East Africa Regional Desert Locust Impact Monitoring

Round 3

KEY MESSAGES

- The assessment found that one fifth of cropping households and roughly one in four livestock-rearing households living in Desert Locust affected administrative units experienced Desert Locust-related pasture and crop losses.

- For impacted households, Desert Locust-related losses were often quite large. More specifically, slightly over half of impacted cropping and livestock-rearing respondents experienced high or very high losses to either their crops and/or rangeland where their animals graze.

- Considering only those areas included in all three rounds of data collection (round 1 conducted in June/July 2020, round 2 conducted in October/November/December 2020, and round 3 conducted in April/May/June 2021), significant declines in the percentage of respondents observing Desert Locusts and related losses have been observed. These declines are likely due to successful control operations and less favorable conditions as rainfall between March and May 2021 was below average across much of the region.

- Beyond direct crop and rangeland impacts, Desert Locust affected respondents also commonly indicated that Desert Locusts were driving increased food insecurity/malnutrition, concerns relating to animal health, environmental impacts, emotional stress/anxiety, and concerns relating to human health.

- Overall, cropping respondents (both those affected by Desert Locusts and those who were not) were relatively positive about their expectations for the upcoming harvests. Livestock-rearing respondents, meanwhile, were split on the state of current pasture availability, depending on where they were located in the region. In areas where the highest percentage of respondents reported poor pasture availability and/or that harvests would be below average, below-average rains were identified as a key driver of current conditions. Desert locusts were identified to be a key driver only in a few areas.

- Food insecurity amongst the interviewed agricultural respondents was found to be high with more than 20 percent of respondents in most of the assessed areas reporting a reduced Coping Strategies Index (rCSI) exceeding 18, the threshold for Crisis (IPC Phase 3) or worse. The highest prevalence of food insecurity was observed in Afdar and Nogob in Ethiopia, and Bari and Sool in Somalia. Additionally, major deteriorations in food insecurity amongst agricultural households were found between round 2 (conducted in October/November/December) and round 3 (conducted in April/May/June) in Isiolo, Kenya and Bari, Sanaag, and Sool in Somalia.

Assessment funded by:
Food and Agriculture Organization of the United Nations

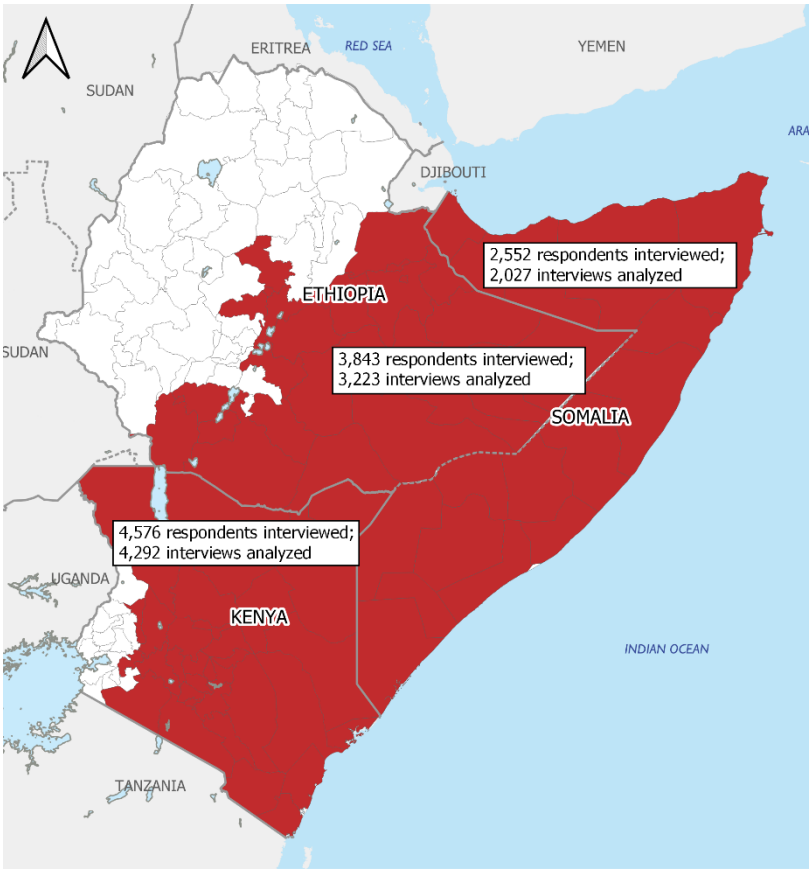
For questions and /or any other feedback, please contact the FSNWG Secretariat through:

IGAD: Charity Mumbua (csmumbua@icpac.net)
FAO: Brenda Lazarus (brenda.lazarus@fao.org)

METHODOLOGY

The assessment interviewed 10,971 respondents across Desert Locust-affected areas of Ethiopia, Kenya, and Somalia (Figure 1) who indicated that their household was active in agricultural activities (cropping or livestock rearing) during the past 12 months. Desert Locust-affected areas were defined as administrative units where either 1) Desert Locusts were reported between February and March, based on eLocust3M data[1], or 2) there was reasonable evidence to believe that Desert Locusts were likely present in the area despite a lack of data due to inadequate coverage of eLocust3M.

Figure 1. Assessed Desert Locust affected areas

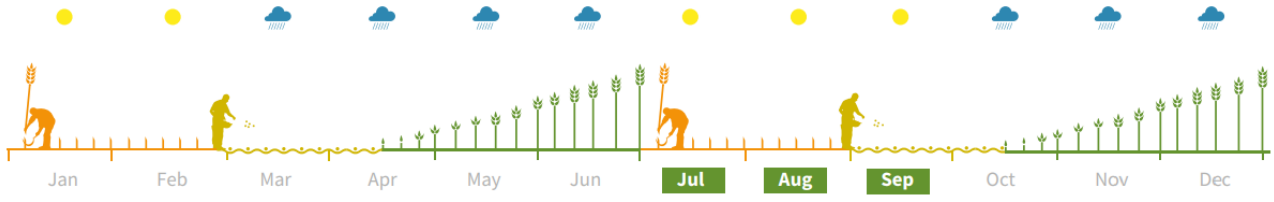


Source: FSNWG

Data collection was conducted between late April and early June 2021, during the long rains/*Gu* cropping season in most areas (Figure 2), using a cell phone-based household survey approach. The assessment was deployed by a service provider (GeoPoll) and interviewed respondents were selected using a random sampling approach. In all administrative units assessed, the team interviewed at least 150 respondents (see Annex 1 for more information).

After data collection was completed, the data was cleaned before analysis. During this process, 1,429 respondents were dropped from the analysis due to data quality issues. This resulted in 9,542 interviews being included in the final analysis.

Figure 2. Seasonal calendar for the Horn of Africa



Source: FAO

[1] For more information about eLocust3M, please see: https://www.humanitarianresponse.info/sites/www.humanitarianresponse.info/files/documents/files/elocust3m_faqs.pdf

KEY FINDINGS

Regional analysis

Demographics

The assessment included cropping, agropastoral, and pastoral regions of East Africa and aimed to interview households with both cropping and livestock incomes. In total, 7,290 respondents had income from crop sales during the past year, of which 5,851 (80 percent) had crops in the field at the time of the survey. Additionally, 7,006 respondents had income from livestock or livestock product sales during the past year. Other common income sources amongst the assessed respondents were petty trade, agricultural wage labour, and salaries/wages.

Amongst cropping households, the most commonly reported crops grown were maize, pulses, fruits/vegetables, root crops/tubers, and bananas. For livestock-rearing households, cattle, goats, poultry, sheep, and camels were the most common types of animals owned.

For cropping households who reported that they did not currently have crops in the field, 68 percent indicated that they would, in a normal year, typically have crops in their field at this time of the year. Amongst this group who was not cultivating, the most commonly reported reasons were weather conditions, lack of credit, lack of fertilizer/seeds/tools, crop pests (including Desert Locusts), and lost access to fields.

The highest percentage of households reporting that they were not currently cultivating but typically would be were observed in Ethiopia and Somalia (18 percent of cropping households in both) followed by Kenya (8 percent). By country, reasons for not currently cultivating varied with weather conditions being the most important reason for no longer cultivating in both Ethiopia and Kenya, while lack of credit was identified as the most important reason in Somalia.

Very few livestock-rearing households indicated that they had dropped out of livestock-related activities during the past 12 months.

The average age of the respondents interviewed was 34 years old. Twenty-seven percent of respondents were female while 73 percent were male.

Awareness of Desert Locusts

Awareness of Desert Locusts amongst respondents was high across the surveyed areas with 95 percent of respondents indicating that they had heard of Desert Locusts. The most common sources of information were 1) observation of Desert Locusts, 2) radio, 3) television, and 4) fellow farmers. There were no significant differences between genders with regards to awareness levels or information sources.

Desert Locust observations and losses

Amongst the 5,851 respondents who had crops in the field at the time of the survey, 28 percent indicated that they had seen Desert Locusts in their fields, and 20 percent reported Desert Locust-related losses to their crops.

However, for those who reported losses, Desert Locust impacts were in many cases significant. More specifically, 54 percent of cropping households who experienced losses indicated that their losses were high or very high, factoring in reported area affected and the severity of damages within the fields that were impacted.

54%

of Desert Locust impacted cropping respondents had high or very high losses

56%

of Desert Locust impacted livestock rearing respondents had high or very high losses

Twenty-six percent thought that the current condition of their most important crop was poor, and 46 percent reported that upcoming harvests of this crop would be below average.

The most commonly reported crop stages when Desert Locust damages occurred were the flowering and seed filling stages. Damages occurring during the seedling, vegetative, and harvesting periods were less commonly reported.

For livestock-rearing households, 35 percent of respondents indicated that they had observed Desert Locusts in their rangelands, and 28 percent indicated that the Desert Locusts had caused rangeland losses.

Similar to affected cropping households, losses among affected livestock-rearing households were reportedly significant. More specifically, 56 percent of affected respondents reported high or very high losses to their rangeland. Additionally, 54 percent of respondents with losses thought that the current availability of pasture was below average while 67 percent thought their livestock were in either fair or poor body condition.

The highest percentage of cropping and livestock-rearing respondents observing Desert Locusts and reporting related losses were observed in Somalia while Kenyan respondents reported the lowest levels (Table 1). Additionally, high and very high crop and rangeland losses were most commonly reported by respondents in Ethiopia (Table 2).

Table 1. Percentage of respondents reporting having observed Desert Locusts and experiencing losses, by country and livelihood activity.

	Cropping Respondents		Livestock Respondents	
Country	**% Observed DL**	**% DL Losses**	**% Observed DL**	**% DL Losses**
Ethiopia	36%	24%	46%	37%
Kenya	18%	12%	22%	15%
Somalia	46%	36%	50%	46%
Total	*28%*	*20%*	*35%*	*28%*

Source: FSNWG Desert Locust impact assessment results

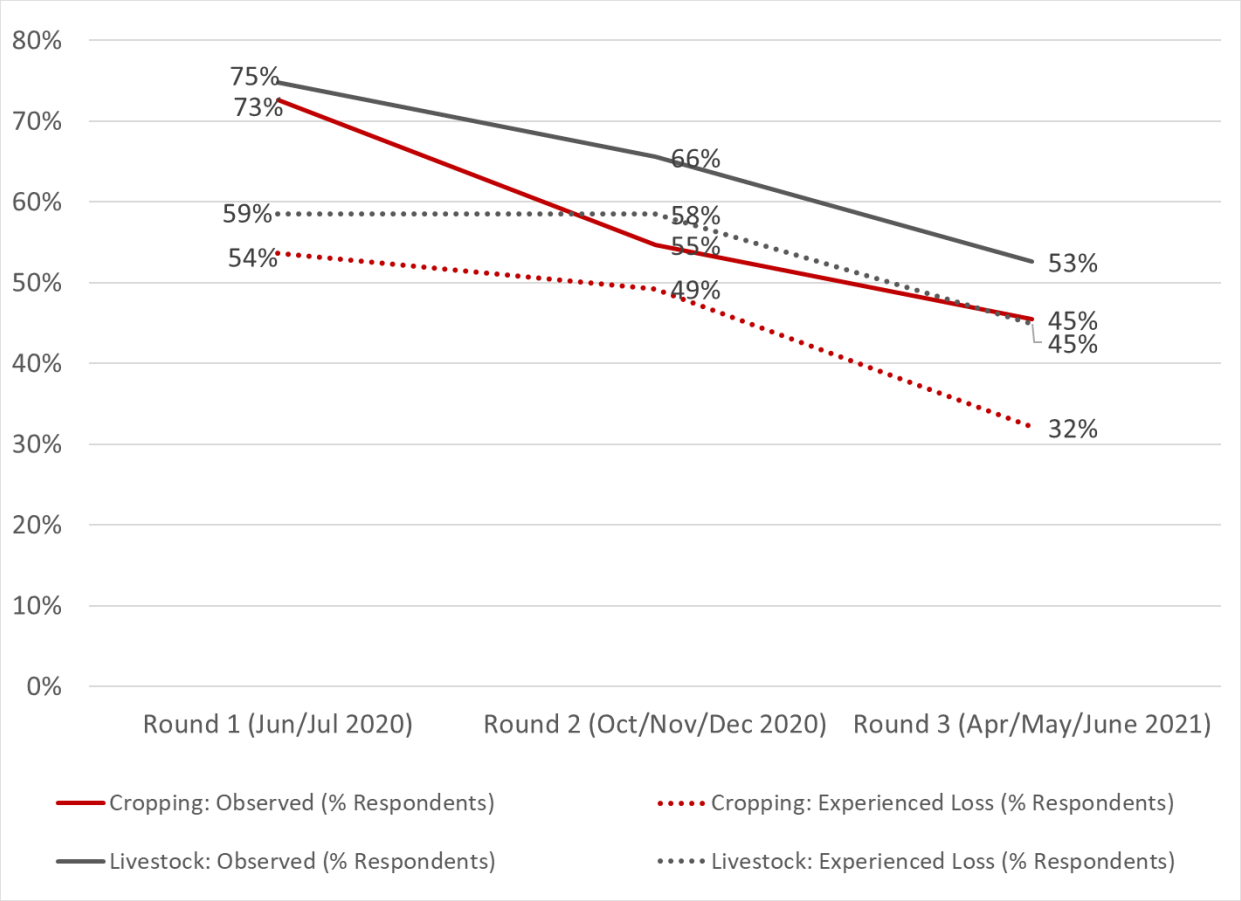
Table 2. Reported losses by country amongst respondents who indicated that they experienced Desert Locust losses to their crops or rangelands

	Ethiopia	Kenya	Somalia
Of cropping respondents who reported crop losses….	• 63% had high or very high losses • 37% thought harvests of their most important crop would be below average	• 37% had high or very high losses • 48% thought harvests of their most important crop would be below average	• 60% had high or very high losses • 57% thought harvests of their most important crop would be below average
Of livestock-rearing respondents reporting rangeland losses…	• 66% had high or very high losses • 68% thought their livestock were in either fair or poor condition (47% in poor condition)	• 48% had high or very high losses • 64% thought their livestock were in either fair or poor condition (17% in poor condition)	• 42% had high or very high losses • 70% thought their livestock were in either fair or poor condition (32% in poor condition)

Source: FSNWG Desert Locust impact assessment results

Considering only areas included in all three rounds of data collection (round 1 conducted in June/July 2020, round 2 conducted in October/November/December 2020, and round 3 conducted in April/May/June 2021), significant declines in the percentage of respondents observing Desert Locusts and related losses have been observed. These declines are likely due to successful control operations and less favorable conditions as rainfall between March and May 2021 was below average across much of the region.

Figure 3. Changes in the percentage of respondents observing Desert Locusts and reporting related losses between Round 1, 2 and 3 of data collection

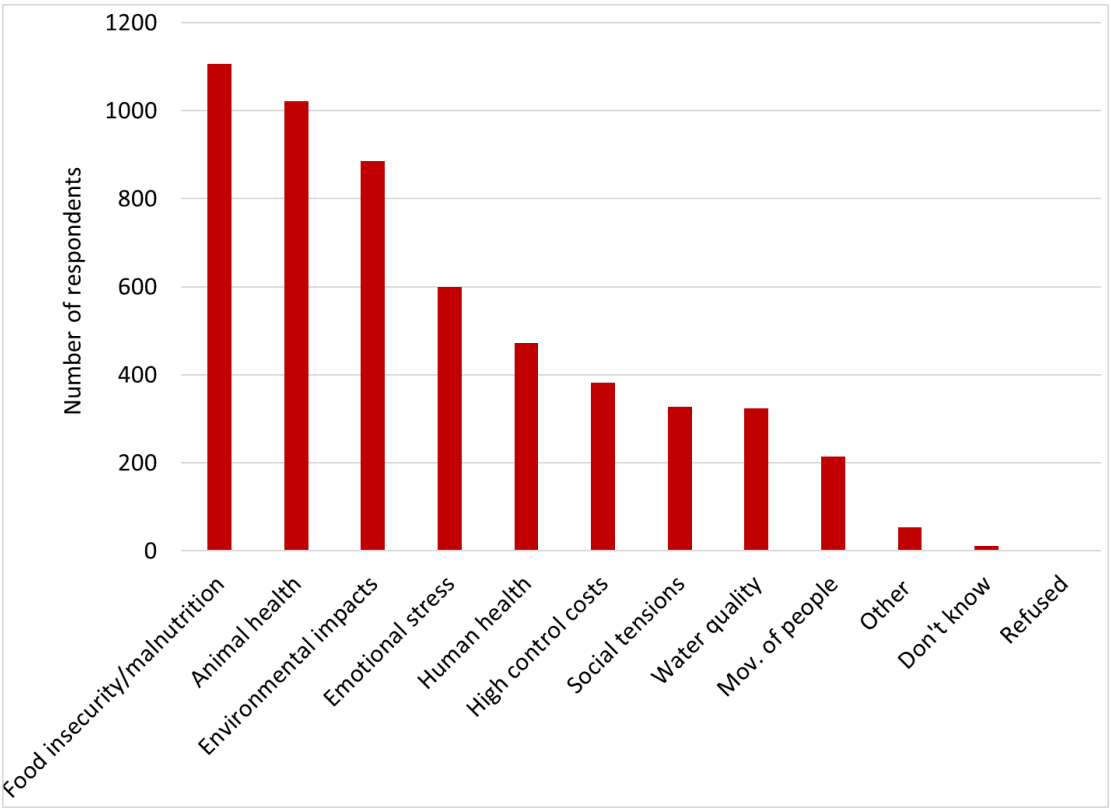


Source: FSNWG Desert Locust impact assessment results

Other Desert Locust impacts

Fifty-seven percent of respondents who had observed Desert Locusts also indicated that their household experienced Desert Locust-related impacts beyond direct losses to crops and pasture. Within this population, the most commonly reported impacts were increased food insecurity/malnutrition, concerns relating to animal health, environmental impacts, emotional stress/anxiety, and concerns relating to human health.

Figure 6. Other Desert Locust impacts (number of respondents reporting)



Source: FSNWG Desert Locust impact assessment results

Current crop conditions and drivers

All cropping respondents, regardless of whether they saw Desert Locusts or experienced related losses, were interviewed about the current state of their most important crop, as well as their expectations for the upcoming harvest.

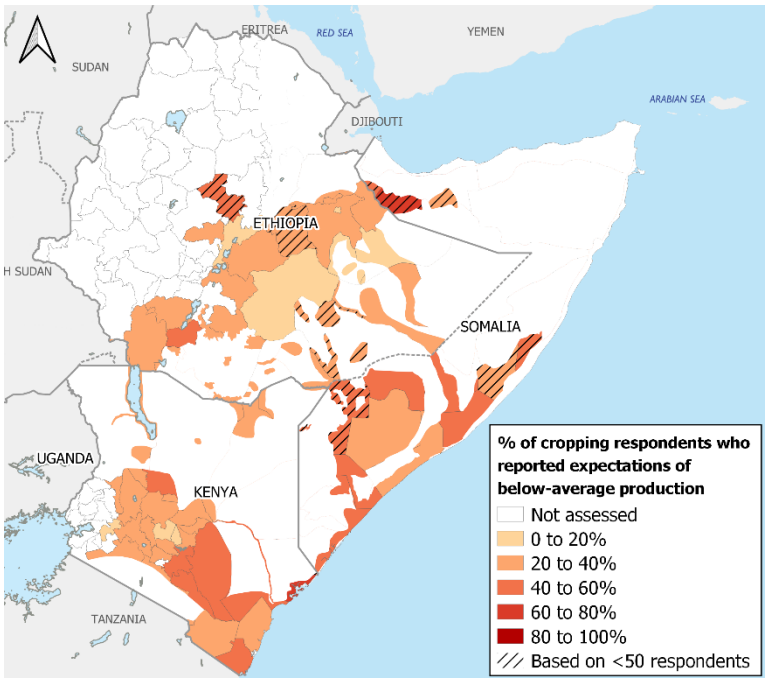
Respondents were relatively positive about their expectations for the upcoming harvests, with 46% reporting that they expected above-average harvests, 19% reporting average harvests, and 33% reporting below-average harvests. Notably, farmers in Ethiopia were the most optimistic (60% reported expectations of above-average harvests), compared to Kenya (43%) and Somalia (25%). Across the region as a whole, the most commonly reported driver of current crop conditions was rainfall performance, with average rains being most commonly reported, followed by below-average rains and above-average rains.

At a subnational level, the majority of farmers in all areas of Ethiopia, except those in North Shewa[2] and Segen Peoples, as well as the majority of farmers in Embu, Kericho, Kiambu, Kirinyaga, Meru, Murang'a, Narok, Nyandarua, Nyeri, and Tharaka-Nithi of Kenya thought that their production would be above average. Meanwhile, more than half of farmers in Kitui, Lamu, and Tana River in Kenya and Awdal, Bakool, Middle Juba, and Woqooyi Galbeed in Somalia indicated that their production would be below-average.[3] Table 3 shows that below-average rains and dry spells were the most important driver of current crop conditions in all of these areas. Desert Locusts were only reported to be an important driver in Awdal in Somalia.

[2] Results for North Shewa in Ethiopia are based on less than 50 cropping respondents.

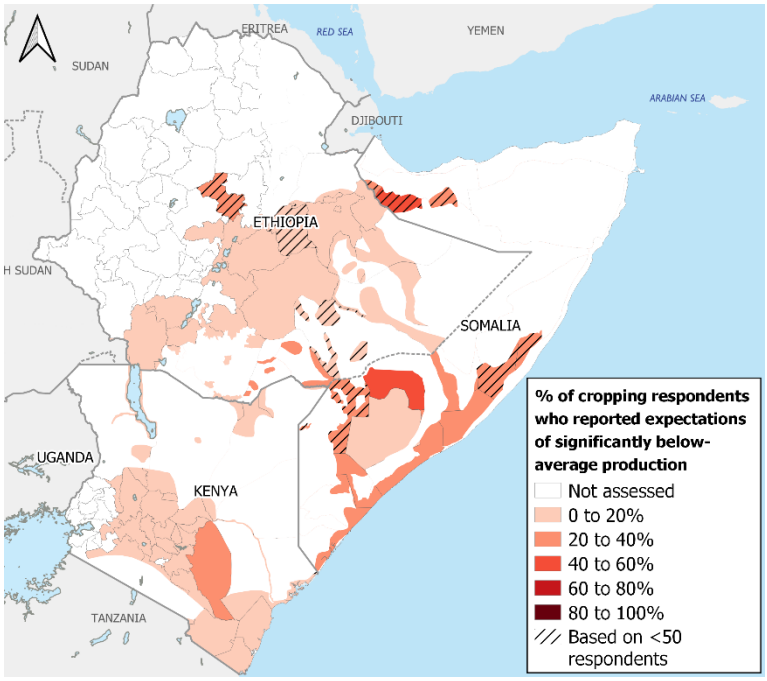
[3] Results for Garissa in Kenya and Awdal, Sanaag, Sool, and Woqooyi Galbeed in Somalia are based on less than 50 cropping respondents.

Figure 7. Percentage of respondents who indicated that they expected upcoming harvests for their most important crop to be below average (including mask to show only cropping and agropastoral areas)



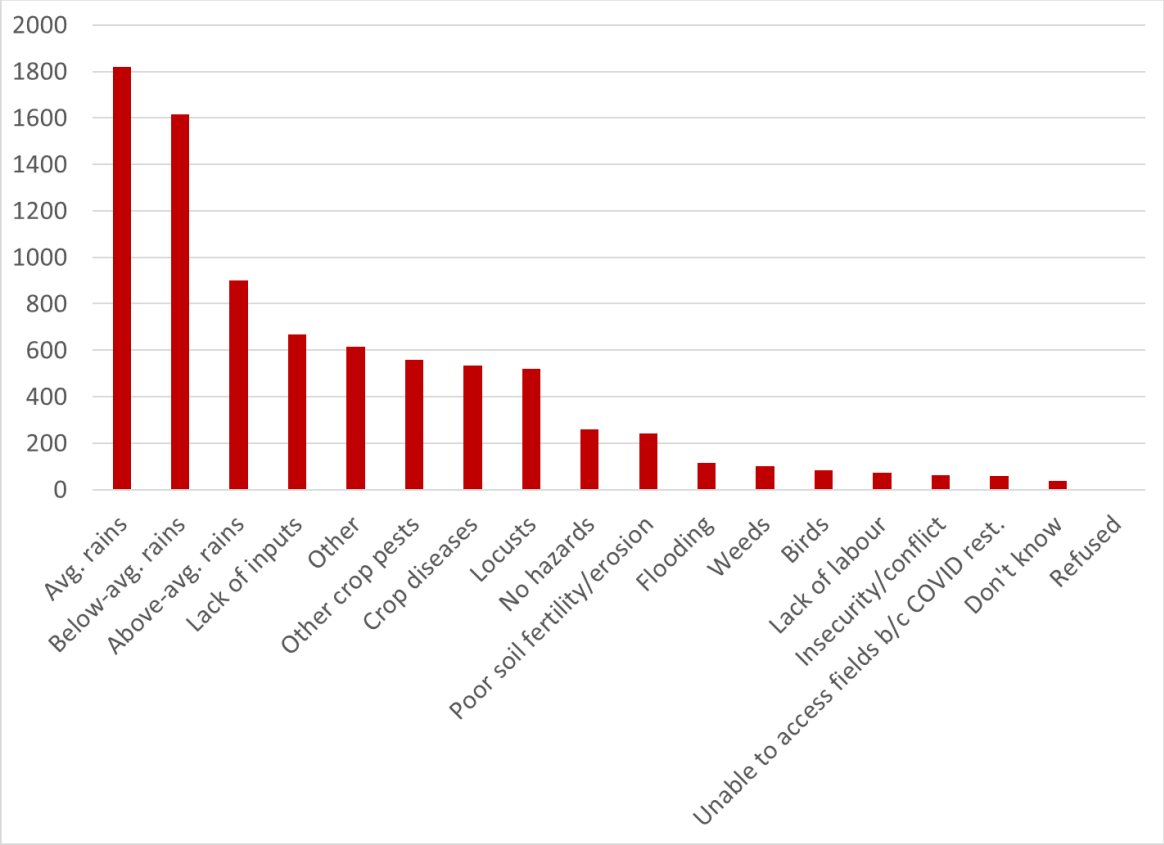
Source: FSNWG Desert Locust impact assessment results

Figure 8. Percentage of respondents who indicated that they expected upcoming harvests for their most important crop to be significantly below average (including mask to show only cropping and agropastoral areas)



Source: FSNWG Desert Locust impact assessment results

Figure 9. Drivers of current crop conditions (number of respondents reporting)



Source: FSNWG Desert Locust impact assessment results

Table 3. Drivers of current crop conditions in key areas of concern[4]

Administrative Unit	Key Drivers of Current Crop Conditions *(in order of importance)*
Kitui, Kenya	Below-average rains/dry spells
Lamu, Kenya	Below-average rains/dry spells
Tana River, Kenya	Below-average rains/dry spells
Awdal, Somalia	Below-average rains/dry spells, average rains, Desert Locusts
Bakool, Somalia	Below-average rains/dry spells, average rains
Middle Juba, Somalia	Below-average rains/dry spells, average rains
Woqooyi Galbeed, Somalia	Below-average rains/dry spells

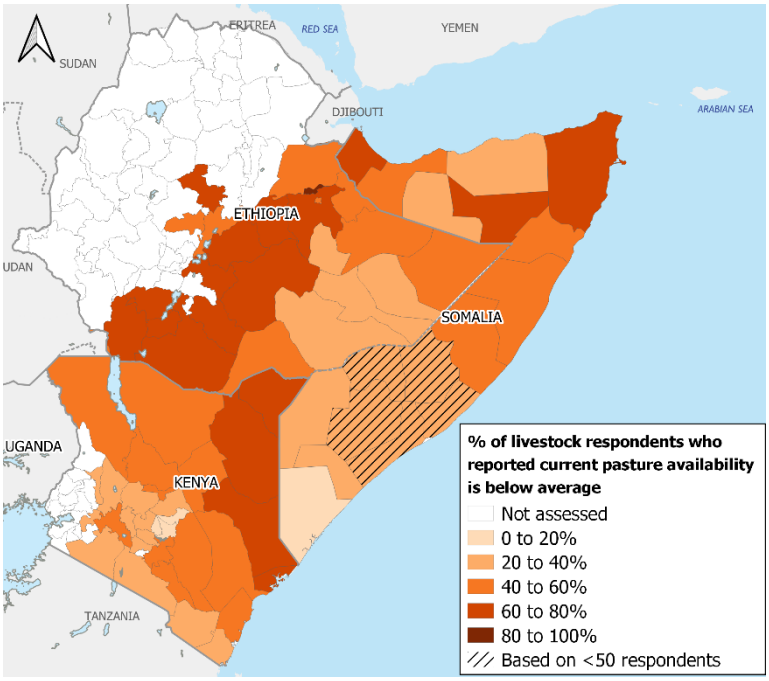
Source: FSNWG Desert Locust impact assessment results

Current pasture availability and drivers

Depending on the location within the region, livestock-rearing respondents were split on their opinion of current pasture availability with 48% indicating that pasture availability was below-average, 31% reporting it was above-average, and 20% reporting it was average.

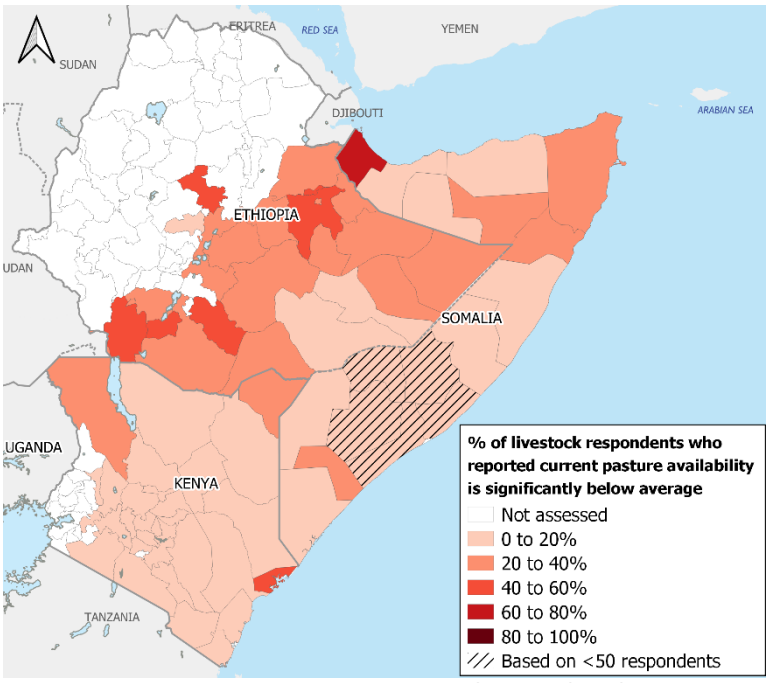
[4] Results for Garissa in Kenya and Awdal, Sanaag, Sool, and Woqooyi Galbeed in Somalia are based on less than 50 cropping respondents.

Figure 10. Percentage of livestock-rearing respondents who indicated that current pasture availability is below average



Source: FSNWG Desert Locust impact assessment results

Figure 11. Percentage of livestock-rearing respondents who indicated that current pasture availability is significantly below average



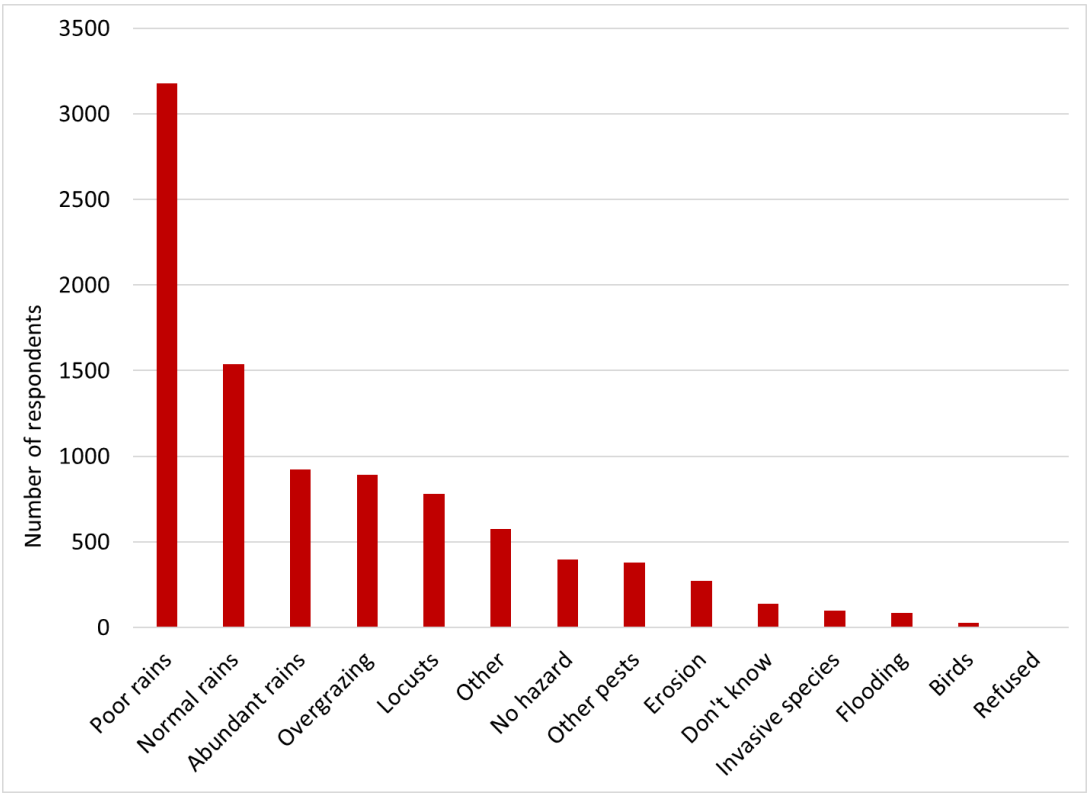
Source: FSNWG Desert Locust impact assessment results

Across the region, the most commonly reported drivers of current pasture availability were poor rainfall, normal rainfall, abundant rainfall, overgrazing, and Desert Locusts. With regards to the reports of mixed rainfall, seasonal performance for the March to May 2021 rainy season varied across the region, with below-average rains falling over much of eastern Kenya, southern Somalia, and central and north-central Ethiopia.

However, heavy rainfall episodes in late April and early May over parts of the region has meant that observed vegetation (as shown by Normalized Difference Vegetation Index (NDVI) anomalies in Figure 14) in many areas that experienced poor rains, such as north-central Ethiopia, still remains

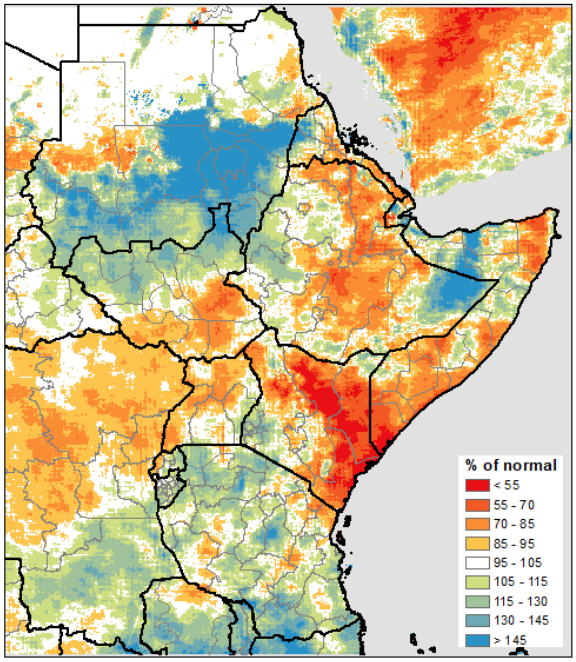
favorable. However, widespread negative NDVI anomalies have been observed over Kenya and southern Somalia.

Figure 12. Drivers of current pasture availability (number of respondents reporting)



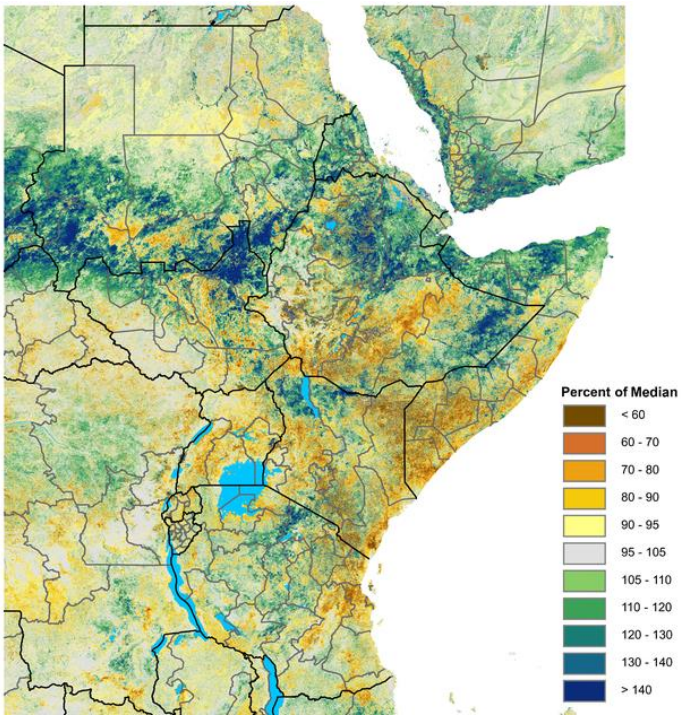
Source: FSNWG Desert Locust impact assessment results

Figure 13. Seasonal rainfall accumulation (percent of normal), 1 February to 30 June 2021



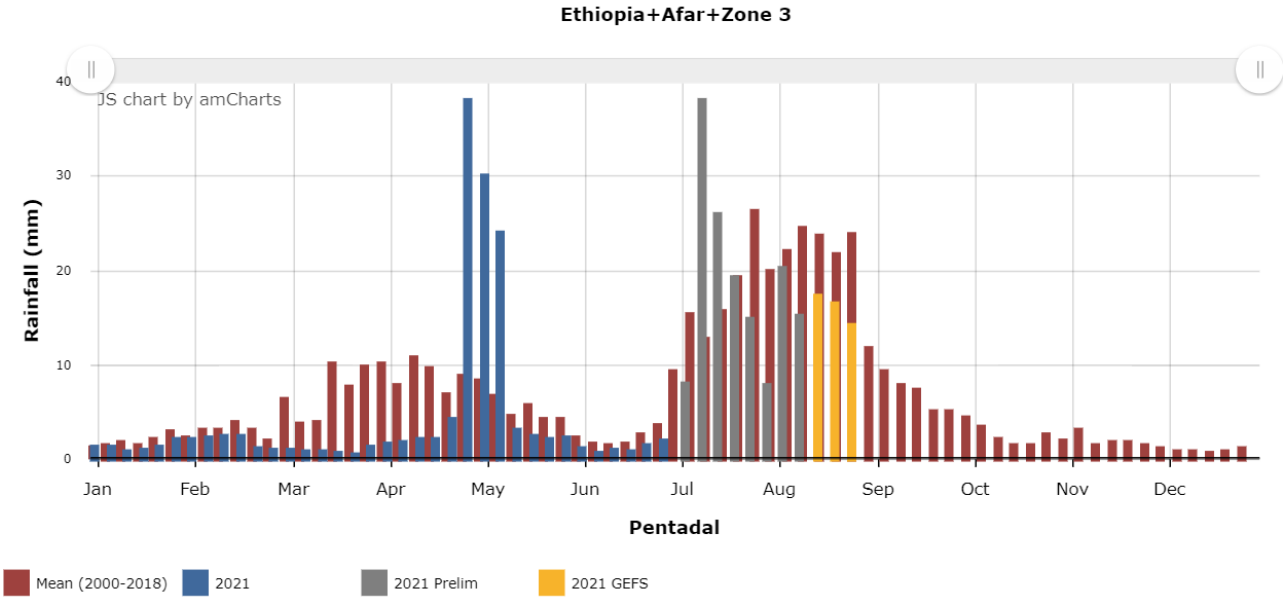
Source: FEWS NET/USGS

Figure 14. Normalized Difference Vegetation Index (NDVI) anomaly, 21 – 30 June 2021



Source: FEWS NET/USGS

Figure 15. Rainfall distribution during the March to May 2020 season for Zone 3 of Afar, Ethiopia showing below-average rains during the season except for in late April and early May 2021



Source: FEWS NET/USGS

Key areas of concern with regards to pasture availability are areas where more than 60 percent of the respondents indicated below-average availability. These areas include Arsi, Bale, Basketo, Borena, Dire Dawa, East Harerge, Gamo Gofa, Guji, North Shewa, Segen Peoples, South Omo, West Arsi, West Harerge in Ethiopia, Garissa, Lamu, Mandera, Samburu, and Wajir in Kenya, and Awdal, Bari, and Sool in Somalia. As shown in Table 4, poor rainfall was identified as the most important driver of current pasture availability in most of these worst-affected areas. However, Desert Locusts were also identified as an important driver in East Harerge and South Omo in Ethiopia, as well as Sool in Somalia.

Table 4. Drivers of current pasture availability in key areas of concern

Administrative Unit	Key Drivers of Current Pasture Availability *(in order of importance)*
Arsi, Ethiopia	Poor rainfall
Bale, Ethiopia	Poor rainfall, normal rainfall
Basketo, Ethiopia	Other, poor rainfall, normal rainfall
Borena, Ethiopia	Poor rainfall
Dire Dawa, Ethiopia	Poor rainfall
East Harerge, Ethiopia	Poor rainfall, Desert Locusts
Gamo Gofa, Ethiopia	Poor rainfall, other, normal rainfall
Guji, Ethiopia	Poor rainfall
North Shewa, Ethiopia	Poor rainfall
Segen Peoples, Ethiopia	Other, poor rainfall
South Omo, Ethiopia	Poor rainfall, Desert Locusts, other, normal rainfall
West Arsi, Ethiopia	Poor rainfall
West Harerge, Ethiopia	Poor rainfall
Garissa, Kenya	Poor rainfall
Lamu, Kenya	Poor rainfall
Mandera, Kenya	Poor rainfall, overgrazing
Samburu, Kenya	Poor rainfall
Wajir, Kenya	Poor rainfall
Awdal, Somalia	Poor rainfall
Bari, Somalia	Poor rainfall
Sool, Somalia	Poor rainfall, Desert Locusts

Source: FSNWG Desert Locust impact assessment results

Food insecurity

This Desert Locusts impact assessment was not intended to be a food security assessment. However, in order to get an understanding of existing food insecurity amongst respondents, one food security indicator, reduced coping strategy index (rCSI), was calculated.[5]

The rCSI food security module asks respondents about the frequency, during the past 7 days, that they employed five common coping strategies: 1) eating less-preferred foods, 2) borrowing food/money from friends and relatives, 3) limiting portions at mealtime, 4) limiting adult intake in order for children to eat, and 5) reducing the number of meals per day.[6] The reduced coping strategies index is a food security outcome indicator according to the IPC[7] acute food security reference tables, with an rCSI exceeding 18 considered in line with Crisis (IPC Phase 3) or worse food insecurity.

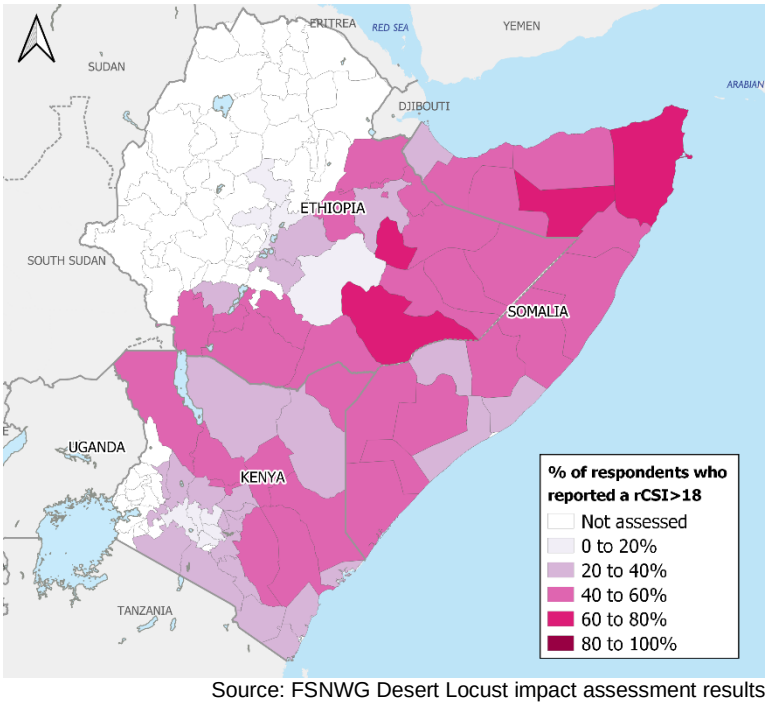
[5] Given that only households involved in crop and livestock production were interviewed by this assessment, the rCSI data only represents food insecurity amongst this population and is not representative of food insecurity levels across all populations living within the administrative unit.

[6] For more information about rCSI, please visit: https://documents.wfp.org/stellent/groups/public/documents/manual_guide_proced/wfp211058.pdf

[7] The Integrated Food Security Phase Classification (IPC) is a set of standardised tools used to classify the severity of food insecurity using a five-phase scale, that is, Minimal (IPC Phase 1), Stressed (IPC Phase 2), Crisis (IPC Phase 3), Emergency (IPC Phase 4) and Catastrophe or Famine (IPC Phase 5).

As shown in Figure 16, more than 20 percent of respondents in most of the assessed areas reported a rCSI that exceeded 18. Of particular concern are four of these administrative areas where more than 60 percent of respondents indicated a rCSI greater than 18 - Afdar (60%) and Nogob (61%) in Ethiopia and Bari (67%) and Sool (65%) in Somalia.

Figure 16. Percentage of respondents reporting a rCSI greater than 18



Source: FSNWG Desert Locust impact assessment results

For areas included in both round 2 (conducted in October/November/December 2020) and round 3 (conducted in April/May/June 2021), a comparison of the rCSI showed relative stability or improvements in food security in Ethiopia, and either stability or worsening food security in Somalia and Kenya. Notably, a major deterioration in food security, defined by an increase of 20+ percent of the agricultural population with a rCSI exceeding 18, was recorded in Isiolo, Kenya (21 to 48%), and Bari (38% to 67%), Sanaag (35% to 55%) and Sool (42% to 65%) in Somalia.

Country-level analysis

The following sections present key country-level facts and figures for Ethiopia, Kenya, and Somalia.

ETHIOPIA

Desert Locust observations and losses

Table 5. Percentage of respondents reporting having observed Desert Locusts and experiencing Desert Locust losses, by livelihood activity

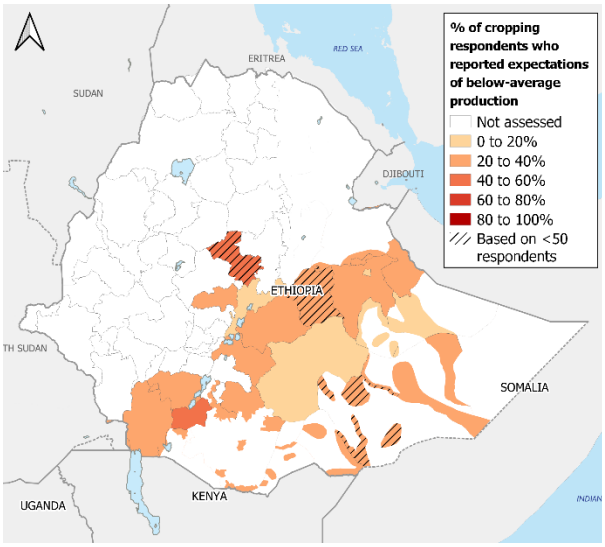
Cropping Respondents		Livestock Respondents	
% Observed DL	**% DL Losses**	**% Observed DL**	**% DL Losses**
36%	24%	46%	37%

Table 6. Reported losses amongst respondents who indicated that they experienced Desert Locust losses to their crops or rangeland

Of cropping respondents who reported crop losses….	• 63% had high or very high losses • 37% thought harvests of their most important crop would be below average
Of livestock-rearing respondents reporting rangeland losses…	• 66% had high or very high losses • 68% thought their livestock were in either fair or poor condition (47% in poor condition)

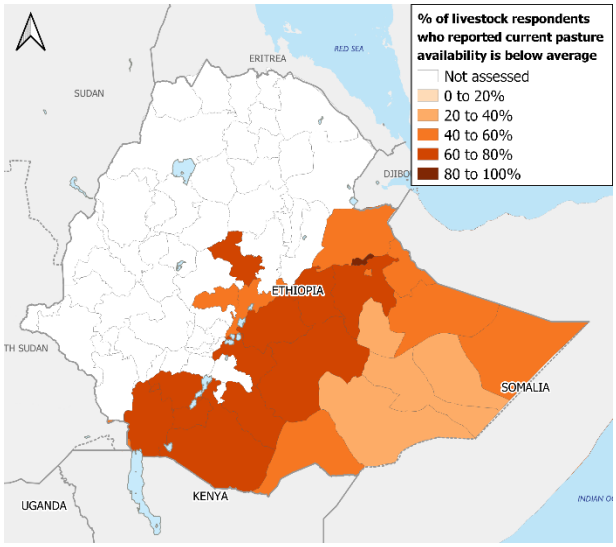
Current crop conditions

Figure 18. Percentage of respondents who indicated that they expected upcoming harvests for their most important crop to be below average



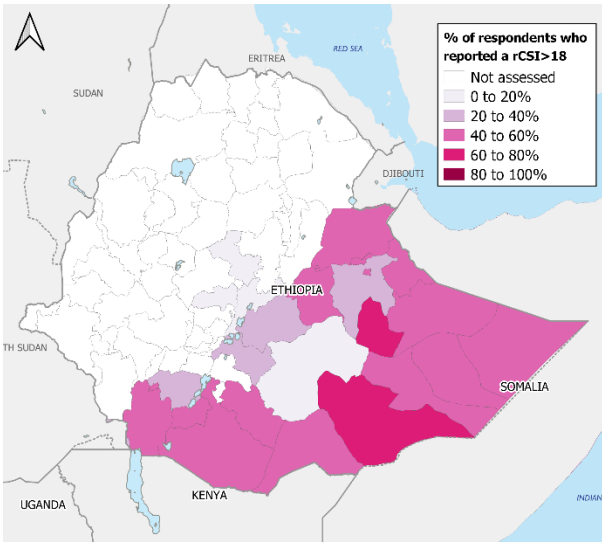
Current pasture availability

Figure 19. Percentage of livestock-rearing respondents who indicated that current pasture availability is below average



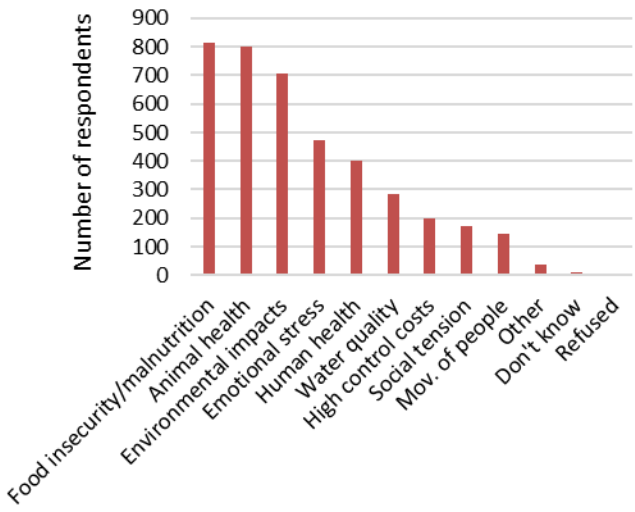
Food insecurity

Figure 20. Percentage of respondents reporting a rCSI greater than 18



Other Desert Locust impacts

Figure 21. Other Desert Locust impacts (number of respondents reporting)



KENYA

Desert Locust observations and losses

Table 7. Percentage of respondents reporting having observed Desert Locusts and experiencing Desert Locust losses, by livelihood activity

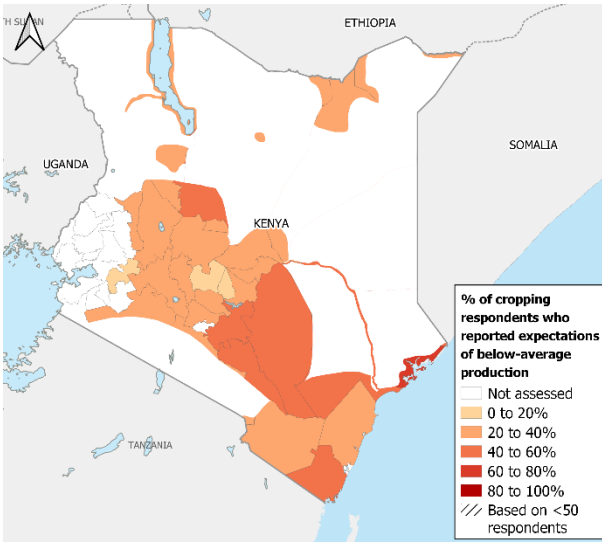
Cropping Respondents		Livestock Respondents	
% Observed DL	**% DL Losses**	**% Observed DL**	**% DL Losses**
18%	12%	22%	15%

Table 8. Reported losses amongst respondents who indicated that they experienced Desert Locust losses to their crops or rangeland

Of cropping respondents who reported crop losses….	• 37% had high or very high losses • 48% thought harvests of their most important crop would be below average
Of livestock-rearing respondents reporting rangeland losses…	• 48% had high or very high losses • 64% thought their livestock were in either fair or poor condition (17% in poor condition)

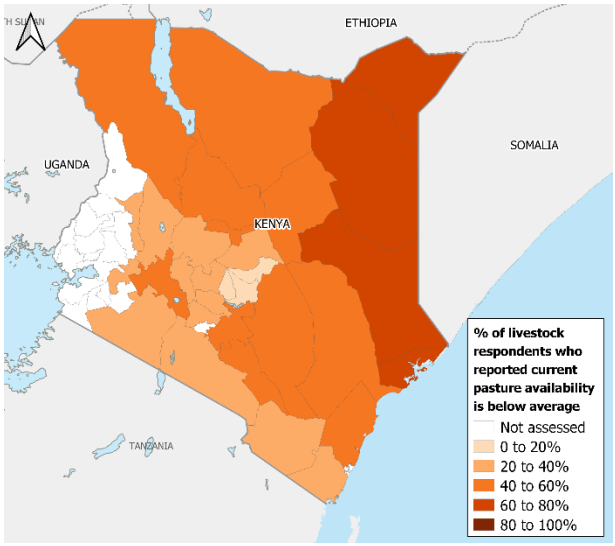
Current crop conditions

Figure 22. Percentage of respondents who indicated that they expected upcoming harvests for their most important crop to be below average (including mask to show only cropping and agropastoral areas)



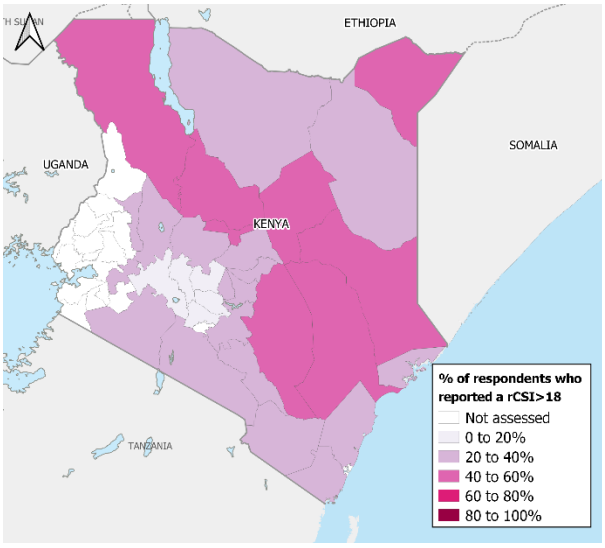
Current pasture availability

Figure 23. Percentage of livestock-rearing respondents who indicated that current pasture availability is below average



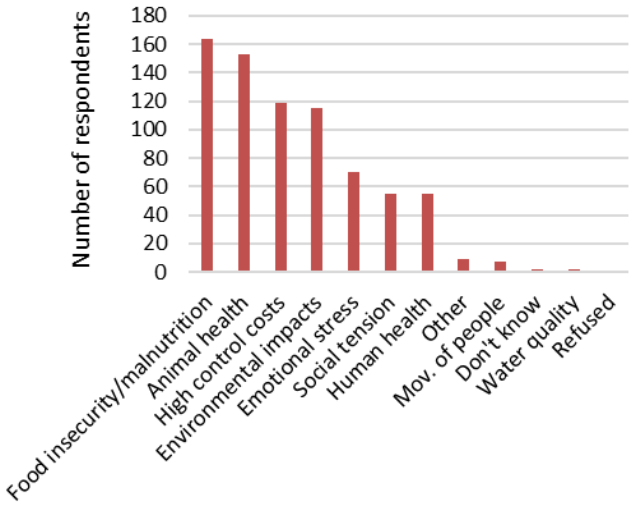
Food insecurity

Figure 24. Percentage of respondents reporting a rCSI greater than 18



Other Desert Locust impacts

Figure 25. Other Desert Locust impacts (number of respondents reporting)



SOMALIA

Desert Locust observations and losses

Table 9. Percentage of respondents reporting having observed Desert Locusts and experiencing Desert Locust losses, by livelihood activity

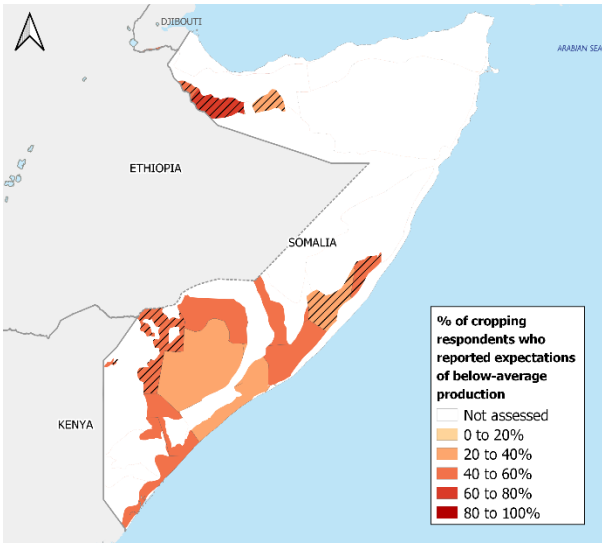
Cropping Respondents		Livestock Respondents	
% Observed DL	% DL Losses	% Observed DL	% DL Losses
46%	36%	50%	46%

Table 10. Reported losses amongst respondents who indicated that they experienced Desert Locust losses to their crops or rangeland

Of cropping respondents who reported crop losses….	• 60% had high or very high losses • 57% thought harvests of their most important crop would be below average
Of livestock-rearing respondents reporting rangeland losses…	• 42% had high or very high losses • 70% thought their livestock were in either fair or poor condition (32% in poor condition)

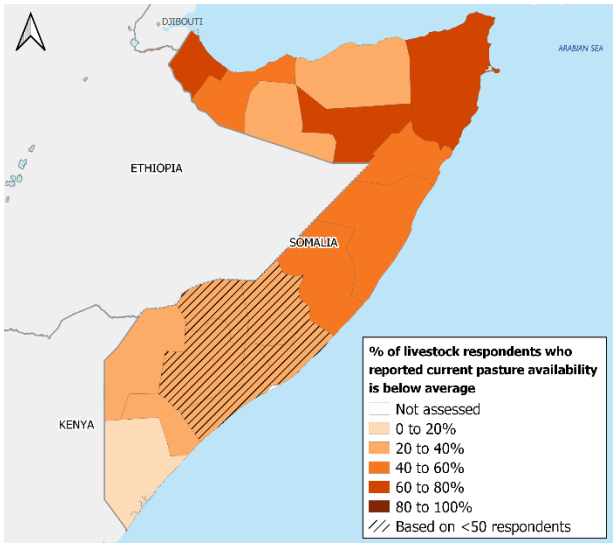
Current crop conditions

Figure 26. Percentage of respondents who indicated that they expected upcoming harvests for their most important crop to be below average (including mask to show only cropping and agropastoral areas)



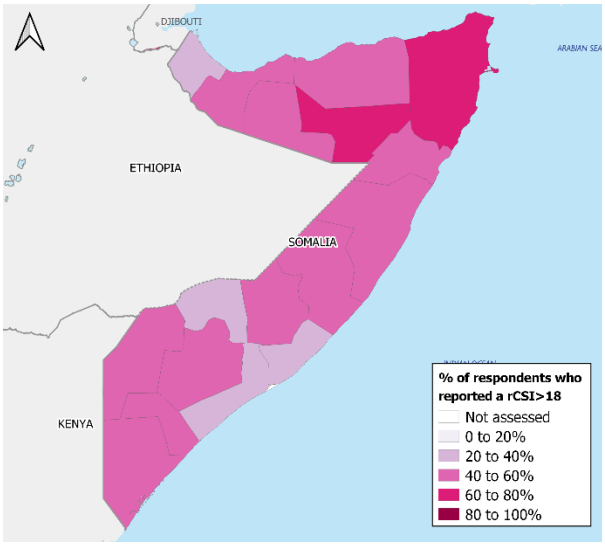
Current pasture availability

Figure 27. Percentage of livestock-rearing respondents who indicated that current pasture availability is below average



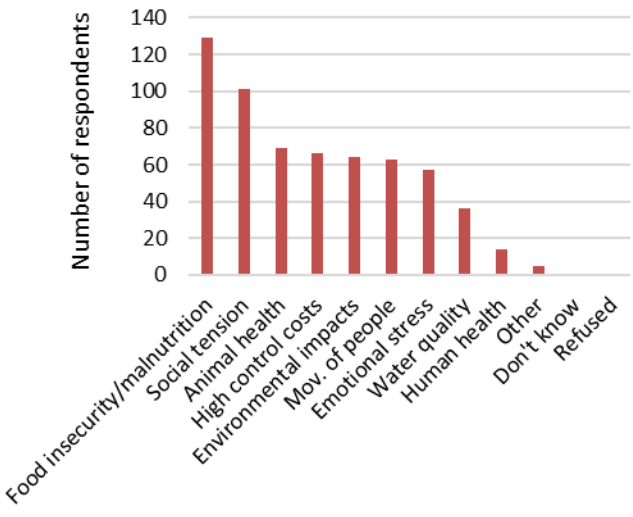
Food insecurity

Figure 28. Percentage of respondents reporting a rCSI greater than 18



Other Desert Locust impacts

Figure 29. Other Desert Locust impacts (number of respondents reporting)



CONCLUSIONS AND RECOMMENDATIONS

This assessment found that one fifth of cropping households and roughly one in four livestock-rearing households living in Desert Locust affected administrative units experienced Desert Locust related pasture and crop losses.

Though these percentages are not overly large, the impacts of Desert Locusts on households who did experience losses were in many cases quite significant. More specifically, slightly over half of impacted cropping and livestock-rearing respondents experienced high or very high losses to either their crops and/or rangeland where their animals graze. Additionally, a sizable share of Desert Locust impacted cropping and livestock-rearing respondents reported that either the condition of their livestock was poor or fair, or that they expected upcoming harvests of their most important crop to be below average, with more pessimism amongst livestock-rearing respondents in comparison to cropping households.

Considering only areas included in all three rounds of data collection (round 1 conducted in June/July 2020, round 2 conducted in October/November/December 2020, and round 3 conducted in April/May/June 2021), significant declines in the percentage of respondents observing Desert Locusts and related losses have been observed. These declines are likely due to successful control operations and less favorable conditions as rainfall between March and May 2021 was below average across much of the region.

Cropping respondents (both those affected by Desert Locusts and those who were not) were relatively positive about their expectations for the upcoming harvests. Livestock-rearing respondents, meanwhile, were split on the state of current pasture availability depending on where they were located in the region. In areas where the highest percentage of respondents reported poor pasture availability or that harvests would be below average, below-average rains were identified as a key driver of current conditions. Desert Locusts were identified to be a key driver only in a few areas.

Food insecurity amongst the interviewed agricultural respondents was found to be high with more than 20 percent of respondents in most of the assessed areas reporting a reduced Coping Strategies Index (rCSI) exceeding 18, the threshold for Crisis (IPC Phase 3) or worse. The highest prevalence of food insecurity was observed in Afdar and Nogob in Ethiopia and Bari and Sool in Somalia. Additionally, major deteriorations in food insecurity amongst agricultural households were found between round 2 (conducted in October/November/December) and round 3 (conducted in April/May/June) in Isiolo, Kenya and Bari, Sanaag, and Sool in Somalia.

Beyond direct crop and rangeland losses, respondents also indicated that Desert Locusts were driving increased food insecurity/malnutrition, concerns relating to animal health, environmental impacts, emotional stress/anxiety, and concerns relating to human health.

Given these key findings, the FSNWG recommends the following actions:

1) **Continued Desert Locust surveillance and control operations** in Desert Locust-affected areas in order to identify and rapidly control new swarms and hopper bands and prevent further Desert Locust-related crop and pasture losses.

2) **Close coordination among the various stakeholders** to strengthen synergies, sustained management and control of Desert Locusts in the region.

3) **Immediate livelihood and food security support programmes to food insecure households (regardless of their driver –including climatic hazards, Desert Locusts, conflict, economic shocks)** to ensure adequate access to food and rebuild household livelihoods. These programmes should be focused in areas with high level of existing food insecurity, as well as areas where crop and livestock production are expected to be below average.

4) **Closely monitor rainfall forecasts for the upcoming October – December 2021 rainy season and prepare anticipatory action programs in areas forecast to receive below-average rains,** given that 1) the assessment found that below-average rains and dry spells were a key driver of crop and pasture availability during the previous season, and 2) current forecasts suggest an increased risk of below-average rains which, should it materialize, could lead to a third consecutive poor rainy season in some areas.

5) **Strengthened food security monitoring and early warning systems** with an increased focus on anticipatory action, given severe levels of existing food insecurity across East Africa and the high frequency of a variety of hazards (such as climatic, pests, conflict, and economic shocks among others) affecting the food security of vulnerable populations in the region.

ANNEX 1: ASSESSMENT SAMPLING

Admin unit	# respondents interviewed	# respondents kept for analysis	% analyzed respondents with crop income	% analyzed respondents with livestock income
Afder	167	129	43%	93%
Arsi	166	157	99%	75%
Bale	150	135	96%	75%
Basketo	151	144	93%	78%
Borena	154	119	87%	87%
Dire Dawa	153	125	95%	81%
Doolo	151	108	27%	92%
East Harerge	152	129	97%	74%
East Shewa	150	142	97%	68%
Fafan	159	125	77%	82%
Gamo Gofa	150	140	86%	82%
Guji	152	114	95%	79%
Hareri	152	131	97%	80%
Jarar	152	121	68%	85%
Korahe	160	122	66%	83%
Liben	152	120	77%	85%
Nogob	159	128	71%	82%
North Shewa (R4	150	143	74%	92%
Segen Peoples	150	141	96%	93%
Shabelle	154	120	76%	67%
Siti	153	101	83%	61%
South Omo	151	137	89%	83%
Southwest Shewa	152	148	97%	76%
West Arsi	152	130	100%	88%
West Harerge	151	114	97%	83%
Ethiopia	**3843**	**3223**		
Baringo	152	143	92%	86%
Elgeyo-Marakwet	155	150	99%	79%
Embu	152	140	91%	77%
Garissa	151	142	39%	91%
Isiolo	150	132	57%	88%
Kajiado	153	149	83%	81%
Kericho	159	153	90%	78%
Kiambu	153	146	81%	71%
Kilifi	154	150	85%	69%
Kirinyaga	151	143	93%	69%
Kitui	152	142	91%	73%
Kwale	153	146	88%	74%
Laikipia	154	144	90%	74%
Lamu	151	144	85%	65%
Machakos	152	145	90%	72%
Makueni	151	141	93%	77%
Mandera	152	141	49%	89%
Marsabit	150	133	57%	86%
Meru	150	144	91%	72%
Murang'a	151	144	87%	69%
Nakuru	151	143	88%	69%
Narok	154	147	88%	83%
Nyandarua	153	145	92%	83%
Nyeri	154	148	86%	76%
Samburu	158	145	64%	81%
Taita-Taveta	150	144	88%	72%
Tana River	153	142	82%	70%
Tharaka-Nithi	151	140	92%	84%
Turkana	156	141	55%	90%

Wajir	150	125	45%	92%
Kenya	**4576**	**4292**		
Awdal	150	137	28%	74%
Bakool	150	128	84%	23%
Bari	150	83	33%	67%
Bay	150	112	79%	31%
Galguduud	150	108	39%	62%
Gedo	150	106	60%	57%
Hiran	150	116	67%	37%
Lower Juba	150	123	72%	45%
Lower Shebelle	150	126	74%	38%
Middle Juba	150	122	66%	50%
Middle Shebelle	150	121	79%	36%
Mudug	150	109	29%	73%
Nugal	150	122	45%	58%
Sanaag	150	121	52%	51%
Sool	152	138	38%	65%
Togdheer	150	127	39%	64%
Woqooyi Galbeed	150	128	47%	56%
Somalia	**2552**	**2027**		
Grand Total	**10971**	**9542**		