MULTI AGENCY SEASONAL ASSESSMENT REGIONAL REPORT

(FOOD SECURITY AND AGRICULTURE)

DURATION 16 November – 07 December 2021

JANUARY 2022 MEKELLE, TIGRAI

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Selected Woredas and Team Compositions

Team	Zone	Selected woredas	Name of the experts	Organization	Composition
			NegashHadis (Team Leader)	BOARD- EW	Food
		• Chercher	TadesseGebre	BOARD- Crop	Food
			GeremeskelTesfay	BOARD- L.stock	Food
		 Endamekoni 	AlemTeklu	REST	Food
		Bora	Dr. Nigsti Haile	FAO	Food
	Southern	G. G. G.	YaredTezera	Save the chi.n	Food
One	and south	• Samre	NegasiBirhane	AAH	Food
	Eastern	• D/temben	Dr. Zinabu	WHO	Non food
			HailuGeremedhin	AAH	Non food
			MehariKahsay	BOARD-ENCU	Non food
			HagosAbrha	Oxfam	Non food
			GerekidanNega	BOWR	Non food
			BirhaneKalayu	IOM	Non food
Two	Eastern	• Atsbi	NigusseAynalem(Team Leader)	BOARD- EW	Food
		Geralta	MebrahtuTesfay	BOARD- crop	Food
		Geraita	AlematGidena	BOARD- L.stock	Food
		• Hawzen	GeremedhinKassa	REST	Food
		Gantafeshu	KasahunGebremicael	WV Ethiopia	Food
			TeweldeGebreslasie	CWW	Food
			KirosGirmay	Care Ethiopia	Food
			ErmiasAmare	BOARD-ENCU	Non food
			HaftamuNigus	BOWR	Non food
			Daniel Abrha	IOM	Non food
Three	Central	Y/abergele	Gebrab G/medhin(Team Leader)	BOARD- EW	Food
		_	BirhaneTesfay	BOARD- Crop	Food
		Mayknetal	GebreslasieHagos	BOARD L.stock	Food
		Ahsa	Mulu	UN OCHA	Food
		• Chila	Kinfe H/geriel	FAO	Food
			ZeynawiTikue	AAH	Food
		• Naeder	ZerayKebede	FH	Food
			HaileslasieWelegebriel	MCMDO	Food
			AdonayEzgihaye	Save the ch.n	Non food
Four	North west	• L/koraro	Belay G/medhin(Team Leader)	BOARD- Crop	Food
		 Tsimbla 	LuelBerhe	BOARD- EW	Food
			BereketTilahun	MCMDO	Non Food
		• S/adyabo	SemaieGebre(Shire site)	WV Ethiopia	Food
		• T/adyabo	Adugna	Zone administration	Food

1. INTRODUCTION

Tigrai National Regional state has nearly 8 million people living in 54,593 km² areas of different agro ecological zones. It has 1.3million hectares of arable land, 7 administrative zones and 60 rural and 33 urban Woredas. Agriculture is the main backbone of the state economy in which crop production accounts about 70 % of the economy and it is the source of employment and income for 80% of the population. The contribution of livestock in the economy of the state is about 30%. Tigrai had believed to have nearly 17 million livestock population which includes cattle 4,850,412, sheep 2,282,746, goats 4,232,680, equine 991,905 (horse, mule and donkey) camel 52,905, poultry 6,190,640, and Bee colonies331, 407 (CSA, 2018/19).

The region is classified into 16 livelihoods. The rainfall pattern in this region is predominantly uni-modal (June to early September) and briefly the meher season rains are the most important for crop, livestock and other livelihood means of the people. Meher contributes for large amount of the annual rain fed crop production and a few amount of crop production is produce from the belg season. Most Woredas of the region are summer season dependent and it contributes the same for both crop and livestock production.

The economic and social services have disrupted, driving food insecurity, malnutrition, health and psychosocial problems and water shortages all over the region due to the war crisis. On top of that the extension services are disrupted. About 6.5 million people are in need of emergency food and out of these 1.5 million people displaced from their home of origin. Currently, about 1.7 million people are faced catastrophic famine and more than 76,361 children are estimated severely malnourished faced imminent risk of death. Considerable part of the state's social and physical infrastructure has destroyed.

Field assessment reports, from government& humanitarian partners, has indicated that most of public Institutions in urban and rural areas had been destroyed, Crops, food and farm equipment had been burned down or looted, livestock are looted and/slaughtered, Irrigation schemes and natural resources are damaged. More than 570,000 hectare of land is unploughed and not planted. Hazards Livestock diseases, crop pests, diseases and weeds significantly influence the productivities and production of crop and livestock. All economic & social services /extension, health, education, etc. / are interrupted from the time when the war is erupted. More than 80 % of the state's population depends on subsistence agriculture, which means that they depend on their own farm product for survival. Despite the consequences of rain performance and input utilization, the war crisis significantly affected the seasonal production.

2. OBJECTIVES

- ➤ To evaluate the outcome of the Meher season and its impact on livelihood security.
- To identify key factors affecting productivity & production of this production year
- To assess the impact of each disaster and evaluate the extent to which households can cope with
- ➤ To identify areas where relief assistance needs in the current year due to acute problems and to estimate the size of the population in need and duration of assistance required for 2022.
- ➤ To identify emergency requirements in agriculture, public health, nutrition, social protection and water supply and sanitation.
- > To evaluate the implementation of the ongoing multisectoral humanitarian responses

3. METHODOLOGY

Procedure

- > The teams were briefed by regional BOARD/Early warning and Response Directorate before visiting selected zones and woredas.
- ➤ Conduct briefing to Zone officials about the objective of the Meher assessment and agreed on the selected woredas for Meher assessment.
- ➤ Semi-structured interviews/briefings/debriefing were held with zone and woreda officials to discuss the food security situation and to gather crop, livestock, price and "other" information for the current season (Meher 2021).
- ➤ Complementary information was also collected through field observations,
- ➤ The team conducted briefing to Woreda officials on the objective of the Meher assessment and agreed on the selected Kebelles for focus group discussion and field observation.
- ➤ Complementary information collected through field observation and focus group discussion with community members in the selected two kebelles and one day woreda stakeholders' discussion and debriefing the findings of the field observation and discussion with the stakeholders.'
- > Zonal report writing and presentation on the findings of the Meher assessment to the Zonal stakeholders lead by Zonal Administration.
- ➤ Report writing and debriefing the findings at regional level

The assessment team initially had a briefing and meeting with the regional BoARD/EWRFS. The teams able to visited Meher growing Woredas in five zones of the region that identified based on the early warning information/data to have rainfall adversity ,food insecurity and related concerns.

In each of the visited Woredas, the team were able to collect data using seasonal assessment formats/questionaries' on current season/year crop and livestock production, price data (including staple prices, livestock and livestock product prices, cash crop prices and labour prices), changes in livestock holdings, and changes in availability of labour, changes in other incomes sources, IDPs, Relief and PSNP data, institutional service data (FTC, Vet. Functionaries at all levels) data was collected. Trans walk observation was used and available secondary data (Woreda reports and damage assessment data) was collected through structured checklists and/or reporting formats.

To triangulate the data collected at woreda level, the team was also able to conduct field observation of the crop and livestock situation and focus group discussion with randomlyselected farmers from the community and interviewed individual farmers at kebelelevel aiming at witnessing and observe overall crop and livestock production prospects, collect conflict damage reports and its impact on livelihoods. Similarly, discussions made with woreda and zone officials including zone administrator on the findings of the assessment.

Limitation

- Out of 60 rural and 33 urban woredas of the region only 18 rural woredas are covered by the assessment due to shortage of fuel and security issues along to woredas bordering Eritrea, Amhara and Afar areas
- The assessment team was assumed to comprise all bureau and core partner representative experts. However, the team lacked experts from bureau of education, bureau of health, bureau of social affairs, UNOCHA, UNICEF, and WFP due to shortage of cash and security fears (drone strikes).
- Lack of baseline and recently collected data and reliability was a problem during the assessment in all woredas due to looting and destruction of information technology appliances and archives by Eritrean and Ethiopian forces.
- We could not get the exact number of people residences in each woreda in fluxed from Eritrea, as the regional government declared in 2018 that Tigray is the 2nd homeland of Eritreans, and ejected Tigreans from other regions of the country. And, since the 2007 population census the fertility and birth rate has

- increased in the rural areas due to the positive changes in socio economic of the communities. All these factors makes difficult to estimate the number of existing population of the region.
- Due to the current crisis in the region most of the experts in all woredas and Tabias are away from their place of work to search food. Because of this most of data were collected from discussion with communities' key informants, and Trans walk observations.

4. BACK GROUND INFORMATION

Short cycle food crops like wheat, barley, and teff are majority grown in most highlands and mid-lands of the region. Long cycle crops like sorghum, maize, millet and finger millet are grown in lowlands of the region specifically in ALL, HSS, MTK, RVL, TSC, MRB and WRC livelihood zones. Pulses are grown in large quantity in AOH livelihood zone like Ofla, Endamehoni, Degua-Tembien and Emba-Alaje Woredas and AWH livelihood zone of Atsbi-Womberta Woreda. Even though, the amount and area coverage differ from Woreda to Woreda most livelihood zones grow small quantity of pulse crops. Main crops of the region depending on the agro-ecology and livelihood zones like Teff, Wheat, Sorghum and Sesame are grown. Most of the low land areas of the region are potential for cattle and goat rearing.

5. BRIEF SUMMARY OF THE ASSESSMENT

The conflict in Tigray; which started in November 2020 and which is still continuing; is one of the largest humanitarian crises in the world. The conflict has forced millions of people to be displaced and seek security within and outside the region. It also resulted to millions of people to be in critical humanitarian situation.

The victims affected by the conflict have lost their physical, social and economic access to food; and there was an urgent need to respond to the needs of the transitory food insecure households. In response to the crisis, besides to the Tigray Government's endeavours, a number of UN Agencies, INGOs and local NGOs are being involved in humanitarian food and non-food assistance.

The humanitarian food assistance commenced in April 2021, and up to the end of November 2021, only half of the targeted beneficiaries have received their 2nd round food rations. The main factors for this low performance are: scarcity of food commodities attributing to big time gaps between food distribution rounds, partial family targeting and inability to distribute full food basket, cash and fuel constraints and discontinuity in telephone and internet connectivity, frequent power blackouts and non-availability of banking services.

The Tigray Government along with the relevant UN agencies, INGOs and NGOs has conducted this Multi-Agency Meher Assessment in 5 zones and in 18 Meher crop growing woredas. The major early warning indicators covered during the assessment include: weather conditions, crop production, livestock and pasture conditions and crop and livestock markets.

The assessment revealed that, agriculture the main source of livelihood of about 80% of the Tigray population; is the most affected sector of the Tigray Economy. This is mainly due to the war and late onset of rainfall. Significant proportion of the population in the farming communities were displaced from their home area affecting timely land preparation and plantation. Moreover, farmers were prohibited to plough and their oxen looted and slaughtered by the warring parties. This was compounded by the late supply and improper use of agricultural inputs, lack of agricultural extension services, hailstorm and flooding, weeds, pests and diseases and instability in the crop and livestock markets.

As a result of these problems, though the total planned size of land to be planted for the year 2021 was 1,326,555 hectare the actual planted was 727,438 ha (54.8%). Moreover, the total crop production from the five zones of the region is estimated to be 8,968,543qt. Out of the planned 27,179,311qt,this is only 33% of the plan.

Thus, in the year 2022, a total of 6,525,097 (PSNP=1,010,752, Relief = 4,012,609 and IDP = 1,501,736) people will become highly vulnerable to famine and associated problems and they will be food aid dependents for 9 months of the year. Besides to the emergency food assistance, the other components of the agriculture related emergency interventions for the year 2022 include: restoration of the different agricultural infrastructures, full-scale resumption of extension services, maintenance of existing water points, emergency supply of agricultural inputs, emergency provision of livestock feed, vaccines, drugs and treatment services etc. the details of which is described here with this report.

6. WEATHER CONDITIONS

The region receives bimodal rains, meher and belg seasons. Meher is the main season in which all Woredas of the region receive rain and grow food crops. Belg covers only some Woredas of the region where found in Southern zone and few Tabiya of South East zone in Hintalo and Wajirat Woredas. Belg is important in the region not only for food production but also for livestock production and productivity that has equivalent share as crop production to the livelihood of the households. The last belg rainfall was reportedly poor and belg crop production has failed not only by shortage of rainfall but also by the horrific war in Tigray affects farmers not to prepare their land and saw on time. Therefore, belg-producing Woredas was not able to produce.

6.1 Performance of Azmera rainfall

Meher is long season useful in the region that has two types of rainfall locally called Azmera and Tsediya/keremti. Azmera rainfall is important for growing long cycle (high yielding) crops such as Sorghum, Maize, Millet and Finger millet. It is also essential for land preparation of short cycle food crops as wheat, Teff, Barley and pulse crops in all Woredas of the region.

Azmera rainfall normally started in the second week of March and ends up first week of May but on 2021 production year there was no rain in seven woredas of Eastern zone and late by 1-2 weeks for T/Womberta, Geralta and TsaedaEmba Woredas. It was normal in some woredas of southern zone, D/temben, Adwa and L/maychew woredas but in other most woredas of the region was late by 2-3 weeks. The rainfall amount was poor and erratic distribution followed by prolonged dry spell during May and June. The amount, spatial and temporal distribution of Azmera rain was generally poor in most Woredas of central zoneas well as in most Woredas of North West zone but Severe in Abergele-Yechilla, Chilla, Aheasa, Naeder and pocket areas of Mai-kenetal and E/Senayti, S/Adiabo, T/adiabo, Tsimbila, L/Koraro, Tselemti and L/tselemti Woredas. Because of late onset of Azmera rain and poor amount and distribution, area planted for Azmera was shifted from long cycle and high yielding crops to short cycle and low yielding crops and the growth was poor. It was also reported that the prolonged dry spell affected the timelines of planting and the overall growth and performance of Azmera crops, where in some pocket areas caused wilting and dry up of vegetative growth of long cycle crops (Example in Chilla sorghum remained without seed setting).

6.2 Performance of Tsediya rainfall

Normally Tsediya rainfall starts on the first week of June and ends third week of September with slight variation among agro-ecology and Woredas in the region. On 2021 production year the onset of rainfall was normalin some Woredas such as R/chercher, R/azebo, R/alamata, E/mehoni and E/alaje ,L/Maychew, Adiet, Adwa, T/maychew and K/tembien. But in most woredas of the region in five zones the onset of rainfall was late by 1-3 weeks as compared to the normal year. The amount and distribution of rainfall was improved since mid-July up to the end of August in most Woredas of the region. But also poor, erratic distribution and long dry spell had seen in several woredas in all zones of the region.

The cessation of meher seasonal rainfall in general can be rated as early in most Woredas of the region. In some woredas such as A/Yechila, Ahsea, Mai-kenetal, Naeder and most Tabiya of Endaba-Tsehma the rainfall were

ceased one to three weeks earlier than normal. It was stopped while planted crops were at stage of flowering and seed setting, which adversely affected crop production. The above average rainfall coupled with hailstorm, pest and diseases, led to various types of adversities in crop production in most Woredas of the region. In North West zone, the cessation of Meher rainfall was normal in all Woredas of the zone with the exception of M/adiabo and A/dearo, which was early by 2 weeks. In Eastern zone rainfall cessation was 1-2 weeks early to all Woredas except K/Awlaelo, Hawzien, and Geralta and T/Womberta woredas as compared to normal season.

7. MEHER CROP PRODUCTION PROSPECTS

7.1 Planted area and timelines of planting

Table-1. Azmera and Tsidiya crops planted vs. the plan to be planted in hectare

		Azmera			Tsediya		Total			
zone	Plan	Ach	%	plan	Ach;	%	plan	Ach.	0/0	
East	12491.39	10803.5	86.5	80231	76210.9	95	92,722.4	87,014	93.8	
South East	24,593.3	21,536.6	87.8	82,670.3	84,397.9	102	107,264	105,935	98.7	
South	54619	56288.4	93.5	87346.75	85996.5	98.5	141965.75	142,285	100.2	
Central	120,308	111,035	92.3	76,173	80,636	106	196,536	191,669	97.5	
North West	143879.3	130786.8	90.9	89191.25	69746.9	78.2	233,070.5	200,533	86	
Western	380,004	0.0	0.00	174,992.00	0.0	0.00	554,996	0.0	0.00	
Six zone total	735,895	330,450	44.9	590,610	396,988	67.2 %	1,326,555	727,438	54.8%	

Table 2 Azmera and Tsidiya crops planted vs. the plan to be planted in hectare in each Woredas

			Azmera			Tsediya			Total	
Zone	Woredas	Plan	Ach	%	plan	Ach	%	Plan	Ach	%
	G/Afeshum	601	686.93	114.3	8613	8314.2	97	9214	9001.13	97.69
	Hawzen	3939.25	3840.8	97.5	10525	8997.5	85.5	14464.25	12838.3	88.76
	Geralta	976	910.25	93.3	5528	5302.8	95.9	6504	6213.05	95.53
	Atsbi	211.5	194.5	92	8022	7884.1	98.3	8233.5	8078.6	98.12
_	G/mekeda	850.5	650.25	76.5	8261	8366.5	101	9111.5	9016.75	98.96
Eastern	Bzet	1160.01	972.88	83.86	2425	2210.6	91.1	3585.01	3183.48	88.80
Eas	S /Saesie	787.375	615.25	78.1	6738	6375.3	94.6	7525.375	6990.55	92.89
	Tsa-Emba	863.5	672	77.8	9398	9052.5	96.3	10261.5	9724.5	94.77
	K/Awlaelo	1892.25	1534.6	81.1	10281	10031	97.6	12173.25	11565.6	95.01
	Ts/Wemberta	930	726	78.1	9520	9676.4	101	10450	10402.4	99.54
	Erob	280	0	0	920	0	0	1200	0	0.00
	Sub total	12491.39	10803.46	86.49	80231	76210.9	95	92,722.4	87,014.4	93.8
	D/tembien	500	871	174	8184	7803	95.3	8684	8674	99.88
	Seharti	3515	3367	95.8	11034.5	11034.5	100	14549.5	14401.5	98.98
ıst	Samre	12085.3	9411.3	77.9	7743.8	10110.6	130	19829.1	19521.9	98.45
1 E	Wajirat	2345	1892	80.7	5884	5837	108	8229	7729	93.92
South East	Huntalo	2756	3040	110	21660	21273.8	98.2	24416	24313.8	99.58
9 2	Enderta	3392	2955.3	87	28164	28339	100	31556	31294.3	99.17
	Sub total	24593.3	21536.6	87.8	82670.3	84397.9	102	107,264	105,935	98.7
	R/alamata	17783	18002	101	18447	18228	98.8	36230	36230	100
South	R/church	9965	8909	89.4	7978	9035	113	17943	17944	100
S	R/azebo	14555	14555	100	12168.5	12168.5	100	26723.5	26723.5	100

Sub total	54619	56288.4	93.5	87346.75	85996.5	98.5	141,965.7	142,285	100
Ofla	1731	3007	174	15794	13925	88	17525	16932	96.6
Neqsege	314	319.5	101.8	3959	3950.5	99.8	4273	4270	99.9
Zata	1115	1509	135.3	3067	2637	86	4182	4146	99.1
E/mehon	2347	3449	147	9297	9282	99.8	11644	12731	99.9
Bora	1314	1333	97.9	2641	2595	113	3955	3928	99.3
Selawa	4970	4475.5	101	5412.25	5856.5	108	10382.25	10332	99.5
E/alaje	525	729.4	139	8583	8319	97	9108	9048.4	99.4

	NA/a wa da	Azmera			Tsidya			Total		
zone	Woreda	Plan	Ach	%	plan	Ach	%	Plan	ach	%
	A/Yechela	13,595	12,918	95.00%	5,992	6,100	102	19,587	19,018	97.1
	T/ Melash	8,395	8,145	97.00%	2,855	2,820	98.8	11,250	10,965	97.5
	KollaTembien	13,805	13,197	95.60%	1,937	1,605	82.9	15,742	14,802	94
	Keyhe - Tekle	12,680	12,784	100.8	2,155	2,038	94.6	14,835	14,822	99.9
	Mai - kenetal	5,464	3,369	61.70%	2,437	4,136	170	7,901	7,505	95
	E/Tshema	5,017	3,113	62.00%	2,731	4,364	160	7,748	7,477	96.5
	Emba- senieti	3,233	2,995	92.60%	2,181	2,146	98.4	5,464	5,142	94.1
	Hahale	644	808	125.5	5,145	4,776	92.8	5,789	5,583	96.4
=	Ahefrom	2,542	2,513	98.90%	9,020	8,971	99.5	11,562	11,484	99.3
Central	Egela	4,201	2,705	64.40%	1,224	2,278	186	5,425	4,983	91.9
ŭ	Ahesea	9,368	8,672	92.60%	1,658	2,074	125	11,026	10,746	97.5
	R/ AdiArbaete	8,580	8,480	98.80%	2,144	1,844	86	10,724	10,324	96.3
	Chila	10,952	10,608	96.90%	772	863	112	11,724	11,471	97.8
	Adwa	3,670	2,979	81.20%	10,377	10,957	106	14,047	13,936	99.2
	L/Machew	2,861	2,447	85.50%	11,214	11,610	104	14,075	14,057	99.9
	T/ Machew	4,280	4,267	99.70%	6,924	6,655	96.1	11,203	10,922	97.5
	Adiet	6,792	6,792	100	4,316	4,321	100	11,113	11,113	100
	Naeder	4,229	4,243	100.3	3,091	3,078	99.6	7,321	7,321	100
	Sub total	120,308	111,035	92.30%	76,173	80,636	106	196,536	191,669	97.5

7000	Movede		Azmera			Tsediya		Total			
Zone	Woreda	Plan	Ach	%	plan	Ach	%	Plan	ach	%	
	S/Adiabo	10722	9406.25	87.7	2540	2298.4	90.5	13262	11704.65	88.26	
	T/Adiabo	28522	23631	82.9	18241	3361.75	18.4	46763	26992.75	57.72	
	Tsimbila	20826	18968.5	91.1	3046	3196	105	23872	22164.5	92.85	
	L/Koraro	5396	5509	102.1	3935	3781	96.1	9331	9290	99.56	
,	A/Daero	15506.75	14602.5	94.2	5747.25	5222	90.9	21254	19824.5	93.27	
North West	M/Adiabo	12573	9350	74.4	3322	627.75	18.9	15895	9977.75	62.77	
rth	L/Teslemeti	14181	13943	98.3	3894	3505	90	18075	17448	96.53	
Ž	Teslemeti	15351.5	15447.5	100.6	3327	2676	80.4	18678.5	18123.5	97.03	
	T/Koraro	10415	10981	105.4	10352	9594	92.7	20767	20575	99.08	
	Zana	6298	6820	108.3	4314	3790	87.9	10612	10610	99.98	
	Asgeda	4088	2128	52.1	30473	31695	104	34561	33823	97.86	
	Sub total	143879.3	130786.75	90.9	89191.25	69746.9	78.2	233070.5	200533.7	86.04	
u,	Wolkayt	30,325	0.0	0.00	16,529.00	0.0	0.00	46,854.00	0.0	0.00	
Western	Awra	11101	0.0	0.00	5851	0.0	0.00	16,952.00	0.0	0.00	
>	K/Humera	271180	0.0	0.00	117500	0.0	0.00	388,680.00	0.0	0.00	

Tsege	edia	67398		0.00	35112		0.00	102,510.00	0.0	0.00
Sub	total	380,004	0.0	0.00	174,992.00	0.0	0.00	554,996.00	0.0	0.00
Six zones t	total	735 895	330 450	44.9	590 610	396,988	67.2	1.326.555	727,438	54.8

The annual meher season plantation was achieved below planned. The total planned in six zones in sixty rural woredas of the region was 1,326,555ha and 727,438 ha (54.8 %) was planted. The achievement of this year was less by 45.2% as compared to the annual plan. Azmera was planned to plant 735,895 ha but the achievement was 330,450 which is 44.9 % and Tsediya was planned to plant 590,610 ha and achieved 396,988ha which is 67.2 %.

The overall achievement of this year is 54.8 % of the plan. While Azmera crops achievement is (44.9%) of the plan and Tsediya achievement is (67.2%) of the plan. High yielding crops of Azmera like Sorghum and Maize was less this year compared to the plan and last year estimated yield before war of most Azmera potential Woredas and the Tsediya achievement is higher than Azmera, this shows that shortage of rainfall in Azmera enable farmers to shift from long maturing and high yielding crops to short maturing and low yielding crops. 5t

The major crops grown in the region are long cycle (Sorghum, Maize, Finger millet, and Millet) and short cycle (Teff, Wheat, and Barley etc.). The long-cycle crops are grown using Azmera rain and normally start between midmarch and extend to Mid-December and short-cycle crops are grown using Tsediya rain Mid-June to October. The timing and amount of rainfall are important factors for high crop production. Land preparation was decided by the rainfall intensity but this year land preparation was interrupted by the war in Tigray for long ploughing months. Most of the farmers were forced to plant their field in the first ploughing and some in second Ploughing. According to focus group discussion, in central, East and North West zone, Eritrean forces were not allowed farmers to plough their lands. In South East, due to the invading forces war instability and displacement of people; un able to prepared their lands, in addition, because of shortage of oxen for ploughing since most of the farmers looted their oxen by Eritrean forces, the land were not properly prepared.

The performance of 2021 meher season plantation was below normal as compared to plan, last year plantation and to that of reference year. The late onset of Azmera rainfall affects the land preparation. The war in Tigray that took 8 months affects timely land preparation and plantation. The war and late onset of rainfall-frustrated farmers not to timely prepared their cultivable lands. Timeliness of plantation for Azmera and Tsediya was below normal because of the above-mentioned reasons. Mostly land was prepared after the war stopped in Tigray between end of June and first week of July.

7.2 Input (fertilizer and seed) supply and utilization Table-2 Inputs utilizations vs. planned

	Type of in	ıput						
Zones	Tot	al fertilize	r (qt.)	Seed (qt)				
	Planned	Supplied	Utilized	Plan	Supplied	Utilized		
Eastern	95847.5	106545.5	103318.72	17826	25704	23196		
South East	87911.5	85702.5	85702.5	0	15129.3	15129.3		
South	28,958	51,758	45,208.5	9125	12,348.75	12,348.75		
Central	184,639.5	176,835	163,402	14588	17,939.95	16,595.95		
North West	134,002	119172	99,638.5	8043.5	4598.87	3441.5		
Western	71,355	0	0	0	0	0		
Total	602,713.5	540,013	497,270.22	49582.5	75,720.87	70,711.5		

It is obvious that crop production could be increased mainly by using yield improvement input in particular using natural fertilizer, chemical fertilizer and high yielding varieties of seed. In this production year the achievement of input utilization (Chemical fertilizer and improved seed) were below normal and the proportion of planted area which is rated 68 kg per hectare, 10kg per hectare chemical fertilizer and improved seed respectively. This

indicates that the utilization of chemical fertilizer per hectare is very low as compared to the standard rate and the improved seed utilized is low as compared the land covered with crop and standard seed rate of potential crops of the region.

In 2021 production year, there was not able to support farmers through extension service due to the war crises. Development agents were not able to teach and sensitized rural households since the conflict deter them to move from the rural area to save their life. The supply of both chemical fertilizers and improved seeds was late transported to each Woredas particularly to Tabiyas due to transportation problem, and farmers were not able to properly use inputs on time. The team observes less in amount, late distribution, improper utilization and technical failure as top dressing of NPS. Most of farmers of the region were familiarized with herbicides and chemicals to control pest and diseases. The supply of these chemicals were facilitated by multipurpose cooperatives, unions and agro dealers but in 2021 crop production season, these institutions were not able to supply inputs because most of the cooperatives and unions were looted and damaged by Eritrean and Ethiopian forces. As a result the production and productivities of crops highly affected.

7.3 Weather Adversities and other risks

Moisture stress and other Weather related adversities such as hailstorm, flood, wind, crop pest and diseases, high intensity of rainfall have experienced on many pocket areas of the region. In North West, L/koraro, A/daero, L/Tselemti, T/koraro, Zana, Asgede, Tsimbla and S/adiabo in 49 Tabias 29,699 ha of land (25-95%) was damaged. Similarly unseasonal rainfall was adversely affected 1461 ha of land in Zana and Tsmbila Woredas. In Central zone 115,985 ha of land was damaged with the level of 20-100% by the above rainfall-associated adversities. In Eastern zone weather correlated adversities such as flooding, waterlogging, shortage of precipitation, hailstorm, pest and diseases have affected 23,839 ha of land, which is 27.4% of the total planted, and 296,342 qt. that is 35.4% of the total production affected. In South East and South zones, there were also weather adversities as Hailstorm, Flood, Waterlogging, Moisture stress and unseasonal rainfall, crop damage occurred in the visited Woredas and resulted significant crop production loss.

Poor land preparations has made a conducive situation for high weed and pest infestation. There were desert locust invasion from 3rd week of July to October 2021 in some woredas such as Samre, Saharti and Abergeleyechila in which damages are observed. In most of the sorghum and finger millet growing low land areas of N/western, Samre, Saharti of S/East zone and central zone woredas sorghum and finger millet crops are severely damaged its ear head during seed setting stage by Sap Sucking Bugs and other different insects.

7.4 Crop production prospect

Table-3. Production estimations vs. the planed in quintal

		Azmera			Tsediya		Total			
Zones	Plan	Ach	%	plan	Ach	%	plan	ach	%	
East	283,440	95,368	33.6	1,797,272	740,770	41.2	2,080,712	836,138	40.2	
South east	727,686	311,759	42.8	1,898,379	894,221	47.1	2,626,067	1,205,980	45.9	
South	2,440,886	1,269,202	52	2,226,169	1,110,998	49.9	4,667,055	2,380,200	51	
central	3,308,300	942,993	28.5	1,448,255	771,834	53.3	4,756,555	1,714,827	36.1	
North west	4,998,119	2,465,875	49.3	664,676	365,523	55.0	5,662,795	2,831,398	50	
Western	6,744,856	0		641,273	0		7,386,127	0	0	
six zone total	18,503,287	5,085,197	27.5	8,124,024	3,883,346	47.8	27,179,311	8,968,543	33	

Production estimations vs. the planed in quintal in each woredas

7	X V		Azmera			Tsediya		Total			
Zone	Woreda	Plan	Ach	%	plan	Ach	%	plan	ach	%	
	G/Afeshum	15388	5905	38.37	215741	95062	44.06	231129	100967	43.68	
	Hawzen	97291	30372	30.96	234813	92528	39.40	332104	122900	37.01	
	Geralta	22190.5	9022	40.66	128272	54620	42.58	150462.5	63642	42.30	
	Atsbi	5118.5	2218	43.33	146607	66437	45.32	151725.5	68655	45.25	
	G/mekeda	21320	8948	42.45	190950	82930	43.43	212270	91878	43.28	
	Bzet	24590.5	6579	26.75	47350.35	25261	53.35	71940.85	31840	44.26	
	S /Saesie	9840	1419	14.18	150156	39964	26.61	159996	41383	25.87	
	Tsa-Emba	17243	4425	25.82	199468	88682	44.46	216711	93107	42.96	
	K/Awlaelo	35724.8	15640	43.78	233104.9	96422	41.36	268829.7	112062	41.69	
	Ts/Wemberta	26894	10840	40.31	229650	98864	43.05	256544	109704	42.76	
E	Erob	7840	0	0.00	21160	0	0.00	29000) (0.00	
Eastern	Sub total	283440	95368	33.6	1797272	740770	41.2	2080712.55	836138	40.2	
	D/tembien	12450	8715	70.00	178745	88796	49.7	191195	97511	51	
	Seharti	92749	18498	19.94	150365	72296	48.08	243114	90794	37.4	
	Samre	369132	115405	31.28	105922	79327	74.9	475054	194732	41	
	Wajirat	54620	30938	56.6	98192	36760	37.4	152812	67698	44.3	
	Huntalo	101627	74635	73.4	572075	262219	45.8	673702	336854	50	
last	Enderta	97108	63568	65.46	793080	354823	44.7	890188	418391	47	
South E	Sub total	727,686	311,759	42.8	1,898,379	894,221	47.1	2,626,067	1,205,980	45.9	
<u> </u>	R/alamata	806,305	499,90	9 62	556,650	222,456	57	1,362,955	722,365	53	
	R/chercher	508,228	255,84	9 50.3	126,312	48,731	38.6	634,540	304,580	48	
	R/azebo	713195	31930	9 44.8	199732	155411	77.81	912927	474720	52	
	E/alaje	16683	934	2 56	253781	139410	54.9	270464	148752	55	
	Selawa	126,393	45,80	8 36.2	158,148	71,482	45.2	284,541	117,290	41.2	
	Bora	44958	1573		87678			132636			
	E/mehoni	110892	5801		305131	166634		416023			
	Zata Neqsege	25040 10029	926 451	+ +	46231 94793	22653 38462		71271 104822		1	
ern	Ofla	79,163	5145		397713			476,876			
Southern	Sub total	2,440,886	1,269,20	2 52	2,226,169	1,110,998	49.9	4,667,055	2,380,200	51	
Zone	Woreda	Azme	era		Tsidya			Total			
Zone	Woreda	Plan	Ach	%	plan	Ach	% pla	an a	ich	%	
	A/Yechela	388,303	64,21	7 16	.5 69,313	32,127	46.35	457,616	96,344	21.05	
	T/ Melash	263,644	58,35	2 22	.1 77,960	14,705	18.8	341,604	73,057	21.39	
	KollaTembien	385,755	143,97	9 3	26,965	9,050	34.1	412,720	153,029	37.08	
	Keyhe – Tekle	370,520	170,38	0 45.9	98 32,525	14,952	45.97	403,045	185,332	45.98	
.al	Mai – kenetal	150,432	31,59	1 2	52,041	41,633	80	202,473	73,224	36.10	
Center	E/Tshema	90,925	19,88	6 21	.9 74,623	17,302	23	165,548	37,188	22.40	
Ŭ	Emba- senieti	95,325	17,19	2	18 36,025	13,141	36.47	131,350	30,333	23.09	
	Hahale	22,285	7,80	0 3	89,179	44,590	50	111,464	52,389	47.00	
	Ahefrom	65,115	26,04	6 40.0	00 188,142	103,478	55.00	253,257	129,524	51.14	
	Egela	100,122	25,03	1 25.0	00 16,654	23,108	138.75	116,776	48,139	41.22	
	Ahesea	237,664	36,05	6 15	.2 34,631	5,984	17.3	272,295	42,040	15.44	

Six zones	s total	18,503,287	5,085,197	27.5	8,124,024	3,883,346	47.8	27,179,311	8,968,543	33
	Sub total	6,744,856	0	0.00	641,273	0	0.00	7,386,127	0	0.00
	Tsegedia	1175154	0	0.00	194,120	0	0.00	1,369,274	0	0.00
Western	K/Humera	4,829,160	0	0.00	333,000	0	0.00	5,162,160	0	0.00
ïrn	Awra	198,052	0	0.00	28410	0	0.00	226,462	0	0.00
	Wolkayt	542,490	0	0.00	85,743	0	0.00	628,233	0	0.00
Nort	Sub total	4,998,119	, , , , , , , , , , , , , , , , , , ,	49.3	664,676	365,523	55.0	5,662,795	2,831,398	50
North We	Asgeda	927,640			37,367	33,960	90.9	965,007	620,956	
est	Zana	222,556	117,926	53.0	58,026	30,383	52.4	280,582	148,309	52.86
	T/Koraro	280,829	88,964	31.7	96,088	105,864	110.2	376,917	194,828	51.7
	Teslemeti	603,952	383,847	63.6	56,512	34,077	60.3	660,464	417,924	63.3
	L/Teslemeti	333,867	93,392	28.0	44,862	9,763	21.8	378,729	103,155	27.2
	M/Adiabo	376,640	87,475	23.2	11,019	810	7.4	387,659	88,285	22.8
	A/Daearo	485,536	294,183	60.6	84,493	50,666	60.0	570,029	344,849	60.5
	L/Koraro	180,415	60,595	33.6	72,861	39,492	54.2	253,276	100,087	39.5
	Tesimbila	479,724	279,907	58.3	43,000	33,950	79.0	522,724	313,857	60
	T/Adiabo	790,212	347,461	44.0	130,944	13,131	10.0	921,156	360,592	39.15
	S/Adiabo	316,748	125,129	39.5	29,504	13,427	45.5	346,252	138,556	40.02
	Sub total	3,308,300	987,256	29.8	1,448,255	771,834	53.3	4,756,555	1,714,827	36.05
	Naeder	153,940	53,378	34.7	51,398	21,993	42.8	205,338	75,371	36.7 1
	Adiet	174,654	69,191	39.6	-		43.4	225,752	91,351	40.47
	T/ Machew	130,698	41,549	31.8	140,186	66,411	47.37	270,884	107,960	39.85
	L/Machew	79,477	25,118	31.60	229,666	144,690	63.00	309,143	169,808	54.93
	Adwa	82,322	30,138	36.61	229,702	168,301	54.00	312,024	154,177	49.41
	Chila	290,362	65,311	22.5	16,263	2,866	17.6	306,625	68,177	22.23
	R/ AdiArbaete	226,757	102,041	45.00	31,884	25,343	79.5	258,641	127,384	49.25

The total crop production from the six zones of the region is estimated to be **8,968,543**qtOut of the planned **27,179,311**qt which is **33%** of the plan. The production expected from Azmera and Tsediya planted crops is **5,085,197**qt, **3,883,346**qt, which is **27.5%** and **47.8%** respectively, this indicates that there is high loss in Azmera than Tsediya food crops. The poor crop production prospect is from long cycle growing crops mainly from Central, North West, East and South East zone Woredas. The cumulative production estimation from six zones of the region is 40.2, 45.9%, 51%, 36 %, 50% and 0% of the annual crop production for Eastern, South East, South, Central, North West and Western zones respectively. **Eastern** and **central** zones are the most affected zones in which their total production is **40.2%** and **36** % respectively. Generally, the meher crop production prospect is below normal to most Woredas of the region as compared to annual plan and last year yield estimated before war. There is no production from western zone due to conflict the people have displaced and the area is under the control of Eritrean and Amhara forces.

Azmera food crop potential in lowland areas such as A/Yechilla, Ahsea, T/Milash, T/adiabo, S/adiabo, L/Koraro, M/Adiaboand L/Tselemti Woredas the production reduction estimation is 83%, 85%, 78%, 56%, 60%, 66%, 77%, 72% of the annual plan respectively due to moisture stress and other risks.

The main reasons for low crop production prospect are horrific war that affects timely land preparation and loss of oxen and farm tools due to invading forces, the shift of long cycle crops in many Woredas of Central and North West zones ,shortage of rainfall, poor performance, erratic distribution, prolonged dry spell and late input

distribution .There has been substantial yield reduction mainly associated to failure and poor performance of Azmera rainfall in all long cycle crop growing areas of the region and lowland Woredas. The war followed by displacement and the ban of farmers not to plough their farm land and has been affected the timely land preparation, delay and improper use of inputs, weeds, pest and disease significantly contributed to yield reduction. Farmers were forced to plant using local seed which is low yielding varieties. Similarly wide spread weather adversities reported such as prolonged dry spell, moisture stress, hailstorm, wind, and flooding between July and August. Other crop production reduction factors, include pest and disease such as rust, shoot fly, stalk borer, root rot, chocolate spot and poor agronomic practices, loss of soil fertility and lack of extension service have also contributed to the overall crop production reduction.

8. LIVESTOCK CONDITIONS

It has been understood that livestock plays an essential role in the livelihoods of the regional community by generating cash incomes through the sales of live animals and livestock products. Providing nutrition for the community by integrating livestock and livestock products in their diets particularly for the children, pregnant & lactating mothers. It has been implied that the subsector contributes to the food security prospects of the region.

8.1 Livestock body Conditions

During the assessment the livestock body condition is observed to be below normal as compared to last year and normal year. Especially cattle are significantly affected and highly emaciated in some woredas. Due to the overall impact of war on animal management, cattle could not recover their physical condition. Poor body condition is associated with shortage of feeds since last year hay and straw has been burnt-out by Eritrean and Ethiopian forces, traveling of long distances with their owners to protect and hide from the Eritrean soldiers, high prevalence of diseases due to lack of veterinary services, current shortage of feed and water due to the late onset & low intensity of Tsidiya rain which has been made the soil sticky as the regenerating of grasses and vegetation has been stunted. Moreover, large numbers of animals were left home for days with no feed and water since the owner fled to other areas to save his life.

8.2 Availability of pasture and Water

In 2021 following late onset and poor performance of rainfall has negatively affected the production of pastures as well as water points. Besides, late onset and low rainfall of Tsidya rains has affected the regeneration of grass and shrubs. The bio mass of crop production is relatively poor as compared to normal year due to the environmental pollution by the firing of the war. Many Pasture areas and water points are polluted due to chemical bombardments by the war. The crop residue expected to be collect from the current harvest will be reduced. Moreover, the last year crop residues were not collected and have been burnt by the Ethio-Eritrean forces on the fields. Hay from area closures and pasture lands has depleted by free grazing because the bylaw of pasture utilization is not in place due to the war crisis.

Commercial feed suppliers were not functional due to the destruction of the warehouses and feed processing, and blockage. The availability of water for livestock is expected to be reduce starting from January as most of livestock watering points have been destroyed. Dams and ponds could not hold enough water. During the reporting period some woredas have reported that large number of animal are suffering due to shortage of water. The woredas water resource offices have reported that the water schemes have been depleted due to high utilization by livestock and human those were displaced from the surroundings. There is a shortage of water for human and livestock in several woredas especially some woredas such as Geralta Tabias Adiwalka ,Ganta Afeshum Tabia kokebeTsibah ,Raya-chercherTabiaulaga, most Tiabias of Selewa, EndamekhoniTabia Jema, Saharti Tabia Bamba and DeguaTembien Tabia Aynberkeken are highly suffering from shortage of water which were observed during the assessment period. In N/western zone there is unusual influx of animals from the

western zone of Tigrai due to the devastating war crisis, there is high shortage of feeds and water in N/western zone woredas as a lot of animals are concentrated in host woredas and competing of pasture and water resources. As the result the livestock will be forced to travel long distances in search of water during the coming dry season.

8.3 Livestock productivity and herd size

The productivity of animals has shown significant decreasing trend due to shortage of feed and water since last year, poor management and limited veterinary services. The herd size has shown a significant reduction due to war crisis incidences and disease prevalence. Significant numbers of animals has been killed, slaughtered, looted and injured by the Eritrean and Ethiopian soldiers and death due to different diseases. In terms of severity, this reduction has been more manifested in poultry, bee colony, goats and sheep respectively. The poor small holder farmers, especially women headed households have been more affected, because their sources of income is depends on poultry, goat and sheep production. Comparatively, the number of poultry has decreased more due to they were preferably hunted by the Eritrean and Ethiopia soldiers. On top of these, the out growers and egg hatching plants are not functional at present which have a very significant role in the multiplication/production of poultry. Moreover, milk production and body performance has shown significant reduction especially cattle when compared with last year and normal year. Therefore, this situation is expected to have a negative implication on income, food and nutrition security of farmers.

8.4 Livestock Diseases

The overall supply and accessibility of livestock health services, vaccinations and treatment, has been challenging and serious disease outbreaks were observed. Hence, the coverage and prevalence of the diseases have affected more animals than the normal year. Unusual death of cattle occurred in Hahayle and Ahseaworedas, 252 cattle dead within August, 2021 in most tabias of the woredas, more death registered in three Tabias in Hahayle and one Tabia in Ahsea. In other woredas, large number of livestock have affected by different diseases, which figure out for 83,691 sickness and 15,547 deaths in the past six months. This was due to poor management, limited veterinary services (denied supplies of medicines) and high movement of animals. Diseases reported during the assessment are FMD, LSD, Rabies, PPR and internal and external parasites and are among the Tran boundary animal diseases (TADs), immediately reportable to OIE. Due to the war in Tigrai 176 of 198 (88%) public veterinary clinics were damaged, looted and most veterinary staffs have been fled. And most of them are not functional. Though, limited veterinary services have been provided, the above mentioned disease have not yet been controlled. Especially rabies have affected human and animals, still it is a threat for the communities in the Region. Therefore, urgent intervention is needed to mitigate and prevent different diseases.

9. REASONS FOR THE REDUCTION OF PRODUCTION

9.1 Crop production

- Poor agricultural practices (land preparation, weeding, poor utilization of agricultural inputs and poor moisture management).
- Lack of extension services & technical assistance
- Instability & displacement of farmers due to the war crisis
- Ban by invaders not to plough their farm lands
- Moisture stress
- Hailstorm &Flooding
- Mudslides & water logging

- Vermin (rodents, parasites)
- Pests and diseases (smut, stalk borer, chocolate spot and desert locust)

9.2 Animal production

- Lack of technical experts (fled due to the war)
- Lack of extension and veterinary services, denied supplies
- Instability & disturbance of animals' environment due to the war crisis
- Productive animals has been slaughtered, looted and killed by invaders (soldieries).
- private agro-service providers are damaged & closed due to the war crisis and total blockage
- Pasture lands and water points are polluted by weapons' chemical attacks of Ethiopian and Eritrean armies/forces.
- Low availability and access of feed and water
- Disease outbreak

10. MARKET CONDITIONS

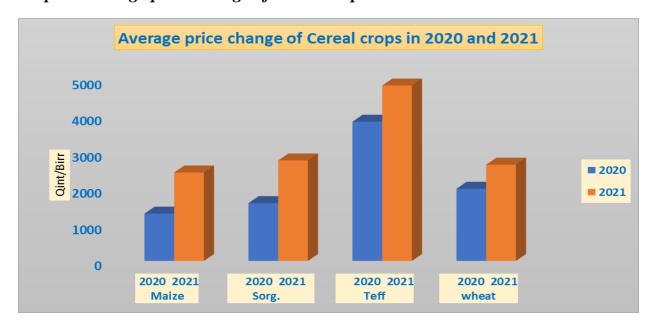
Price of Cereal crops

The major staple crops grown and consumed in the region are wheat, barley, hanfets, teff, maize and sorghum. The team was informed that supply of cereals to the market was below normal during the assessment. The prices of all staple crops are increasing significantly across all markets of the region comparing with last year of the same month/ October-2020.

Increase of price is associated with

- Limited market supply due to loss of production by pests', moisture stress and other factors.
- ➤ Blockade, looting and damaging of the crops at field as well as from the stock of farmers by Eritrean and Ethiopian troops.
- ➤ Increase demands of staple crops at high prices in all market places. For example the average price change of maize, sorghum, teff and wheat are increased by 68% 74%, 26% and 33% respectively as compared to last year of the same month of October/2020. Moreover, there is an anticipation of increment of market price for staple food starting from January 2022 until the next harvest season due to limited supply of staple crops from all woredas following poor production of this year.

Graph1. Average price change of cereal crops in 2020 and 2021



4 Pulses Price

In addition to the cereal crops, different pulses like field pea, chick pea and lentil are grown in the highland woredas and consumed in all over the region. Similar to other staple crops, the average price of pulses has

increased significantly augmented. For Example, the average price of field pea, chickpea and lentil are increased highly by 34%, 66% and 46% respectively as comparing with last year of the same month/October 2020. The reason for price augmentation is similar to other crop items there was limited supply, due to damage and looting during the war and poor production performance of last year.

Average price change of Pulses compared to 2020 with 2021 8103 9000 8000 5901 7000 5769 5569 6000 4291 5000 3560 4000 3000 1000 0 2020 2021 2020 2021 2020 2021 Field pea Chick pea Lentil

Graph2. Average price change of pulses in 2020 and 2021

4 Livestock price

Supply of livestock to the market is near normal, but their prices have decreased significantly. For example, the average price of a sheep and goat is 1750 and 1800 respectively. The decrease on average is from sheep 30 %, from goat 27 % as compared to the prices of last year of the same months/October. The decrease in price of livestock is mainly associated with the war crisis that caused shortage of cash in the region due to denying banking system and total blockage. In particular the average price of cattle is significantly decreased in all woredas of the region. For example, price of a medium ox has decreased from 18,000 to about 12,000 birr in average and similarly a cost of a cow has decreased from 16,000 birr to 10, 000.00 birr. This is a decrease of 33% for an ox and 37.5% for a cow respectively.



Graph3. Average price change of sheep and goat in Oct.2020 and Oct.2021

4 Labour price

The average agricultural and other labour wage rates of this year have decreased compared significantly compared to last year of similar months. Agricultural or 'unskilled' labour has decreased by 35 % from last year. The wage

rate decreasing trend is associated with the war crisis in Tigrai. More over the blockade, and total stoppage of the access for the seasonal labour migration to urban and investment like road, house constructions, mining and irrigation and agricultural activities have affected the accessibility and price of labour. During the assessment time seasonal labour migration to urban and investment areas have ceased totally due to the war crisis and failure of over all transactions in Tigrai. The Average wage for unskilled labour in all woredas at present ranges from 130 to 200 birr while it was 250 to 300 birr last year. This shows that decrease by 48% to 33% from last year.

11. OTHER SOURCES OF INCOME

> At Normal time

Based on the Tigrai livelihood Zone profile base line there are many sources of income identified and implemented in different livelihood zones of the region. The main sources are Livestock sales contribute the largest share of income over the entire region particularly for the middle and better off households. Mainly goats and sheep mostly frequently sold to cover the food and most wealth groups sell poultry especially main source of income for the very poor and poor. Honey is sold by the middle and better off households, who own beehives. Livestock product sales comprise butter, eggs and skins; all wealth groups sell eggs throughout the year. For all wealth groups' livestock and livestock products combined make a greater contribution to incomes than crops. Sale of crop are an important income source for all wealth groups, in particular for the middle and better off households. Credit is another major source of income in all woredas. All groups are receiving loans as part of the household credit packages and use the income for livestock investment and restocking, purchase of bee hives and irrigation inputs (treadle pumps, generator and mechanical pumps.

The Productive Safety-Nets Program (PSNP) is a largest key income source of the poor and very poor, in the absence of PSNP, would likely be facing an income deficit. Remittance is source income for many people; supported from families, relatives and other sources from abroad and within the country. All wealth groups get additional income from the sale of eucalyptus trees (other) especially in the areas growing Eucalyptus trees like Southern zone of Tigrai. Labour sales are earning significant income for very poor and poor during weeding and harvesting agricultural season on the farms of the middle and better-off households, and private investors in neighbouring woredas specially in Southern zone Raya Azebo woreda. Similarly labour migration the biggest income source for the very poor and poor mainly youth migrate to western Tigrai for the sesame weeding and harvesting season. Construction labour and other casual labour opportunities are available in Mekelle and other urban area.

On 2021 Source of income experienced

Based on the woredas official reports and the assessment team observation; Due to the war crisis in all woredas of the region currently all the source income mentioned in the above are significantly affected. Many livestock are looted, slaughtered, killed by the invading forces. The income earn from poultry production is significantly reduced because of the chickens were slaughtered by invading forces, the poultry farm in Mekelle currently completely closed and no chicken provision for the farmers engaged in poultry production. As a result the income generated is significantly reduced, this may also sustainably affected the livelihood of the people. Honey bee production is reduced due to war crises so that the income source of farmers deteriorated.

12. RELIEF DISTRIBUTION (PSNP and EMERGENCY)

- About 50% of the emergency relief assisted people have received 2nd round food assistances up to the end of November 2021. Due to the partial targeting, most of the needy population were received only one round.
- According to the emergency response performance reports of partners, on 2021 PSNP, IDPs and relief response wasn't as anticipated in terms of its ration size, components, consistency and timeliness in allocation and dispatch. Generally the performance of implementation of humanitarian aid was poor in all woredas of the region because of insecurity, transportation problem and Blockage of humanitarian corridor.

13. THE IMPACT OF WAR ON AGRICULTURE BASED ECONOMY

13.1 On crop production

- The land preparation was interrupted by the war in Tigrai for 8 ploughing months so production of this year affected.
- Most of the farmers were forced to plant their farm land in the first ploughing and some in second ploughing.
- This is because, according to focus group discussion, in central, East and North West zones, Eritrean forces were not allowed farmers to plough their lands.
- In South East Zone, due to the invading forces for long months & continues war that created instability and displacement of people, farmers were unable to prepare their lands.
- In addition, because of shortage of oxen and farm tools for ploughing since most of the farmers have been looted, slaughtered, and killed their oxen, and farm tools burned by Eritrean forces, the land were not properly prepared.
- The local seeds and staple foods are mixed with soil, water and unnecessary materials that purposely done to completely destroy the livelihoods of the community by Ethio-Eritrean forces.
- Some farmers were killed and slaughtered their oxen when they were ploughing their land in the field.
- The war in Tigrai took place 8 months that affected timely land preparation and plantation.
- Mostly land was prepared after the war stopped in Tigrai between end of June and the first week of July.
- There was not able to support farmers sustained extension service due to the war.
- Development agents were not able to teach and sensitized rural households since the conflict deter them to move from the rural area to save their life.
- The supply of both chemical fertilizers and improved seeds was late due to transportation problem, and farmers were not able to properly use inputs on time.
- The team observed that less in amount, late distribution, improper utilization and technical failure as top dressing of NPS.
- Before 2021, the supply of herbicide chemicals was facilitated by multipurpose cooperatives, unions and agro dealers.
- In this crop production season, most of the cooperative and union institutions were looted and damaged and they were not able to supply inputs.

13.2 On Livestock production

- Traveling of livestock to long distances along the owners, lack of veterinary services, shortage of feed and water due to the war.
- Besides to these, large number of animals' was left home for days with no feed and water when the owner was displaced.
- The bio mass of crop production is relatively poor as compared to last year due to the environmental pollution by the firing of the war and other natural hazards.
- Moreover, the last year crop residues were not collected and have been burnt by the Ethio-Eritrean forces on the fields.
- Hay from area closures and pasture lands has depleted by free grazing because the bylaw of pasture utilization is not in place due to the war crisis.
- Commercial feed suppliers were not functional due to the destruction of the warehouses, feed processing and blockade.

- The availability of water for livestock is expected to be reducing starting from January as most of livestock water points have been destroyed.
- In N/western zone there is unusual influx of animals from the western zone of Tigrai due to the devastating war crisis.
- Comparatively, the number of poultry has decreased more due to they were preferably hunted by the Eritrean and Ethiopia soldiers.
- The out growers and egg hatching plants are not functional at present which have a very significant role in the multiplication/production of poultry of the region.
- Private agro-service providers are damaged & closed due to the war crisis and total blockade.
- Most of the pasture areas and water points are polluted due to chemical bombardments by Ethiopian government airstrikes.

13.3 On market stability

- Since the war erupted on November 2020, all market is not functional in the proper place and time comparing to the previous years.
- Looting and damaging of crops at field as well as from the stock of farmers by Eritrean and Ethiopian troops, that affected the supply and price of staple food.
- Looting, slaughtering, killing of livestock and banned pasture and water by the troops, which affected the supply and price of livestock and livestock products.
- Blockage of transportation, communication, credit access from microfinance and banking system affects the financial transaction which is key factors for market stability.
- The purchasing power of the community is highly affected by the above mentioned reasons.

13.4 On food security and implementation of food aid distribution

- The livelihoods of the community have been depleted so that very large number of community went back to poverty.
- Transportation problem and Blockage of humanitarian corridor
- Blockage of banking system and communication
- Insecurity
- Resource limitation to protect famine
- Delay of allocation and food aid distribution to vulnerable community.

14. COPING STRATEGIES

14.1 Positive Coping strategies

- During the normal year the common sources of income and positive copying strategies of the region are:-
 - Relief/PSNP cash/food assistance, remittance
- Sale of goat, sheep, poultry, livestock products and Petty trade
- Migratory wage labor, Mining
- Sale of expensive crops such as teff and pulse to purchase cheaper crops.
- Minimize expenditure on none food items
- Changing food consumption pattern are among the others

14.2 Negative Coping strategies

- ➤ Currently, all the normal coping mechanisms are much below normal in all woredas of the 5 assessed zones due to the war crises.
- ➤ The positive copying strategies are shifted to negative copying mechanisms
- o Unusual sale of charcoal
- o Begging in the street and around churches
- o Migration from their village of origin to towns and cities
- Selling of house utensils, farm equipment, TV & Jewelries
- Consuming unusual wild foods
- Minimizing meal size, frequency and quality of the food
- o Sending of children to better off relatives to work for food
- Consumption of local & improved seeds
- o Loan from illegal lenders with an interest rate of 25-30%/month.

15. CHALLENGES AND QUESTIONS RAISED DURING THEASSESSMENT AT WOREDA LEVEL

- ➤ There is no enough skilled experts at Tabia and woredas, No furniture, stationery, computers, photocopy machines, etc. in almost all Woreda offices.
- ➤ Big problem of transportation to collect necessary information/data, to support farmers, provide veterinary services, monitor activities, water schemes maintenance etc.
- ➤ Shortage of fuel for water pumps for irrigation
- There is shortage of agricultural inputs (crop seeds, vegetables seeds, fertilizers, etc.) for irrigation to compensate the deficit.
- ➤ It was also mentioned that there is shortage of veterinary vaccines, drugs ,Veterinary equipment's and other materials.
- ➤ Woredas vs. CSA population data have significant difference and challenged to decide food support beneficiaries.

16. FOOD SECURITY PROSPECTS UNTIL THE NEXT HARVEST SEASON

Due to the manmade disaster which is the horrific war, weather related adversities' and other risks there is a significant loss in crop and livestock production which are the main sources of food and income of the farmers. On 2021/2022 crop production is expected (33%) out of the planned which is below the last year estimated before war and reference year. This production may be cover for three months food consumption for people living in rural areas.

The price of staple food has significantly increased as compared to the reference year and last year since there is no supply due to the blockade of the region from any transaction and food aids. The price of livestock has also significantly decreased as compared to the reference year and last year. Other sources of income are limited; some coping mechanisms are abnormal and wage rate has decreased as compared to reference year and last year.

Most of the above stated indicators reason out that the food security prospect a large number of communities' shows to be food insecure, so that based on the above information theneedy people for emergency assistance would be PSNP=1,010,752, Relief =4,012,609, IDPs=1,501,736, Total beneficiaries (PSNP+Relief+IDPs)= 6,525,097 for the next9months since starting on February2022.

16.1 ESTIMATES OF NEEDY POPULATION AND DURATION OF ASSISSTANCE BY WOREDA

Ref.	Name of Zones	Name of Woredas	PSNP5 benefici aries	Relief beneficia ries	No of IDPs currently living in the	Total Emerge ncy benefici aries	Total 9 Months Ration in Quintal				
					Woreda	for 2022/ PSNP+ Relief +IDP	Wheat	Pulse	V.Oil	CSB	Total (Qtl)
2		Raya Alamata	31,980	50,755	6,368	89,103	120,289.05	12,028.91	3,608.672	12,630.350	148,556.98
2		Raya Azebo	42,182	33,030	7,117	82,329	111,144.15	11,114.42	3,334.325	11,670.136	137,263.03
3	Souther	Raya chercher	17,666	23,193	2,743	43,602	58,862.70	5,886.27	1,765.881	6,180.584	72,695.43
4	n Zone	Ofla	28,888	68,830	2,500	100,218	135,294.30	13,529.43	4,058.829	14,205.902	167,088.46
5		Zata	16,780	5,198	1,737	23,715	32,015.25	3,201.53	960.458	3,361.601	39,538.83
6		Endamokeni	22,955	40,132	6,000	69,087	93,267.45	9,326.75	2,798.024	9,793.082	115,185.30
7		Neksege	8,579	10,621	3,500	22,700	30,645.00	3,064.50	919.350	3,217.725	37,846.58
8		Bora chelena	7,029	24,257	6,732	38,018	51,324.30	5,132.43	1,539.729	5,389.052	63,385.51
9		Selewa	10,569	27,178	4,326	42,073	56,798.55	5,679.86	1,703.957	5,963.848	70,146.21
10		Embalaje Alamata	12,958	42,165	4,486	59,609	80,472.15	8,047.22	2,414.165	8,449.576	99,383.11
12		town		54,415	4,500	58,915	79,535.25	7,953.53	2,386.058	8,351.201	98,226.03
		Korem town		27,525	3,200	30,725	41,478.75	4,147.88	1,244.363	4,355.269	51,226.26
13		Maychew town		36,966	31,172	68,138	91,986.30	9,198.63	2,759.589	9,658.562	113,603.08
14		Mekoni town		21,781	5,500	27,281	36,829.35	3,682.94	1,104.881	3,867.082	45,484.25
		Sub total	199,586	466,046	89,881	755,513	1,019,942.55	101,994.26	30,598.28	107,093.97	1,259,629.05
1	South	Wejerat	18,966	29,025	2,590	50,581	68,284.35	6,828.44	2,048.531	7,169.857	84,331.17
2	Eastern Zone	Hintalo	23,892	85,426	5,825	115,143	155,443.05	15,544.31	4,663.292	16,321.520	191,972.17
3		Samre	18,293	50,654	7,292	76,239	102,922.65	10,292.27	3,087.680	10,806.878	127,109.47
4		Seharti	17,038	60,435	10,125	87,598	118,257.30	11,825.73	3,547.719	12,417.017	146,047.77
5		Enderta	48,025	80,464	9,870	138,359	186,784.65	18,678.47	5,603.540	19,612.388	230,679.04
6		Doguatembe n	16,901	39,500	5,427	61,828	83,467.80	8,346.78	2,504.034	8,764.119	103,082.73
8		Adigudomto wn Hagereselam		14,387	3,932	18,319	24,730.65	2,473.07	741.920	2,596.718	30,542.35
		town		13,370	3,680	17,050	23,017.50	2,301.75	690.525	2,416.838	28,426.61
		Sub total	143,115	373,261	48,741	565,117	762,907.95	76,290.80	22,887.24	80,105.335	942,191.32
1		Qiha sub city					-		-		
2		Hadnet sub city					-		-		
3	Mekelle Zone/Ci	Ked. weyane sub city					-		-		
4	ty	Adihaki sub city					-		-		
5		Hawelti sub					-		-		
6		Ayder sub city					-		-		
7		Semen sub city					-		_		
		Sub total		427,440	119,778	547, 218	738,744.30	73,874.43	22,162.329	77,568.152	912,349.21

1		Geralta	10,474	20,930	1,500	32,904	44,420.40	4,442.04	1,332.612	4,664.142	54,859.19
2	-		,				, ,				,
3	Eastern Zone	K/awlaelo Tsiraewonbe	27,286	50,670	4,000	81,956	110,640.60	11,064.06	3,319.218	11,617.263	136,641.14
4	-	rta	26,047	44,086	3,640	73,773	99,593.55	9,959.36	2,987.807	10,457.323	122,998.03
5	-	Atsbi	30,377	43,597	2,490	76,464	103,226.40	10,322.64	3,096.792	10,838.772	127,484.60
	-	Tsaedaemba	21,559	46,890	2,350	70,799	95,578.65	9,557.87	2,867.360	10,035.758	118,039.63
6	_	Sewasaesie	25,608	30,043	2,500	58,151	78,503.85	7,850.39	2,355.116	8,242.904	96,952.25
7		Hawzen	36,568	62,832	6,648	106,048	143,164.80	14,316.48	4,294.944	15,032.304	176,808.53
8		Ganta- afeshum	52,353	29,104	2,650	84,107	113,544.45	11,354.45	3,406.334	11,922.167	140,227.40
9		Erob	25,175	9,755	7,013	41,943	56,623.05	5,662.31	1,698.692	5,945.420	69,929.47
10		G/mekoda	50,692	20,154	2,450	73,296	98,949.60	9,894.96	2,968.488	10,389.708	122,202.76
11		Bizet	17,267	13,478	5,500	36,245	48,930.75	4,893.08	1,467.923	5,137.729	60,429.48
12		Wukro town		53,477	21,669	75,146	101,447.10	10,144.71	3,043.413	10,651.946	125,287.17
13	-	AtsbiEndasla ietown		19,443	1,700	21,143	28,543.05	2,854.31	856.292	2,997.020	35,250.67
14	-	Fireweynito wn		11,841	1,750	13,591	18,347.85	1,834.79	550.436	1,926.524	22,659.59
15	_	Edagahamus					, ,				,
16	<u> </u> -	Hawzen		20,748	2,000	22,748	30,709.80	3,070.98	921.294	3,224.529	37,926.60
17	_	Adigrat town		18,685 105,965	3,100 188,710	21,785 294,675	29,409.75 397,811.25	2,940.98 39,781.13	882.293 11,934.338	3,088.024 41,770.181	36,321.04 491,296.89
18		Zalambesa town		14,408	0	14,408	19,450.80	1,945.08	583.524	2,042.334	24,021.74
	1										
		Sub total	323,406	616,106	259,670	1,199,182	1,618,895.70	161,889.57	48,566.871	169,984.05	1,999,336.19
1		Sub total	323,406	616,106	259,670	1,199,182 47 307	1,618,895.70 63,864.45	161,889.57 6.386.45	,	169,984.05 6.705.767	, ,
1 2		Egela	9,349	37,238	720	47,307	63,864.45	6,386.45	1,915.934	6,705.767	78,872.60
		Egela Ahferom	9,349 23,285	37,238 68,002	720 9,682	47¸307 100¸969	63,864.45 136,308.15	6,386.45 13,630.82	1,915.934 4,089.245	6,705.767 14,312.356	78,872.60 168,340.57
2		Egela Ahferom Hahayle	9,349 23,285 12,800	37,238 68,002 48,145	720 9,682 5,430	47,307 100,969 66,375	63,864.45 136,308.15 89,606.25	6,386.45 13,630.82 8,960.63	1,915.934 4,089.245 2,688.188	6,705.767 14,312.356 9,408.656	78,872.60 168,340.57 110,663.72
3		Egela Ahferom	9,349 23,285	37,238 68,002	720 9,682	47¸307 100¸969	63,864.45 136,308.15 89,606.25 66,939.75	6,386.45 13,630.82 8,960.63 6,693.98	1,915.934 4,089.245 2,688.188 2,008.193	6,705.767 14,312.356 9,408.656 7,028.674	78,872.60 168,340.57 110,663.72 82,670.59
3 4	Central	Egela Ahferom Hahayle Embasneiti	9,349 23,285 12,800	37,238 68,002 48,145	720 9,682 5,430	47,307 100,969 66,375	63,864.45 136,308.15 89,606.25	6,386.45 13,630.82 8,960.63	1,915.934 4,089.245 2,688.188	6,705.767 14,312.356 9,408.656	78,872.60 168,340.57 110,663.72
2 3 4 5	Central Zone	Egela Ahferom Hahayle Embasneiti E/arbi	9,349 23,285 12,800 11,612	37,238 68,002 48,145 33,006	720 9,682 5,430 4,967	47,307 100,969 66,375 49,585	63,864.45 136,308.15 89,606.25 66,939.75	6,386.45 13,630.82 8,960.63 6,693.98	1,915.934 4,089.245 2,688.188 2,008.193	6,705.767 14,312.356 9,408.656 7,028.674	78,872.60 168,340.57 110,663.72 82,670.59
2 3 4 5 6		Egela Ahferom Hahayle Embasneiti E/arbi E/tsahma	9,349 23,285 12,800 11,612 10,180	37,238 68,002 48,145 33,006 54,713	720 9,682 5,430 4,967 6,490	47,307 100,969 66,375 49,585 71,383	63,864.45 136,308.15 89,606.25 66,939.75 96,367.05	6,386.45 13,630.82 8,960.63 6,693.98 9,636.71	1,915.934 4,089.245 2,688.188 2,008.193 2,891.012	6,705.767 14,312.356 9,408.656 7,028.674 10,118.540	78,872.60 168,340.57 110,663.72 82,670.59 119,013.31
2 3 4 5 6 7		Egela Ahferom Hahayle Embasneiti E/arbi E/tsahma Mayknetal Adwa Ahsa	9,349 23,285 12,800 11,612 10,180	37,238 68,002 48,145 33,006 54,713 46,262	720 9,682 5,430 4,967 6,490 4,267	47,307 100,969 66,375 49,585 71,383 60,710	63,864.45 136,308.15 89,606.25 66,939.75 96,367.05 81,958.50	6,386.45 13,630.82 8,960.63 6,693.98 9,636.71 8,195.85	1,915.934 4,089.245 2,688.188 2,008.193 2,891.012 2,458.755	6,705.767 14,312.356 9,408.656 7,028.674 10,118.540 8,605.643	78,872.60 168,340.57 110,663.72 82,670.59 119,013.31 101,218.75
2 3 4 5 6 7 8		Egela Ahferom Hahayle Embasneiti E/arbi E/tsahma Mayknetal Adwa	9,349 23,285 12,800 11,612 10,180 10,181 22,989	37,238 68,002 48,145 33,006 54,713 46,262 84,756	720 9,682 5,430 4,967 6,490 4,267 2,500	47,307 100,969 66,375 49,585 71,383 60,710 110,245	63,864.45 136,308.15 89,606.25 66,939.75 96,367.05 81,958.50 148,830.75	6,386.45 13,630.82 8,960.63 6,693.98 9,636.71 8,195.85 14,883.08	1,915.934 4,089.245 2,688.188 2,008.193 2,891.012 2,458.755 4,464.923	6,705.767 14,312.356 9,408.656 7,028.674 10,118.540 8,605.643 15,627.229	78,872.60 168,340.57 110,663.72 82,670.59 119,013.31 101,218.75 183,805.98
2 3 4 5 6 7 8 9		Egela Ahferom Hahayle Embasneiti E/arbi E/tsahma Mayknetal Adwa Ahsa Rama	9,349 23,285 12,800 11,612 10,180 10,181 22,989 9,970	37,238 68,002 48,145 33,006 54,713 46,262 84,756 34,485	720 9,682 5,430 4,967 6,490 4,267 2,500 1,916	47,307 100,969 66,375 49,585 71,383 60,710 110,245 46,371	63,864.45 136,308.15 89,606.25 66,939.75 96,367.05 81,958.50 148,830.75 62,600.85	6,386.45 13,630.82 8,960.63 6,693.98 9,636.71 8,195.85 14,883.08 6,260.09	1,915.934 4,089.245 2,688.188 2,008.193 2,891.012 2,458.755 4,464.923 1,878.026	6,705.767 14,312.356 9,408.656 7,028.674 10,118.540 8,605.643 15,627.229 6,573.089	78,872.60 168,340.57 110,663.72 82,670.59 119,013.31 101,218.75 183,805.98 77,312.05
2 3 4 5 6 7 8		Egela Ahferom Hahayle Embasneiti E/arbi E/tsahma Mayknetal Adwa Ahsa Rama A/arbaete	9,349 23,285 12,800 11,612 10,180 10,181 22,989 9,970 11,915	37,238 68,002 48,145 33,006 54,713 46,262 84,756 34,485 40,462	720 9,682 5,430 4,967 6,490 4,267 2,500 1,916 5,058	47,307 100,969 66,375 49,585 71,383 60,710 110,245 46,371 57,435	63,864.45 136,308.15 89,606.25 66,939.75 96,367.05 81,958.50 148,830.75 62,600.85 77,537.25	6,386.45 13,630.82 8,960.63 6,693.98 9,636.71 8,195.85 14,883.08 6,260.09 7,753.73	1,915.934 4,089.245 2,688.188 2,008.193 2,891.012 2,458.755 4,464.923 1,878.026 2,326.118	6,705.767 14,312.356 9,408.656 7,028.674 10,118.540 8,605.643 15,627.229 6,573.089 8,141.411	78,872.60 168,340.57 110,663.72 82,670.59 119,013.31 101,218.75 183,805.98 77,312.05 95,758.50
2 3 4 5 6 7 8 9		Egela Ahferom Hahayle Embasneiti E/arbi E/tsahma Mayknetal Adwa Ahsa Rama A/arbaete Chila	9,349 23,285 12,800 11,612 10,180 10,181 22,989 9,970 11,915 13,267	37,238 68,002 48,145 33,006 54,713 46,262 84,756 34,485 40,462 47,951	720 9,682 5,430 4,967 6,490 4,267 2,500 1,916 5,058 6,606	47,307 100,969 66,375 49,585 71,383 60,710 110,245 46,371 57,435 67,824	63,864.45 136,308.15 89,606.25 66,939.75 96,367.05 81,958.50 148,830.75 62,600.85 77,537.25 91,562.40	6,386.45 13,630.82 8,960.63 6,693.98 9,636.71 8,195.85 14,883.08 6,260.09 7,753.73 9,156.24	1,915.934 4,089.245 2,688.188 2,008.193 2,891.012 2,458.755 4,464.923 1,878.026 2,326.118 2,746.872	6,705.767 14,312.356 9,408.656 7,028.674 10,118.540 8,605.643 15,627.229 6,573.089 8,141.411 9,614.052	78,872.60 168,340.57 110,663.72 82,670.59 119,013.31 101,218.75 183,805.98 77,312.05 95,758.50 113,079.56
2 3 4 5 6 7 8 9 10		Egela Ahferom Hahayle Embasneiti E/arbi E/tsahma Mayknetal Adwa Ahsa Rama A/arbaete Chila T/may chew	9,349 23,285 12,800 11,612 10,180 10,181 22,989 9,970 11,915 13,267 16,319	37,238 68,002 48,145 33,006 54,713 46,262 84,756 34,485 40,462 47,951 53,700	720 9,682 5,430 4,967 6,490 4,267 2,500 1,916 5,058 6,606 4,200	47,307 100,969 66,375 49,585 71,383 60,710 110,245 46,371 57,435 67,824 74,219	63,864.45 136,308.15 89,606.25 66,939.75 96,367.05 81,958.50 148,830.75 62,600.85 77,537.25 91,562.40 100,195.65	6,386.45 13,630.82 8,960.63 6,693.98 9,636.71 8,195.85 14,883.08 6,260.09 7,753.73 9,156.24 10,019.57	1,915.934 4,089.245 2,688.188 2,008.193 2,891.012 2,458.755 4,464.923 1,878.026 2,326.118 2,746.872 3,005.870	6,705.767 14,312.356 9,408.656 7,028.674 10,118.540 8,605.643 15,627.229 6,573.089 8,141.411 9,614.052 10,520.543	78,872.60 168,340.57 110,663.72 82,670.59 119,013.31 101,218.75 183,805.98 77,312.05 95,758.50 113,079.56 123,741.63
2 3 4 5 6 7 8 9 10		Egela Ahferom Hahayle Embasneiti E/arbi E/tsahma Mayknetal Adwa Ahsa Rama A/arbaete Chila T/may chew L/may chew	9,349 23,285 12,800 11,612 10,180 10,181 22,989 9,970 11,915 13,267 16,319 10,916	37,238 68,002 48,145 33,006 54,713 46,262 84,756 34,485 40,462 47,951 53,700 56,685	720 9,682 5,430 4,967 6,490 4,267 2,500 1,916 5,058 6,606 4,200 2,450	47,307 100,969 66,375 49,585 71,383 60,710 110,245 46,371 57,435 67,824 74,219 70,051	63,864.45 136,308.15 89,606.25 66,939.75 96,367.05 81,958.50 148,830.75 62,600.85 77,537.25 91,562.40 100,195.65 94,568.85	6,386.45 13,630.82 8,960.63 6,693.98 9,636.71 8,195.85 14,883.08 6,260.09 7,753.73 9,156.24 10,019.57 9,456.89	1,915.934 4,089.245 2,688.188 2,008.193 2,891.012 2,458.755 4,464.923 1,878.026 2,326.118 2,746.872 3,005.870 2,837.066	6,705.767 14,312.356 9,408.656 7,028.674 10,118.540 8,605.643 15,627.229 6,573.089 8,141.411 9,614.052 10,520.543 9,929.729	78,872.60 168,340.57 110,663.72 82,670.59 119,013.31 101,218.75 183,805.98 77,312.05 95,758.50 113,079.56 123,741.63 116,792.53
2 3 4 5 6 7 8 9 10 11 12		Egela Ahferom Hahayle Embasneiti E/arbi E/tsahma Mayknetal Adwa Ahsa Rama A/arbaete Chila T/may chew L/may chew Adet Naeder	9,349 23,285 12,800 11,612 10,180 10,181 22,989 9,970 11,915 13,267 16,319 10,916 19,395 12,780	37,238 68,002 48,145 33,006 54,713 46,262 84,756 34,485 40,462 47,951 53,700 56,685 66,255 39,146	720 9,682 5,430 4,967 6,490 4,267 2,500 1,916 5,058 6,606 4,200 2,450 4,037 6,800	47,307 100,969 66,375 49,585 71,383 60,710 110,245 46,371 57,435 67,824 74,219 70,051 89,687 58,726	63,864.45 136,308.15 89,606.25 66,939.75 96,367.05 81,958.50 148,830.75 62,600.85 77,537.25 91,562.40 100,195.65 94,568.85 121,077.45	6,386.45 13,630.82 8,960.63 6,693.98 9,636.71 8,195.85 14,883.08 6,260.09 7,753.73 9,156.24 10,019.57 9,456.89 12,107.75	1,915.934 4,089.245 2,688.188 2,008.193 2,891.012 2,458.755 4,464.923 1,878.026 2,326.118 2,746.872 3,005.870 2,837.066 3,632.324	6,705.767 14,312.356 9,408.656 7,028.674 10,118.540 8,605.643 15,627.229 6,573.089 8,141.411 9,614.052 10,520.543 9,929.729 12,713.132	78,872.60 168,340.57 110,663.72 82,670.59 119,013.31 101,218.75 183,805.98 77,312.05 95,758.50 113,079.56 123,741.63 116,792.53 149,530.65
2 3 4 5 6 7 8 9 10 11 12 13		Egela Ahferom Hahayle Embasneiti E/arbi E/tsahma Mayknetal Adwa Ahsa Rama A/arbaete Chila T/may chew L/may chew Adet Naeder Keihtekli	9,349 23,285 12,800 11,612 10,180 10,181 22,989 9,970 11,915 13,267 16,319 10,916 19,395 12,780 14,171	37,238 68,002 48,145 33,006 54,713 46,262 84,756 34,485 40,462 47,951 53,700 56,685 66,255 39,146 57,372	720 9,682 5,430 4,967 6,490 4,267 2,500 1,916 5,058 6,606 4,200 2,450 4,037 6,800 3,543	47,307 100,969 66,375 49,585 71,383 60,710 110,245 46,371 57,435 67,824 74,219 70,051 89,687 58,726 75,086	63,864.45 136,308.15 89,606.25 66,939.75 96,367.05 81,958.50 148,830.75 62,600.85 77,537.25 91,562.40 100,195.65 94,568.85 121,077.45 79,280.10 101,366.10	6,386.45 13,630.82 8,960.63 6,693.98 9,636.71 8,195.85 14,883.08 6,260.09 7,753.73 9,156.24 10,019.57 9,456.89 12,107.75 7,928.01 10,136.61	1,915.934 4,089.245 2,688.188 2,008.193 2,891.012 2,458.755 4,464.923 1,878.026 2,326.118 2,746.872 3,005.870 2,837.066 3,632.324 2,378.403 3,040.983	6,705.767 14,312.356 9,408.656 7,028.674 10,118.540 8,605.643 15,627.229 6,573.089 8,141.411 9,614.052 10,520.543 9,929.729 12,713.132 8,324.411 10,643.441	78,872.60 168,340.57 110,663.72 82,670.59 119,013.31 101,218.75 183,805.98 77,312.05 95,758.50 113,079.56 123,741.63 116,792.53 149,530.65 97,910.92 125,187.13
2 3 4 5 6 7 8 9 10 11 12 13 14		Egela Ahferom Hahayle Embasneiti E/arbi E/tsahma Mayknetal Adwa Ahsa Rama A/arbaete Chila T/may chew L/may chew Adet Naeder	9,349 23,285 12,800 11,612 10,180 10,181 22,989 9,970 11,915 13,267 16,319 10,916 19,395 12,780	37,238 68,002 48,145 33,006 54,713 46,262 84,756 34,485 40,462 47,951 53,700 56,685 66,255 39,146	720 9,682 5,430 4,967 6,490 4,267 2,500 1,916 5,058 6,606 4,200 2,450 4,037 6,800	47,307 100,969 66,375 49,585 71,383 60,710 110,245 46,371 57,435 67,824 74,219 70,051 89,687 58,726	63,864.45 136,308.15 89,606.25 66,939.75 96,367.05 81,958.50 148,830.75 62,600.85 77,537.25 91,562.40 100,195.65 94,568.85 121,077.45 79,280.10	6,386.45 13,630.82 8,960.63 6,693.98 9,636.71 8,195.85 14,883.08 6,260.09 7,753.73 9,156.24 10,019.57 9,456.89 12,107.75 7,928.01	1,915.934 4,089.245 2,688.188 2,008.193 2,891.012 2,458.755 4,464.923 1,878.026 2,326.118 2,746.872 3,005.870 2,837.066 3,632.324 2,378.403	6,705.767 14,312.356 9,408.656 7,028.674 10,118.540 8,605.643 15,627.229 6,573.089 8,141.411 9,614.052 10,520.543 9,929.729 12,713.132 8,324.411	78,872.60 168,340.57 110,663.72 82,670.59 119,013.31 101,218.75 183,805.98 77,312.05 95,758.50 113,079.56 123,741.63 116,792.53 149,530.65 97,910.92

		hila	22,322	60,085	13,800	96,207	129,879.45	12,987.95	3,896.384	13,637.342	160,401.12
19		Enticho town		22,160	17,928	40,088	54,118.80	5,411.88	1,623.564	5,682.474	66,836.72
20		Adwa town		78,589	117,800	196,389	265,125.15	26,512.52	7,953.755	27,838.141	327,429.56
21		Axum town		85,325	63,200	148,525	200,508.75	20,050.88	6,015.263	21,053.419	247,628.31
22		Abyiadi		24.200	42.250	76 640	103,464.00	10,346.40	3,103.920	10,863.720	127,778.04
	<u> </u>	town		34,290	42,350	76,640	103,404.00	10,540.40	3,103.720	10,003.720	127,770.04
1	Nouth	Sub total	258,093	1,151,249	331,302	1,740,644	2,349,869.40	234,986.94	70,496.082	246,736.28	2,902,088.71
2	North West Zone	Laelaykoraro	8,797	65,510	11,431	85,738	115,746.30	11,574.63	3,472.389	12,153.36	142,946.68
	-	Zana	8,018	54,262	8,790	71,070	95,944.50	9,594.45	2,878.335	10,074.17	118,491.46
3		Tahtaykoraro	11,888	70,015	15,200	97,103	131,089.05	13,108.91	3,932.672	13,764.35	161,894.98
		Tsimbla	6,693	63,534	585	70,812	95,596.20	9,559.62	2,867.886	10,037.60	118,061.31
5		Asgede	1,326	81,560	32,895	115,781	156,304.35	15,630.44	4,689.131	16,411.96	193,035.87
7		Laelaytselem ti	22,974	57,086	6,493	86,553	116,846.55	11,684.66	3,505.397	12,268.89	144,305.49
'		Tselemti	5,850	64,999	13,027	83,876	113,232.60	11,323.26	3,396.978	11,889.42	139,842.26
8	-	Adidaero	5,308	63,342	13,647	82,297	111,100.95	11,110.10	3,333.029	11,665.60	137,209.67
9		Seyemtiadya bo	4,965	32,574	7,247	44,786	60,461.10	6,046.11	1,813.833	6,348.42	74,669.46
10		Maekeladiya bo	4,783	35,334	5,292	45,409	61,302.15	6,130.22	1,839.065	6,436.73	75,708.16
		Tahtayadiyab o	5,950	55,760	91,246	152,956	206,490.60	20,649.06	6,194.718	21,681.51	255,015.89
12		Shire E/slasie town		86,409	352,549	438,958	592,593.30	59,259.33	17,777.799	62,222.30	731,852.73
13		Sheraro town		31,089	53,350	84,439	113,992.65	11,399.27	3,419.780	11,969.23	140,780.92
14		Endabaguna town		17,500	8,050	25,550	34,492.50	3,449.25	1,034.775	3,621.71	42,598.24
13	_	Maytsebri town		15,595	325,62	48,157	65,011.95	6,501.20	1,950.359	6,826.25	80,289.76
		Sub total	86,552	794 ,569	652,364	1,533,485	2,070,204.75	207,020.48	62,106.143	217,371.50	2,556,702.87
1		Kaftahumera		41,361		41,361	55,837.35	5,583.74	1,675.121	5,862.922	68,959.13
2	Wester n Zone	Tsegede		44,219		44,219	59,695.65	5,969.57	1,790.870	6,268.043	73,724.13
3		Welkayt		46,241		46,241	62,425.35	6,242.54	1,872.761	6,554.662	77,095.31
4		Awra		11,724		11,724	15,827.40	1,582.74	474.822	1,661.877	19,546.84
5		Setithumera		16,751		16,751	22,613.85	2,261.39	678.416	2,374.454	27,928.10
6	-	Maykadra					13,410.90	1,341.09	402.327	1,408.145	16,562.46
7	-	Dansha town		9,934		9,934	7,515.45	751.55	225.464	789.122	9,281.58
8	-	Korarit town		5,567		5,567	5,201.55	520.16	156.047	546.163	6,423.91
9	-	May gaba		3,853		3,853					
	_	Sub total		4,288		4,288	5,788.80	578.88	173.664	607.824	7,149.17
		Suv Will		183,938		183,938	248,316.30	24,831.63	7,449.489	26,073.21	306,670.63
		Total	1,010,752	4,012,609	1,501,736	6,525,097	8,808,880.95	880,888.10	264,266.43	924,932.50	10,878,967.9

17. AGRICULTURAL INPUTREQUIREMENTS

A. Seed requirements

Zone	Target HHs	Areas in hectare	Amount in Qt.
South	164,459	142,893.00	93,156.8
S/East	212,056	106,028.00	118,347
Eastern	189,964	94,980.00	100,129.5
Central	404,118	202,059.00	65,796
N/west	120,321	240,640.80	41,984.8
Western	92,499	554,996.00	73,234.4
Grand Total	1,183,417	1,341,593.80	492,648.5

B. Animal health budget requirements

S/N	Activities	No of clinics	Cost Per clinic	Total budget
1	Renting for temporary room for health service provision	176	4,000	12,672,000
2	Purchase and transportation of vaccination equipment	176	147,427	43,547,200
3	Purchase and transportation of clinical equipment	176	107,060	18,842,560
4	Purchase and transportation of vaccines	198	18,002,160	12,317,580
5	Purchase and transportation of Drugs	198	3,888,970	77,016,060
6	Purchase & transportation of laboratory chemicals, kits	198	56,185	11,124,640
	Capacity building up	198	22,800	4,514,400
7	Reconstructing & minor clinic maintenance	176	3,144,051	553,353,000
A8	Purchase of machineries, motor bike and vehicle	176	500,000	88,000,000
9	Purchase of office facilities	176	87,230	15,352,480
10	Operational cost (Fuel and lubricants, perdiem, etc.)	198	21,000	4,158,000
11	Mobile clinic	Lump sum		65,524,704
	Total		•	906,422,,642

C. Animal feed requirements

S/N	Required type of feed	Unit	Amount	Unit cost	Total cost
1	Concentrate feed	Qt	451,704.5	1000	451,704,500
2	Balance diet	Qt	40,045	1450	58,065,250
3	Urea Molasses Block	Qt	9.26	960	8889.6
4	EM2	Liter	750	50	37,500
5	Molasses	Qt	2500	750	1,875,000
6	Grass Hay	Qt	3000	500	1,500,000
	Total		494,758.76		513,191,140

18. RECOMMENDATIONS

- Action has to be taken to conduct food dispatch and distribution for the target beneficiaries of PSNP, Relief and IDPs; timely launching of the identified needy people 2022.
- The crop and livestock performance of this year is below normal; to the fill the food and feed gaps in areas accessible for irrigation should provide seeds, fertilizer, extension services, and fuel access and conduct water schemes maintenance for damaged water points.

- Large scale vaccination and treatment campaigns and rehabilitation of water points to preserve the remaining animals; Restoring veterinary clinics with necessary vaccines, drugs, and equipment to improve delivery of animal health services; Especial emphasis needs to be given to the establishment of mobile teams of veterinary personnel to respond to the disease outbreaks.
- To fill the feed gaps emergency livestock feed supply is required from January onwards and until the onset of 2022 Kiremti rains; to protect livelihoods and to build community resilience, improvement in AI services and provision of forage seeds in irrigated areas is critical.
- Emergency seed and input supplies support to the affected areas ahead of time before the planting time.
- Currently there is no any income for the civil servants and they are faced in food shortage so direction should be given to save the lives of the civil servant.
- Provision of backyard poultry, beekeeping and small ruminant fattening for vulnerable segment of the population.
- Multi-disciplinary task force should be established and functional to provide technical support to the community. Until strengthen the extension services provision on crop and livestock production.
- Rehabilitation and maintenance of existing water points in almost all assessed woredas of the region is
 critical issue. Making functional will solve the current human and animal water supply problems besides
 irrigation development. Also, some water reservoirs and truckers may be needed in Woredas severely
 affected by potable water shortage.
- The production plan seems over stretched specially in the visited woredas the yield production in quintal per hectare in each woreda should be put a bench mark by crop type depending on the agro ecology and potential of the woreda.
- The graduated and better off farmers are affected their normal livelihood due to the invaders so that PSNP beneficiaries should be retargeted.
- Resource and post-harvest management education messages should disseminated to the community to improve resource utilization and resilient.