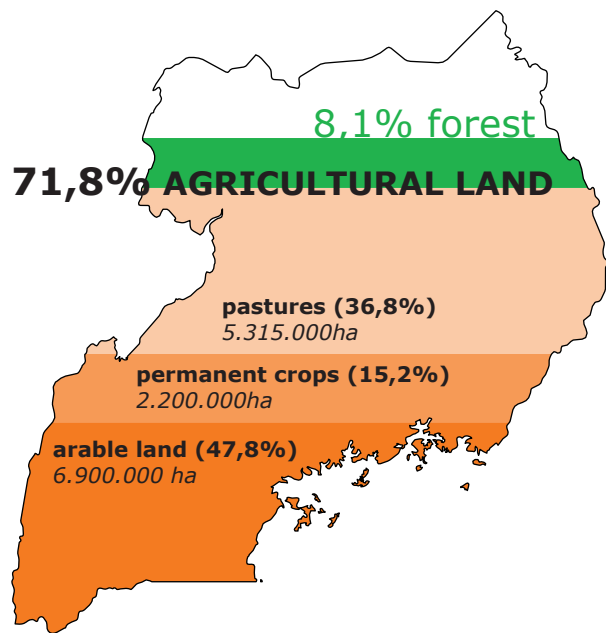


FACTSHEET

UGANDA

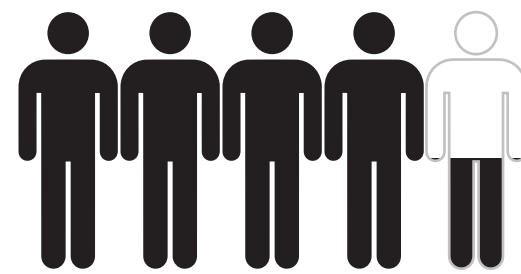
CIRCULAR

REFUGEE CAMPS



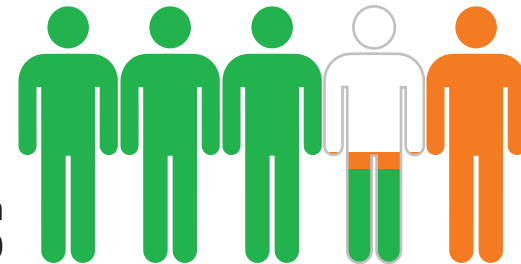
country size
24.155.000ha

14.415.000ha
AGRICULTURAL LAND



=10 million persons

total population
44.270.563



rural population
33.745.000

urban population
10.525.083

80% of Ugandans rely directly
on land, agriculture and fishing
for their livelihoods

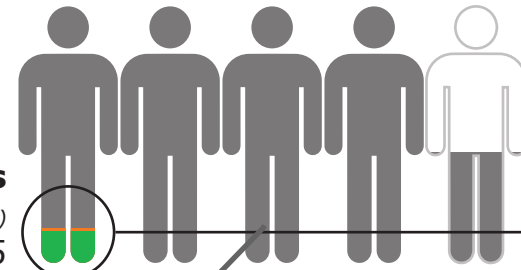
41% Prevalence of undernourishment
and increasing (% of population)

FAO

refugees

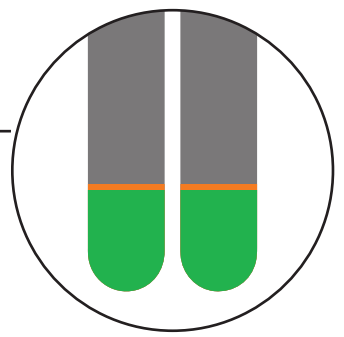
(as part of total population)

1.331.565

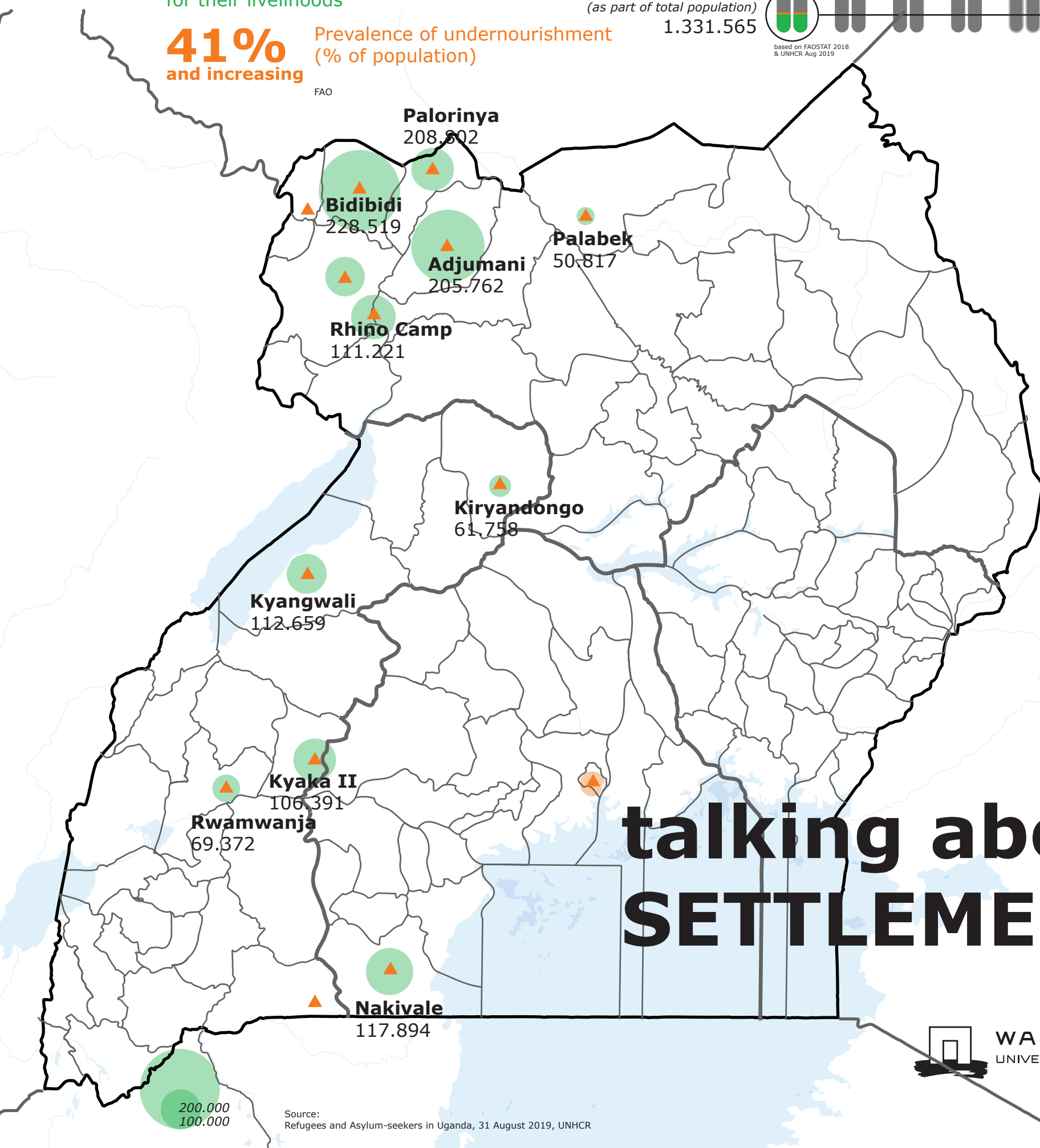


based on FAOSTAT 2018
& UNHCR Aug 2019

urban
72.357



rural
1.259.208

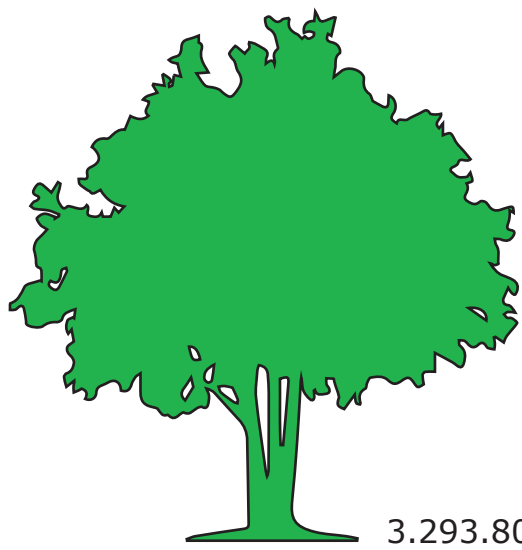


talking about SETTLEMENTS

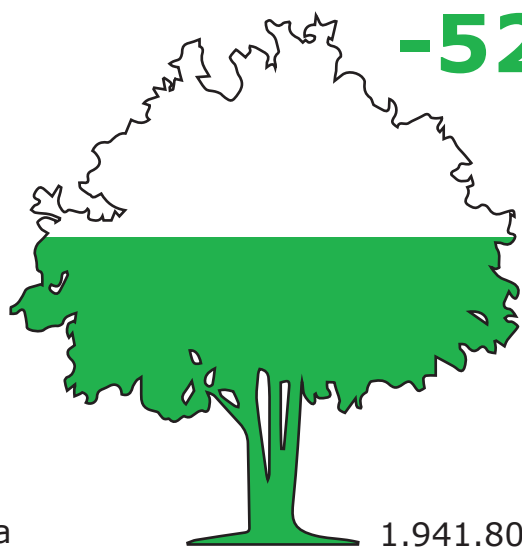


WAGENINGEN
UNIVERSITY & RESEARCH

Source:
Refugees and Asylum-seekers in Uganda, 31 August 2019, UNHCR



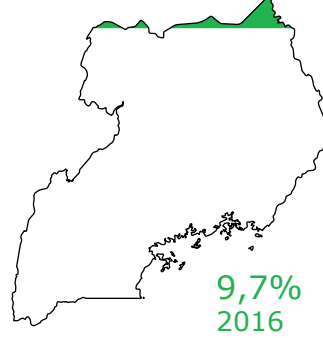
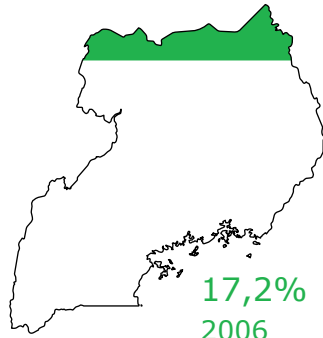
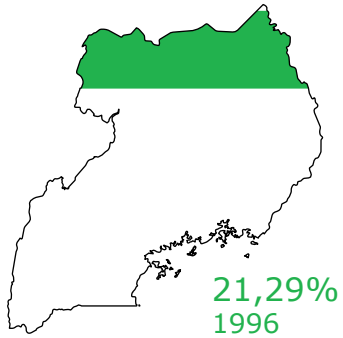
3.293.800 ha
2006



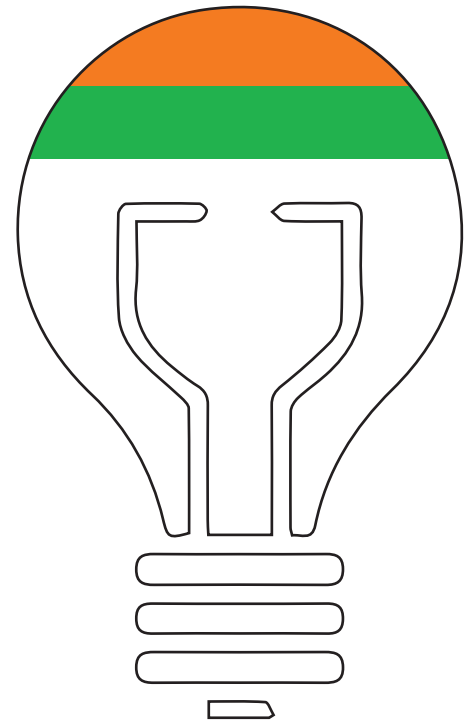
1.941.800 ha
2016

-52%

LAND USE CHANGE & FUELWOOD



Forest area (% of land area)
World Bank / FAO



rural
11.43%
total
22%

ENERGY

electrification rate

DEFORESTATION

41-46%
land degradation

severe degraded
10-12%

Sources: Ministry of Agriculture, Uganda / CSA Country Profiles CIAT 2017

- > low soil fertility
- > extreme nutrient depletion
- > soil erosion
- > low productivity

Need to adopt appropriate agricultural technologies
including soil and water conservation techniques
UNHCR, operational update 2018

LOW AGRICULTURAL PRODUCTIVITY

low levels of intensification
<30% use FERTILIZERS/IMPROVED SEED

The land is often left un-utilized in between rice
crops resulting in reduced land productivity

1/3 of crop production is marketed and
less than 7% is exported

< 5% of products
are processed

CSA Country Profiles CIAT 2017

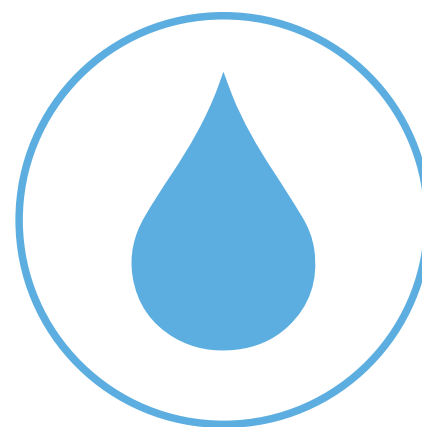
food loss **20-30%**
WFP 2016



Refugees get:
50x50 m for agriculture
20x20m for residential

need for integrated (solid) waste management plans

Environmental Health Strategy

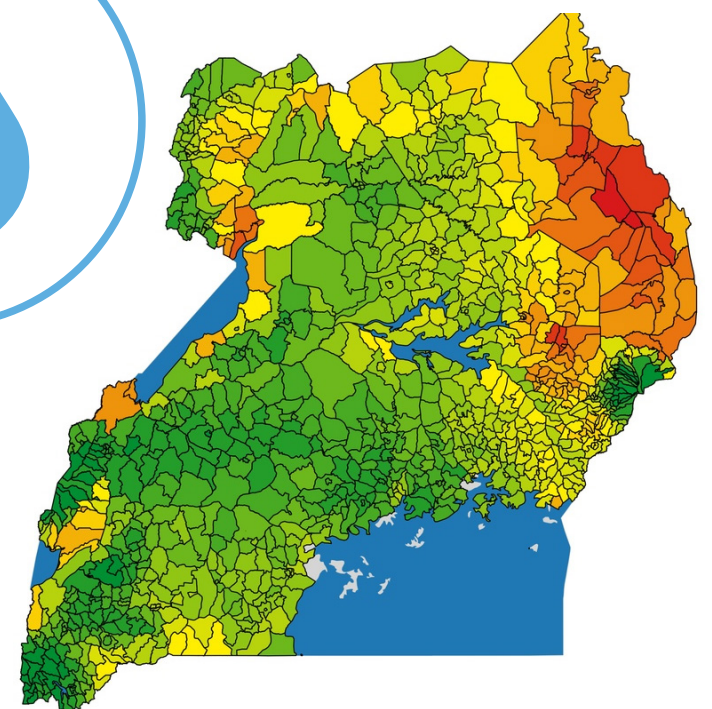


↓ **10%** water availability
crop income ↓ **38.3%**

DROUGHT is emerging issue

- > frequency
- > production
- > food shortages

Turyatunga, 2015, p. 240) (Hill & Mejia-Mantilla, 2017, p. 20) MWE, 2015a, p.vi



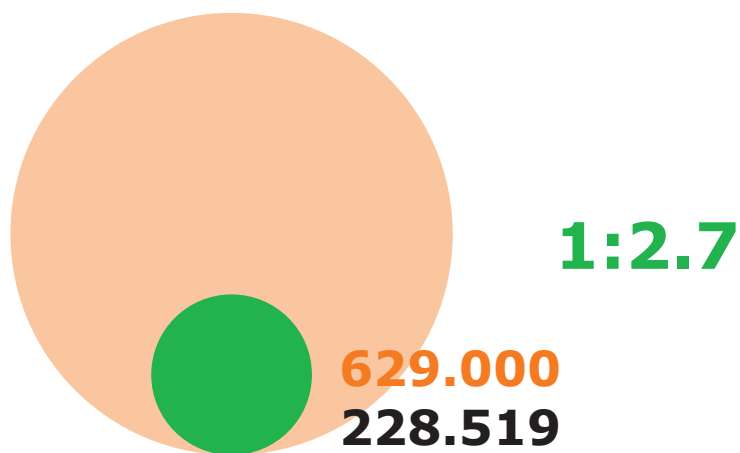
Low Risk Areas (Average loss below 5%)
Medium Risk Areas (Average loss 5% to 10%)
High Risk Areas (Average loss above 10%)

Uganda risk areas -satellite based drought index
(Netherlands Space Office)

30%

of all aid resources have to
benefit the host community

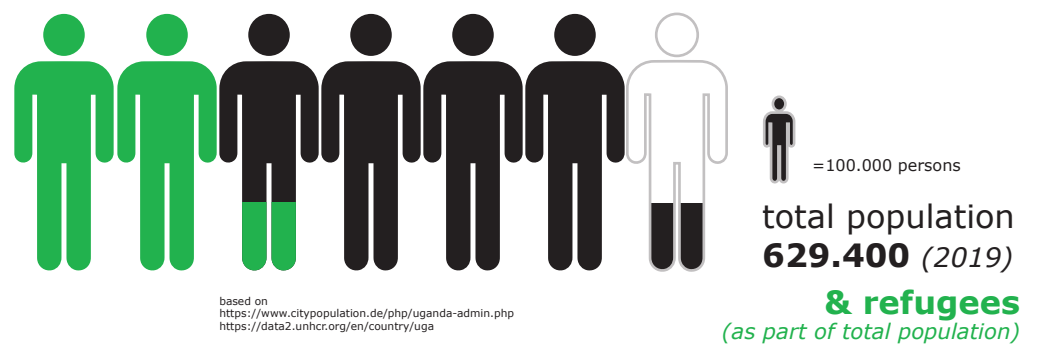
BIDI BIDI SETTLEMENT



YUMBE DISTRICT
area 2321 km2
density 232.100 ha
density 271,2 /km2

forest 2010 63800 ha (28%)
estimated loss 2001-2018
7730ha (8,5%)

www.globalforestwatch.or



Total HOUSEHOLDS
43.264 **87%** WOMEN & CHILDREN

annual deficit woody biomass Bidibidi

314.180 tonnes per day
depletion is URGENT MATTER

fuelwood consumption Bidibidi

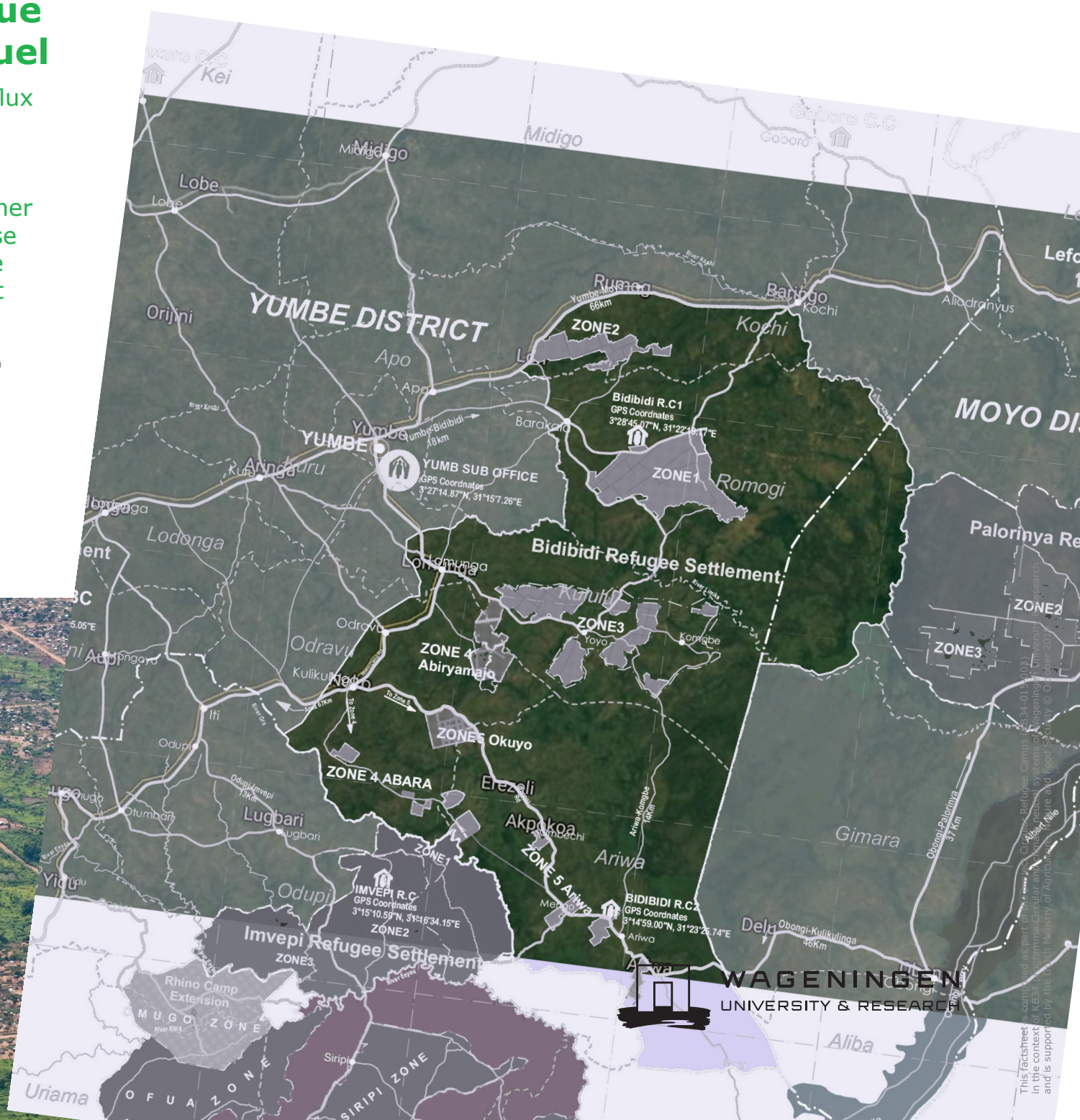
952 tonnes per day
347.480 tonnes per year

2017 baseline for the Bidibidi settlement, FAO UNCR 2017

There is a **clear risk of high levels of deforestation and land degradation due to the increased woodfuel demand** caused by the sudden influx of refugees to the Bidibidi settlement.

It should be a priority to improve the management of existing forests and other woodlands and to plant trees to increase the production of woody biomass in the settlement and on the lands of the host community.

Rapid woodfuel assessment 2017 -baseline for the Bidibidi settlement, Uganda
FAO/UNHCR





Dependency on water trucking operations high

BIDI BIDI 46%

settlements almost **2x** higher demand
than host communities

Data collection survey on social infrastructure needs of refugee-hosting communities in Northern Uganda, July 2018

Conflicts over access to firewood and environmental degradation

need a more focused approach to address the core structural driver of the conflict.

Conflicts over natural resources are real and unresolved.

Contested Refuge: The Political Economy and Conflict Dynamics in Uganda's Bidibidi Refugee Settlements, 2018

LAND ISSUES

> Quality of land

"refugees argue that land is impossible to cultivate, either because it too rocky or too close to livestock or too far from their home"

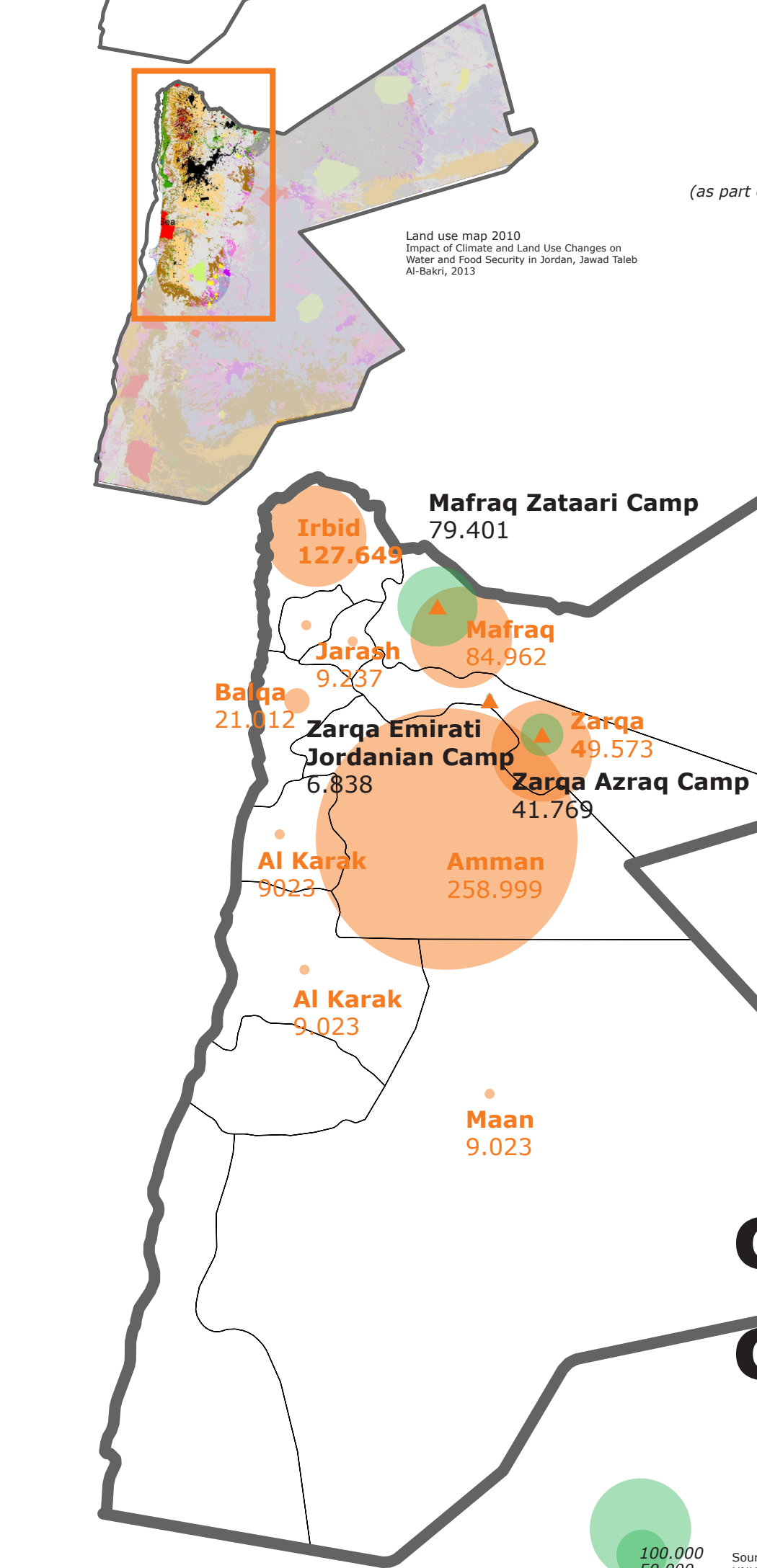
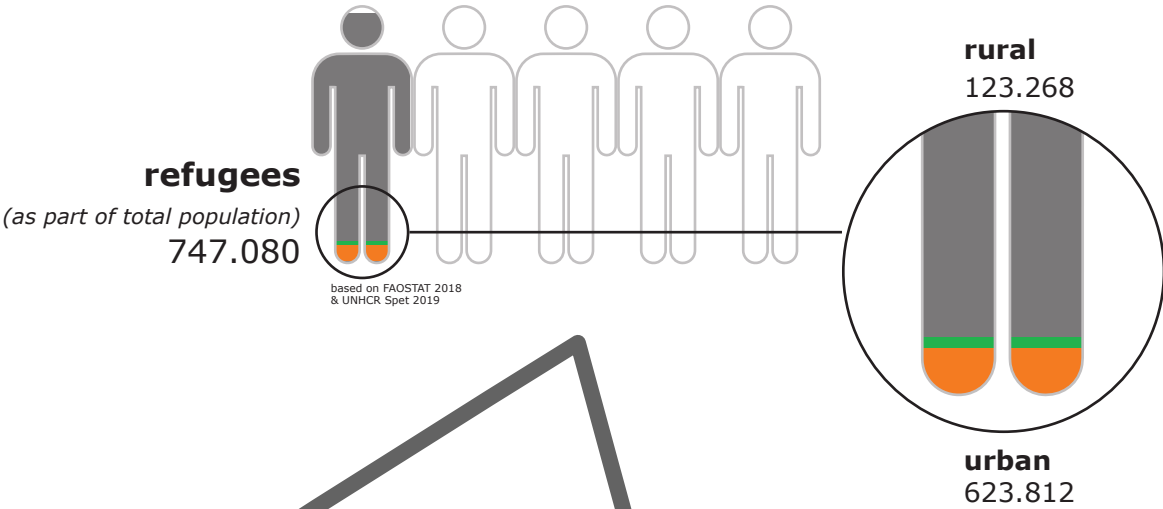
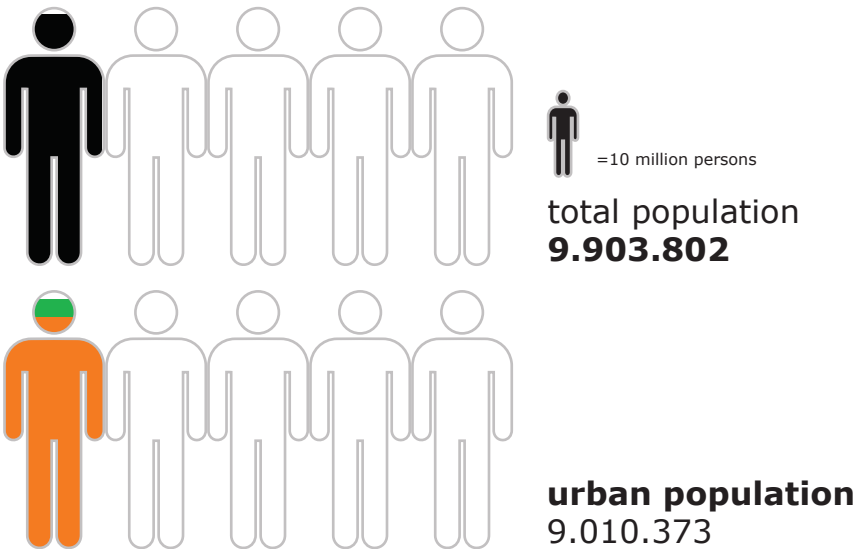
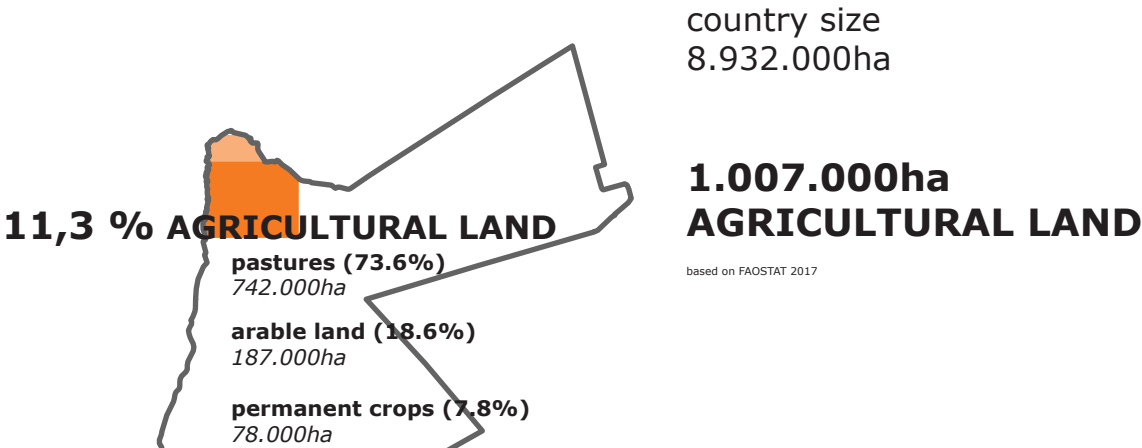
> Land dispute

"The Bidibidi settlement is located on the communal land of the Aringa people, who are governed by customary laws. In general, communal land falls under the control of the specific clan with historical claim to the area. Under this system, each clan has a designated "land chief" responsible for speaking on behalf of the community. Most of Bidibidi is on land that was not used prior to the refugees' arrival, as it was considered unsuitable for agriculture. But....

this land supported hunting, livestock grazing and charcoal production critical to the livelihood of the host population.

Conflict dynamics in the Bidibidi refugee settlement in Uganda, Conflict Trends 2018/4, ACCORD







WATER STRESS

100,1% Aquastat

Freshwater withdrawal as % percentage of total renewable water resources

96,42 % (2016)

By sector (% of total water withdrawal)

AGRICULTURE 53,13%

INDUSTRIAL 3,1%

MUNICIPAL 43,7% Aquastat



76 BILLION LITERS/YEAR
lost by leakage

Tapped Out, MercyCorps, March 2014

2020 > 2030

↓ **20% to 30%** less **PRECIPITATION**

↑ temperature **+6 °C** and the number and duration of droughts will double.

↑ number
↑ duration

DROUGHT X2

Future adaptation to extreme droughts in Jordan will be an immense challenge. The projected negative impacts of more severe droughts of greater duration

CALLS FOR ESSENTIAL ALTERNATIVES

Increasing drought in Jordan: Climate change and cascading Syrian land-use impacts on reducing transboundary flow, Rajsekhar 2017
Jordan Water Project, Stanford Woods Institute for the Environment's Global Freshwater Initiative, 2017

OVEREXPLOITING GROUNDWATER RESOURCES
Amman Zarqa

194%

OVERPUMPING RATE

155% average Jordan

Jordan -Water along the food chain, FAO 2015

Reused wastewater is an essential element of Jordan's water strategy. Sewage treated wastewater should be the most important source of water in irrigation in the near future.

FAO Aquastat

Waste generation

urban 0.9 kg/person/day

rural 0.6 kg/person/day

50% ORGANIC

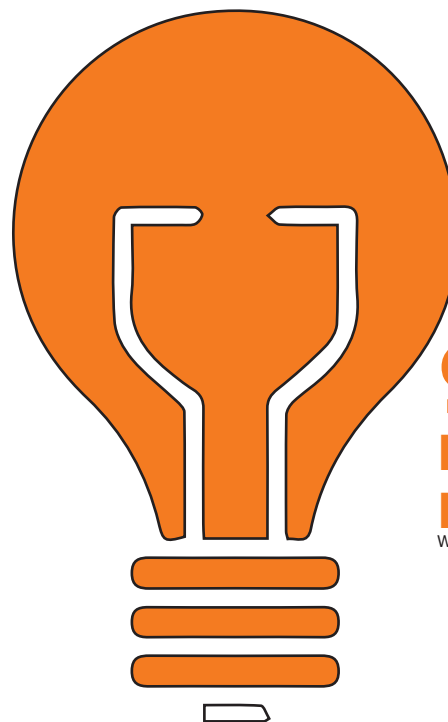
Solid Waste value chain analysis Irbid & Mafrq -Jordan, UNDP 2015

Jordan's annual renewable resources of less than

100m³ per capita

are far below the global threshold of severe water scarcity of 500m³ per capita

UNHCR



96.81 %
Energy imports 2014
Net % of energy use

WorldBank

By the end of 2018, Jordan was producing 1,130MW of power from renewable energy resources, accounting for about 11% of total electricity requirements.

AMBITION JORDAN

to **BOOST RENEWABLE**

ENERGY SOURCES 20% by 2025

Ministry of Energy & Mineral Resources (MEMR), 2019

FACTSHEET

JORDAN

CIRCULAR

REFUGEE CAMPS

AL ZA'ATARI

Al Mafrq

Al-Bādīah ash-Shamāliyah al-Gharbiyah

area 669 km²
density 66.900 ha
369.4 /km²

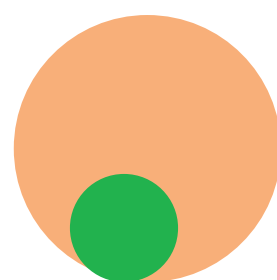
population 247.031 (2015)
74.965 (2004)

Qasabah al Mafrq

area 601 km²
density 326.7 /km²

population 196.196 (2015)
101.712 (2004)

ARID AREA

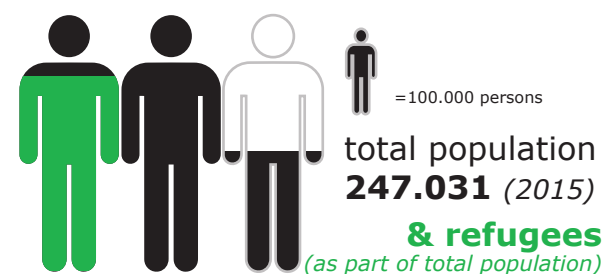


247.031

76.892

Source:
UNHCR Jordan-Zaatari Refugee Camp
factsheet June 2019

5,3 km²



=100.000 persons
total population
247.031 (2015)

& refugees
(as part of total population)



12.9-megawatt SOLAR PLANT
opened in November 2017

saves around **5.5 million US \$/year**
provision of electricity to refugees' homes
from **8 hours up to 12 hours**

UNHCR Jordan-Zaatari Refugee Camp
factsheet June 2019



SOLID WASTE management

& community-led LOW COST RECYCLING

are priorities UNHCR, 2019

**0.85 kg solid waste
produced per person per day**

M.N. Saidan et al./Waste Management 61 (2017)

750m³/day SOLID WASTE

WASTE GENERATION

60 TON/DAY UNHCR, 2016

currently controlled dumping at
the Al-Hussainyyat dumpsite

> 259 tonnes
collected every week for recycling.

Recycle project Oxfam, Sept 2019

WASTE TO ENERGY

initiative for **2 BIOGAS HUBS**

food and animal waste
> clean and safe fuel and fertilizer

2016 Clinton Global Initiative (CGI) and Solar C3ITIES

progress?

water & waste water NETWORK recently developed

2016

>3 internal wells

CAPACITY 3,800m³

> wastewater treatment plant

CAPACITY 3,600m³/d;

+ piped water supply distribution system

+ piped sewage network

UNHCR, 2019



...still 35 liters per person per day,

which is under the absolute water scarcity level (of 60 l)?

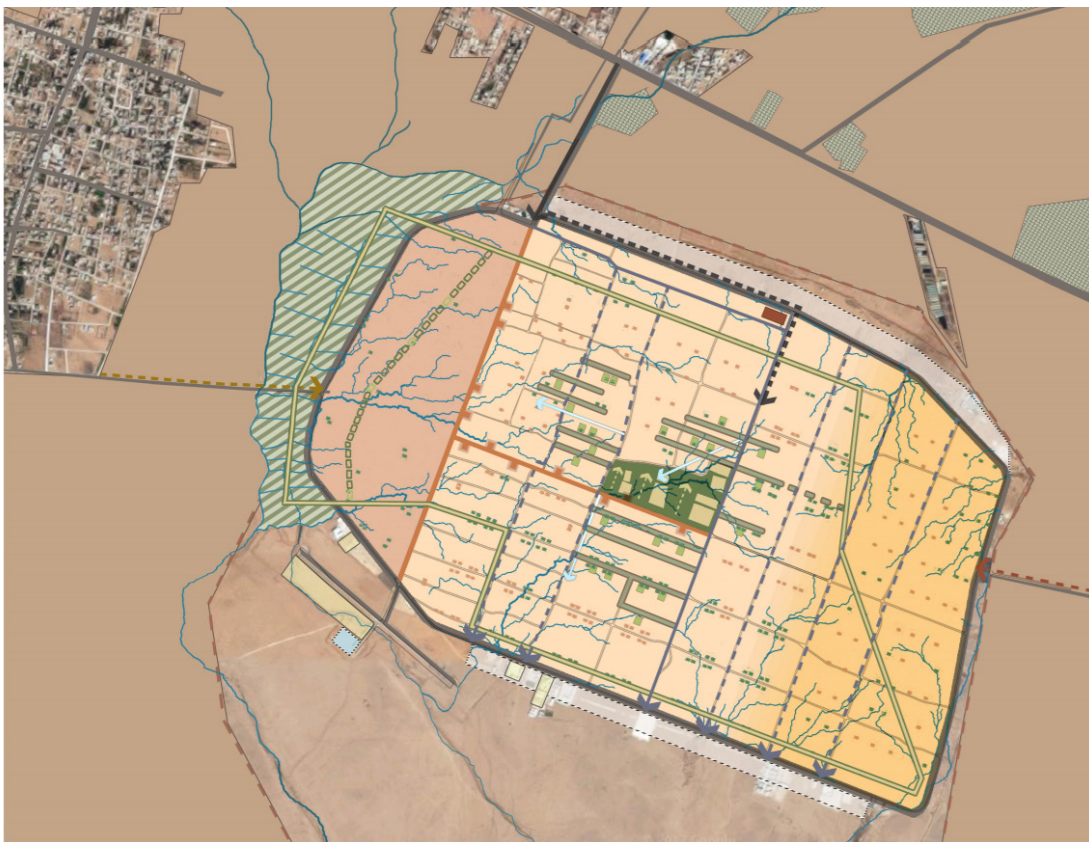
IFPO, 2018

**20 additional
watertrucks /day**

UNHCR, 2017



WAGENINGEN
UNIVERSITY & RESEARCH



Source: Concept Design WADI PARK, Za'atari Jordan, Lodewijk Baljon Landscape Architects 2018

ZA'ATARI WADI

flood management

Work permit holders

37% of Zaatari Camp
working age population (18 to 60)
Factsheet Al Zaatari, UNHCR, 2019

entrepreneurship & EMPLOYMENT

3,000 businesses
with a total value of

\$13 million per month
WEF, 2019

the camp usually experiences harsh weather conditions during the winter months, an interagency winterization plan has been put in

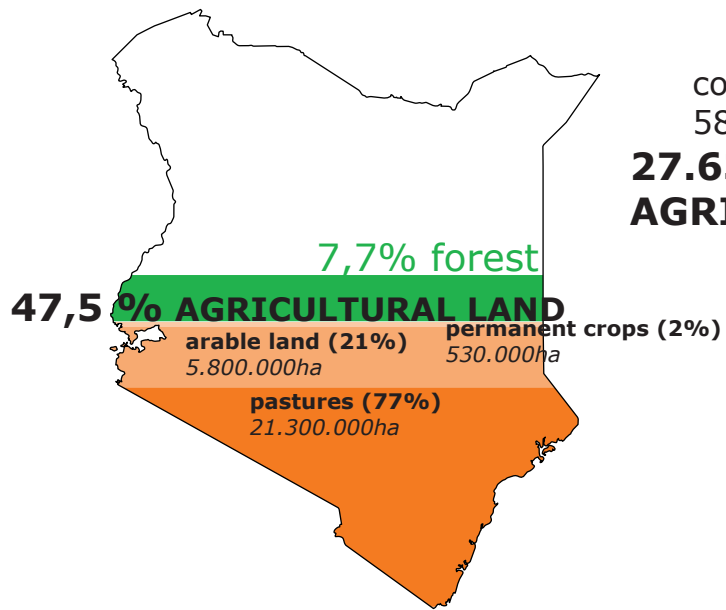
place to **mitigate the effects of the weather conditions**

UNHCR, 2019

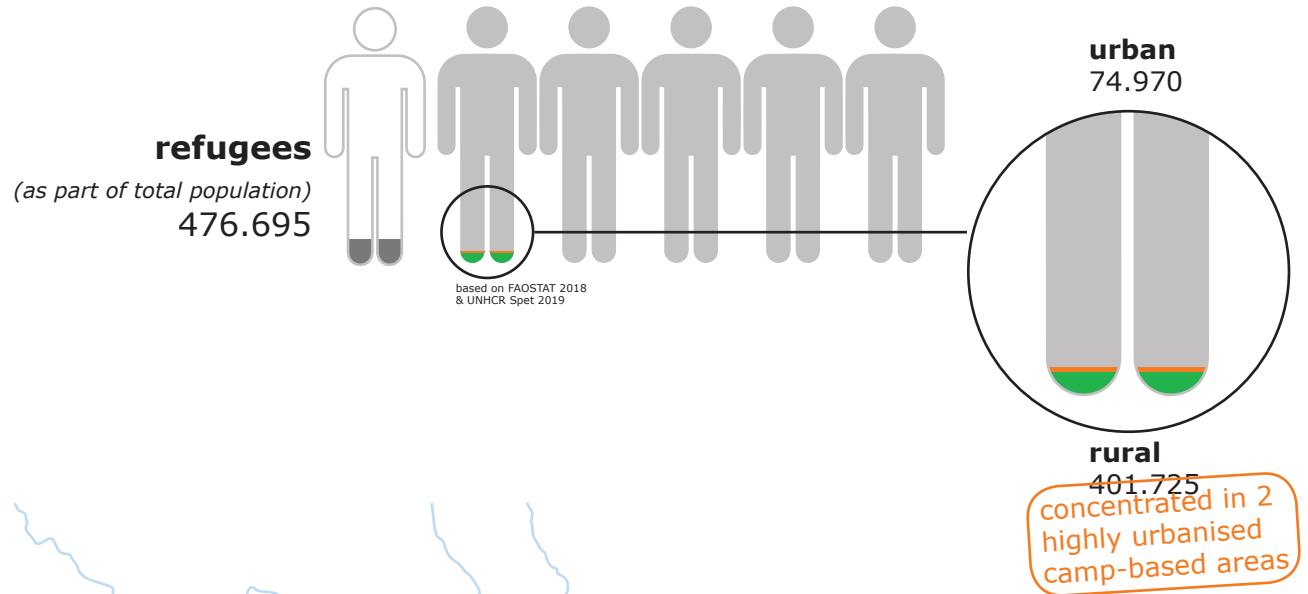
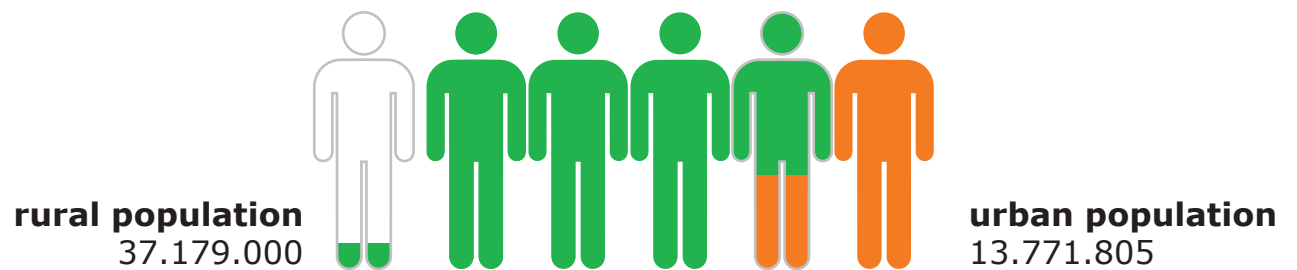
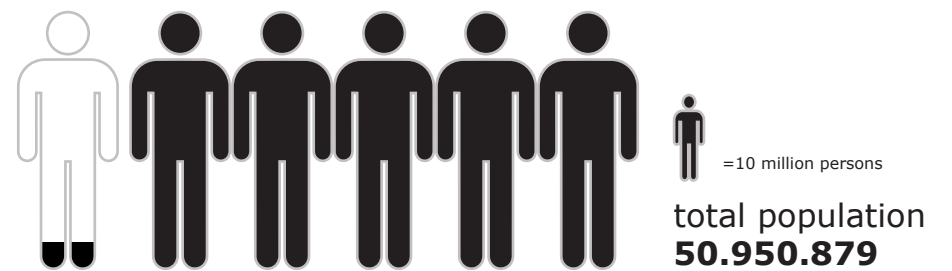


FACTSHEET KENYA

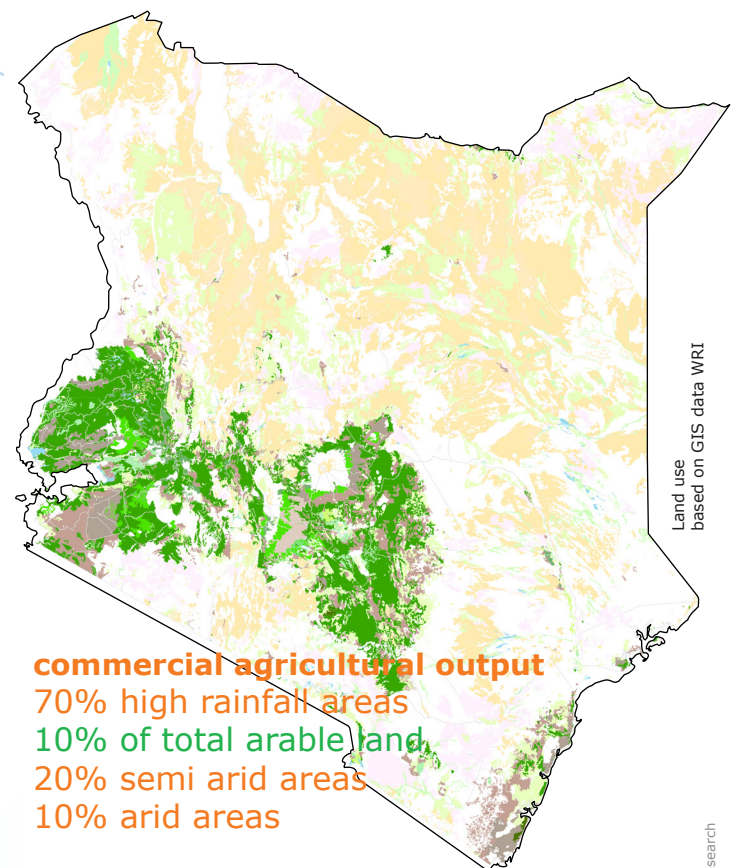
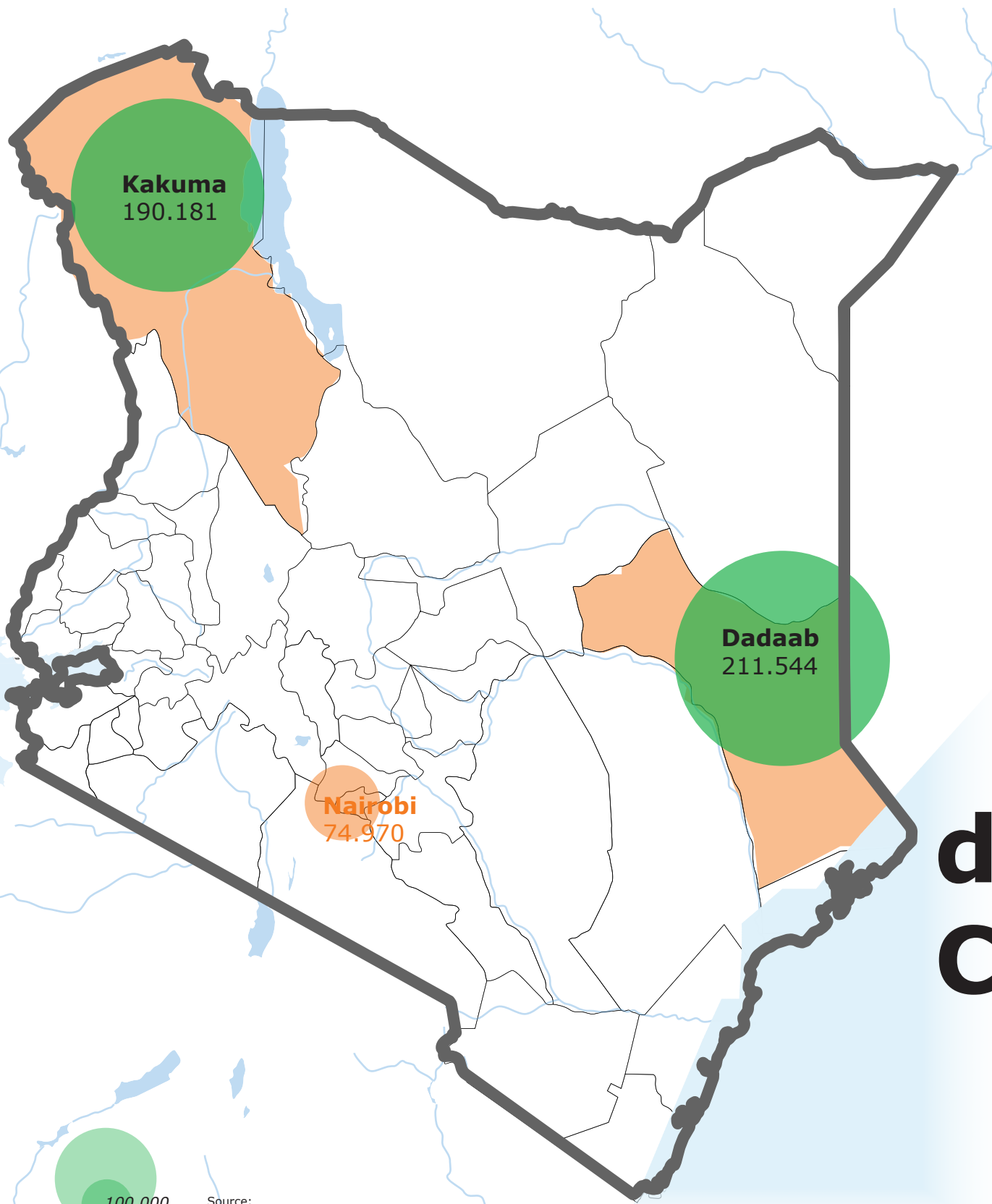
CIRCULAR REFUGEE CAMPS



country size
58.037.000ha
27.630.000ha
AGRICULTURAL LAND



80 percent
of the population
depend on agriculture
for their livelihood
(FAO)



driving CHANGE



WATER STRESS

33,2% Aquastat

Freshwater withdrawal as % percentage of total renewable water resources

13,13 % (2016)

at COUNTRY LEVEL
...but big regional differences

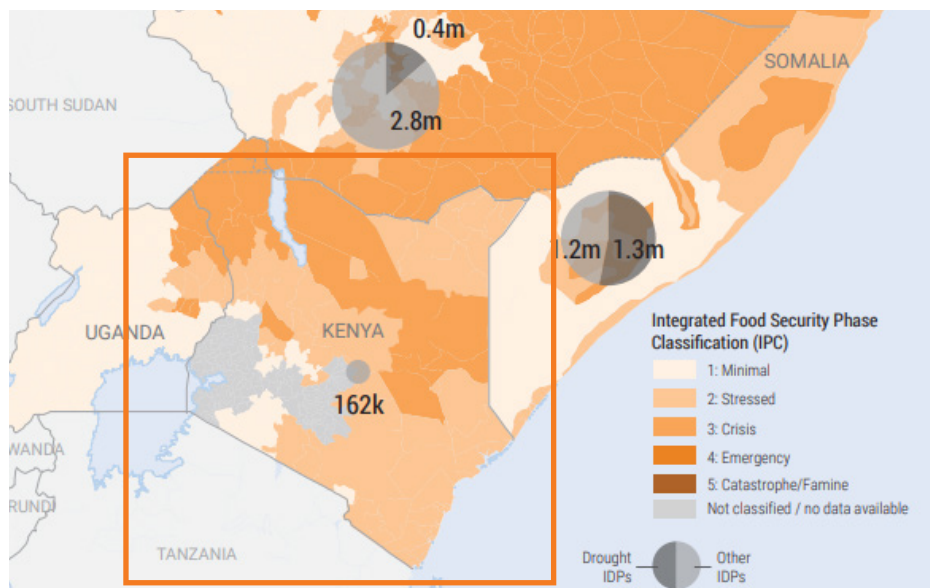
By sector (% of total water withdrawal)

AGRICULTURE 80,21%

INDUSTRIAL 7,5%

MUNICIPAL 12,28% Aquastat

prevalence of severe food insecurity
35.6%



Drought Snapshot, OCHA, June 2019

"Kenya drought: More than a million people face starvation"

Months of rain have just ended but weather experts say it was not enough to prevent worsening food and water shortages.

Drought has left more than a million people on the brink of starvation in northern Kenya."

Aljazeera -August 2019

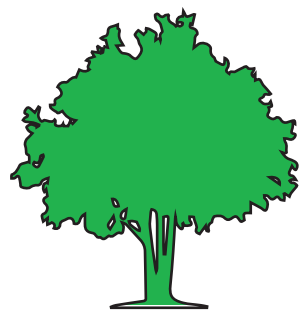
23 counties = **80% country**
11 counties ALERT
10 counties ALARM **DROUGHT**

Pastoral & agro-pastoral areas

Pasture and water shortages in pastoral areas affecting livestock conditions

..and severely affected food access and availability

FAO Country Brief, 2019



- 9.8%

(2001-2018)
GlobalForestWatch

3.180.000ha forest (2010)
326.000 ha lost 10%

fuel wood > 70%

of national energy demand

Renewable Energy Consumption 94,75%
depends on traditional use of biomass

annual deficit 7 million m3

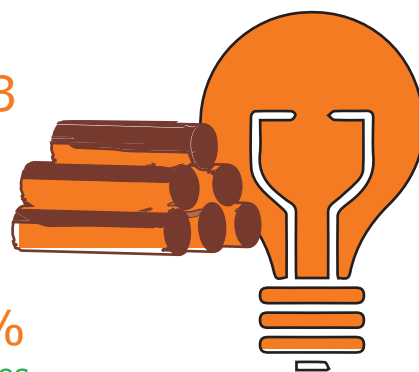
Kenya Forest Service, 2010

LOW energy efficient
COOKING METHODS

13% access to clean cooking

access to electricity 63,8%

>rural 58% boosted via renewable sources
WorldBank (2017)



cumulative rains

70% below average

FAO Country Brief, 2019

production levels down

increasing food prices (30-70%)



2x HIGHER DEPENDENCY

on foreign markets

TO FEED CITIZENS

(2010 - 2015)

over-reliance on rain-fed agriculture has seen her increasingly resort to imports in the event of dry weather.

Economic Survey 2018, Kenya National Bureau of Statistics

Major food imports
maize, unmilled wheat,
wheat flour, rice & sugar

Economic Survey 2018

KAKUMA CAMP & KALOBYEI SETTLEMENT

Turkana COUNTY

area 68.680 km²
6.868.000 ha
density 12.45 /km²

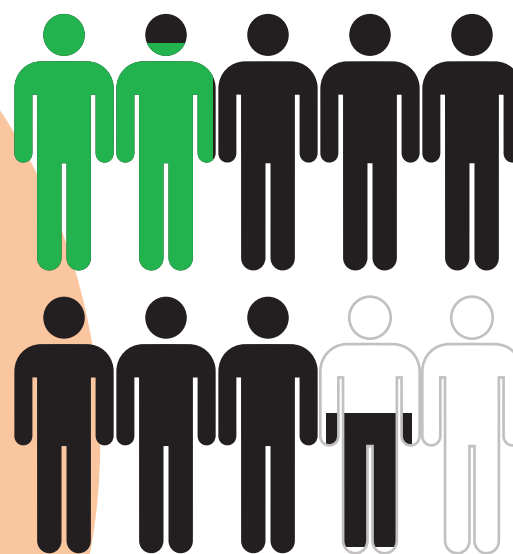
(SEMI)ARIDE AREA

■ Kakuma 1,2,3 and 4

First settlement 1991
Total of 4 settlement clusters
13.5 km²
density 12.000 /km²

■ Kalobei

Established 2015 as planned settlement
15 km²



=100.000 persons

total population
855.359 (2009)

& refugees
(as part of total population)

190.181

855.359

- > food assistance main source of food
- > food insecure region
- > harsh climatic conditions

Joint Assessment Mission – Kenya Refugee Operation, 2014



90% of the camps' inhabitants
originally **pastoralists**
with limited knowledge
of environmental practices

Food assistance is far from meeting
Recommended Daily Intake
> deteriorating nutrition status
UNHCR, 2019

Low dietary diversification due to high prices of
fresh fruits and vegetables results in
an **increase in micro-nutrient deficiencies**
such as anemia, scurvy and stunting.

Road conditions affect the availability of perishable food
as the average resupply time in the camp doubles
from 1.5 days in the dry season to 3 days in the rainy season



21 BOREHOLES

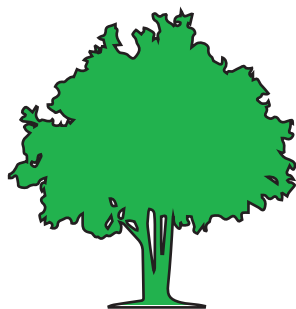
supply water to residents of
Kakuma and Kalobeyei

To promote safe and equitable distribution of water
there is a need to **explore and invest**
in alternative sustainable sources
UNHCR, 2019

disputes over water sources
SOIL HARVESTING for BRICKS

only 5% ACCESS TO ELECTRICITY

1.063 solar streetlights installed



TURKANA
forest loss 2001-2018 178ha
of forest 4540ha (2010) =4%

75% of the
host community members
MAIN SOURCE INCOME
SELLING CHARCOAL &
FIREWOOD to refugees

Ongoing demand for
SHELTER CONSTRUCTION MATERIALS
such as wood and walling bricks

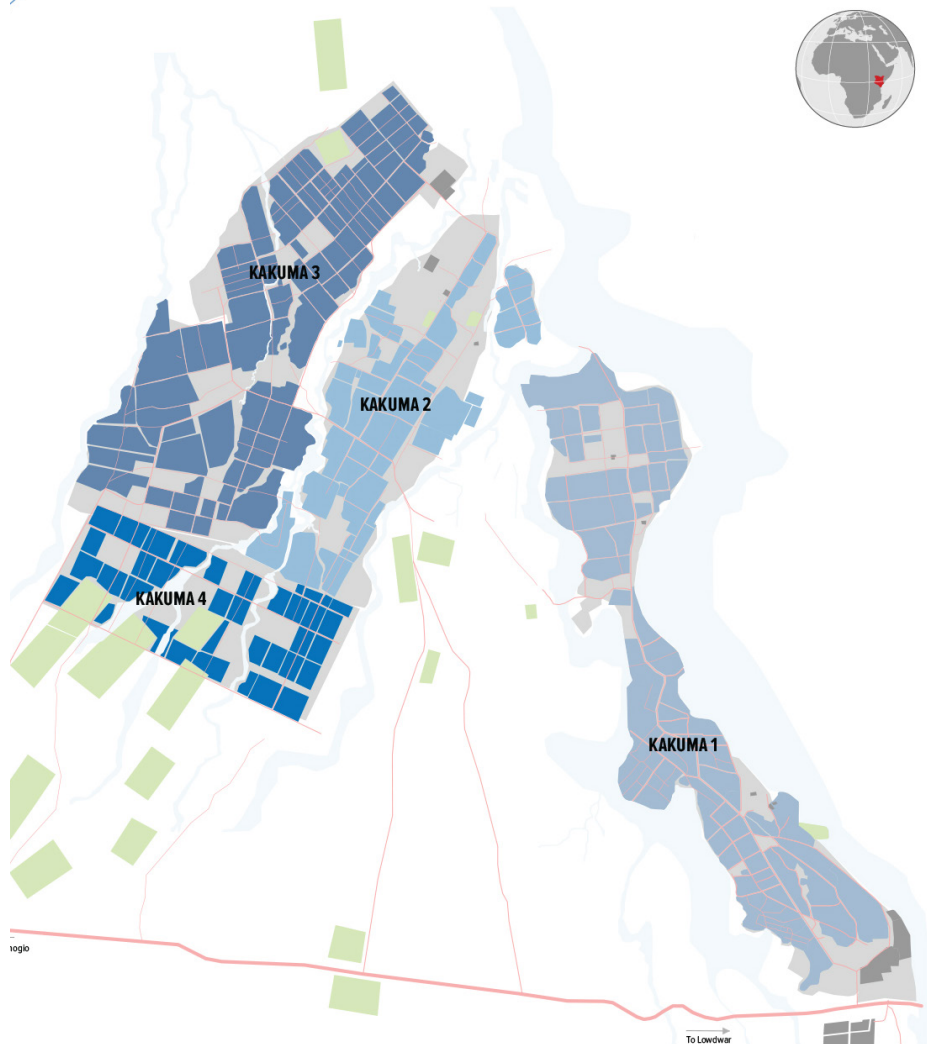
Refugee households
rely entirely
on fuel-wood
for all domestic energy needs
>80% harvested
within 25km radius

340 Households issued with
energy saving stoves
UNHCR, 2019

organized
SUPPLY MEETS <20%



WAGENINGEN
UNIVERSITY & RESEARCH



camp's ~~informal~~ **economy** is thriving
IFC World Bank, 2018

need to **construct household latrines**
 to replace communal latrines

- > 624 communal pit latrines in Kalobeyei settlement
- > 10,437 family pit latrines in Kakuma

drop out
PASTORALISM
 host communities



- > Conflicts over resources like GRAZING PASTURES between refugees and host communities
- > Water boreholes for humans and livestock

An aerial image of the over 2,000 permanent shelter units constructed in Village One of Kalobeyei Integrated Settlement. UNHCR/Samuel Otieno

