185																														
Directorate of Irrigation and Water Resources Development	1																														
Directorate of Planning and Agricultural Economics	-																														
Directorate of Environment and Soil Survey	-																														
Directorate of Extension and Rural Advisory Services	-																														
Total	384																														
Source: State MAFI.																															
Budget			Strategic plan																												
<table border="1"> <thead> <tr> <th>Category</th> <th>2011/12 Budget</th> <th>2011/12 Outturn</th> <th>2012/13 Budget</th> </tr> </thead> <tbody> <tr> <td>Salary</td> <td>3,930,576</td> <td>3,596,376</td> <td>3,027,976</td> </tr> <tr> <td>Operating</td> <td>873,450</td> <td>396,351</td> <td>944,444</td> </tr> <tr> <td>Transfers</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>Others</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>Capital</td> <td>4,006,905</td> <td>1,053,204</td> <td>1,569,937</td> </tr> <tr> <td>Overall total</td> <td>8,810,931</td> <td>5,045,931</td> <td>5,542,357</td> </tr> </tbody> </table> Source: State MAFI. Unit: SSP	Category	2011/12 Budget	2011/12 Outturn	2012/13 Budget	Salary	3,930,576	3,596,376	3,027,976	Operating	873,450	396,351	944,444	Transfers	-	-	-	Others	-	-	-	Capital	4,006,905	1,053,204	1,569,937	Overall total	8,810,931	5,045,931	5,542,357	WBG Strategic plan (2010-12) <p>Objective</p> <ul style="list-style-type: none"> To contribute to the enhancement of food security for about 35% of the people of WBG State by promoting private sector development and supporting self-employment opportunities in the agriculture and forestry subsectors To contribute to the improvement of food security and livelihoods of the population of WBG State through sustainable and improved animal resources and fisheries production <p>Budget (Information not available)</p> <p>Plan</p> <ul style="list-style-type: none"> Provide infrastructure and strengthen Institutions through capacity development and training Conduct technical assessment to establish current levels of agricultural production and factors limiting increased production Rehabilitate existing state farms and establish demonstration farms for local farmers Establish robust forestry advisory and extension services to encourage agroforestry and afforestation <p>Activities</p> <ul style="list-style-type: none"> Train farmers on agroforestry Organise food security and livelihood coordination meetings Run awareness campaign for environmental degradation and deforestation Promote agro enterprises activities in the rural areas Provide improved seeds and tools Source: State MAFI.		
Category	2011/12 Budget	2011/12 Outturn	2012/13 Budget																												
Salary	3,930,576	3,596,376	3,027,976																												
Operating	873,450	396,351	944,444																												
Transfers	-	-	-																												
Others	-	-	-																												
Capital	4,006,905	1,053,204	1,569,937																												
Overall total	8,810,931	5,045,931	5,542,357																												
Services provided by State MAFI and local government																															
<p>(Technical advice)</p> <ul style="list-style-type: none"> Technical advice and training are provided to farmers. Some activities are conducted in cooperation with NGOs. Field survey for monitoring farmers' activities <p>(Seed/Tool provision)</p> <ul style="list-style-type: none"> Improved seeds are provided. Due to logistic issues, the provision is often late. <p>(Demo farm and field day= visit to field to share best agricultural practices)</p> <ul style="list-style-type: none"> Some demo farms are installed. <p>(Tractor hiring service)</p> <ul style="list-style-type: none"> The number of the tractors provided by the State MAFI is not enough to meet farmers' needs. 																															

B. Crop			
Services provided by DPs and NGOs			
Organisation	Activities	Area	Target
ACTED (Agency for Technical Cooperation and Development)	Following technical advices are provided: <ul style="list-style-type: none"> • Land preparation • Vegetable growing • Inter-cropping • Compost making • Small-scale irrigation • Financial management • Seeds and tools provision 	Wau and Jur river Counties	Vulnerable groups
Dorcas Aid International	Provide technical advice and training. Install demo plots for agricultural development.	Wau County	Vulnerable groups
<p>*1 Activities of NGOs and DPs are mainly delivery of training and provision of tools and seeds. *2 There are a number of DPs and NGOs in the state. The above information collected by CAMP team is shown as an example.</p>			
Services provided by private sector			
<p>(Tractor hiring service)</p> <ul style="list-style-type: none"> • There are few private tractor providing hiring services. • The charge is SSP 250/feddan for ploughing. <p>(Agro dealer)</p> <ul style="list-style-type: none"> • Improved seeds, mainly imported from Sudan, are available in a hardware shop. • The shop owner conducts germination test and gives technical advice as well to the customers. <p>(Financial institution)</p> <ul style="list-style-type: none"> • Agricultural Bank of South Sudan provides a loan service to farmers groups and some individual farmers. 			

Western Bahr el Ghazal State

Market						
Agricultural products and their origin (Wau, May 2013)						
(Cereal)			(Others)			
Item	Type	Origin	Item	Type	Origin	
Sorghum	Import	Sudan	Tomato	Import	-	
	Domestic	-		Domestic	Wau	
Maize	Import	Uganda	Egg plant	Import	-	
	Domestic	Ezo (WE State)		Domestic	Wau	
Pearl Millet	Import	Sudan	Okra	Import	Uganda	
	Domestic	-		Domestic	Wau	
Maize flour	Import	Uganda	Okra (Flour)	Import	Sudan	
	Domestic	-		Domestic	-	
Wheat flour	Import	Sudan	Jew's mallow	Import	-	
	Domestic	-		Domestic	Wau	
Groundnut	Import	-	Ginger (Dried)	Import	Sudan	
	Domestic	Wau		Domestic	-	
Source: CAMP survey team 2013. *1 This is not a representative sample. *2 WE: Western Equatoria			Source: CAMP survey team 2013. * This is not a representative sample.			
Market price (Retail price, Wau, May 2013)						
Item	Unit	Price (SSP) (range)				
		Low season			High season	
Sorghum (Domestic)	Sack (100 kg)	Feb-May	300	-	500	May-Aug
Sorghum (Import)	Sack (100 kg)	Feb	500	-	800	Aug
Maize (Domestic/WE State)	Sack (100 kg)	Feb	200	-	300	Aug
Maize (Import)	Sack (50 kg)	Feb-May	150	-	200-280	May-July
Maize flour (Import)	Sack (50 kg)	Aug-Dec	230	-	250	Jan-July
Wheat flour (Import)	Sack (100 kg)	Depend on market demand	360	-	380	Depend on market demand
Pearl Millet (Import)	Sack (100 kg)	Feb	350	-	400	Aug
Groundnut (Domestic)	Sack (100 kg)	Feb-May	120	-	180	May-Aug
Eggplant (Domestic)	4 pieces	Aug-Nov	5	-	10	Jan-May
Tomato (Domestic)	Piece	July-Dec	5 (4 pieces)	-	5 (3 pieces)	Jan-May
Okra (Domestic)	Piece	July-Dec	6 (5 pieces)	-	6 (4 pieces)	Jan-May
Source: CAMP survey team 2013. *1 This is not a representative sample. *2 WE: Western Equatoria						
Transportation cost (Wau, May, 2013)						
Type	Unit	Currency	Cost			
(Information not available)	(Information not available)	(Information not available)	(Information not available)			
Tax and charge (Wau, May, 2013)						
(Wholesaler/trader)						
Type	Cost (SSP) (range)		Frequency			
Licence	500-1,200		Annually			
Police service	30-50		Monthly			
Rent charge	300-1,200		Monthly			
(Retailer)						
Type	Cost (SSP) (range)		Frequency			
Rent table	60		Monthly			
Market cleaning fee	1		Daily			
Security fee	2		Daily			
Source: CAMP survey team 2013. *This is not a representative sample.						

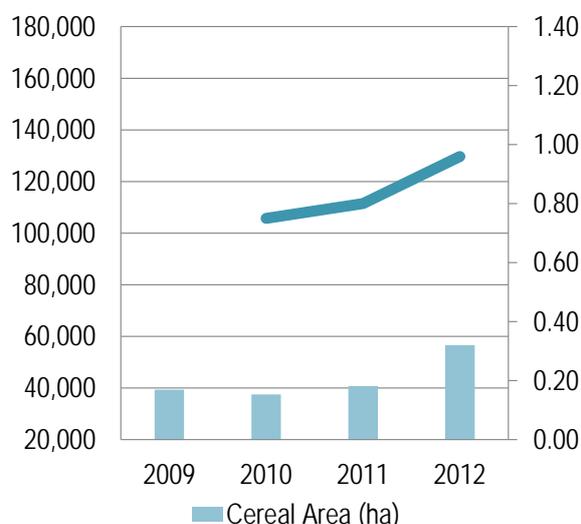
Western Bahr el Ghazal State

Crop production		Survey area 
Farming household (%) (2012)	78	
Farming household (No.) (2012)	58,702	
Total cereal area (ha) (2012)	56,635 (9 th)	
Cereal gross yield (t/ha) (2012)	1.00 (3 rd)	
Gross cereal production (t) (2012)	56,460 (8 th)	
Average cereal area per household (ha/hh) (2012)	0.96 (4 th)	

Source: FAO and WFP. 2013 CFSAM.

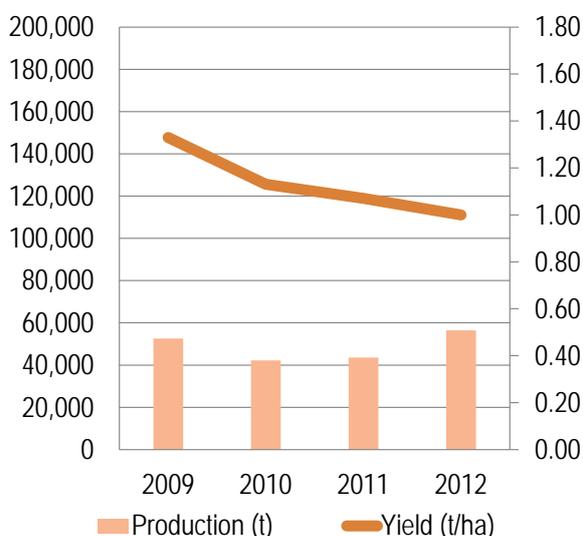
Cereal production (2009-2012)

Total cereal harvested area (ha) and average cereal area per household (ha/hh)



Source: Aggregate from CFSAM 2010, 2011, 2012 and 2013.

Total gross cereal production (t) and average cereal yield (t/ha)



Source: Aggregate from CFSAM 2010, 2011, 2012 and 2013.

Crop production by livelihood zone

Ironstone Plateau		Western Flood Plains	
Major agricultural products			
Crop	Vegetable	Crop	Vegetable
Sorghum	Onion	Sorghum	Tomato
Maize	Okra	Bean	Onion
Cassava	Tomato	Finger millet	Water melon
Bean	Pumpkin	Cash Crop	
Cash Crop	Watermelon	Groundnut	
Groundnut	Jew's mallow	Sesame	
Sesame			
Cowpea			

Cropping calendar

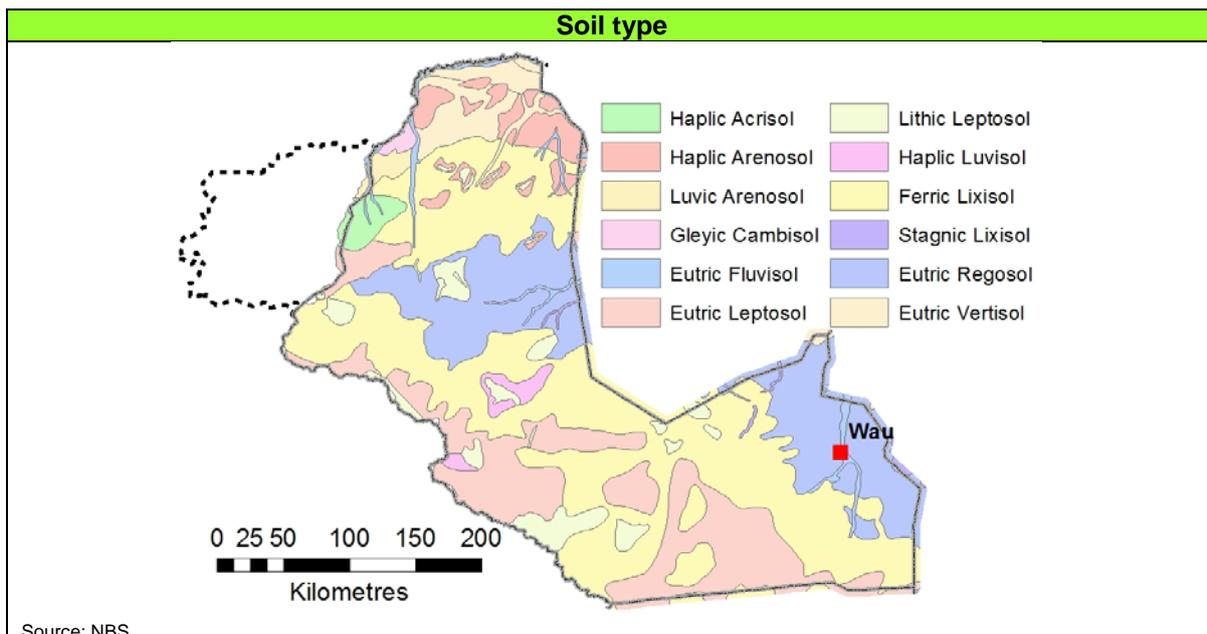
Crop	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Sorghum			L	L	S	S	S		H	H	H	H
Maize				L	S				H			
Cassava (2yrs)			H	L	S	S						
Groundnut				L	S	S	S	S	S	H	H	H
Sesame	H			L	S	S	S	S	H	H	H	H
Bean				L	S				H	H	H	
Okra				L	S				H	H		

Source: CAMP survey team. 2013

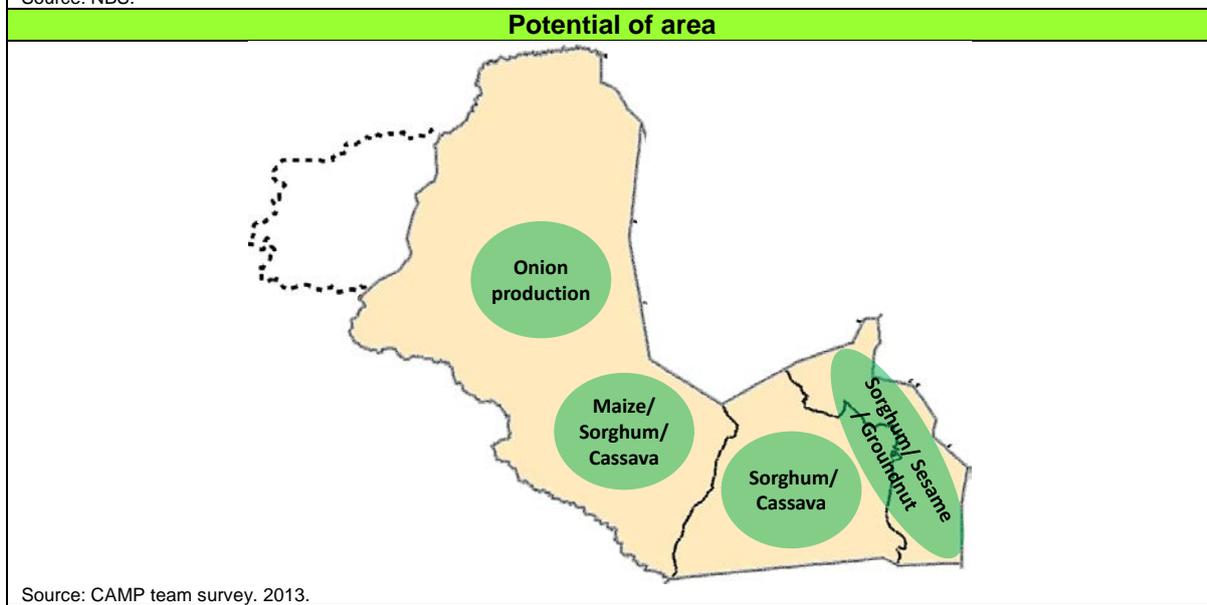
Crop	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Sorghum		L	L	S	S				H (short)	H (long)		
Groundnut		L	L	S	S	S			H (short)	H (long)		
Bean		L	L	S	S				H	H	H	
Finger millet		L	L	S	S							H
Tomato	Planted all year around by small-scale irrigation											
Okra		L	L	S	S				H	H	H	H
Water melon		L	L	S	S				H	H	H	

Source: CAMP survey team. 2013

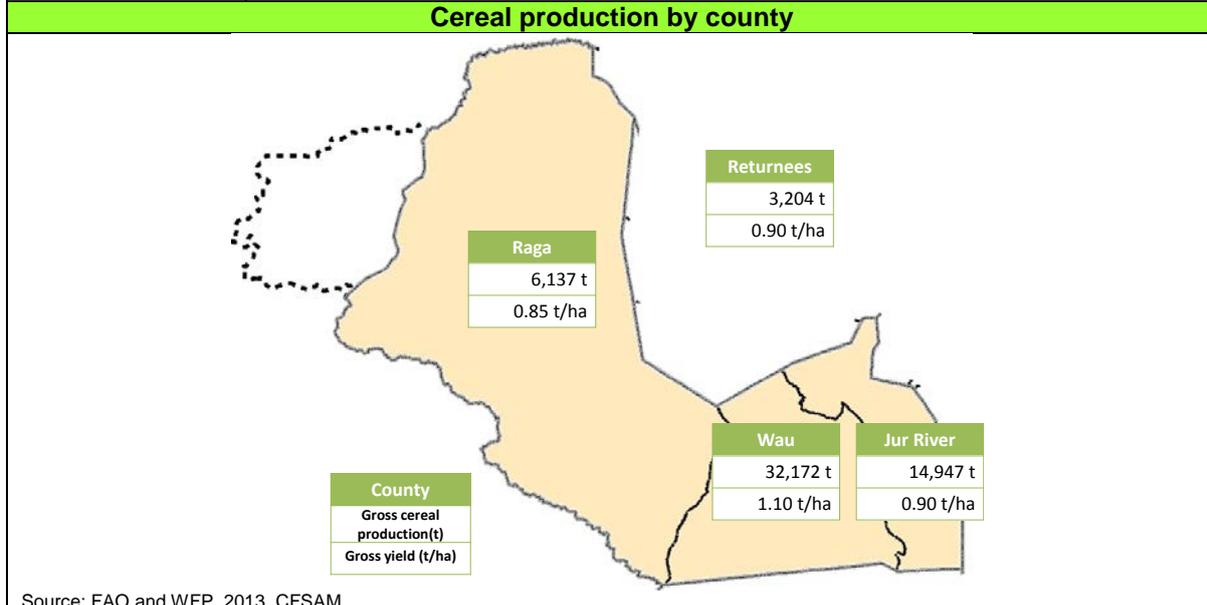
Western Bahr el Ghazal State



Source: NBS.



Source: CAMP team survey, 2013.



Source: FAO and WFP, 2013. CFSAM.

Cross cutting issues
<p>(Land)</p> <ul style="list-style-type: none"> • Tension between pastoralist and sedentary farmers <p>(Gender)</p> <ul style="list-style-type: none"> • Women take important role in agricultural production. • Women have a voice in village meetings. However, decision making is done by men in many cases. <p>(Security)</p> <ul style="list-style-type: none"> • Tribal conflicts occurred in 2012. There is still tension between two tribes. <p>(IDPs and returnees)</p> <ul style="list-style-type: none"> • Land is usually allocated to IDPs and returnees. However, their living standards are relatively lower than the average. <p>(HIV)</p> <ul style="list-style-type: none"> • The infection rate is unknown.
Opportunities
<p>Crop</p> <ul style="list-style-type: none"> • Vast unutilized land • Suitable soil for cultivation • Abundant labour force
Challenges
<p>Overall</p> <ul style="list-style-type: none"> • Feeder roads are not well established. • Poor access to financial institutions • High tax rates • High transport costs • High labour costs
<p>Crop</p> <ul style="list-style-type: none"> • Underdeveloped agricultural extension system • Financial services are not available for many farmers. • No effective pest and disease control methods • Inadequate post-harvest facilities lower net production.

Western Bahr el Ghazal State

C. Forestry

1. On-going and proposed projects

1-1. List of on-going projects

Project name	Objectives/activities	Duration	Annual cost
Agro-forestry (DECCOPE)	Introduce fruit seedling for sustainability management	2 years	(Information not available)
Multi-Purpose Tree Services (MPTS) Nursery Peace Corp	Propagate and distribute seedlings for forest conservation	(Information not available)	(Information not available)

Source: CAMP team survey. 2013.

2-2. List of proposed projects

Project name	Objectives/activities	Duration	Annual cost
Nursery development	Propagate seedlings for plantation	(Information not available)	(Information not available)
Afforestation	Develop plantation	(Information not available)	(Information not available)
Agro-forestry	Introduce agro-forestry practice	(Information not available)	(Information not available)
Rehabilitation of saw milling	Increase timber production	(Information not available)	(Information not available)
Capacity building	Train farmers on forest management	(Information not available)	(Information not available)
Coppice management	Improvement of stock	(Information not available)	(Information not available)
Rehabilitation of Forestry Development HOR office	Improve work environment for effective services provision	Oct. 2013-May 2014	1,913,171.64
Rehabilitation of Pongo Nuer Saw mill	Increase timber production	Oct. 2013-Dec. 2014	599,366
Training of staff on agro-forestry and extension service	Develop staff's capacity for effective extension services	Nov. 2013-Jan. 2014	65,000
Awareness campaign on environmental degradation and deforestation	Enlighten farmers on importance of environmental conservation	(Information not available)	10,000
Establishment of agro-forestry nurseries	Promote agro-forestry in the communities	Oct. 2013-Nov. 2013	97,838

Source: CAMP team survey. 2013.

2. Land cover percentage to total area

County	AG	TCO	SCO	HCO	URB	BS	WAT	Total area	Total area (ha)
Jur River	8.2%	66.3%	15.6%	9.5%	0.0%	0.0%	0.4%	100.0%	1,111,155
Raga	0.3%	71.4%	19.3%	7.6%	0.0%	0.5%	1.0%	100.0%	7,305,684
Wau	1.1%	88.1%	1.2%	7.4%	0.1%	0.2%	2.0%	100.0%	1,923,927
Total	1.3%	73.9%	15.5%	7.8%	0.0%	0.3%	1.1%	100.0%	10,340,766

Source: FAO. 2011. Land cover atlas of South Sudan. Rome.

Legend: AG=Agriculture, TCO=Tree closed-to-sparse, SCO=Shrubs closed-to-sparse, HCO=Herbaceous closed-to sparse, URB=Urban areas, BS=Bare Rocks and Soil, and WAT=Waterbodies.

Western Bahr el Ghazal State

State Ministry of Animal Resources and Fisheries (MARF)																																			
Organogram		Staff																																	
<pre> graph TD Minister --> DG[Director General] DG --> DF[Directorate of Fisheries] DG --> DAP[Directorate of Animal Production] DG --> DVS[Directorate of Veterinary Services] DG --> DHRD[Directorate of Human Resources Development] DG --> DFA[Directorate of Finance and Administration] </pre>		Breakdown of information not available <table border="1"> <thead> <tr> <th>Section</th> <th>Number of staff</th> </tr> </thead> <tbody> <tr> <td>Directorate of Fisheries</td> <td>-</td> </tr> <tr> <td>Department of Control</td> <td>(-)</td> </tr> <tr> <td>Department of Fisheries</td> <td>(-)</td> </tr> <tr> <td>Directorate of Animal Production</td> <td>-</td> </tr> <tr> <td>Department of Animal Production</td> <td>(-)</td> </tr> <tr> <td>Department of Animal Health</td> <td>(-)</td> </tr> <tr> <td>Directorate of Veterinary Services</td> <td>-</td> </tr> <tr> <td>Directorate of Human Resources Development</td> <td>-</td> </tr> <tr> <td>Directorate of Finance and Administration</td> <td>-</td> </tr> <tr> <td>Department of Accounts</td> <td>(-)</td> </tr> <tr> <td>Department of Procurement</td> <td>(-)</td> </tr> <tr> <td>Department of Human Resource</td> <td>(-)</td> </tr> <tr> <td>Department of Planning</td> <td>(-)</td> </tr> <tr> <td>Department of Administration</td> <td>(-)</td> </tr> <tr> <td>Total</td> <td>249</td> </tr> </tbody> </table>		Section	Number of staff	Directorate of Fisheries	-	Department of Control	(-)	Department of Fisheries	(-)	Directorate of Animal Production	-	Department of Animal Production	(-)	Department of Animal Health	(-)	Directorate of Veterinary Services	-	Directorate of Human Resources Development	-	Directorate of Finance and Administration	-	Department of Accounts	(-)	Department of Procurement	(-)	Department of Human Resource	(-)	Department of Planning	(-)	Department of Administration	(-)	Total	249
Section	Number of staff																																		
Directorate of Fisheries	-																																		
Department of Control	(-)																																		
Department of Fisheries	(-)																																		
Directorate of Animal Production	-																																		
Department of Animal Production	(-)																																		
Department of Animal Health	(-)																																		
Directorate of Veterinary Services	-																																		
Directorate of Human Resources Development	-																																		
Directorate of Finance and Administration	-																																		
Department of Accounts	(-)																																		
Department of Procurement	(-)																																		
Department of Human Resource	(-)																																		
Department of Planning	(-)																																		
Department of Administration	(-)																																		
Total	249																																		
Source: State MARF.		Source: State MARF.																																	
Budget		Strategic plan																																	
Category	2011/12 Budget	2012/13 Outturn	2013/14 Budget																																
Salary	(Data not available)	136,831,804	144,021,638																																
Operating	(Data not available)	19,992,977	44,850,556																																
Transfers	(Data not available)	-	-																																
Others	(Data not available)	-	-																																
Capital	(Data not available)	9,571,841	12,606,195																																
Overall total	(Data not available)	166,396,622	201,478,389																																
Source: State MARF. Unit: SSP																																			
		WBG State Strategic plan (2012-15)																																	
		Objective <ul style="list-style-type: none"> To contribute to the enhancement of food security for about 35% of the people of WBG State by promoting private sector development and supporting self-employment opportunities in the agriculture and forestry subsectors To contribute to the improvement of food security and livelihoods of the population of WBG State through sustainable and improved animal resources and fisheries production 																																	
		Budget Plan (Information not available) <ul style="list-style-type: none"> Provide infrastructure and strengthen Institutions through capacity development and training Conduct technical assessment to establish current levels of animal production and factors limiting increased production Promote animal and poultry disease control and establish livestock marketing mechanism Promote establishment of fisheries marketing mechanism Establish poultry houses, quarantine, fence and installed electricity and water supply 																																	
		Activities <ul style="list-style-type: none"> Conduct different training for staff at the state and the counties Initiate the formation of community animal health workers associations Train veterinary pharmacists on basic dispensing and animal health prophylactic treatment Poultry houses constructed and supplied with electricity and water 																																	
		Source: State MARF.																																	
Services provided by State MARF and local government																																			
(Animal production services) <ul style="list-style-type: none"> Provide technical advices to livestock keepers Provide information through radio programme run by State MARF 																																			
(Animal health services) <ul style="list-style-type: none"> Provide clinical support to livestock keepers Technical support to livestock keepers 																																			

D. Livestock**Services provided by National government institutions**

Organisation	Activities	Area	Period
Marialai Dairy Farm	<ul style="list-style-type: none"> • Training of smallholder dairy farmers in quality breeds, quality feeds, animal health, and milk processing techniques. • The target is vulnerable groups. • Produce milk and other dairy products by the trainees to improve their livelihoods 	Jur river County	(Information not available)
University of Bahr El Ghazal, college of Vet Services (Wau)	<ul style="list-style-type: none"> • Undergraduate course (Bachelor degree) • Postgraduate course (MSc and PhD) 	Veterinary science	5 years 2 years each

Source: CAMP survey team. 2013.

Services provided by DPs and NGOs

Organisation	Activities	Area	Period
WOTAP (Women Training and Promotion)	<ul style="list-style-type: none"> • Undertake goat, sheep and poultry restocking program • Deliver training and workshops 	Wau County	Throughout the year
WDG (Women Development Group)	<ul style="list-style-type: none"> • Provide ox-ploughing attachments and give training. • Undertake goat and poultry restocking program 	Wau County	Throughout the year
Intermon Oxfarm	<ul style="list-style-type: none"> • Undertake sheep and bull restocking program 	(Information not available)	(Information not available)
FAO	<ul style="list-style-type: none"> • Deliver training to local CAHWs • Provide bicycles for extension work 	(Information not available)	(Information not available)
HARD (Hope Association for Relief and Development)	<ul style="list-style-type: none"> • Deliver goat and poultry restocking program 	(Information not available)	(Information not available)

Source: CAMP survey team. 2013.

*CAHW: Community Animal Health Worker

Services provided by private sector**(Agro-dealer)**

- There are some agro-dealers providing veterinary drugs and technical advices.

(Slaughter house)

- Only one slaughter slab is run by a private individual.

(Livestock market)

Livestock market is run by the state government. However, following services are provided by private sector:

- Inspect origin of animals to find out if the animals are stolen
- Provide holding grounds
- Provide security
- Provide transport service to butcheries

Livestock population

Type of Animal	Population In the State
Cattle	1,200,000
Goat	750,000
Sheep	980,000
Poultry	800,000
Horse	2,000
Pig	163
Donkey	5,000
Total	3,727,163

Source: CAMP survey team. 2013

Western Bahr el Ghazal State

Livestock diseases		
Type of Animal	Type of disease	Outbreak area in last 2 years
Cattle	Liver problems, Contagious bovine pleuropneumonia	There was no outbreak in the last 2 years.
	Anthrax	There was no outbreak in the last 2 years.
	Diarrhoea	There was no outbreak in the last 2 years.
	Haemorrhagic septicaemia, Foot and mouse disease	There was no outbreak in the last 2 years.
Goat	Contagious bovine pleuropneumonia	There was no outbreak in the last 2 years.
	Arthritis	There was no outbreak in the last 2 years.
	Diarrhoea	There was no outbreak in the last 2 years.
	Elimentisis	There was no outbreak in the last 2 years.
	Mange	There was no outbreak in the last 2 years.
Sheep	Contagious Bovine Pleura Pneumonia	There was no outbreak in the last 2 years.
	Arthritis	There was no outbreak in the last 2 years.
	Diarrhoea	There was no outbreak in the last 2 years.
	Elimentisis	There was no outbreak in the last 2 years.
	Mange	There was no outbreak in the last 2 years.
Pig	(Information not available)	(Information not available)
Horse	(Information not available)	(Information not available)
Donkey	(Information not available)	(Information not available)

Source: CAMP survey team. 2013.

Animal health issues

- The number of state staff and CAHWs (Community Animal Health Workers) are not enough to control animal diseases.
- There are limited grazing areas because these areas are communal lands.
- Water points are not enough to keep livestock healthy.
- Drugs supply is not sufficient to provide animal health service.

Market

Type of livestock and livestock product	Market
Cattle	Domestic and secondary
Sheep	Domestic and secondary
Goat	Domestic and secondary
Poultry	Domestic and secondary
Meat	Domestic and secondary
Egg	Domestic and secondary
Milk	Primary
Honey	Primary

Source: CAMP survey team. 2013.

Market price

Item	Unit	Price (SSP) (range)		
		Low season		High season
Bull (big)	400 kg	November-April	2,000-2,500 - 3,000-3,500	May-October
Bull (medium)	280 kg	November-April	1,000-1,500 - 2,000-2,500	May-October
Heifer	180 kg	(Information not available)	1,000 - 1,000	(Information not available)
Calf	200 kg	(Information not available)	500 - 500	(Information not available)
Sheep	75-80 kg	(Information not available)	150 - 150	(Information not available)
Goat	75-80 kg	(Information not available)	200 - 200	(Information not available)
Milk	500 ml	(Information not available)	3 - 3	(Information not available)
Honey	600 ml	(Information not available)	15 - 15	(Information not available)
Meat (beef)	1 kg	(Information not available)	20 - 20	(Information not available)
Meat (sheep and goat)	1 kg	(Information not available)	30 - 30	(Information not available)
Egg (exotic)	Each	(Information not available)	1 - 1	(Information not available)
Milk tea	1 cup	(Information not available)	2 - 2	(Information not available)

Source: CAMP survey team. 2013.

*This is not a representative sample.

Taxes and charges

(Butcheries)

Type	Cost (SSP) (range)	Frequency
Meat sales licence	200	Every 6 months
Trade Licence	400	Annually
Profit taxes (tax rate not available)	300-400	Annually
Municipality fee	40	Monthly
Security fee	40	Monthly

Source: CAMP survey team. 2013.

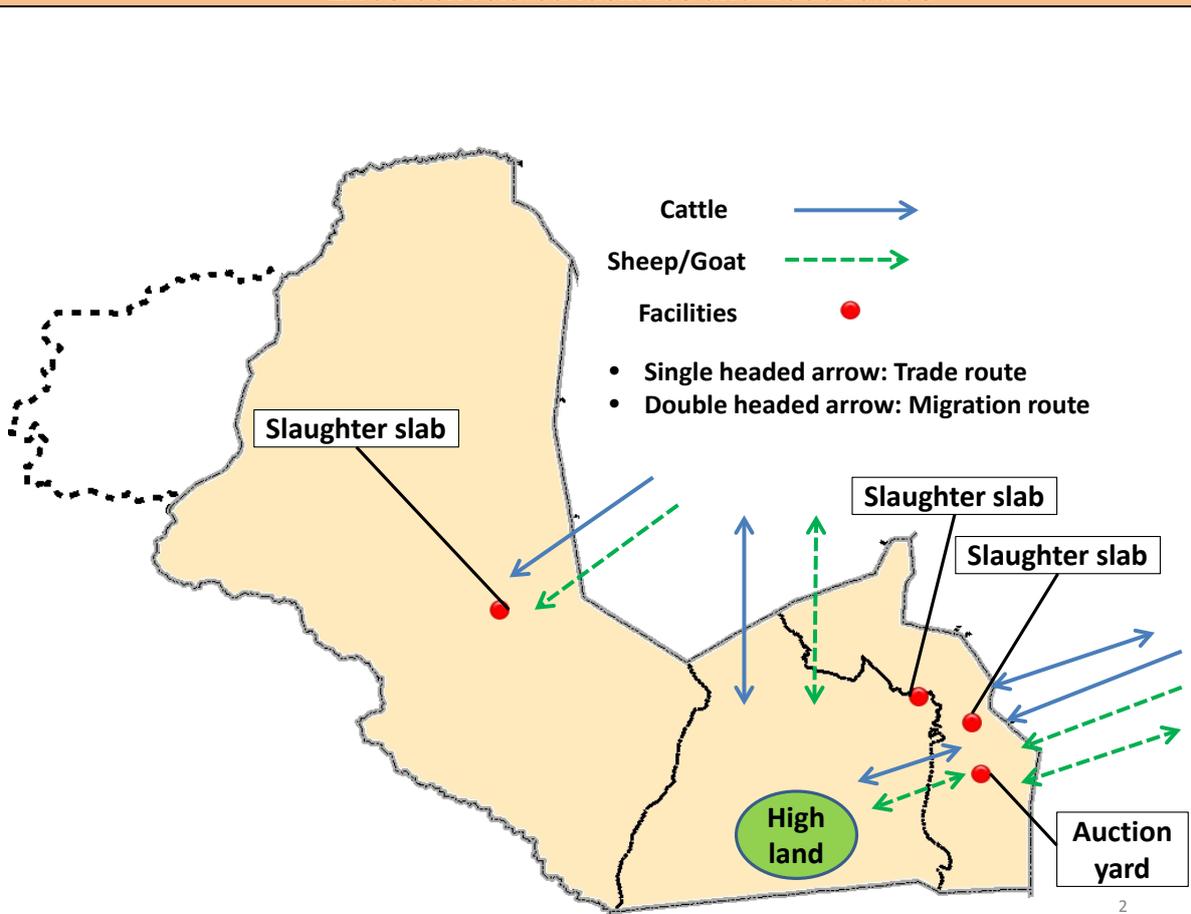
*This is not a representative sample.

Major livestock species and products by livelihood zone

Ironstone Plateau		Western Flood Plains	
Type of Animal	Breed	Type of Animal	Breed
Cattle	Local	Cattle	Local
Goat	Local	Goat	Local
Sheep	Local	Sheep	Local
Poultry	Local	Poultry	Local
Livestock products		Livestock products	
<ul style="list-style-type: none"> • Meat • Milk • Egg • Local fat 		<ul style="list-style-type: none"> • Meat • Milk • Egg • Local fat 	

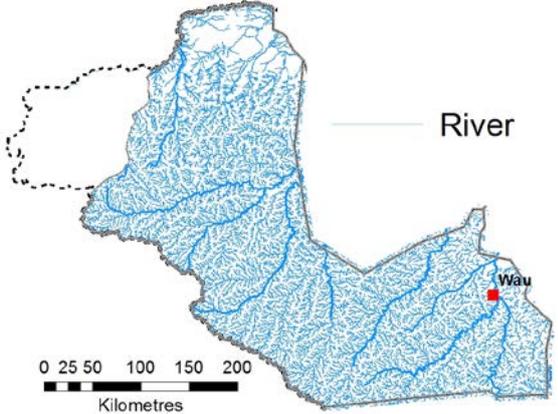
Source: CAMP survey team. 2013

Livestock related facilities and trade routes



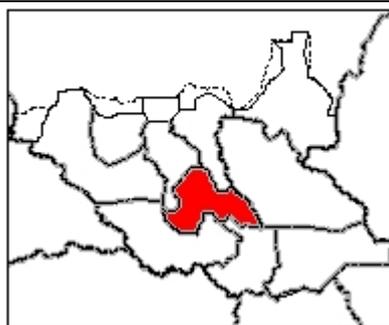
Source: CAMP survey team. 2013.

Cross-cutting issues
<p>(Land)</p> <ul style="list-style-type: none"> • Tension at communal grazing areas among pastoralists • Land use is not effective. (e.g. land rotation) • Land boundary issue between sedentary farmers and pastoralists from other states <p>(Migration)</p> <ul style="list-style-type: none"> • Long distance migration causes low livestock and milk production. <p>(Conflict and insecurity)</p> <ul style="list-style-type: none"> • Tension between sedentary farmers and pastoralist results in conflicts. • Conflicts occur at common grazing and watering points occasionally. <p>(Gender disparities)</p> <ul style="list-style-type: none"> • Unequal cattle ownership • Decision-making is done by men. • Women are seen as property in some areas. <p>(Drought and floods)</p> <ul style="list-style-type: none"> • Unstable climate lowers livestock production and productivity.
Opportunities
<ul style="list-style-type: none"> • Vast land • Sufficient rain and underground water • Sizable livestock population • A number of CBOs (Community Based Organisations) and DPs/NGOs are operating in the state. • High supply capacity of livestock products • Livestock markets are well-functioning. • Local government institutions have strong authority.
Challenges
<ul style="list-style-type: none"> • Irregular rainfall • Livestock diseases • Livestock facilities • Transportation of livestock and livestock products • Traditional method of livestock keeping • Resource-based conflict (grazing and watering points) • Capacity of the State MARF is insufficient • Technological packages are not available. (e.g. information techniques) • Feeder roads are not well established.

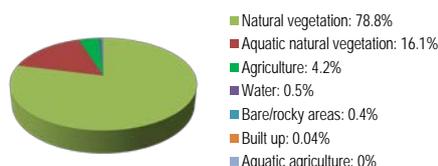
E. Fisheries					
Numbers of fishing households (ANLA 2012)		4,010			
Fish production	Unknown. There is no ice availability in the state.				
Fish exports	Fish from Wau and WBG State travels to NBG State for Mandesha.				
Fish imports	Fresh fish comes from Warrap mainly to Wau for the urban market. Small pelagics from Uganda and Kosti for preparation of Mandesha. Dried fish from Lakes, Unity and and Upper Nile States. Some daga'a and small amount of smoked fish from Uganda.				
Seasonality	All year in the large Jur River and similar. Elsewhere late wet season on the floodplains, dry season in the lakes and smaller rivers.				
Landing sites	Scattered near rivers and lakes. Mostly seasonal except in the Jur River and tributaries				
Gears	Cast nets, long lines, spears, gill nets. Extensive use of plant poisons in enclosed waters.				
Vessels	Dugout and dugout palm log canoes.				
Informal taxation	Mainly a problem for importers of pelagics from Uganda.				
Market	Fish sold fresh if near to a market, but much dried for preparation into Mandesha or sale to local markets.				
Aquaculture					
<p>There is no producing aquaculture in the state (late 2013) though one entrepreneur is building 2 ponds. These have not yet been stocked. Water supply will be a problem for large scale aquaculture in the future, and the temperatures may be too high in the hot season. State MARF has plans for the future for aquaculture but these await funding. (Photo: Half dug pond near Wau)</p>					
Post-harvest and marketing					
		<p>Fish is coming in to Wau from Warrap State fresh. Definite preference for fresh fish, though Mandesha also widely available and made in WBG State. All fish sold by the kilo in WBG State, except Mandesha and some dried fish which is sold by the rotl (450gms: an Arab measure of weight). (Photo: Fresh fish for sale in Wau)</p>			
Species	Presentation	SSP/kg	Species	Presentation	SSP/kg
Alestes	Fresh	25.77	Bagrus dogmac	Fresh	40.00
Clarius spp	Fresh	29.32	Tilapia spp	Fresh	38.00
Clarius anguillarus	Sun dreid	58.72	Distichotus spp	Sun dried	51.85
Herotus niloticus	Sun dried	50.00	Lates niloticus	Sun dried	51.85
Uganda pelagics	Sun dried	17.78	Bagrus dogmac	Fresh	40.00
Alestes	Fresh	25.77			

7. Lakes State (Capital: Rumbek)

A. Basic Information	
Population (2008) ^a	695,730 (7 th) Male: 365,880 Female: 329,850
Projected Population (2013) ^b	879,012(7 th)
Area ^c	44,075 km ² (6 th)
No. of Countites, Payams and Bomas (2009) ^d	8 Counties 49 Payams 122 Bomas
Food secure population (2012) ^b	62% (6 th)
Access to improved drinking water (2009) ^e	71% (1 st)
Literacy rate (15-24 years old) (2009) ^e	30% (7 th)
Primary school gross enrolment rate (GER) (2010) ^f	67% (7 th)

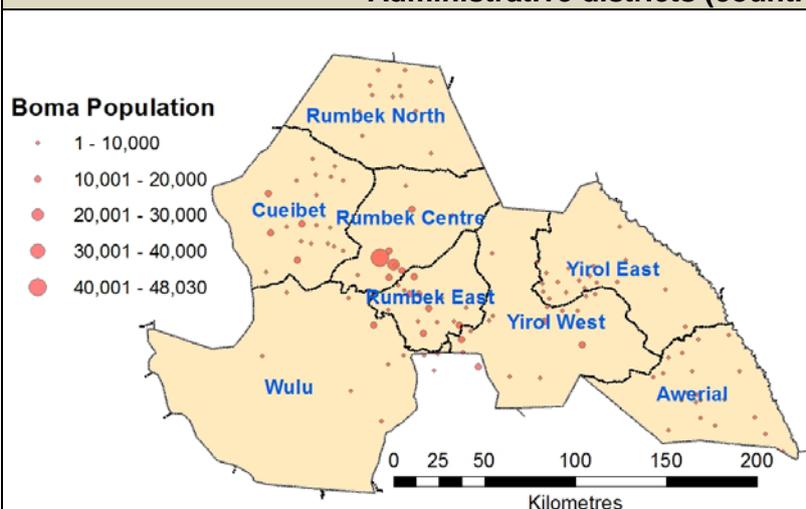


Land cover ^g



Source: ^a SSCSE. 2010. Southern Sudan Counts: Tables from the 5th Sudan Population and Housing Census, 2008; ^b WFP. 2013. ANLA; ^c FAO. 2011. Land Cover Atlas of the Republic of South Sudan; ^d Original data source of NBS. 2012. NBHS 2009; ^e NBS. 2012. NBHS 2009; ^f MoE. 2010. EMIS; ^g NBS. 2011. South Sudan Statistical Yearbook 2011.

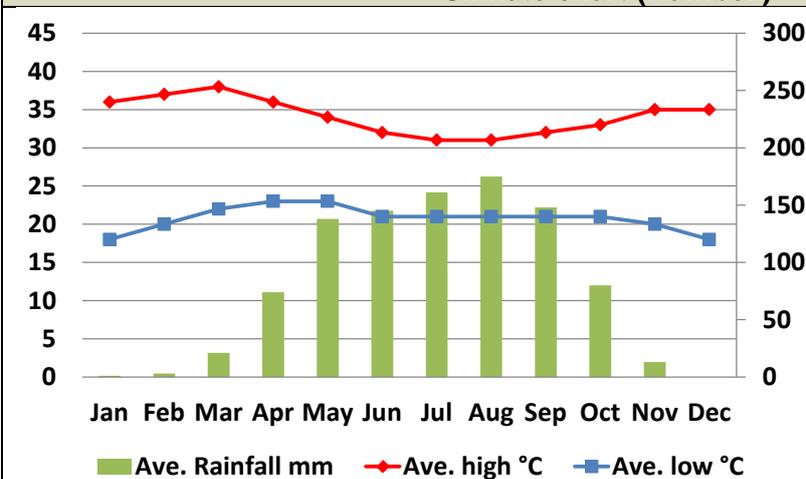
Administrative districts (counties)



County	Estimated Population (2013) ^a	Pop. density (ppl/km ²) ^b
Rumbek Centre	174,469	45.0
Rumbek North	140,385	29.2
Yuiol East	134,582	26.9
Cueibet	133,857	25.7
Rumbek East	133,798	55.6
Yuiol West	121,218	18.8
Awerial	53,763	11.9
Wulu	46,319	3.9

Source: (Map) NBS; (Table)^a WFP. 2013. ANLA; ^b Land scale data applied from FAO. 2011. Land Cover Atlas of the Republic of South Sudan

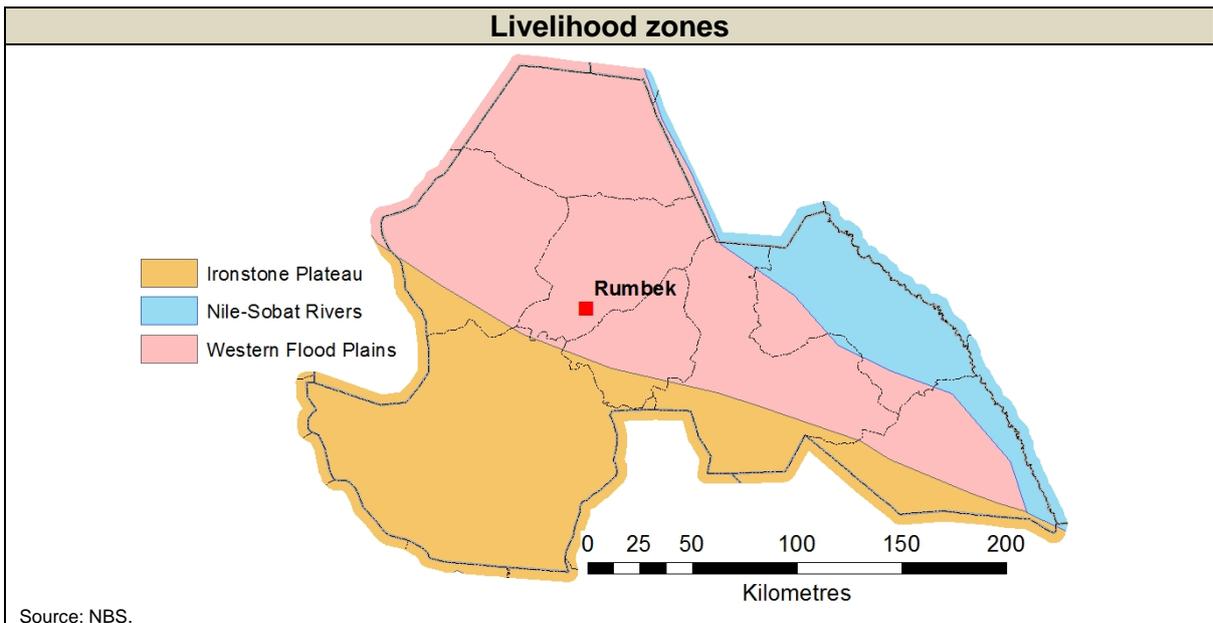
Climate chart (Rumbek)



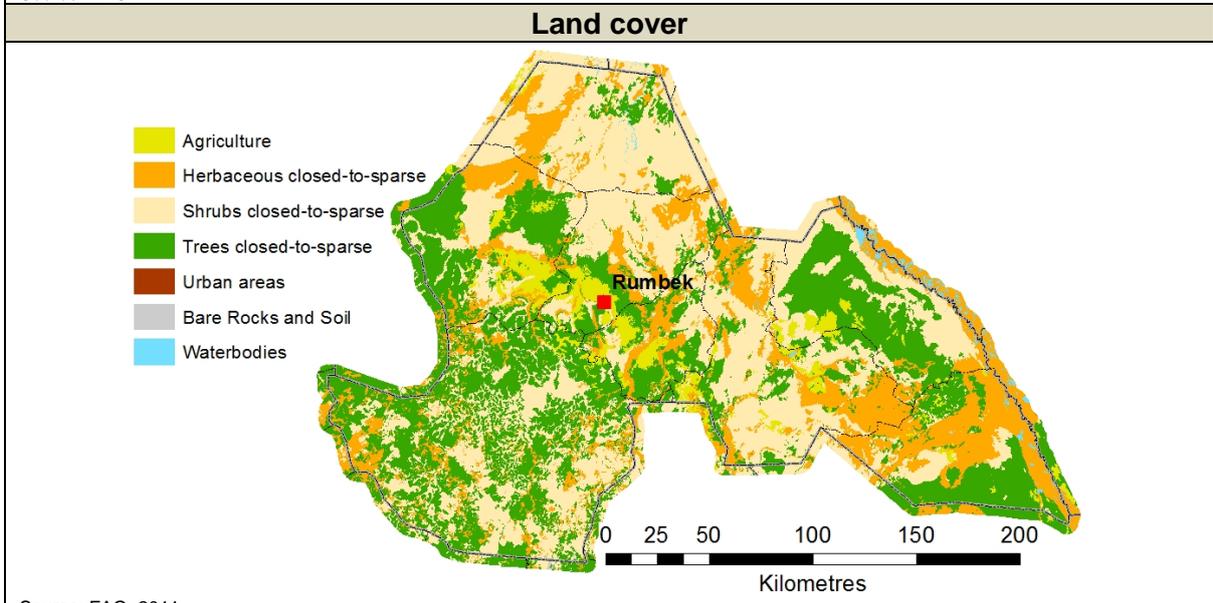
Annual ave. high temp.	33.9°C
Annual ave. low temp.	20.6°C
Average temperature	27.3°C
Ave. annual precipitation	959mm

Source: Climatedata.eu. 2013. Climate Rumbek. <http://www.climatedata.eu/climate.php?loc=suzz0016&lang=en> (accessed on 25th August 2013)

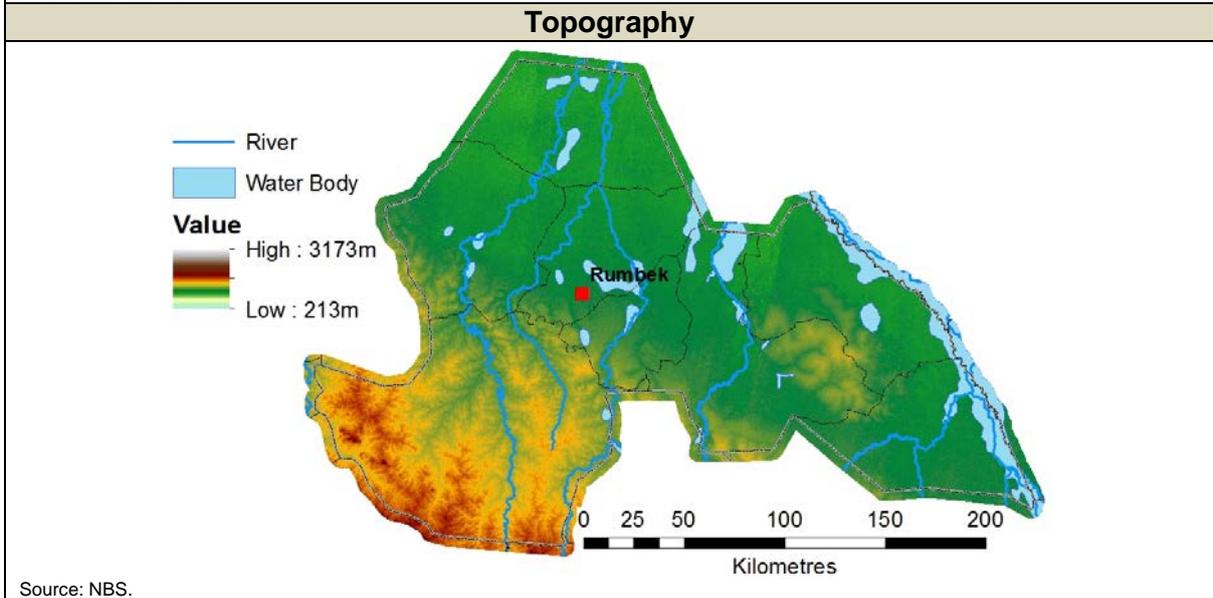
Lakes State



Source: NBS.

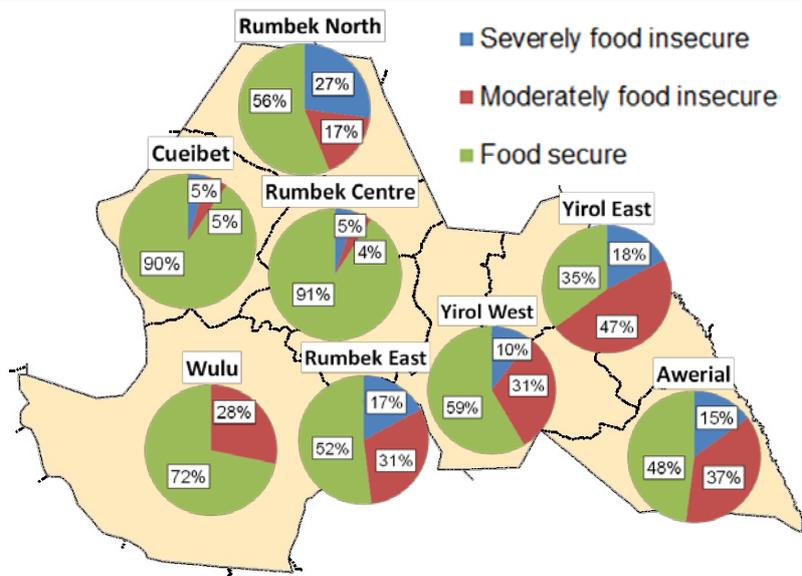


Source: FAO. 2011.



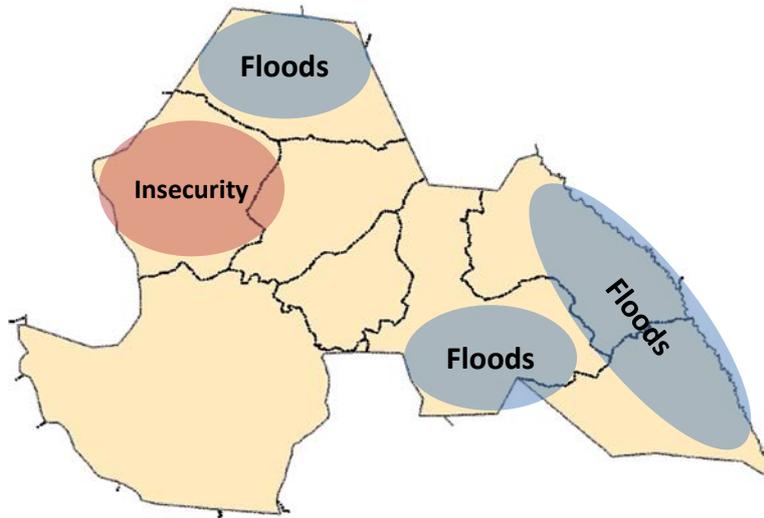
Source: NBS.

Estimated food security status by county (2013)



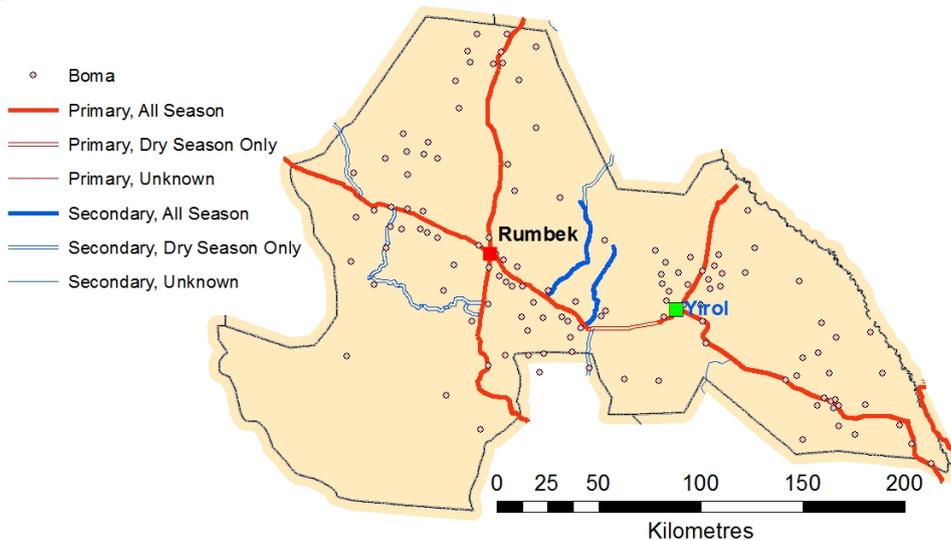
Source: WFP.2013.ANLA.

Insecurity and natural disaster



Source: CAMP survey team 2013.

Road and Boma location



Source: Road (WFP. 2013), Boma location (NBS).

State Ministry of Agriculture and Forestry (MAF)																																																			
Organogram		Staff																																																	
<pre> graph TD Minister --> DG[Director General] DG --> DA[Directorate of Agriculture] DG --> DF[Directorate of Forestry] DG --> DM[Directorate of Mechanization] DG --> DPB[Directorate of Planning and Budgeting] DG --> DFA[Directorate of Finance and Administration] </pre>		<table border="1"> <thead> <tr> <th style="background-color: #d3d3d3;">Section</th> <th style="background-color: #d3d3d3;">Number of staff</th> </tr> </thead> <tbody> <tr> <td>Directorate of Agriculture</td> <td>60</td> </tr> <tr> <td>Department of Extension</td> <td>(34)</td> </tr> <tr> <td>Department of Horticulture</td> <td>(8)</td> </tr> <tr> <td>Department of Crop Production</td> <td>(16)</td> </tr> <tr> <td>Department of Plant Protection</td> <td>(2)</td> </tr> <tr> <td>Directorate of Forestry</td> <td>45</td> </tr> <tr> <td>Department of Saw Mill</td> <td>(15)</td> </tr> <tr> <td>Department of Agro-forestry and Afforestation</td> <td>(15)</td> </tr> <tr> <td>Department of Utilisation and Marketing</td> <td>(15)</td> </tr> <tr> <td>Directorate of Mechanization</td> <td>17</td> </tr> <tr> <td>Department of Mechanisation and Ox-plough technology</td> <td>(9)</td> </tr> <tr> <td>Department of irrigation and Water conservation</td> <td>(8)</td> </tr> <tr> <td>Directorate of Planning and Budgeting</td> <td>6</td> </tr> <tr> <td>Department of Monitoring and Evaluation</td> <td>(1)</td> </tr> <tr> <td>Department of Budgeting</td> <td>(1)</td> </tr> <tr> <td>Department of Agriculture Information System</td> <td>(3)</td> </tr> <tr> <td>Statistics</td> <td>(1)</td> </tr> <tr> <td>Directorate of Finance and Administration</td> <td>21</td> </tr> <tr> <td>Department of Procurement</td> <td>(2)</td> </tr> <tr> <td>Department of Human Resource</td> <td>(5)</td> </tr> <tr> <td>Department of Information Technology</td> <td>(7)</td> </tr> <tr> <td>Unclassified staff</td> <td>(7)</td> </tr> <tr> <td>Total</td> <td>149</td> </tr> </tbody> </table>		Section	Number of staff	Directorate of Agriculture	60	Department of Extension	(34)	Department of Horticulture	(8)	Department of Crop Production	(16)	Department of Plant Protection	(2)	Directorate of Forestry	45	Department of Saw Mill	(15)	Department of Agro-forestry and Afforestation	(15)	Department of Utilisation and Marketing	(15)	Directorate of Mechanization	17	Department of Mechanisation and Ox-plough technology	(9)	Department of irrigation and Water conservation	(8)	Directorate of Planning and Budgeting	6	Department of Monitoring and Evaluation	(1)	Department of Budgeting	(1)	Department of Agriculture Information System	(3)	Statistics	(1)	Directorate of Finance and Administration	21	Department of Procurement	(2)	Department of Human Resource	(5)	Department of Information Technology	(7)	Unclassified staff	(7)	Total	149
Section	Number of staff																																																		
Directorate of Agriculture	60																																																		
Department of Extension	(34)																																																		
Department of Horticulture	(8)																																																		
Department of Crop Production	(16)																																																		
Department of Plant Protection	(2)																																																		
Directorate of Forestry	45																																																		
Department of Saw Mill	(15)																																																		
Department of Agro-forestry and Afforestation	(15)																																																		
Department of Utilisation and Marketing	(15)																																																		
Directorate of Mechanization	17																																																		
Department of Mechanisation and Ox-plough technology	(9)																																																		
Department of irrigation and Water conservation	(8)																																																		
Directorate of Planning and Budgeting	6																																																		
Department of Monitoring and Evaluation	(1)																																																		
Department of Budgeting	(1)																																																		
Department of Agriculture Information System	(3)																																																		
Statistics	(1)																																																		
Directorate of Finance and Administration	21																																																		
Department of Procurement	(2)																																																		
Department of Human Resource	(5)																																																		
Department of Information Technology	(7)																																																		
Unclassified staff	(7)																																																		
Total	149																																																		
Source: State MAF.		Source: State MAF.																																																	
Budget		Strategic plan																																																	
Category	2011/12 Budget	2011/12 Outturn	2012/13 Budget																																																
Salary	(Data not available)	(Data not available)	(Data not available)																																																
Operating	(Data not available)	(Data not available)	(Data not available)																																																
Transfers	(Data not available)	(Data not available)	(Data not available)																																																
Others	(Data not available)	(Data not available)	(Data not available)																																																
Capital	(Data not available)	(Data not available)	(Data not available)																																																
Overall total	(Data not available)	(Data not available)	(Data not available)																																																
Lakes State strategic plan (2012-15)																																																			
Objective		(Information not available)																																																	
Budget		(Information not available)																																																	
Plan		(Information not available)																																																	
Activities		(Information not available)																																																	
Services provided by State MAF and local government																																																			
(Technical Advice)																																																			
<ul style="list-style-type: none"> Technical advice is delivered to farmers by the AEO (Agricultural Extension Officer) in the counties and payams and by extension workers who support farmers voluntarily at the Boma level. State MAF provides training to extension officers and farmers. 																																																			
(Seeds and tools provision)																																																			
<ul style="list-style-type: none"> Seeds, tools, watering cans, and ox-plough attachments are provided by State MAF in some counties. 																																																			
(Demo farm and field day= visit field to share best agricultural practice)																																																			
<ul style="list-style-type: none"> Demo farms, which are about 10 feddan, are established in some counties. 																																																			
(Tractor hiring service)																																																			
<ul style="list-style-type: none"> The hiring charge is SSP 300/feddan in Rumbek East County 																																																			

B. Crop			
Services provided by DPs and NGOs			
Organization	Activities	Area	Target
ACROSS	<ul style="list-style-type: none"> • Agriculture training for farmers • Provision of ox-plough attachment and training • Provision of vegetable seeds and fruit seedlings 	Rumbek East and Rumbek Centre Counties	Farmers in the pilot areas
DRDA (Diar for Rehabilitation and Development Association)	<ul style="list-style-type: none"> • Provide agricultural training to farmers • Organise farmers' groups 	Yirol, Rumbek East and Rumbek Centre Counties	Farmers in the pilot areas
FAO	<ul style="list-style-type: none"> • Building CAD office • Provision of seeds 	Rumbek Centre, Rumbek East, Cueibet and Yirol Counties	Farmers in the pilot areas
OXFAM	<ul style="list-style-type: none"> • Training for crop production for farmers • Provision of seeds, tools and ox plough attachments • Creation of community assets • Building community access roads to local market 	Rumbek Centre County	Farmers in the pilot areas
CEFA	<ul style="list-style-type: none"> • Training for crop and vegetable production • Training female farmers • Provision of seeds, tools and ox plough attachments 	Rumbek East and Rumbek Centre Counties	Farmers in the pilot areas
WFP	<ul style="list-style-type: none"> • Provide food to vulnerable people 	8 Counties in Lakes State	Farmers in the pilot areas

*There are a number of DPs and NGOs in the State. The above information collected by CAMP team is shown as examples.

Services provided by private sector

(Tractor hiring)

- Tractor hiring services are provided by private service provider.
- The charge is from SSP 200 to 300/feddian for ploughing.

(Agro-dealer)

- Seed and tool supply system is underdeveloped.
- Some local traders deal with local seeds, tools and some fruit tree seedlings.

(Financial institution)

- Some finance institutions are available mainly in Rumbek.
- SUMI provides loans to cooperatives groups.
- DRDA and BRAC provide financial support to women's groups.

*1 SUMI: Sudan Micro Finance Institution

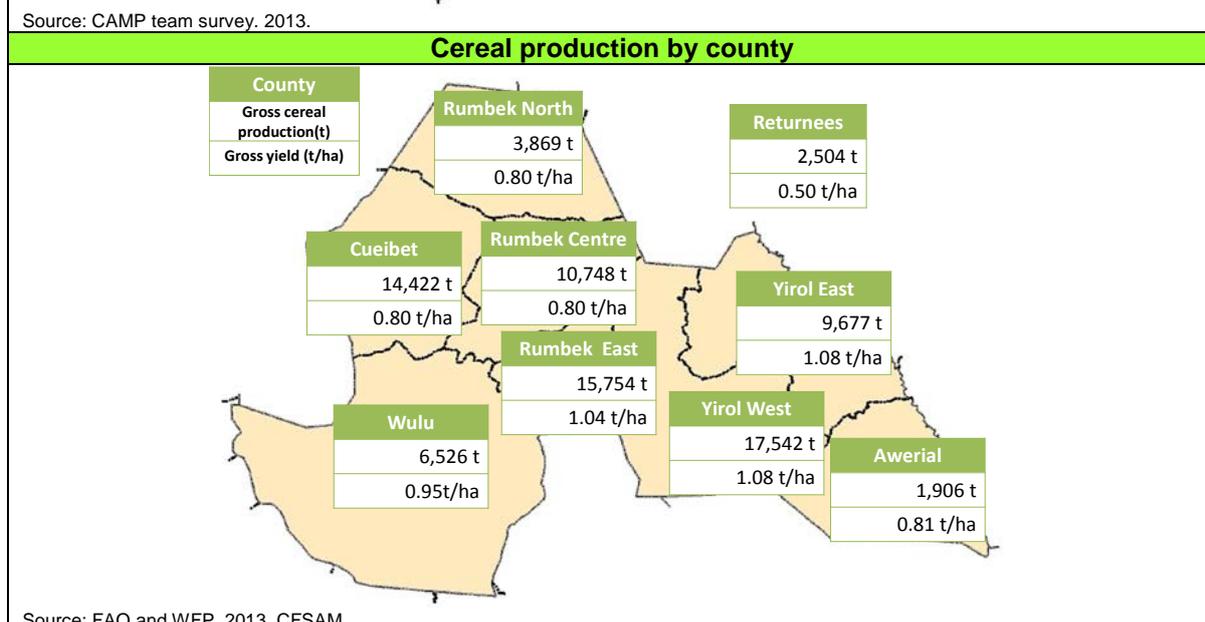
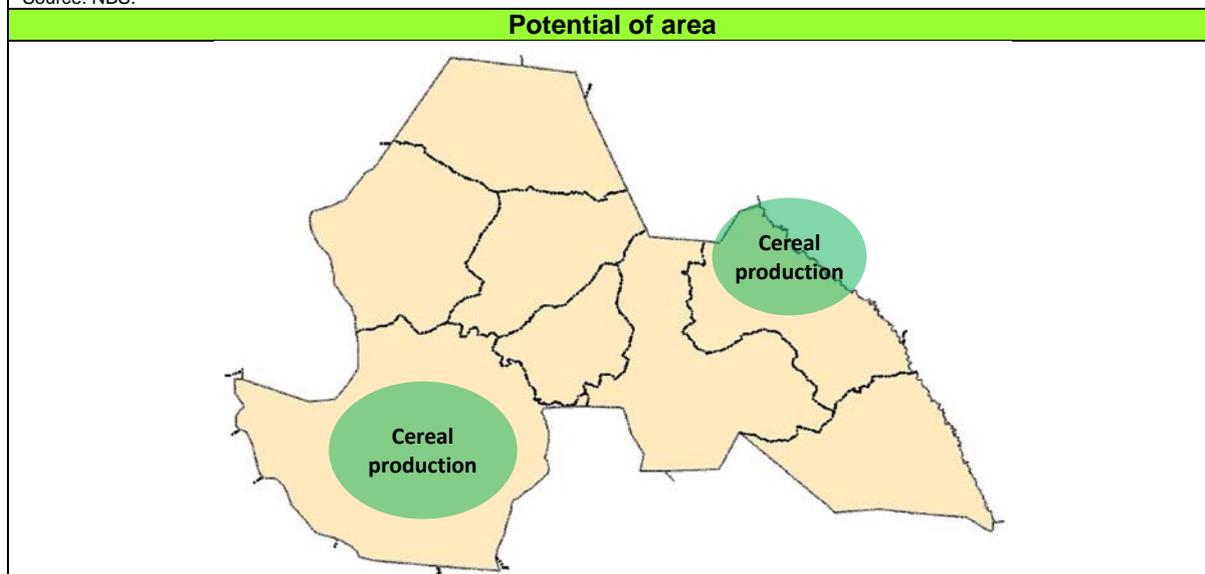
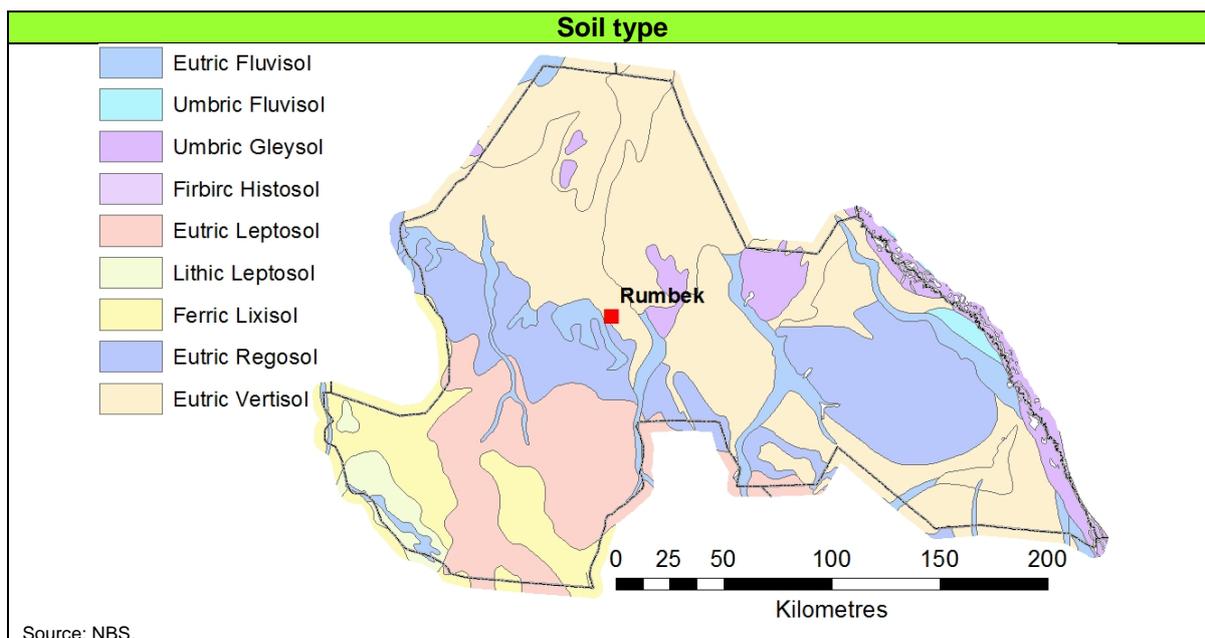
*2 DRDA: Diar for Rehavilitation and Development Association

*3 BRAC: Bangladesh Rural Adcancement Committee

Lakes State

Market						
Major agricultural products and their origin (Rumbek, May 2013)						
(Crop)			(Others)			
Item	Type	Origin	Item	Type	Origin	
Sorghum	Import	-	Okra	Import	-	
	Domestic	Lakes State		Domestic	Lakes State	
Maize flour	Import	Uganda	Jew's mallow	Import	-	
	Domestic	-		Domestic	Lakes State	
Groundnut	Import	-	Tomato	Import	Uganda	
	Domestic	Lakes State		Domestic	Lakes State	
Rice	Import	Uganda	Onion	Import	Uganda, Tanzania	
	Domestic	-		Domestic	-	
			Cabbage	Import	Uganda	
				Domestic	-	
			Carrot	Import	Uganda	
				Domestic	-	
			Amaranthus	Import	-	
				Domestic	Lakes State	
Source: CAMP survey team 2013. * This is not a representative sample.			Source: CAMP survey team 2013. * This is not a representative sample.			
Market price (Retail price, Rumbek, May 2013)						
Item	Unit	Price (SSP) (range)				
		Low season			High season	
Sorghum (Domestic)	Basin (10kg)	Dec-Jan	25	-	75	Feb-May
Maize flour (Imported)	25kg	Nov-Dec	40	-	70-90	May-Sep
Groundnut (Domestic)	Basin	Aug	10	-	30	May-July
Tomato (Imported)	1kg	Nov-Mar	17	-	25	May-Sept
Onion (Imported)	1kg	Jan-June	10	-	20	July-Sep
Source: CAMP survey team 2013. * This is not a representative sample.						
Transportation cost (Rumbek, May 2013)						
Type	Unit	Currency	Cost (range)			
Hiring charge(Kampala-Rumbek)	Truck (15,000kg)	Ush	25,000			
Customs	Truck (15,000kg)	SSP	8,000			
State tax (Tax rate not available)	Truck (15,000kg)	SSP	5,000			
Source: CAMP survey team 2013. * This is not a representative sample.						
Taxes and charges (Rumbek, May 2013)						
(Wholesaler size 4mx4m)						
Type	Cost (SSP)	Frequency				
Licence	260	Annually				
Trade union fee	25	Monthly				
(Retailer)						
Type	Cost (SSP)	Frequency				
Licence	75	Annually				
Rent	200	Monthly				
Trade union fee	30	Monthly				
Source: CAMP survey team 2013. * This is not a representative sample.						

Lakes State



Cross cutting issues
<p>(Land)</p> <ul style="list-style-type: none"> • Dispute over grazing land among pastoralists • Dispute between urban and sub-urban communities due to the expansion of urban areas without sufficient consultation with the sub-urban communities <p>(Gender)</p> <ul style="list-style-type: none"> • Few gender disparity issues in the state apart from land ownership issues of women <p>(Security)</p> <ul style="list-style-type: none"> • Cattle raiding happens frequently between the counties and with other states. • Armed robbery in some areas • In general, security has been improved by the caretaker governor appointed by the national government. <p>(IDPs and returnees)</p> <ul style="list-style-type: none"> • Living standards of the returnees and IDPs are lower than the average in the rural areas. <p>(HIV)</p> <ul style="list-style-type: none"> • The infection rate is not surveyed but some NGOs are conducting educational activities for HIV prevention. <p>(Others)</p> <ul style="list-style-type: none"> • Crop damaged by wild animals has been a serious problem for farmers. • Revenge attacks for cattle raiding make the situation worse. • Short rainy season (about 5 months) lowers agricultural production.
Opportunities
<p>Crop production</p> <ul style="list-style-type: none"> • Sufficient manpower • Soil is relatively fertile.
Challenges
<p>Overall</p> <ul style="list-style-type: none"> • Feeder roads are not well established. • Poor access to financial institutions • High tax rates • High transport costs • High labour costs
<p>Crop</p> <ul style="list-style-type: none"> • Market information system is not well established for the farmers. • Low land is affected by floods. • Drought occurs frequently. • Crop damaged by wild animals is getting serious. • Farmers do not have means of controlling pests and diseases. • Supply chain for improved seeds and agricultural tools is underdeveloped. Improved seeds are rarely available in the state. • Training opportunities for farmers are not sufficient due to lack of funds. • In some counties, demo farm has not been installed. • Human resource competes between farming and livestock activities in busy period.

C. Forestry**1. On-going and proposed projects****1-1. List of on-going projects**

Project name	Objectives/activities	Duration	Annual cost
Agro-forestry (FAO)	Promote agro-forestry activities	Ended 2012	(Information not available)
Agro-forestry (ACROSS)	Promote agro-forestry activities	On-going	(Information not available)

Source: CAMP team survey, 2013.

1-2. List of proposed projects

Project name	Objectives/activities	Duration	Annual cost
Afforestation	Develop plantation	(Information not available)	(Information not available)
Agro-forestry and extension	Awareness building for agro-forestry development	(Information not available)	(Information not available)
Nursery development	Propagate teak seedling for afforestation	(Information not available)	(Information not available)
Saw mill rehabilitation	Rehabilitate saw mill and increase timber production	(Information not available)	(Information not available)
Capacity development	Training of extension workers	(Information not available)	(Information not available)
Lulu and honey production	Develop lulu and honey production	(Information not available)	(Information not available)
Gum Acacia production	Develop gum acacia production	(Information not available)	(Information not available)

Source: CAMP team survey, 2013.

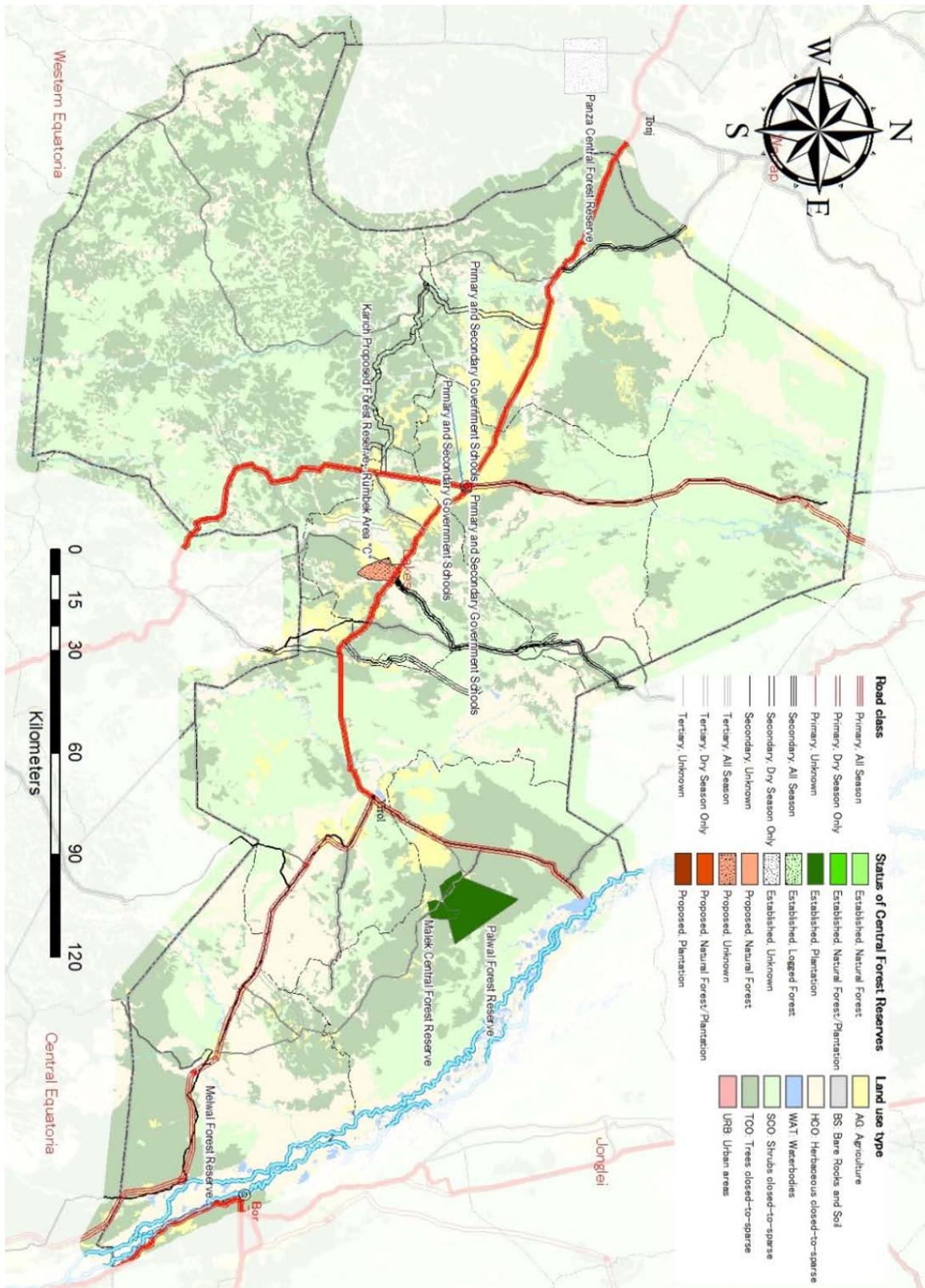
2. Land cover percentage to total area

County	AG	TCO	SCO	HCO	URB	BS	WAT	Total area	Total area (ha)
Awerial	2.2%	36.6%	13.2%	46.8%	0.0%	0.3%	0.9%	100.0%	450,702
Cueibet	8.4%	46.4%	28.2%	17.0%	0.0%		0.0%	100.0%	520,582
Rumbek Centre	6.5%	22.6%	50.4%	20.3%	0.3%		0.0%	100.0%	387,259
Rumbek East	13.4%	38.2%	24.5%	23.9%	0.0%		0.0%	100.0%	240,785
Rumbek North	0.8%	8.4%	71.3%	19.0%	0.0%		0.4%	100.0%	480,511
Wulu	1.0%	51.1%	32.9%	13.3%	0.0%	1.4%	0.3%	100.0%	1,183,090
Yirol East	4.7%	47.3%	36.2%	10.1%			1.6%	100.0%	500,250
Yirol West	5.3%	15.0%	50.6%	28.7%	0.1%		0.3%	100.0%	644,329
Total	4.2%	35.5%	38.5%	20.9%	0.0%	0.4%	0.5%	100.0%	4,407,508

Source: FAO. 2011. Land cover atlas of South Sudan. Rome.

Legend: AG=Agriculture, TCO=Tree closed-to-sparse, SCO=Shrubs closed-to-sparse, HCO=Herbaceous closed-to sparse, URB=Urban areas, BS=Bare Rocks and Soil, and WAT=Waterbodies.

3. Location of Central Forest Reserves and land cover in 2009



Source: NBS.

State Ministry of Animal Resources and Fisheries (MARF)																																	
Organogram			Staff																														
<pre> graph TD Minister --> DG[Director General] DG --> DFA[Directorate Finance and Administration] DG --> DLD[Directorate of Livestock Development] DG --> DF[Directorate of Fisheries] DG --> DERT[Directorate of Extension, Research and Training] </pre> <p>Source: State MARF.</p>			Breakdown of information not available <table border="1"> <thead> <tr> <th>Section</th> <th>Number of staff</th> </tr> </thead> <tbody> <tr> <td>Directorate of Finance and Administration</td> <td>-</td> </tr> <tr> <td>Department of Finance</td> <td>(-)</td> </tr> <tr> <td>Department of Planning</td> <td>(-)</td> </tr> <tr> <td>Department of Human Resources</td> <td>(-)</td> </tr> <tr> <td>Department of Procurement</td> <td>(-)</td> </tr> <tr> <td>Department of Administration</td> <td>(-)</td> </tr> <tr> <td>Directorate of Livestock Development</td> <td>-</td> </tr> <tr> <td>Department of Animal Health</td> <td>(-)</td> </tr> <tr> <td>Department of Animal Production and Range Management</td> <td>(-)</td> </tr> <tr> <td>Directorate of Fisheries</td> <td>-</td> </tr> <tr> <td>Directorate of Extension, Research and Training</td> <td>-</td> </tr> <tr> <td>Department of Extension</td> <td>(-)</td> </tr> <tr> <td>Department of Research and Training</td> <td>(-)</td> </tr> <tr> <td>Total</td> <td>140</td> </tr> </tbody> </table> <p>Source: State MARF.</p>	Section	Number of staff	Directorate of Finance and Administration	-	Department of Finance	(-)	Department of Planning	(-)	Department of Human Resources	(-)	Department of Procurement	(-)	Department of Administration	(-)	Directorate of Livestock Development	-	Department of Animal Health	(-)	Department of Animal Production and Range Management	(-)	Directorate of Fisheries	-	Directorate of Extension, Research and Training	-	Department of Extension	(-)	Department of Research and Training	(-)	Total	140
Section	Number of staff																																
Directorate of Finance and Administration	-																																
Department of Finance	(-)																																
Department of Planning	(-)																																
Department of Human Resources	(-)																																
Department of Procurement	(-)																																
Department of Administration	(-)																																
Directorate of Livestock Development	-																																
Department of Animal Health	(-)																																
Department of Animal Production and Range Management	(-)																																
Directorate of Fisheries	-																																
Directorate of Extension, Research and Training	-																																
Department of Extension	(-)																																
Department of Research and Training	(-)																																
Total	140																																
Budget			Strategic plan																														
<table border="1"> <thead> <tr> <th>Category</th> <th>2010/11 Budget</th> <th>2011/12 Outturn</th> <th>2012/13 Budget</th> </tr> </thead> <tbody> <tr> <td>Salary</td> <td>1,747,286</td> <td>(Data not available)</td> <td>(Data not available)</td> </tr> <tr> <td>Operating</td> <td>276,213</td> <td>(Data not available)</td> <td>(Data not available)</td> </tr> <tr> <td>Transfers</td> <td>-</td> <td>(Data not available)</td> <td>(Data not available)</td> </tr> <tr> <td>Others</td> <td>-</td> <td>(Data not available)</td> <td>(Data not available)</td> </tr> <tr> <td>Capital</td> <td>505,636</td> <td>(Data not available)</td> <td>(Data not available)</td> </tr> <tr> <td>Overall total</td> <td>2,529,135</td> <td>(Data not available)</td> <td>(Data not available)</td> </tr> </tbody> </table> <p>Source: State MARF. Unit: SSP</p>	Category	2010/11 Budget	2011/12 Outturn	2012/13 Budget	Salary	1,747,286	(Data not available)	(Data not available)	Operating	276,213	(Data not available)	(Data not available)	Transfers	-	(Data not available)	(Data not available)	Others	-	(Data not available)	(Data not available)	Capital	505,636	(Data not available)	(Data not available)	Overall total	2,529,135	(Data not available)	(Data not available)	Lake State Strategic plan (2012-16) <ul style="list-style-type: none"> Objective <ul style="list-style-type: none"> Ensure efficient and effective use of available resources in the achievement of rapid growth of the sector Provide the basis for increased synergies among all actors in the development of the sector Provide a basis for monitoring and evaluation Budget Plan (Information not available) <ul style="list-style-type: none"> Increase awareness of the investment in livestock and fisheries in Lakes state Increase the capacity of the staff to provide services Enhance availability of appropriate infrastructure facilities and equipment Increase livestock production and productivity Activities <ul style="list-style-type: none"> Implement livestock disease surveillance and reporting system Carry out vaccination campaign and maintain adequate stocks of drugs, vaccines, materials and equipment Establish diagnostic laboratory facility (including the purchase of equipment and consumable) Train livestock officers on dairy, poultry, range land, hides and skins and bee keeping Train fisheries in modern technology of fish production, preservation and marketing <p>Source: State MARF.</p>				
Category	2010/11 Budget	2011/12 Outturn	2012/13 Budget																														
Salary	1,747,286	(Data not available)	(Data not available)																														
Operating	276,213	(Data not available)	(Data not available)																														
Transfers	-	(Data not available)	(Data not available)																														
Others	-	(Data not available)	(Data not available)																														
Capital	505,636	(Data not available)	(Data not available)																														
Overall total	2,529,135	(Data not available)	(Data not available)																														
Service provided by State MARF and local government																																	
<p>(Animal production services)</p> <ul style="list-style-type: none"> Technical advice is provided to livestock keepers. <p>(Animal health services)</p> <ul style="list-style-type: none"> Vaccination Drugs on cost recovery Disease inspection and control Treatment and animal health advice Training of CAHWs (Community Animal Health Workers) 																																	

D. Livestock								
Service provided by National government institutions								
No national government institutions are in the state.								
Service provided by DPs and NGOs								
Organisation	Activities				Area	Period		
VSF (Vétérinaires Sans Frontières) -Belgium	<ul style="list-style-type: none"> Strengthening institutional capacity of MAF and MARF Improving productivity Animal health, production, food security recovery and livelihood programs Training of CAHWs 				Rumbek North and Centre Counties (constructed a slaughter house in Rumbek Centre and North Counties)	2009-2013		
Oxfam GB	<ul style="list-style-type: none"> Animal health, animal production, food security and livelihood programs Community, public work and WASH (Water, Sanitation and Hygiene) program Cash transfer to returnees households Training of CAHWs 				Rumbek North, Rumbek Centre and Cueibet Counties (constructed a slaughter house in Cueibet County)	Since 1993		
FAO	<ul style="list-style-type: none"> Animal health activities Supply and transportation of vaccines through State MARF Training of CAHWs Conduct FFS (Farmer Field Schools) Training of State MARF Staff Provided 1 hardtop and pickup land cruisers vehicles for State MARF 				Rumbek Centre Country	Since 2003		
NPA (Norwegian People's Aid)	<ul style="list-style-type: none"> Food security programs Provides drugs on cost recovery basis Training of CAHWs 				Yirol East and West Counties	Since 1995		
GIZ	<ul style="list-style-type: none"> Implementing fisheries project Capacity building 				Yirol East County	2008-2012		
Source: CAMP survey team. 2013. *CAHW: Community Animal Health Worker								
Services provided by private sector								
(Agro-dealer)								
<ul style="list-style-type: none"> Some agro-dealers supply veterinary drugs. 								
(Slaughter house)								
<ul style="list-style-type: none"> All the services in the slaughter houses are managed by the local government. 								
(Livestock market/auction yard)								
<ul style="list-style-type: none"> (Information not available) 								
Livestock population								
Type of Animal	Population by county							
	Awerial	Cueibet	Rumbek Centre	Rumbek East	Rumbek North	Yirol East	Yirol West	Wulu
Cattle	300,000	285,000	80,000	60,000	250,000	150,000	180,000	20,000
Sheep	60,000	55,000	42,000	39,000	43,000	46,000	50,000	25,000
Goat	65,000	63,000	62,000	55,000	61,000	50,000	54,000	40,000
Poultry	5,000	20,000	10,000	7,000	2,000	6,000	3,000	15,000
Pig	N/A	N/A	N/A	N/A	20	N/A	N/A	N/A
Total	430,000	423,000	553,000	161,000	356,020	517,020	873,040	1,390,060
Source: State MARF. N/A: Data not available								

Livestock diseases		
Type of Animal	Type of disease	Outbreak area in last 2 years
Cattle	Haemorrhagic septicaemia	All counties except Rumbek East County between 2011 and 2012
	Trypanosomiasis	Cueibet County
	East Coast fever	Awerial County
	Black quarter, Contagious bovine pleuropneumonia, Foot and mouse disease, Anthrax, Brucellosis	There was no outbreak in the last 2 years.
Sheep and goat	Peste des petits ruminants, Contagious caprine pleuropneumonia, Internal parasites, Mange, Foot rot	There was no outbreak in the last 2 years.
Poultry	Newcastle disease, Fowl pox, Infectious bronchitis, Chronic respiratory disease, Salmonellosis, Internal parasites	There was no outbreak in the last 2 years.
Equine	(Information not available)	(Information not available)

Source: State MARF.

]

Animal health issues

- Lack of drugs and equipment
- Lack of animal health regulations and laws
- Insufficient qualified animal health personnel
- Lack of offices at the counties
- Lack of laboratories for disease diagnosis

Market

Type of livestock and livestock product	Market
Butcheries	Rumbek Centre (domestic)
Auction yard (all livestock species)	Rumbek Centre (domestic)
Butcheries and auction yard	Yirol West (Yirol Town)
Live animal market (cattle, sheep and goat)	Yirol West (Agany) Yirol East (Nyang)
Live animal market (cattle, sheep and goat)	Rumbek North (Auction yard)
Live animal market (cattle, sheep and goat)	Rumbek East (Bar-Pakeny)
Live animal market (mostly cattle)	Awerial
Live animal market	Wulu
Honey market	

Source: CAMP survey team. 2013.

Market price

Counties Item	Price (SSP) (range)							
	Awerial	Cueibet	Rumbek Centre	Rumbek East (Bar-pakeny)	Rumbek North	Yirol East	Yirol West	Wulu
Cattle	500-2,000	400-800	500-1,000	500-800	400-700	500-800	500-1,000 450-700	N/A
Sheep	80-200	100-200	150-300	100-150	100-150	100-200	100-200	N/A
Goat	80-200	100-200	200-400	100-150	100-150	100-150	100-200	N/A
Chicken	Hen=20 Cock=40	Hen=15 Cock=30	Hen=30 Cock=50	Hen=20 Cock=40	Hen=30 Cock=40	Hen=20 Cock=40	Hen=20 Cock=40	Hen=15 Cock=30
Milk/1litre	5	5	5	5	2	5	5	N/A
Meat/1kg	10	10	15	10	10	10	10	10
Egg/each	2	2	2	2	N/A	2	2	2
Honey/1litre	N/A	20	30	20	N/A	N/A	20	10
Hide and skin	N/A	N/A	Hide=2 Skin=2	N/A	N/A	N/A	N/A	N/A

Source: CAMP survey team. 2013.

* This is not a representative sample.

N/A: Data not available

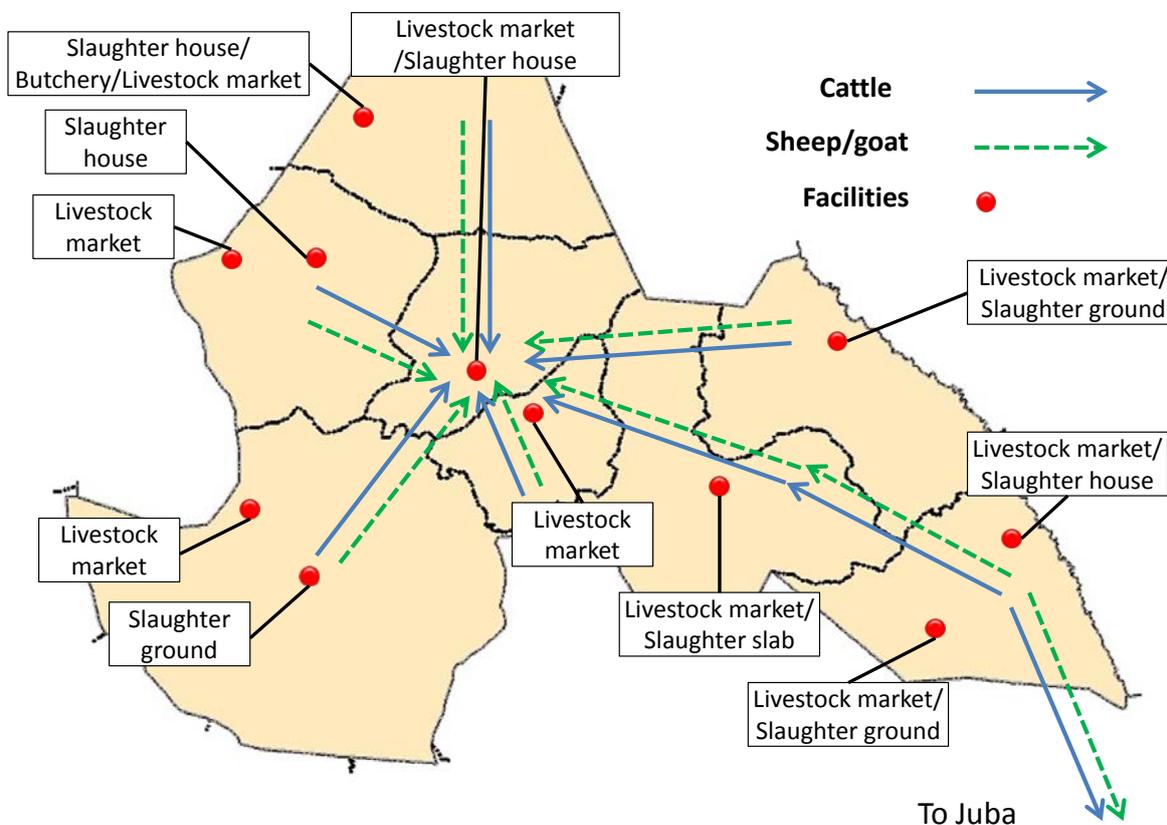
Taxes and charges		
Type	Cost (SSP)	Frequency
Live animal tax (Cattle, sheep and goat)	10% of the price for both seller and buyer	Daily in auction yard
Live bird tax	2/chicken	Daily in the market
Meat inspection fee	10/cattle	Daily at slaughter house
Hide charge at slaughter house	5/each hide	Every 2-3 months
Skin charge at slaughter house	3/each skin	Every 2-3 months

Source: CAMP survey team. 2013.
* This is not a representative sample.

Major livestock species and products by livelihood zone					
Western Flood Plains		Ironstone Plateau		Nile-Sobat Rivers	
Type of Animal	Breed	Type of Animal	Breed	Type of Animal	Breed
Cattle	Local Nilotic	Cattle	Local Nilotic	Cattle	Local Nilotic
Sheep	Local	Sheep	Local	Sheep	Local
Goat	Local	Goat	Local	Goat	Local
Chicken	Local	Chicken	Local	Chicken	Local
Pig (Rumbek North)	Local			Bee (Wulu)	Local
Livestock products		Livestock products		Livestock products	
<ul style="list-style-type: none"> • Meat (beef, mutton, pork and poultry) • Milk • Egg • Hide and skin 		<ul style="list-style-type: none"> • Meat (beef, mutton, pork and poultry) • Milk • Egg • Hide and skin 		<ul style="list-style-type: none"> • Meat (beef, mutton, pork and poultry) • Milk • Egg • Hide and skin 	

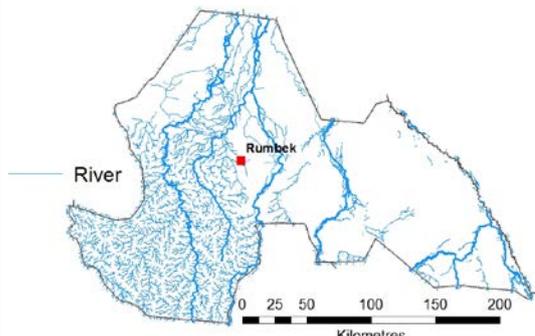
Source: CAMP survey team. 2013.

Livestock related facilities and trade routes



Source: CAMP survey team. 2013

Cross-cutting issues
<p>(Land)</p> <ul style="list-style-type: none"> • No clear land tenure policies • The repatriation of the IDPs and returnees from the North have caused tenancy inconvenience, as some of the lands allocated or meant for livestock infrastructures have been occupied by the returnees. <p>(Migration)</p> <ul style="list-style-type: none"> • Like any other pastoral communities, the livestock keepers in Lakes State migrate seasonally from their permanent settlements to the “Toichs” typically along the River Nile. Since it is the only permanent water source during dry season, animals accumulate leading to overgrazing, pervasive diseases transmission and conflicts over resources. • Seasonal migratory routes are affected by the accessible and availability of the pastures and water resources as well as the security status in the area. <p>(Conflict and insecurity)</p> <ul style="list-style-type: none"> • Seasonal migration of livestock keepers is occasionally accompanied with lots of challenges, conflicts over resources, youth disputes over women and cattle rustling. It sometimes results in deadly inter-communal clashes leading to death of hundreds and this in turns causes insecurity. <p>(Gender disparities)</p> <ul style="list-style-type: none"> • In Lakes State, few gender disparities, but traditional beliefs prohibit the involvement of women in some livestock keeping activities. (e.g. Going after the cattle or taking cattle for grazing and having full ownership of the livestock especially cattle.) • After the war, with an increase in the number of widows, they have started owning livestock. <p>(Drought and floods)</p> <ul style="list-style-type: none"> • No droughts occur since the state lies within the Western Flood Plains. • It is frequently affected by seasonal floods that usually happen due to heavy rain and excess flow of water from the River Nile.
Opportunities
<ul style="list-style-type: none"> • Huge potential of livestock population • Growing human population in the urban areas increases the demand of livestock products. • Huge hide and skin production • Vast land and abundant rangelands with good quality pastures and water sources
Challenges
<ul style="list-style-type: none"> • Lack of capital funds and budgetary constraints livestock improvement. • Insecurity and resource based conflicts (i.e. cattle rustling) • Disease outbreaks • Lack of drugs, vaccines and equipment • Lack of animal health regulations and laws • Inadequate qualified staff and lack of offices at the county level • Lack of livestock infrastructure, poor roads and other facilities at the county level • Lack of transport means

E. Fisheries					
Numbers of fishing households (ANLA 2012)		24,498			
Fish production	Unknown. Most of the volume comes from Shambe in Yirol East, but the rivers and lakes are very important in the dry season, and provide the fresh fish that is eaten in Rumbek, for which there is a very great demand. There is no ice availability in the state.				
Fish exports	From the eastern parts of the state, Yirol East County, next to the Nile river, fish is exported both north to Sudan and south to Juba. Before the border closed, boats would visit Shambe and buy fresh and dried fish which was taken north to Khartoum. Dry fish from Lakes is traded throughout Warrap, NBG and WBG States, and of course to Rumbek and other larger towns in the state. Small fish from rivers and lakes are dried and sold in towns.				
Fish imports	Uganda pelagic fish, Daga'a and salted catfish and smoked Nile perch, is in the markets at Rumbek.				
Seasonality	All year but increases in the wet season in the Nile and flood plains, but the river and lake fishery is most active in the dry season.				
Landing sites	Many permanent settlements on the Nile in Yirol East and Shambe. Fishermen there are members of a co-operative. Also temporary fishing camps near swampland near to Rumbek and elsewhere where there is permanent water in the dry season. The fresh fish trade overland sometimes stops in the wet season due to poor roads. Poor security in some Eastern parts of the state.				
Vessels	Planked and dugout canoes. (steel canoes used mainly for transport)				
Informal taxation	It is haphazard (1 in 10 fish usually) and highly resented. Transport taxes are high on fish from Uganda.				
Investment	A Chinese group has put forward a proposal to ship fish from Shambe down to Juba but as at September 2013 no development had occurred.				
Aquaculture					
There is no aquaculture in the state. Much of the state appears unsuitable due to flooding.					
Post- harvest and marketing					
<p>A large proportion of the fish produced in Lakes is dried where it is sold mainly in plaited strips. If from the inland areas in strips (catfish) or if small, whole. The small dried fish is often made into Mandesha, which is easily transported and highly popular. The demand for fresh fish is high and largely unsatisfied. Rumbek (unless noted) prices are given below. (Photo: Drying fish Shambe)</p>					
Species	Presentation	SSP/kg	Species	Presentation	SSP/kg
Clarius spp	Dried plait	42.65	Gymnarchus niloticus	Fresh	21.09
Distichotus sp	Dried plaits	10.83	Heterotus niloticus	Fresh	5.01 Shambe
Heterotus niloticus	Dried plaits	54.05	Clarius spp	Sun dried	41.67
Lates niloticus	Dried plaits	59.70	Heterotus niloticus	Sun dried	48.78
Protopterus spp	Dried plaits	49.30	Uganda pelagics	Sun dried	25.21
Clarius spp	Fresh	6.37 Shambe			