FOOD SHORTAGE SURVEY REPORT ON WELLO

Megabit 1971 (March, 1979 G.C)

DISASTER AREA ASSESSMENT

Food and Nutrition Surveillance and
Disaster Preparedness Planning Programme

Relief and Rehabilitation Commission

ADDIS ABEBA, ETHIOPIA
MAY, 1979

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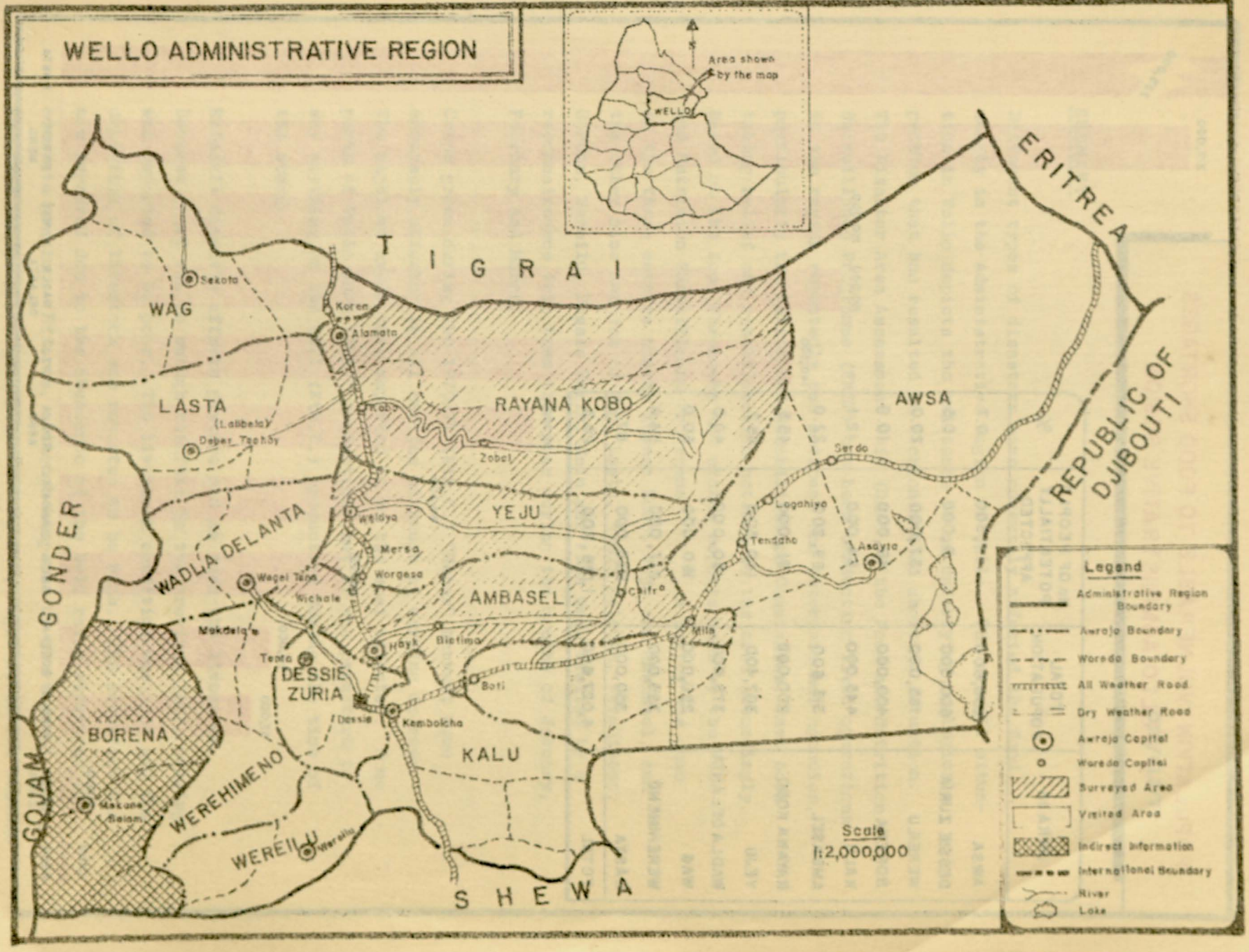
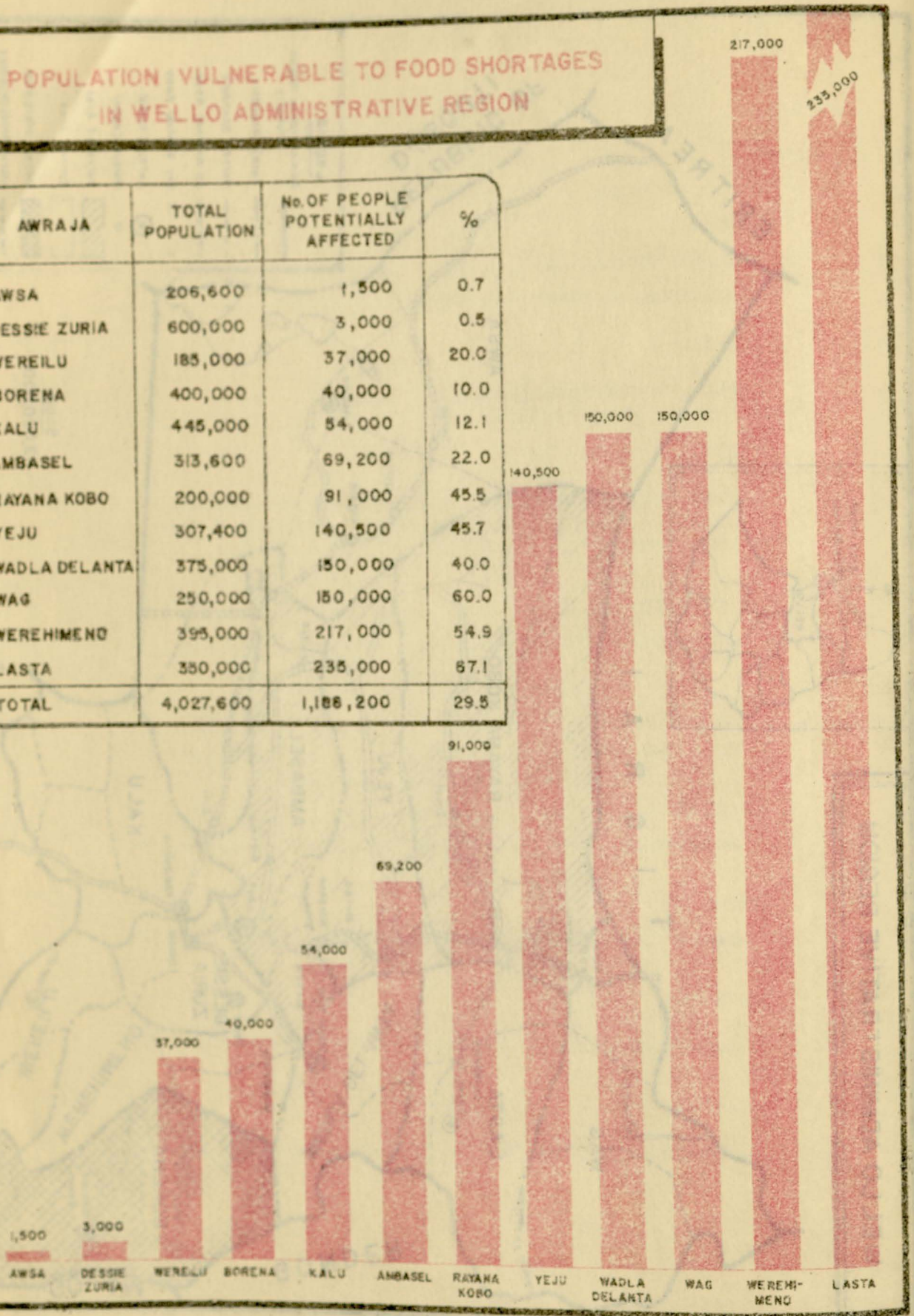

WELLO ADMINISTRATIVE REGION
Area shown by the map
WELLO
TIGRAI
ERITREA
REPUBLIC OF DJIBOUTI
GONDER
GOJAM
SHEWA
WAG
Sekota
LASTA
(Lalibela)
Debre Tsehay
Koren
Alamata
RAYANA KOBO
Kobo
Zobel
AWSA
Serdo
Legahiye
Tenddaho
Asayita
YEJU
Weldya
Mersa
Worgesa
WADLA DELANTA
Wegel Tena
Nichale
AMBASEL
Chifra
Mille
Mekdela
Hayk
Bistima
Tenta
DESSIE ZURIA
Dessie
Boti
Kemboicha
BORENA
KALU
WEREHIMENO
WEREILU
Werilu
Legend
Administrative Region Boundary
Awraja Boundary
Woreda Boundary
All Weather Road
Dry Weather Road
Awraja Capital
Woreda Capital
Surveyed Area
Visited Area
Indirect Information
International Boundary
River
Lake
Scale
1:2,000,000

POPULATION VULNERABLE TO FOOD SHORTAGES IN WELLO ADMINISTRATIVE REGION

AWRAJA	TOTAL POPULATION	No. OF PEOPLE POTENTIALLY AFFECTED	%
AWSA	206,600	1,500	0.7
DESSIE ZURIA	600,000	3,000	0.5
WEREILU	185,000	37,000	20.0
BORENA	400,000	40,000	10.0
KALU	445,000	54,000	12.1
AMBASEL	313,600	69,200	22.0
RAYANA KOBO	200,000	91,000	45.5
YEJU	307,400	140,500	45.7
WADLA DELANTA	375,000	150,000	40.0
WAG	250,000	150,000	60.0
WEREHIMENO	395,000	217,000	54.9
LASTA	350,000	235,000	67.1
TOTAL	4,027,600	1,186,200	29.5



SUMMARY

Different types of disasters have adversely affected the food supply in the Administrative Region of Wello. The overall situation in Wello depicts the existence of an underlying ecological problem that has resulted in a chronic food shortage situation. The Disaster Area Assessment Unit (DAA) of the Food and Nutrition Surveillance Programme (FNSP) has been conducting field operations in the region repeatedly and national and international agencies, particularly the Relief and Rehabilitation Commission, have been taking relief and rehabilitation actions in the area accordingly. Based on the food forecasts and status reports made by the Food and Nutrition Surveillance Programme , a survey was done in the three awrajas namely Bayana Kobo, Yeju and Ambassel, and the other nine awrajas of Wag, Lasta, Wadla delanta, Werehimeno, Borena, Wereilu, Dessie Zuria, Kalu and Awsa were visited by a reconnaissance trip team this year during the months of January, February and March.

Crops grown during the 1970/71 (Eth.C.) "Meher" harvest were adversely affected in all awrajas although at varying degrees. The highland areas were reported to be the most affected. Some parts of Wello have "Belg" production, but it was premature to say anything on the 1971 (Eth.C.) production during the time of the study.

Rainfall directly affects pasture and in turn the livestock. Because there was no enough rainfall in the previous year, grazing was reported to be poor. The livestock condition was poor and the depletion of livestock was reported to be high. The situation has now improved due to the abundance of the belg rains resulting in adequate grazing. Efforts, although hampered by shortage of drugs, vaccines and manpower have also been made to fight livestock disease and improve the livestock condition.

Attempts have been made to study the market flow and prices. It has been found that the rural population is becoming more dependent on market for its food supply as compared to previous years. Market prices of grain in the surveyed awrajas was reported to have decreased. The main reason being the price control efforts. In the other awrajas, some places reported increase in prices of certain types of grains because of shortage and others reported decrease in the prices. The grain price control effort has caused the decrease of supply to the open markets due to the competition by illegal markets offering higher prices.

The food shortages and its sequel has made the people susceptible to various kinds of diseases. From the findings of the reconnaissance trip team, about 30% of the children who are brought to the maternal and child health service were reported to be malnourished. Marasmus and kwashiorkor diseases caused by nutritional deficiencies, typhus and diarrheal diseases were reported in all awrajas. A unique disease locally known as "Mogn Bagegn" was reported in some of the highland awrajas. Although no epidemiological studies have been conducted yet, there are indications to suggest that it is a rickettsial disease.

Based on the assessment, all awrajas, although at varying degrees, are affected by the food shortage. The number of people potentially affected could reach as high as 1,188,200. The rains for the belg season were said to be adequate, hence, the belg production of 1971 (Eth.C.) is expected to ease the food shortage situation.

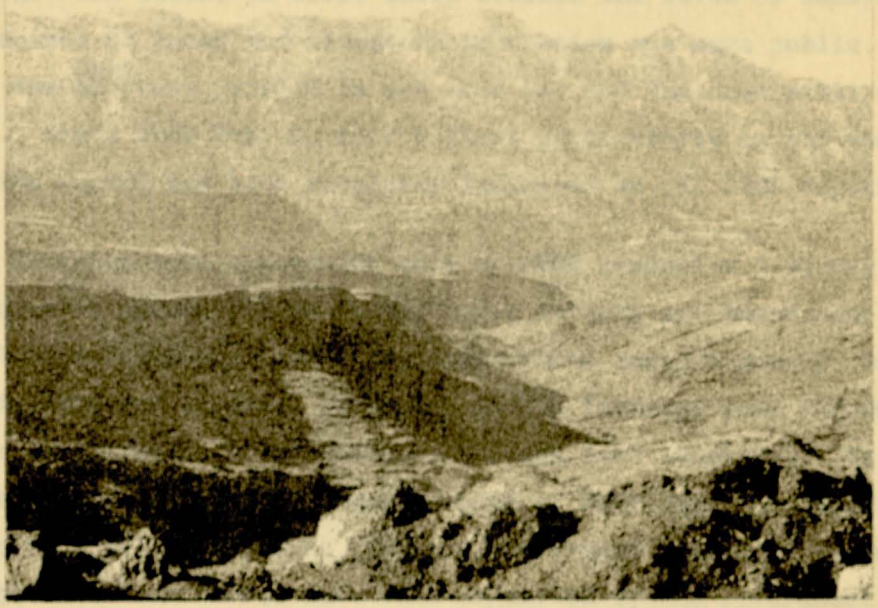
INTRODUCTION

Wello Administrative Region covers an area of 78,976 sq.kms.[1] with an estimated population of 4,026,900.[2] The Highland and the Plateau of the Administrative Region are among the densely populated areas of the country. The economic activity of the inhabitants of the highland and the plateau is mainly settled agriculture, while the economic activity of the eastern lowland population is mainly pastoral.

The land feature of Wello region consists of the western highland, the central plateau and the eastern lowlands. The highland constitutes a chain of rugged mountains with an elevation up to 4,000 meters. The plateau, with an elevation of about 3,000 meters is characterised by deeply dissected landscapes with rugged relief and precipice slopes. The highland and the plateau lie within the catchment of the Beshile, Jema, Abbay and Tekkezie Rivers. Numerous streams join these rivers carrying the uncovered fertile soil of the slopes. The lowland area lies east of the escarpment and extends down to the dry plains of the Awash Valley and the Danakil Depression.

The average annual rainfall is 1,000 to 2,000 mm. in the highlands, 800 to 1,200 mm. in the central plateau and 50 to 400 mm. in the eastern lowlands. In the past few years, drought was persisting in the highland and the central plateau. There was seasonal disturbances of weather with undependable and decreased precipitation. In the present decade, Wello region has been vulnerable to critical food shortage. The vulnerability of Wello to natural food shortage stems from its climatic disturbances, archaic agricultural system, its dense population, deforestation, continuous deterioration of the soil, lack of infrastructure, etc. These factors have always contributed to the maintenance of a marginal subsistance level with the ever present risk of famine whenever unfavorable climatic conditions prevailed. The land is intensively cultivated and there have been progressive deforestation and soil erosion. Even under normal climatic conditions little surplus of grain is produced in most partsof the Region.

Sources: 1 - Central Statistics Office
2 - Awraja Administrative Offices



A typical feature of Western Wello with rugged mountains and steep barren slopes. (Wag Awraja)

When a drought prone area like Wello is over-cultivated, deforested and over-grazed the soil deteriorates and the chances are strong for its inevitable conversion into unproductive waste land. It is a fact that behind the massive and continuing loss of vegetation are two intensifying human needs: The increased use of wood as fuel and the clearing of newlands which convert former friable, fertile and water retentive soil into depleted, compacted waste land. In times of heavy rains, water surges over barren slopes carrying along the fertile top soil. These silts from the rugged plateau and the highlands are carried away by streams, and rivers.

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Six main harvest seasons have now passed since the catastrophic drought and famine in Wello which claimed the lives of hundreds and thousands of human and livestock population was made public. But even now the/ food shortage problem is not over yet and the area still needs relief aid. Since 1968 Eth. C. food deficit particularly in the western awrajas of the region has been regularly indicated in the FNSP reports.

The Disaster Area Assessment Unit of FNSP conducted a survey from January to April 1978 in Lasta, Wadla Delanta and Werehimeno and collected information from the other three awrajas namely; Dessie Zuria, Wag and Borena. According to the findings over 600,000 people were estimated to be affected by serious food shortages. In accordance with the findings and recommendations of FNSP (see Food Shortage Survey Report on Wello, May 1978), RRC had intervened with food and medical supplies. Task forces have been organized by the government and short and long term plans have been prepared for the population of the areas.

Since the last survey the FNSP regular reports continued to indicate deficit production in most awrajas of the Administrative Region. For instance, the Belg Season Food Supply System Synoptic Report (Sept,1978) indicated that six awrajas were expecting poor production from their Belg harvest. Again the Food Supply System Report (November, 1978) anticipated deficit Meher production in eight awrajas. Finally, the Meher Main season Food Supply System Synoptic Report (March, 1979) indicated deficit areas in nine awrajas.

Hence, the Disaster Area Assessment Unit of the Food and Nutrition Surveillance Programme conducted a survey in Bayana Kobo, Yeju and Ambassel Awrajas, and a reconnaissance study trip in Wag, Lasta, Wadla Delanta, Werehimeno, Dessie Zuria, Kalu, Awsa, Borena and Wereilu. This report presents the findings of the study teams in three sections corresponding to the methods used in assessing food shortage. For those who are interested in pursuing the impact of natural disasters in Wello Region "A Profile of Disasters in Wello" prepared by the Disaster Preparedness Planning Programme is annexed.

OBJECTIVES OF SURVEY AND RECONNAISSANCE TRIP

The primary objectives of the survey and the reconnaissance trip were:-

a) To assess the magnitude of crop failure,

b) To assess the situation of the human population, livestock, pasture and market flows and prices,

c) To forecast the effects of the crop failure on the food supplies and human population,

d) To provide updated information to the Relief and Rehabilitation Commission on which management decisions related to urgent food aid and rehabilitation measures can be based to alleviate the difficulties,

e) To make a follow up study in areas that were surveyed last year.

f) As a by-product, to provide pertinent and contemporary information to other concerned Government and international agencies in the hope that the information will facilitate the formulation of responsive decisions.

SECTION I

SELECTED FINDINGS OF SURVEYED AWRAJAS (RAYANA KOBO, YEJU, AMBASSEL)

A. DEMOGRAPHIC CHARACTERISTICS

1. Population size estimates:

In preparation of reports, especially those requiring population figures, one has to depend on information from Administrative Offices and C.S.O's national sample survey reports, which were

published in 1967 and being annually (projected) using the 2.1% growth rate in addition to these the list of tax payers in a given area could also serve as a basis for calculating population figures.

However, population figure estimates for this study were obtained solely from the surveyed Awraja and Wereda Administrative Offices.

Table 1: Population Size of Surveyed Awrajas, 1979

Awraja	Size
Rayana Kobo	200,000
Yeju	307,360
Anbasel	313,604
TOTAL	820,964

2. Migration:

Serious food shortage can be detected by using information on unusual migration of people in a given area and could serve as one of the many indicators of food shortage.

In our last survey of the three Awrajas of Wello Administrative Region, unusual migration of people, dre to food shortage was not reported in most of the visited areas.

Since the last famine in Wello (1973/74) unusual migration of people has decreased due to the efforts of R.R.C. in providing relief food in the affected areas and the improvement of the transport infrastructure in the Administrative Region since then. Peasant Associations have also contributed to the decrease of the number of people migrating by giving early warning of food shortages, controlled issuance of travel permits and identification cards and by organizing community action against food shortages (establishment of co-op farms, giving farm service to the old and disabled, etc.)

As shown in table 2 below, in the surveyed Awrajas of Raya & Kobo, Yeju and Ambasel only 7 out of the 27 sites considered reported below normal population at the time of survey, indicating that very few people were under unusual migration due to shortage of food.

Table 2: Population Size by Awraja (1979)

Awraja	Number of Farmers' Associations Considered	Population Size Status		
		Normal	Below Normal	Above Normal
Rayana Kobo	8	1	3	4
Yeju	9	6	1	2
Ambasel	10	7	3	-
TOTAL	27	14	7	6

Population needing assistance

The computation of the figure for the population needing assistance in any area affected by food shortages is a difficult task, because the people supposed to give the feed back information alrost always tend to magnify the real situation. One, therefore, has to bear in mind the above mentioned statement while considering the estimated number of population needing assistance in the three awrajas which is given as 300,700 in table 3 below:

The amount of belg production as compared to total annual production should be taken into consideration when determining the number of population needing assistance. The success or failure of belg production may influence the number of people needing assisstance and the duration of assistance.

The young, the most vulnerable age group, victimized by the recent food shortages. "We need your help!"

(Yeju Awraja)

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Sites visited in Raya & Kobo Awraja reported that belg production accounts for 23% of their total annual production while sites visited in Yeju and Ambasel reported their belg production to be 29% and 27% respectively.

Though the proportion of belg production as compared to annual production in all the three surveyed Awrajas is less than $\frac{1}{3}$,. It is assumed that the number of people needing assistance will significantly decrease if the belg season production succeeds in 1971 (E.C.)

Table 3: Estimated Number of People Needing Assistance by Awraja

Awraja	Number of People
Yeju	140,500
Ray & Kobo	91,000
Ambasel	69,200
TOTAL	300,700

As a supplement to the discussion on the number of people needing assistance we have added a table showing the age break down of the population needing assistance in table 4 below. The age break down of the population is prepared in the hope of providing concrete information to the R.R.C. and other donor agencies as to the amount and duration of assistance needed for the affected population.

Table 4: Number of People in need of Assistance in the three surveyed Awrajas by Age Group.

Age-Group (years)	Percent	Number of People
0-4	14.9	44,804
5-14	26.0	78,182
15-59	53.3	160,273
60& over	5.8	17,441
TOTAL	100.0	300,700

In table 4, the age break down of the population is classified into four parts taking the distribution of children, the young, adults and the old in each group. Furthermore, the age break down in the table also assumes similar age-structure for the population in need of assistance as well as the total population.

B. CROP PERFORMANCE

Cropping is a major activity of the people in Rayana Kobo, Yeju and Ambasel. Sorghum, Teff, Maize, Peas and Beans were reported to be the major crops grown. Except Kobo woreda in Rayana Kobo Awraja, all the other woredas were found to have belg production. The belg producing areas reported that the belg production accounts for 20-30% of their total annual production.

Most of the woredas visited have had no enough rainfall for their last meher production. As can been seen in table 5, lack of rain was the most common type of disaster during the last meher production in all three awrajas. The crop damage in Rayana Kobo Awraja occurred during the germination period. In the other two awrajas namely Yeju and Ambassel, the crop- damage occured during the flowering and maturation period. Crop pest and rust were the other types of disaster that caused major damage.

Table 5: Unusual event during cropping calendar by type of Disaster (TD)* percentage of production destroyed (PPD) , Woreda and Period**

Woreda and Period		SORGHUM		TEFF		MAIZE		PEAS		BEANS	
		TD	PPD	TD	PPD	TD	PPD	TD	PPD	TD	PPD
Raya & Kobo	G F+M H	1+2	75	1	91.4	1	80	1+2+3	100	NG	-
Yeju	G F+M H	1+2+3	56.1	1+2	55.4	1+2+3	29	1+2+3	79	1+2	83
Ambassel	G F+M H	1+2+3	60.2	1+2+3+4	41.4	1+2+3+5	43	1+2+3+4	66.6	1+2+3+4	68.7

*(TD) Type of Disaster:
1. Lack of Rain
2. Crop Pest
3. Rust Disease
4. Heavy Rain
5. Wild Animals

**Period: G - Germination
F+M - Flowering and Maturation
H - Harvest

NG - Not Grown

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C. LIVESTOCK

Shortage of rain in 1969-1970 (Eth. C.) was the main cause for the lack of water and pasture in the three surveyed awrajas of Rayana Kobo, Yeju and Ambassel. The livestock dependent population in the lowland areas of these awrajas was highly affected by the depletion of livestock. The situation has now improved due to the abundance of the belg rains in 1971 (Eth.C.). The belg rains which have started in Thahsas of this year have resulted in adequate grazing for the livestock.

In the three surveyed awrajas, information on number of livestock alive, bought, sold, butchered and dead for the three months preceding the survey date was obtained as shown in Tabel 6 below. The information gathered, especially on the number of livestock alive should be considered with care because the interviewees' almost always tend to give underestimated figures for livestock alive. It should also be noted that the estimated figure given for the number of livestock (Dead) - also includes the butchered.

From the table, high offtake rate*figures can be observed for shoats in all three awrajas mainly due to disease /dysentry/ which has been killing them in large numbers since the last two years. The low offtake rate figures for cattle and equines as compared to shoats, however, show the lesser depletion of livestock due to the recovery after the belg rains in the three awrajas. It was also reported that the timely recovery of livestock in Ambassel and Yeju Awrajas was hampered by the migration of the nomadic population from Awsa awraja. This migration has resulted in the over grazing of the already available pasture in the two Awrajas.

* Offtake rate = $\frac{\text{Sold + Dead}}{\text{Alive + Sold + Dead}} \times 100$

Table 6: Livestock Alive, Bought, Sold and Dead in the three months preceding survey date by Awraja

Type	Awraja	Alive	Bought	Sold	Dead	Offtake rate%
Cattle	Rayana Azebo	550	Nil	11	37	8.02
	Yeju	587	15	19	46	9.96
	Ambassel	648	3	5	36	5.95
Shoats	Rayana Kobo	279	2	17	70	23.7
	Yeju	709	20	98	146	25.6
	Ambassel	756	6	28	155	19.4
Equines	Rayana Kobo	95	Nil	1	5	5.94
	Yeju	114	Nil	9	10	14.2
	Ambassel	106	Nil	2	24,	19.6

Main types of livestock diseases reported in the three surveyed awrajas were rinderpest, anthrax and black leg. Shoats are mainly attacked by dysentry. Efforts are being made by concerned M.O.A.S. staff to curb the effects of the disease. The one big barrier for combating the disease is the treatment fee (2 Birr/animal) which hinders the farmers from bringing their livestock to treatment centers.

MARKET FLOWS & PRICES:

Market prices of grain in the three surveyed Awrajas have shown a marked decrease compared to prices of last year (see table 7 below). The price decrease is mainly due to the price-cut (control) regulations of 1971 (E.C.) which are being implemented in the whole of the administrative region of Wello and by no means indicate an increase in production or supply of grain to markets. The above statement is proved by the fact that lesser amount of grain is being supplied to markets after gov't officials decided to implement the price cut regulations. However, shortage of pulses in Markets of Yeju Awraja was observed because the pulse growing areas in the highlands were affected by natural calamites. Furthermore, higher grain prices in black markets, controlled by farmer-merchants, were reported from Ambasel Awraja.

The rural population in the three awrajas is becoming more dependent on markets for its food supply as compared to the previous years. Two of the surveyed Awrajas reported that they are more dependent on markets for their food supply than last year. In Ambasel awraja dependence on Markets for food was not reported mainly due to the fact that the survey in this awraja was carried out during harvesting time.

Prices of livestock, have decreased compared with last years' prices. However, as shown in table 8 marginal price increase of cattle has been

Table 7: Average Retail Price per Kg./birr of grains this year and Average Index (Last year = 100) by Awraja

AWRAJA	Sorghum		Teff		Maize		Beans		Peas	
	average price	average index	average price	average index	average price	average index	average price	average index	average price	average index
Raya & Kobo	0.29	58.1	0.57	78.35	0.24	57.7	N.A.	N.A.	N.A.	N.A.
Yeju	0.41	71.9	0.59	66.2	0.35	67.3	0.38	63.3	0.43	57.3
Ambassel	0.63	90.0	0.61	77.2	0.40	85.1	0.33	67.3	0.34	70.8

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Variety	Soybean		Test		Corn		Test	
	price average	index average	price average	index average	price average	index average	price average	index average
Bay Mills	0.25	14.0	0.17	55.2	0.25	14.0	0.17	55.2
Kalamazoo	0.41	14.0	0.29	55.2	0.41	14.0	0.29	55.2
Independent	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Variety	Beans		Test		Oats		Test	
	price average	index average	price average	index average	price average	index average	price average	index average
Bay Mills	N.A.	N.A.	0.17	52.5	0.24	0.40	0.16	1.28
Kalamazoo	N.A.	N.A.	0.29	52.5	0.33	0.40	0.23	1.28
Independent	N.A.	N.A.	0.29	52.5	N.A.	N.A.	N.A.	N.A.

Table 3: Average price per bushel and price index for soybeans, corn, beans, and oats for Bay Mills, Kalamazoo, and Independent Elevators (1967 - 100) by Month

Table 8: Average price in birr of livestock this year and average index (last year = 100) by Awraja

		CATTLE		SHOATS		CAMELS		DONKEYS		MULES		HORSES	
		Av. Price	Av. Index	Av. Price	Av. Index	Av. Price	Av. Index	Av. Price	Av. Index	Av. Price	Av. Index	Av. Price	Av. Index
Raya & Kobo	M	266.00	80.7	28.75	70.55	450.00	50.00	87.50	72.8	481.25	88.25	151.75	75.00
	F	238.55	85.0	24.00	69.85	1200.00	100.00						
Yeju	M	292.50	107.20	18.50	103.52	300.00	40.00	54.50	73.62	316.04	67.96	116.25	87.32
	F	238.85	103.00	19.53	74.37	300.00	66.66						
Ambassel	M	248.87	98.03	18.22	94.60	600.00	85.71	50.83	71.37	291.66	70.94	96.66	93.54
	F	198.34	97.95	17.10	93.90	600.00	100.00						

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observed in Yeju Awraja. Increase in prices of cattle can be attributed to an increase in demand of farming oxen. The decrease in price of Draft animals is mainly due to the strict control of the movement of D. Animals from Wello to Tigrai Administrative Region since last year. In discussions held with concerned Awraja Administrative officials livestock prices have been reported as normal in Ambasel and Yeju Awrajas.

SECTION II

FOOD SUPPLY SITUATION IN WADLA DELANTA, WEREHIMENO, LASTA, WAG, BORENA, WEREILU, DESSIE ZURIA, KALU, AND AWSSA AWRAJAS
(Reconnaissance Trip Result)

General Remarks

As indicated by the Food Supply System reports issued since 1977 (G.C), the preliminary report on Wello (Jan., 1977 G.C), and The Disaster Area Assessment Report on Wello (May, 1978 G.C.), most of the Awrajas in the region have been facing serious food shortages for years. The food supply situation has been particularly serious in most parts of Wadla Delanta, Werehimeno, Lasta, Wag, and Borena, and some areas of Wereilu and Dessie Zuria Awrajas.

Based on the 1978 (G.C) Meher (Main) season food supply system reports, which indicated failure of the 1978/79 (G.C.) Meher season crops in the above mentioned Awrajas and in some areas of Kalu, and also to assess the change from last year, if any, of the food supply situation of the affected awrajas, assessment of the food supply situation of these awrajas was made at an awraja, and wherever possible, at woreda (sub awraja) levels. Since a detailed study of the food supply sitation in most of the highly affected awrajas was made last year and there was no significant change of the food supply situation from last year, another detailed study was found unnecessary.

A. CROP PERFORMANCE

1) Meher 1978/79 G.C.:-

All woredas of Wadla Delanta, Werehimeno, Lasta, Wag, Borena, Wereilu, Dessie Zuria, and most woredas of Kalu, and Bati Woreda of Awssa mainly depend on crop production as the major source

of food. Barley, wheat, and horse beans in the dega (highland) areas, teff, field peas, and lentils in the weina dega (mid altitude) areas, and sorghum, maize, and teff in the Kola (lowland) areas are the major crops grown in these awrajas. In particular, barley in the dega areas, and sorghum in the kola areas are dominant.

The 1978/79 G.C. Meher season production was reported to have failed in the awrajas which have been suffering from food shortages last year - (most parts of Wadla Delanta, Werehimeno, Lasta, Wag, Borena and areas in Dessie Zuria and Wereilu). Although not extensive, crop failure was also reported in areas of Kalu and Awssa Awrajas.

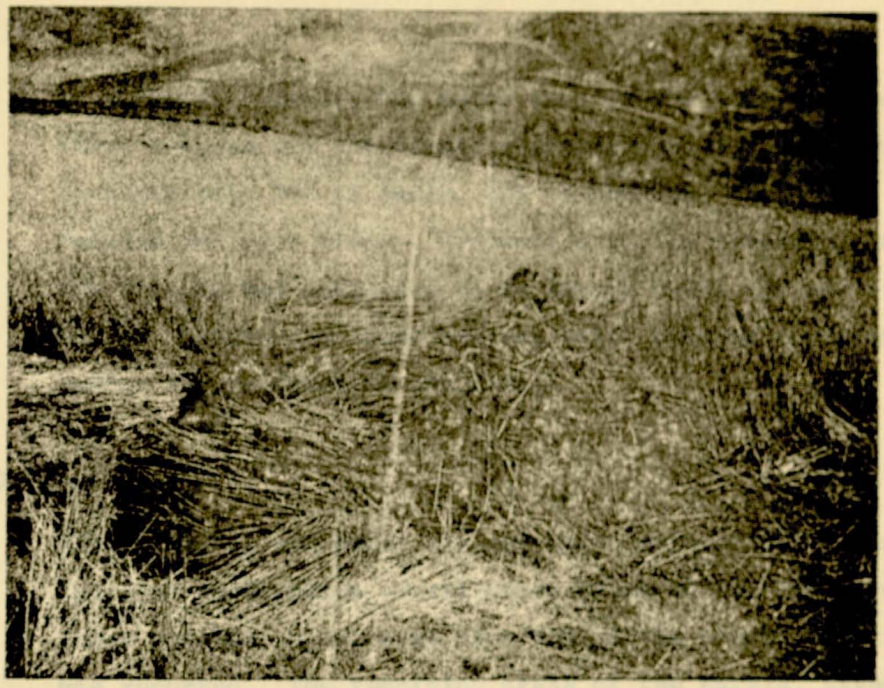
i) Wadla Delanta:

Nearly 50% of the awraja is mainly barley growing dega area, and complete destruction of barley was reported in the two woredas of the awraja- Delanta and Wadla Dawnt. Except in a few Kola areas, where food shortage was reported, production of other crops was generally adequate in the remaining parts of the awraja.

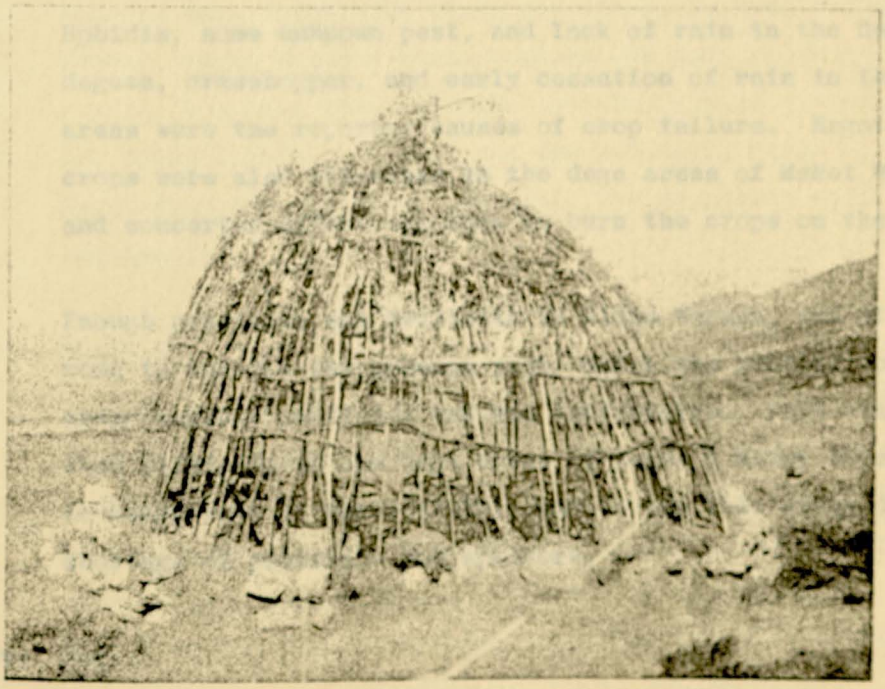
Damage to barley by Ephidis in the dega areas, and damage to sorghum by lack of rain in the Kola areas were the major causes of crop failure. Sorghum, an important kola crop was not sown in most of the kola areas due to shortage of rain. Ballworm (pest), frost, and shortage of rain damage to teff and horse beans was also reported. Although sufficient pesticide was available pest control was difficult due to late reporting of the pest damage. Moreover, the pesticides applied in the areas which reported the damage early were found to be ineffective.

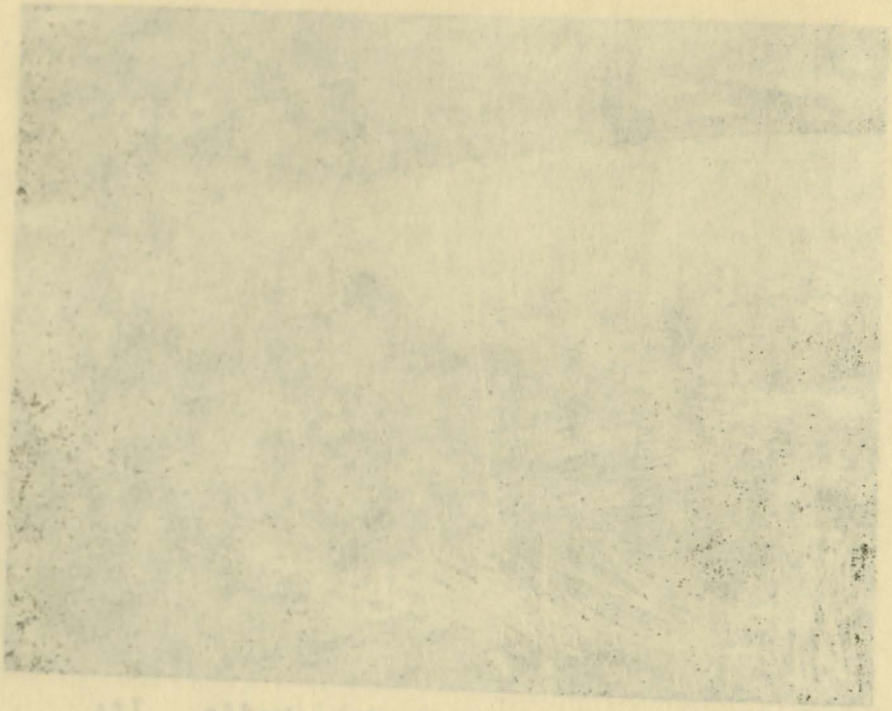
ii) Werehimeno:

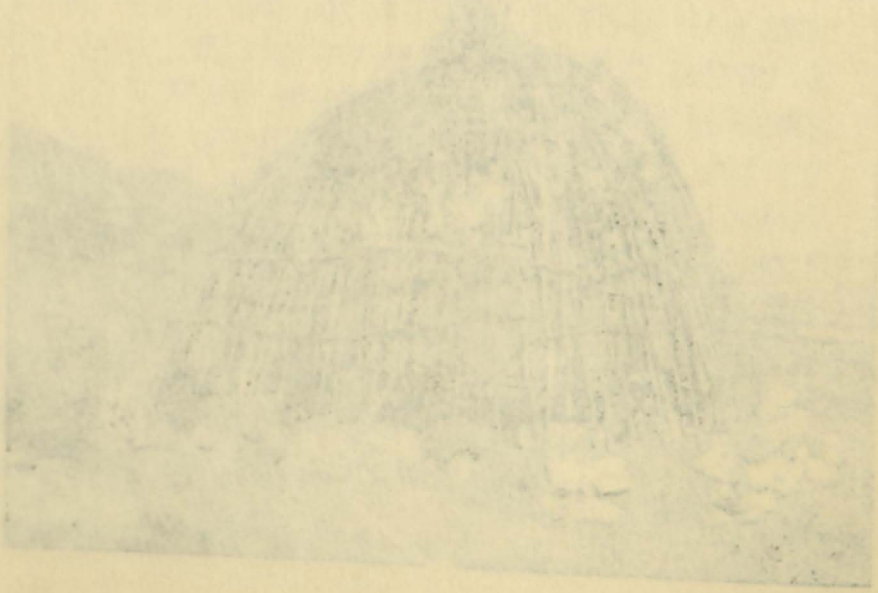
Since more areas were cultivated overall production was slightly better than last year. However, the food shortages in the three woredas of the awraja - Tenta, Mekdela, and Legambo - remain to



-Barley is everything in Western Wello, Its grain is used for food and beverages, while its straw is used as fuel and in making houses. This house needs the straw to be finished.







be serious. Barley, the major crop in the dega areas of the three woredas was completely destroyed due to lack of rain. Approximately 30% of Tenta, 40% of Mekdela, and 65% of Legambo Weredas are dega areas. Production in the remaining areas of the woredas was estimated to be enough until the end of Genbot (May). Unlike the other western Wello Awrajas no major pest damage was reported in the awraja.

iii) Lasta:

Gidan, Bugna, and Meket are the three woredas in the awraja. Complete destruction of all crops grown in the dega areas of these woredas, where more than 60% of the population lives, was reported. The remaining areas of the awraja, although affected, were better than the dega areas. Production was estimated to be enough upto the end of Genbot.

Ephidis, some unknown pest, and lack of rain in the dega areas, degeza, grasshopper, and early cessation of rain in the kola areas were the reported causes of crop failure. Ergot infected crops were also witnessed in the dega areas of Meket Woreda, and concerted effort was made to burn the crops on the field.

Enough pesticide was available in Gidan Woreda, and attempt was made to control the unknown pest, which was similar to Ephidis, using ephidis pesticide but was ineffective. Pest control was also difficult in the dega areas of Bugna & Meket Woredas due to heavy rain in Hamle (July), and in the kola areas due to shortage of pesticide and sprayers.

iv) Wag:

Crop failure was reported in all three woredas of the awraja - Dehana, Sekota, and Wofela. The crop failure in Dehana, which

is very inaccessible and much more affected, and Sekota was particularly serious. Production in most parts of Wofela was estimated to be enough upto the end of Genbot. The remaining areas of Wofela, which are Belg producing, could be self sufficient if the coming (1979G.C.) Belg (Small season) harvest is favourable. In general about 35% of the pre-disaster years production was obtained in the awraja.

Grasshopper, ephidis, and lack of rain were the major causes of crop failure. Barley and wheat were the crops seriously affected. In some areas, the crops were completely destroyed by pest. Pest control was very difficult due to shortage of pesticides and manpower, and late reporting of pest attack.

v) Borena:

The crops grown in the dega areas of Saint and Debre Sina Woredas were completely destroyed mainly by pest and also hail-storm. Saint Woreda, which borders the dega areas of Werehimeno Awraja, was much more affected than Debre Sina. Production in the third woreda - Kelala, and the remaining areas of Saint and Debre Sina was adequate. Rainfall was generally sufficient in the Awraja.

vi) Wereilu:

Overall production in the awraja was reported to be more than last year. However, the crops grown in the dega areas of Wereilu and Legehida woredas (about one-fourth of the woredas) were completely destroyed. The crop destruction was particularly serious in Legehida Woreda. Production was adequate in the third woreda - Jamma, and the remaining areas of Wereilu and Legehida.

Ephidis, and late onset of rain were the major causes of crop failure. The weina dega and kola areas of Legehida and Wereilu were also affected by degeza, and Jama Woreda by ephidis but the pests were controlled early.

vii) Dessie Zuria:

Production was reported to be adequate in most areas of the two woredas of the Awraja - Dessie Zuria and Kutaber. Crop failure was reported in only three peasant associations out of fifty eight in Dessie Zuria Woreda, and eight out of thirty eight in Kutaber Woreda, which are dega areas.

Ephidis and lack of rain were the major causes of crop failure. The pest could not be controlled early due to late reporting of the attack.

viii) Kalu:

Overall production was reported to be better than last year. Last year's production was adequate. Crop failure was reported in areas of Kalu Woreda, which could affect about 20% of the population of the woreda, and what was produced in the affected areas was estimated to be enough until the end of Ginbot. Serious crop failure was also reported in three peasant associations in Artuma Woreda, which is mainly a pastoral woreda. Sorghum is the major crop grown in most areas of the Awraja.

Shortage of rain in Kalu Woreda, and Stalk borer, which could not be effectively controlled by the pesticide applied, in Artuma, were the causes of crop failure. Hailstorm, untimely rain, Beetles, and grasshopper damage to the crops in the other

woredas of the Awraja - Albuko, Iseye Gula, and Dewi Rahmedo - was also reported but the damage was not extensive, and the overall performance of the crops in these areas was not affected.

ix) Awssa:

Bati is the only crop producing woreda in the Awraja, and sorghum is the major crop grown. Production in Bati was reported to be generally adequate. Although there was crop failure due to lack of rain and pest in some areas of the woreda, overall production was reported to be adequate.

2) Belg (Small Season) 1979 (G.C):

Most woredas of the region are important belg producing areas. There are areas in Werehimeno and Dessie Zuria Awrajas, which mainly depend on belg production. In general belg production accounts about ten to twenty percent of the annual production in the region.

It was reported that the overall performance of the 1979 (G.C) belg crops in most woredas was satisfactory. Rainfall was adequate and on time. However, the crops were at an early stage of growth (mostly germination). It must be noted that rainfall in these areas is usually erratic and the major belg crop - barley - susceptible to pest attack. Belg crops were not sown in Tenta Woreda of Werehimeno Awraja for seed aid was not given on time. As the weina dega areas of Tenta are mainly belg crop dependent, this could have an adverse effect on the food supply situation of the woreda.

D. SIZE OF POPULATION AND PEOPLE NEEDING ASSISTANCE*

As no improvement was seen in the food supply situation of the affected awrajas of the region, a significant number of people were still reported

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* Estimated by Awraja Administration.

to require assistance. Compared with last year the number of people needing assistance in Wadla Delanta, and Werehimeno Awrajas has decreased, but increased in Lasta Awraja. No estimate of the affected population was made in the other awrajas last year. If the coming belg harvest fails in Wofela Woreda, more people could be affected in Wag Awraja.

Number of People Needing Assistance

Awraja	Total Population	People Needing Assistance
Lasta	350,000	235,000
Wag	250,000	150,000
Werehimeno	395,000	217,000
Wadla Delanta	375,000	150,000
Wereilu	185,000	37,000
Borena	400,000	40,000
Kalu	445,000	54,000
Dessie Zuria	600,000	3,000
Awssa	206,000	1,500
TOTAL	3,206,000	887,500

One point worth mentioning here is that food aid could not be given to 2,500 people in Wag andunspecified number of people in Lasta Awraja, who live in the woreda and awraja capitals and need assistance, as they were classified as urban dwellers. The relief food aid distribution regulation in the affected awrajas of Western Wello does not allow urban dwellers to get food aid, and the awraja administrators reported difficulties in helping the needy in the towns.

C. MIGRATION

Migration was reported in most of the awrajas visited. The migrations from Wag, Awssa, Borena, and Lasta were usual but the rate has increased. A significant number of people were also reported to have migrated from Wadla Delanta, Werehimeno, Wereilu to the neighbouring awrajas, and most of them were unusual with the whole family migrating. No emigration was reported from Kalu, but there was immigration from Western Wello to the Awraja.

D. HEALTH

When people are malnourished, their body resistance decreases and they become susceptible to all kinds of diseases. Hence, the reporting of some of the common diseases like typhus, relapsing fevers, diarrhoea, kwashiorkor and marasmus by the DAA Unit from their findings in the field is common. At times, however, some unique diseases, even hard to identify by medical people, are also encountered during field operations.

A disease, locally known as "Mqgne Bagegne", literally meaning I wish for a fool, was first encountered by the DAA Unit people during the Wello survey held during the months of November-December 1976 (G.C.) and was mentioned in the preliminary report written by the Unit in January 1977 (G.C). The disease was also reported during this last field operation.

The disease is said to exist in southern Tigrai, Eastern Gondar, Western Wello and Northern Shoa. From the discussion with some medical people and reading of the medical book entitled "A manual of Tropical Medicine" fourth edition, the disease is an acute febrile disease caused by Rickettsia rickettsi, The infection is commonly transmitted to man by the bite of the infected tick.

Occasional instances of infection have occurred, however, following contamination of the hands by crushing ticks while removing them from domestic animals. Tick vectors may be considered in two groups: (1) ticks which feed both on wild rodents and on man, and (2) ticks which serve as vectors among wild rodents but do not feed on man or seldom come in contact with him. The disease does not, as a rule, appear in epidemics. However, in some heavily tick-infested areas it has reached almost epidemic proportions.

The disease is characterized by high fever, pains in the bones and muscles and headache. The fever rises gradually or fairly rapidly to about 104°F and remains elevated without morning remissions. The pathologic findings of this disease resemble those of typhus in that the chief lesions are found in small blood vessels. The height of the illness is reached in the second week. At this time the pulse becomes rapid and weak, and nervours symptoms, especially delirium, may appear. It is during this period that necrosis and death occur. If the patient survives the 14th day, his chances for recovery are excellent.

The mortality depends on the virulence of the rickettsial and on the age of the patient. Persons over 50 years of age are particularly prone to die of the fever, whereas children are but slightly affected as a rule.

The broad spectrum antibiotics, chloramphenicol and the tetracyclines have all proved highly effective in the treatment of the disease. However, sole reliance upon the antibiotic in seriously ill patients late in the course of their disease is inadequate. The ministry of Public Health has recently broadcasted not to use the local treatment of blood-letting which is anaemic resulting in many deaths. It has advised the people to go to the nearest clinics. The disease is still being investigated by the Ministry.

Nutritional deficiencies (marasmus and kwashiorkor), typhos (louse borne) and relapsing fever were wide spread in all awrajas. About 30% of the children brought to maternal and child health service were malnourished. Other diseases such as helminthiasis, all kinds of dysentry, eye diseases (trachoma, conjunctivitis), scabies, VD were reported in several other areas.

Shortages of drugs in Kalu, Dessie Zuria, and Borena, supplementary food in Awssa, health personnel in Wereilu, Borena, and Wadla Delanta were reported. The health centre in Wadla Delanta, which was destroyed in 1975 (G.C), has been repaired but lacks water supply and electricity. It was also reported that the closure of the seven day Adventist Mission Hospital in Dessie has resulted in the pre-occupation of the health centre in curative activities at the expense of Public Health.

E. MARKET PRICES AND FLOWS

Cereals:

Compared with last year, prices were reported to have increased by 100% in Awssa, and 70% in Wag Awrajas. Slight increase in price was also reported in Werehimeno. Last years price of cereals were already very high in these awrajas.

A decrease in price of cereals was reported in Lasta and Wereilu awrajas by 30% and 50% respectively. There was no change in price in Borena and Wadla Delanta awrajas. Price control was introduced in Dessie Zuria and Kalu awrajas.

Supply of cereals was generally poor, particularly in the markets of Awssa Awraja. As most woredas of Awssa are pastoral areas the market and livestock dependent population of the awraja depends

on other awrajas for its supply of grain. Recently, no grain was coming to the awraja, and this has resulted even in the closure of hotels for a number of days. It was only in Lasta that adequate supply was reported. Supply of barley was almost nil in most markets of the Western Wello Awrajas.

Livestock;

Prices of livestock were reported to have increased by 20% in Wadla Delanta and Werehimeno, 30% in Lasta, 40% in Woreilu, and slightly increased in Kalu Awrajas compared with last year. Last year's prices were not high in most of these awrajas. Prices decreased by 50% in Awssa, slightly decreased in Wag Awraja, and were the same as last year in Borena. Price control was introduced in Dessie Zuria Awraja.

F. LIVESTOCK CONDITION

Pastoral Areas:

Most woredas (five out of six) of Awssa Awraja, and parts of Artuma and Dewi Rahmedo Woredas of Kalu Awraja are pastoral (livestock dependent) areas.

The condition of the pastoralists in Kalu could not be known as they graze their livestock in Awash (Hararghe region). Pasture condition was reported to be satisfactory and better than last year in all woredas, except Awssa and Elidar woredas of Awssa Awraja for they graze around the Awash River. Pasture in Awssa and Elidar was affected by lack of rain. The livestock in Awssa and Dubti Woredas were affected by rinderpest but was controlled.

Food poisoning was also reported to have seriously affected all livestock grazing around the Awash farms, particularly of the settlers around Beyayilo (Dubti). About 40 livestock deaths were witnessed in one day, and one of the settlers reported the death of 25 of his livestock. The calves and young camels were not affected as they were not allowed to the grazing lands. It was reported that the poisoning was from the chemicals washed to the grazing lands from the Awash farms.

Cropping Areas:

Several livestock diseases were reported in the cropping ... woredas. Anthrax, black leg, internal parasites, particularly liver fluke, rinderpest, and foot and mouth disease were wide spread in almost all awrajas. For example, 80% of the livestock in Werehimeno were affected by internal parasites. In addition, rabies in Wadla Delanta, sheep pox, trypanosomiasis and scabies in Wag, sheep pox in Werehimeno, carpinepluro pneumonia (CPP) among goats in Kalu were reported. In areas of Wereilu Awraja a disease symptomatically similar to rinderpest but uncontrollable by rinderpest vaccines was reported. In most areas the diseases could not be controlled due to shortage of drugs, vaccines, and manpower.

G. FORESTRY

The afforestation activities in all awrajas except Awssa were generally encouraging. Several seedings were planted last year, and millions are planned to be planted next year through food-for-work programmes. However, shortages of manpower, implements and transportation were reported in Kalu, Wereilu, Wadla Delanta and Dessie Zuria Awrajas. In Awssa, the activity was on experimental basis and needs to be expanded. There is no afforestation activity in Dawnt Woreda of Wadla Delanta Awraja, where it is very much needed, due to shortage of manpower.

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SECTION III

RECOMMENDATIONS

Important as relief food may be in the current situation, it can only serve as a temporary palliative as long as the conditions that create the need for relief persist. In a region like Wello where food shortages have occured repeatedly a concerted effort of short and long term development schemes should be initiated and implemented by the various development agencies. Lack of participation by any one of such agencies could have a great influence on the general development of the region and many a time leads to duplication of activities..

The western Wello food shortage crisis of 1969-70 (Eth. C.) was a continuation of the 1965-66 (Eth.C.) disaster which mainly hit the eastern part of the region. Concerted efforts after the 1965-66 (Eth.C.)crisis could have possibly changed the picture of the recent situation but they were not satisfactorily attempted. Failures in the past could be attributed to many factors which may well have been beyond the control of the concerned agencies.

Be that as it may, the future can't stay the same as the past. To this effect the following list of recommendations is prepared in the hope of assisting concerned agencies in their efforts to launch and intensify relief & rehabilitation activities. The recommendations are classified under names of ministries & agencies to facilitate responsive decisions.

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A. Relief and Rehabilitation Commission (RRC)

1. Food-Aid

Malnutrition in children has been detected in pocket areas of Yeju Awraja. The survey team took an immediate action so that the Wello RRC Branch Office could resume the supply of supplementary foods. Further follow up of the proper allocation and distribution of the supplementary foods in all of the affected awrajas should be carried out to ensure the recovery of the affected children.

After screening the needy, relief grain and other relief materials should be distributed in the newly affected areas and distribution activities should continue in the already relief aid receiving areas.

The food shortage situation in the rural areas has an indirect influence on the urban dwellers. Ways and means, such as price subsidy and food-for-work programme, aimed at minimizing the effect of food shortages on the urban poor should be explored and implemented urgently.

2. Stores and distribution centers

i) The unfinished work in the construction of the store in kulmesk (Lasta Awraja) should be completed. Due consideration should also be given to the construction of stores in Borena Awraja. Relief grain and other supplies have been seen exposed to sunlight and rain

.../32

due to lack of storage facilities in Tsehay Mewcha (Wadla Delanta Awraja). A store should be built in Tsehay Mewcha to prevent further damage of relief food.

ii) A minor distribution center should resume operations in Tekulesh (Lasta Awraja). The affected population around this area cannot be served by Muja and Kulmesk centers which are far away. The already available store in Tekulesh should be stocked adequately for the resumption of distribution activities.

3. Supply of drugs

Requests has been made by most of the visited awrajas for the resumption of the supply of drugs/esp. Nilzan/ for livestock diseases which used to be supplied by R.R.C.

4. Seed - Aid

Requests for seed assistance have been sent to the Wello RRC branch office by agricultural offices particularly EPID. The receipt of these requests by the RRC branch office has been confirmed by one of the study teams. Efforts should be made in time for the purchase and transport of the requested seed.

B. Ministry of Agriculture

1. Pesticides, Insecticides and Fertilizers

Request for pesticides, insecticides and fertilizers was made by most of the awrajas. Supply should start after

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consultation with concerned awraja branch offices of the ministry. Unknown diseases, which are reported to be similar to Ephidis, should be identified and controlled.

2. Veterinary Services

Lack of qualified personnel and shortage of drugs for intestinal diseases of livestock are the two major causes hampering the operation and expansion of veterinary services as reported from Wag, Dessie Zuria, Wadla Delanta and Lasta awrajas. Appropriate measures should be taken to minimize the problems.

3. Horticulture

Horticulture as a supplement to cropping activity should be introduced in most of the awrajas. Gidan (Muja) woreda of Lasta Awraja had already requested for potetoes and Wello RRC Branch Office was requested to respond to the request by one of the Survey Teams. Horticulture should also be further encouraged in areas where it is already under way.

4. Forestry

Shortage of personnel and transport facilities were cited as the major bottlenecks in expanding the re-afforestation efforts. These problems have delayed operations in areas where they are much needed. (e.g. Dawnt Woreda of Wadla Delanta Awraja)

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Furthermore, the delay in the demarcation of forest land in accordance with rural land proclamation has hampered the re-afforestation efforts. Strong measures which would further hasten the development of forestry in the administrative region of Wello should go into effect immediately.

5. Soil and Water Conservation

Soil and water conservation programs should be launched urgently especially in the highland areas of Western Wello. Activities already under operation should also be intensified.

6. Cropping Activities

The population in Awsa Awraja should be encouraged to turn part of its land, presently under cotton cultivation into the cultivation of food crops.

C. Ministry of Health

1. Shortage of drugs

Shortage of drugs for the treatment of common diseases has been reported as one of the major setbacks in advancing health services in most of the awrajas. More budget for drugs should be allocated to all awrajas to enable them obtain adequate quantities of drugs.

2. Lack of Health Personnel

Lack of skilled health personnel has also hampered the rendering of health services. Measures should be taken

to assign the required number of staff in each of the awrajas. The training of teachers, students and representatives of Peasants Associations in basic health services could be useful to minimize the problem connected with the lack of health personnel.

3. Buildings and Equipment

The depreciation of buildings and medical equipment has also posed a problem in the regular operation of health services.

i) The Health Center of Tenta (Worehimeno Awraja) and its electric power generator should be urgently repaired. This was also recommended at the peak of the food shortage situation in Western Wello last year. It is regretable that no action has been taken up to now. The two health stations buildings in Legambo should also be urgently looked at.

ii) The building of the health station in Kombolcha (Kalu Awraja) should be repaired.

iii) The rural Hospital which was planned to be built in the town of Asaita should be reactivated.

iv) The Wegel Tena Health Center (Wadla Delanta) is repaired, although not completely, since our last report last year. But it lacks water supply and electricity. Eforts should be made to supply the Health Center with an electric power generator which could also serve to pump water.

3. Buildings and Equipment

4. Investigations on "Mogne Bagegne"

Epidemological investigations on the disease "Mogne Bagegne" should be activated in parallel with the investigations which are being presently conducted by the ministry. The peasants should be oriented on preventive methods till the final results of the investigations are disclosed. Further they should also be instructed not to use local means of treating the disease especially, the blood letting.

D. Ministries of Mines, Energy and Water Resources, & Industry

1. Water Supply

The Water Resources Authority should be encouraged in its efforts to expand its activities in supplying drinking water to the whole of Awsa Awraja and in some areas of Rayana Kobo Awraja, particularly the Peasants Associations near Waja, where serious shortage of water supply was reported.

2. Small Scale Industries

The development of small scale industries is one of the methods which could help decrease the dependence of the rural population solely on agriculture. Small scale Industries which concentrate in the production of pottery, leather and carpets should be established especially in the highland areas (Wadla Delanta, Wereilu and Werehimenu awrajas) where the necessary raw materials can be obtained easily.

E. Ministry of Commerce

1. Market

i) Efforts should be made to supply grain to the market dependent population of all awrajas particularly Awssa. The Agricultural Marketing Corporation has a great role to play with regard to the supply of marketable food grain.

ii) Farmers have begun to grow vegetables and citrus fruit in large amounts in Ambassel Awraja. However, they have failed to identify market outlets so far. Ministry of commerce in collaboration with the Horticulture corporation should take the necessary steps for buying the surplus production and marketing it in areas where it is much needed (e.g. Assab & Awsa Awrajas)

2. Supply of dry cell batteries

The shortage of dry cell batteries for operating Pesticide Insecticide sprayers was repeatedly mentioned. In our report of last year on Wello* it was recommended that appropriate measures should be taken to ensure the continuous supply of batteries. However, it was found out that the shortage of dry cell batteries persists to this day. Therefore, a timely action is called to resume the regular supply of dry cell batteries.

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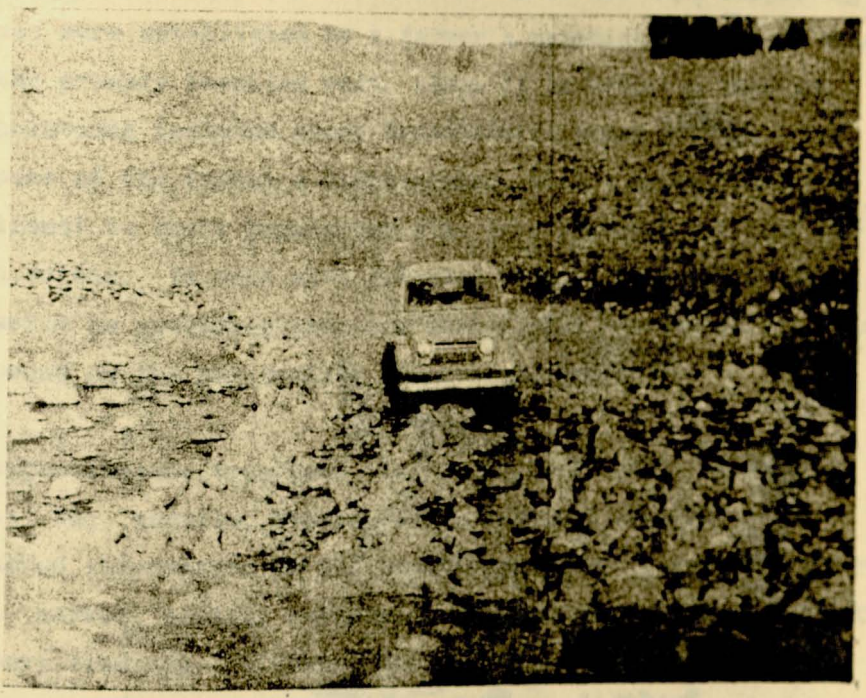
* Food Shortages Report on Wello, May 1978

F. The Ethiopian Roads Authority

The roads to the capitals of the affected awrajas should be maintained regularly. Major operations should start on the Dessie - Tenta Road which is now in a very bad condition. Efforts should also continue to complete the Wegel Tena - Ken road which is presently not progressing satisfactorily mainly due to lack of equipment.



Vehicles have to negotiate with such type of roads and "Bridges" to reach one of the Awraja capitals in the most affected areas of Wello. (Werehimeno - Ketchina "Bridge")

The improvement of the transport infrastructure in Wello was recommended in our report** last year. It should be noted that this recommendation is repeated here, although satisfactory response were taken in accordance with last year's report.

** Food Shortage Report on Wello, May 1978.

ANNEX I

SITE SELECTION

The site selection in the surveyed awrajas of Rayana Kobo, Yeju and Ambassel was done at a woreda level. The sample frames were established at a farmer's associations level, which is the primary sampling unit, since it is believed that the associations included every household in every village. Ten percent of the farmer's associations, with a probability proportional to their population size were randomly selected in each woreda. In each site selected, twenty households were selected as secondary sampling units. The households selection depended on the rationality of each enumerator.

A reconnaissance trip team visited Wadla Delanta, Werehimeno, Lasta, Wag, wereilu, Dessie Zuria, Kalu and Awsa awrajas and gathered information on the population, crop, livestock, rainfall, market, health, assistance requirement and other supplimentary findings. Although the team has not visited Borena Awraja information about the Awraja was gathered.

ANNEX II

Methodology and Questionnaires Used for the Survey

A direct interview method by one team of four enumerators and supervisor was used for collecting the information. Two types of questionnaires were used.

a) Collective Information Questionnaire:

A questionnaire was completed in every site visited at a Farmer's Association level. The questionnaire was filled by interviewing four to five village elders or representatives of Farmer's Association. The questionnaire dealt with the following components.

Population
Crop performance
Livestock status
Market flows and prices and other supplementary facts.

b) Household Information Questionnaire:

Twenty households were selected from each of the Farmer's Associations in the sample. A household questionnaire was filled for each household selected. The enumerators interviewed the heads of the households in completing the questionnaire. The questionnaire dealt with the following components.

Population
Crop performance
Livestock status
Assistance and other supplementary facts.

ANNEX IV

ANNEX III

LIST OF SELECTED SITES:

Names and numbers of the selected sites by woreda and awraja:

RAYANA KOBO

Alamata - 01 Wodefit Abeba
- 02 Ansale Genet
- 03 Addis Alem

Kobo - 01 Ameyana Chiri
- 02 Woremigna
- 03 Afafena Serero
- 04 Mehale Borena
- 05 Golina

YEJU

Haberu - 01 Goshe Wuha
- 02 Wute
- 03 Bayilewote
- 04 Geweyo
- 05 Kida

Gubalafto - 01 Baba Satte
- 02 Woyeniy
- 03 Michael
- 04 Alla Wuha

AMBASSEL

Ambassel - 01 Wortela
- 02 Ziha
- 03 Kulamaso

Tehuledere - 01 Hara
- 02 Seglene
- 03 Kettattiye
- 04 Anemo

Werebabo - 01 Deye
- 02 Bokeksa
- 03 Chifra

APPENDIX XIV

LIST OF REJECTED SITES

Names and numbers of the rejected sites by vowel and metre:

ANNEX IV

RECONNAISSANCE TOUR AREAS AND PERSONS CONTACTED

Places of call, Government Offices and representatives contacted by the reconnaissance trip team:-

PLACES OF CALL:

Wadla Delanta Awraja	-	Wegel Tena
Werehimeno Awraja	-	Tenta
Lasta Awraja	-	Lalibela Muja
Wag Awraja	-	Sekota Koren
Wereilu Awraja	-	Wereilu
Dessie Zuria Awraja	-	Dessie
Kalu Awraja	-	Kombolcha
Awssa Awraja	-	Asaita

PERSONS CONTACTED: (at an awraja level)

- Awraja Administrators
- Awraja Health Officers
- Ministry of Agriculture and Settlement Representatives
- Animal & Fisheries Resources Development Auth. Representative
- Forestry Representatives
- EPID Representatives
- RRC Representative
- Awraja Farmer's Association Representatives
- Urban Dwellers Association Representatives

ANNEX V

A PROFILE OF DISASTERS IN WELLO

I. INTRODUCTION

A lot has been written and lengthy discussions have been made on the causes and consequences of the 1973/74 famine which had affected eleven of the fourteen provinces.[1] The Wello famine which is myopically attributed to the drought situation prevailing in the Sudano-Sahel Zone had been a cause for the recognition of the problem and course of actions to be taken. To mention only a few:

1) the 1973/74 Wello famine had played a very important economic and political role by exposing the suppressive and exploitative nature of the rotten feudal regime and its indifference and silence on the plight of the peasants,

2) the belated disclosure of starvation in Wello had been dramatically publicized by a foreign journalist which initiated the mobilization of local and international relief aid and the initiation of short-term and long-term rehabilitation projects,

3) it initiated and opened the opportunity for the assessment of the causes and consequences of famine and other disasters in the country so as to take timely preventive and mitigative measures,

4) the regime was forced to acknowledge the existence of the problem and established in 1971 a National Emergency Relief Committee. In February 1974, it was replaced by the Relief and Rehabilitation Commission,[2]

5) shortly after February 1974, a 15-man Commission of Inquiry was formed to investigate into the circumstances that led to, and the tragic consequences that arose from the prolonged drought that affected many parts of the country, particularly, Wello.

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1) For the details of the 1973/74 famine and its sequelae in Wello, further reference may be made to many of the Ethiopian Nutrition Institute's reports, Relief and Rehabilitation Commission Publications, the regularly issued "Food Supply System Report" of the Food and Nutrition Surveillance Programme (FNSP), the occasional reports of the Disaster Area Assessment of the FNSP, for example, "Food Shortages Survey Report on Wello - Lasta, Wadla Delanta and Were Himano Awrajas", May 1973, findings of the Inquiry Commission established to investigate into the Wello Disaster and "Wello Emergency Operation - 1973" Ashenafi Moges, Disaster Preparedness Planning Programme of the RRC, July 1978. The reports of Extension and Project Implementation Department (EPID) and organizations engaged in relief activities will serve the same purpose.

2) "Negarit Gazeta", No.23, August 29, 1974, PP.133-137.

ANNEX V

A PROFILE OF DISASTERS IN WOLLO

INTRODUCTION

A lot has been written and lengthy discussions have been made on the causes and consequences of the 1972/74 famine which had affected eleven of the fourteen provinces.1) The Wollo famine which is popularly attributed to the drought situation prevailing in the Sudano-Sahel Zone had been a cause for the recognition of the problem and course of actions to be taken. To mention only a few:

1) the 1972/74 Wollo famine had played a very important economic and political role by exposing the suppressive and exploitative nature of the rotten feudal regime and its indifference and silence on the plight of the peasants;

2) the belated discoverance of starvation in Wollo had been dramatically publicized by a foreign journalist which initiated the mobilization of local and international relief aid and the initiation of short-term and long-term rehabilitation projects;

3) it initiated and opened the opportunity for the assessment of the causes and consequences of famine and other disasters in the country so as to take timely preventive and mitigative measures.

4) the regime was forced to acknowledge the existence of the problem and established in 1971 a National Emergency Relief Committee. In February 1974, it was replaced by the Relief and Rehabilitation Commission.2)

5) shortly after February 1974, a 18-man Commission of Inquiry was formed to investigate into the circumstances that led to, and the tragic consequences that arose from the prolonged drought that affected many parts of the country, particularly, Wollo.

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1) For the details of the 1972/74 famine and its sequelae in Wollo, further references may be made to many of the Ethiopian Nutrition Institute's reports, Relief and Rehabilitation Commission Publications, the regularly issued "Food Supply Bureau Report" of the Food and Nutrition Surveillance Programme (FNSP), the occasional reports of the Disaster Area Assessment of the FNSP, for example, "Food Shortages Survey Report on Wollo - Tarta, Wadla Delanta and Were Himano Awraja", May 1975, findings of the Inquiry Commission established to Investigate into the Wollo Disaster and "Wollo Emergency Operation - 1975" Abonesh Mogos, Disaster Preparedness Planning Procedure of the RRC, July 1975. The reports of Ethiopian and Project Implementation Department (EPID) and organizations engaged in relief activities.

The situations of famine in Wello prior to the 1973/74 famine outbreak have not been properly recorded and investigated. Various factors have contributed to this - absence of properly documented records, unquantified and mystified records, official silence on the issue, etc... In this brief look into the past, an attempt will be made to gather the fragmented and scattered reports and records dealing with famine in Wello with more emphasis on the pre-1973/74 situation and briefly on post-1973-74 up to 1978. Furthermore, the study will not be limited to drought only but will also include all other disasters that have accounted for the loss of life and/or economic and social disruption.

Even though the available fragmentary pieces of information limit an accurate presentation and assessment of famine and related problems, this study will, at least, try to look into some of the following conditions as manifested in Wello.

1) Famine is not a new phenomenon to the peasantry who struggle against nature incessantly to get adequate crop production. It is not the natural environment only that constitutes the only obstacle to an adequate survival. The cruel oppression of man by his fellowman accounts for the peasants' plight which is compounded by the occasional furies of the environment. Hence, famine results mainly from the conditions of the food supply system and the socio-economic system of the society which may be aggravated by the vagaries of nature.

In a long discussion on the real causes of famine, Susan George aptly describes that the social structure of a given society has more to do with famine in comparison with natural causes.

> "Natural calamities may point up the weaknesses of underlying social structures, but they do not cause them. If a given social and economic system is vulnerable it may even reach the point of famine without natural disaster. For example, in several especially famine-prone (i.e. structurally vulnerable) countries, even a small shortfall in grain production can lead to full-scale famine when it's accompanied by less cash to invest in the following year's crop (and therefore by less employment and less income for rural workers), by hoarding and speculation on the part of local grain merchants and traders and by the consequent rise in food prices that put the poor totally outside the market."[1]

This also gives a picture of the biography of the peasant who has never been free from the specter of hunger. Experiences have proved that "each famine takes more land (life, property, initiative and moral) from the poor and thus sets the stages for the next one."[2] In general, one would not be mistaken or biased to conclude that,

> "a closer look at the present situation shows that only the poor - wherever they may live go hungry and that deeply rooted patterns of injustice and exploitation, home grown or imported literally prevent them from feeding themselves (by either growing food, fishing, hunting, buying it or a combination of all)."[3]

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1) Susan George, How the Other Half Dies - The real Reasons for World Hunger, Penguin Book Ltd., 1978, P.44.
2) Ibid., P.45
3) Ibid., P.16.

2) On the basis of the above theoretical background, and because of the absence of well-documented accurate information, it has been anticipated that the assessment of the various factors affecting the food supply system (production/land, labour, climate/ - distribution-consumption), and how this has led the peasantry to a near-marginal survival will give a better picture of the long history of famine in Wello.

3) Even though there is a limitation on source materials, an effort will be made to see the continuity of famine, that is, each famine had created the favourable terrain for its successive one. The past has played a great role in the present and the whole situation must be viewed in terms of the relationship of climate, the land and man. For this purpose we shall here present briefly the geographical environment of the region and its historical background.

A. GEOGRAPHICAL ENVIRONMENT

Wello is one of the most dissected mountainous administrative region ranging in altitude from 400-500 meters in the Lower Awash Plain to over 4000 meters in the Central Massifs. This region lies on both sides of the lines of faulting between the Rift Valley on the east and the drainage of the Nile to the west. Hence, the region can be divided into two geographical regions - the high plateau of western Wello and the lowland of eastern Wello.

Western Wello which at the present includes the awrajas of Wag, Lasta, Werehimano, Wadla Delanta, Borena and Were Ilu is part of the North Central Massifs. This geographical region is characterized by extensive high plateau ranging from 2500 meters in the valleys to more than 4000 meters on the top of the plateaus and dissected by numerous rivers which flow in deep gorges. The works of the rivers have resulted in isolated plateau blocks and smaller tablelands, known as 'Ambas', isolated by river-eroded gorges of the Beshilo and Tekezze Rivers and their tributaries. The flat-topped 'Ambas' separated by gorges is well-described by a British soldier during the Napier expedition in 1867-68 as quoted by Greenfield: "They tell us this is a tableland ('Amba'). If it is, they have turned the table upside down and we are scrambling up and down the legs."[1] The Yeju Wadla Delanta Plateau forms a land bridge between the massifs in the north and the south.

To the east of the Great Eastern Escarpment, the impregnable rugged relief and precipice slopes fall dramatically to the plains of the low plains of the Afar Plain. This geographic region includes Awssa, the largest Awraja in Wello, eastern part of Rayana Kobo, Yeju, Ambassel and Kalu awrajas. It is part of the lower Awash Plain where the Awash meanders before terminating in the lakes of the Awssa region or, at times, disappears in the sand. Most of the people living in this region are herdsmen except in the lower Awash where commercial farms have been introduced since the last decade.

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[1] Richard Greenfield, Ethiopia, A New Political History, London, Pall Mall Press, 1965, P.7.

3) On the basis of the above theoretical background, and because of the absence of well-documented concrete information, it has been anticipated that the appearance of the various factors affecting the food supply system (production/land, labour, climate/ - distribution-consumption), and how this has led the peasantry to a peasant-national survival will give a better picture of the long history of famine in Wello.

3) Even though there is a limitation on source material, an effort will be made to map the continuity of famine, that is, each famine had occurred the favourable terrain for its occurrence one. The past has played a great role in the present and the whole situation must be viewed in terms of the relationship of climate, the land and man. For this purpose we shall here present briefly the geographical environment of the region and its historical background.

A. GEOGRAPHICAL BACKGROUND

Wello is one of the most dissected mountainous administrative region running in altitude from 600-3600 meters in the Lower Awash plain to over 4000 meters in the Central Massif. This region lies on both sides of the Lasso of Lasting between the Rift Valley on the east and the highland of the Mello to the west. Hence, the region can be divided into two geographical regions - the high plateau of western Wello and the lowland of eastern Wello.

Western Wello which is the present Inclusive the provinces of Yad, Lasta, Wereilleano, Wadla Delanta, Dersea and Wero Ilu is part of the North Central Massif. This geographical region is characterized by extensive high plateau running from 3500 meters in the valleys to more than 4000 meters on the top of the plateaus and dissected by numerous rivers which flow in deep gorges. The works of the rivers have resulted in isolated plateau blocks and smaller tablelands, known as 'Amba', isolated by river-eroded gorges of the Yandes and Tekeze River and their tributaries. The flat-topped 'Amba' separated by gorges in 1887-88 as quoted by Greenfield: during the Major expedition in 1887-88 as quoted by Greenfield: "They tell us this is a cultural ('Amba'). If it is, they have turned the table upside down and we are scrambling up and down the legs."1) The Tekeze Plateau forms a land bridge between the massif in the north and the north.

To the east of the Great Eastern Escarpment, the topographic ranged relief and precipice slopes fall dramatically to the plains of the low plains of the Afar Plain. This geographic region includes Awash. the Issaqet Awash in Wello, eastern part of Begemm Mobo, Tsin, Ashangel and Kalu erosion. It is part of the Lower Awash Plain where the Awash meanders before terminating in the Lake of the Awash region on, at times, disappears in the sand. Most of the people living in this region are herdsmen except in the Lower Awash where commercial farms have been introduced since the last decade.

The annual rainfall amount, the vegetation and settlement concentration correspond to the physical division of the region. The yearly precipitation varies from 1500 mm in the high plateau of western Wello to 300 mm in the lowland part of the region. Temperature also varies from nightly frosts in the highlands to intense heat in the Afar Plain. The eastern part which is climatically defined as a desert or a semi-desert supports very stunted and isolated acacia trees, thorn bushes and tough isolated grass clumps. However, along the major rivers and/or tributaries, strips of riverine vegetation or "gallery forest" are found along the banks of the rivers. The western part of the region is covered with mountain grassland and altimontane scrub and steppe.

The geographical make-up of the region has a considerable impact on the socio-economic conditions. The difference in elevation has contributed to the climatic difference within the region and different agricultural practises. The terrain, particularly in western Wello, affects the pattern and nature of transport. It has created problems of mobility because the steep descents and ascents can only be negotiated at a great cost in time and energy by man or mule. It has created a shortage of arable land which has forced people to cultivate the steep slopes. This turn has speeded up the soil erosion.

B. HISTORICAL BACKGROUND

Since the presentation of the intricate history of Wello is not the purpose of this paper, we shall attempt to present the highlights of its history so that an inference could be easily made on the socio-economic factors that may have affected the food supply situation. The Wello area, particularly the highland, was inhabited as early as the first millenium. During this time the Axumite Empire had developed a complex agricultural system which had spread easily to the periphery of the Empire - Wello. After an interlude of some centuries the Axumite Empire was replaced by the Zagwe Dynasty with Roha (Lalibela) in Lasta as its centre.

After the fall of the Zagwe Dynasty in 1270 two major historical incidents took place - the Muslim invasion and the Oromo movement. Each brought violence, death and repercussions. Ahmed ibn Ibrahim el Ghazi, surnamed Gragn, or the left handed, declared a Jihad ('conversion or death') on the country. From 1531 onwards he moved successively into Duara, Shewa, Amhara, Lasta and beyond. Their influence and destruction on the countryside is well described by Greenfield:

> "His nomadic followers proved difficult to control and were activated as much by a lust for loot as by their faith, but in their wake they left a trail of compulsory conversions burning churches and plundered settlements."[1]

[1] Greenfield, Ibid., P.52.

B. HISTORICAL BACKGROUND

A little later the weakened population was faced with the Oromo Movement. The Oromo migration was equally destructive and feared. Local kings, princes and chiefs had confrontations with different Oromo groups.

The impacts of wars and campaigns from the time of the Oromo migration until the era of the Princes had been greatly felt in Wello. The various chronicles of the Emperors indicate that from around 1660 to 1760 campaigns and expeditions carried out to subdue local rebellions had greatly affected the region of Lasta. During the reign of Yohannes I (1667-82) on a campaign in Lasta: "Yohannes is said to have killed the peasants and burnt down their houses - as God burnt Sodom and Gomorrah."[1] To crush the rebellion in Lasta during Bakaffa's time (1721-30), the emperor instructed his soldiers "to pillage and burn down all the houses they could find."[2] This was followed by "burning down houses and seizing many women and children in Lasta" during the reign of Iyasu II (1730-55).[3]

The Era of Princes (Zemene Mesafint) from 1769-1855 was characterized by endless wars between different rival warlords. The wars had adversely affected agricultural production and peasant life. Insecurity prevailed. Economy declined. The population deceased. Around the end of this confused and decadent period, the rule of Tewodros begun in 1855.

He attempted to stop the conflict between the provincial dynasties which was rampant until mid-19th century. He did attempt to carry out some reforms which were strongly opposed by local chiefs, the clergy, etc.

> "His methods provoked mounting resistance, engulfing the country in a storm of rebellion which drove the weary ruler to distraction. The Galla also resumed the raids and lawlessness once again claimed the Ethiopian country".[4]

Menelik's and Yohannes' reign had similar background in which punitive expeditions and campaigns were organized. These troop movements were a burden on the countryside. The inevitable destruction which resulted because of the fighting was intensified by the soldiers' depredations. Many civil wars and confrontations were accompanied by looting and plundering, especially in unprepared and unplanned campaigns. Besides the ravages of the soldiers, people were removed from agricultural activities and property were destroyed. For example, Tewodros' reign can be cited as typical:

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1) Richard Pankhurst, "Some Factors Depressing the Standard of Living of Peasants in Traditional Ethiopia," Journal of Ethiopian Studies, Vol.IV, No.2, Addis Ababa, July 1966, P.77.
2) Loc. cit.
3) Loc. cit.
4) John Markakis, Ethiopia: Anatomy of a Traditional Polity, Oxford University Press, Oxford 1974, P.16.

.../48

"His reign was characterized by interminable warfare, large-scale mobilization of all the able-bodied, and considerable devastation, often intensified in the later years by deliberate castigation of areas in rebellion".[1]

His punitive expeditions were totally destructive. In Wello in 1856 "villages were burnt, the fields laid waste, and men and women and children unsparingly butchered, or dragged into irredeemable captivity."[2] Delanta was similarly sacked in 1868 without any resistance.[3] The problem of the unpaid soldiers could not be solved even by the time of Menelik. Tewodros had attempted to establish a regular pay and instructed the soldiers not to loot. This prohibition was trespassed at Delanta in 1856. The men seized and slaughtered all the animals they could find.[4] In 1892 Menelik also proclaimed "forbidding the soldiers from quartering themsleves on private persons and ordered the peasantry to contribute a special tax for their upkeep."[5] To facilitate this, Menelik set up granaries for his troops in Tigrai, Wello and other provinces.

The fighting of the later 19th century between 1868-1896 had greatly impoverished the northern regions. The principal towns of the north including Sokota had been destroyed. Sokota which had a population of 5000-6000 by the 1870's had been reduced to 1,500 in 1881.[6]

During the 19th century and also during the 20th century, the strategic position had attracted and had been the site of many military activities. It had served as a pathway of the northern war fronts. It was for this reason that Menelik at first had "to subdue the several Galla groups in Wello to the north, whose settlement had, since the 16th and 17th centuries, tended to isolate Shewa from the ancient centres of Amhara and Tigre".[7] It was for this purpose that Menelik sent 110,000 to 120,000 men on an expedition to Wello in 1890.

During the Italian occupation the northern part of Wello around Lake Ashangi had been the scene of famous crucial battles. It was during this period that "the Shewans took the opportunity of raiding the lowland sultanate of Awssa in the Danakil country and burning its capital".[8] The refusal to the mobilization order was followed by Ras Mulugetta's (Minister of War) decision to destroy Kobo.

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1) Richard Pankhurst, Economic History of Ethiopia - 1800-1935, HSIU Press, Addis Ababa, 1968, P.567.
2) Ibid., P.568
3) Loc. cit.
4) Ibid., P.566
5) Ibid., 571
6) Ibid., PP.692-693
7) Greenfield, Ibid., P.97
8) Ibid., P.121

"He ordered floggings and marched on the village of Kobo, a main centre of the Azebu Galla on the Rift Valley floor well south of the Lake Ashangi Basin, and practically destroyed it. The fact that Ras Mulugetta rarely paid his men doubtless contributed to the looting..."1)

In Rayana Azebo there was an uprising of the Azebu Galla in 1929 and 1930.2) After March 1936 on the retreat from the northern front Ras Getachew "was obliged to fight several large-scale engagements with the Raia and Azebu Gallas, out of revenge for the treatment they had earlier received at the hands of Ras Mulugetta".3)

Further on, during the Italian occupation some areas were selectively bombarded. The routes of the retreating Ethiopian force, particularly in the Lake Ashangi area, were bombarded. More particularly, the Lasta region (Lalibela and Bilbila Giorgis Kebeles) was heavily bombarded for its armed resistance against the Italian troops. The Italian commander, Graziani, in one of his urgent telegramsto his bosses in Asmara on Meskerem 1, 1937 indicates the attrocities carried out in Lasta.

"The whole inhabitants of the Lasta region - noted for its determination and bravery - have rebelled except for the birth place of Ras Kassa's children. Therefore, it is necessary to inform the people to disassociate themsleves from the officials, and the whole region must be systematically crushed. This is the only choice because it appears that it is difficult to despatch troops to the area, and moreover, earlier daily air attacks have been carried out in the area unsuccessfully)".4) (Translation from Amharic)

II. HISTORY OF FAMINE AND FAMINE INDUCING FACTORS

Famine is triggered either by natural (drought, locust and pests, cattle plague, epidemics, flood and seismic activity), or man-made (wars and/or civil distrubances, oppressive social and economic system) factors. In this section we shall, as far as possible, deal with each aspect so as to show the impact of the past on the present socio-economic history of Wello. The present Wello has a near-marginal survival which suffers a chronic food shortage that becomes a famine under certain conditions, for example, a mild drop in food production.

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1) Ibid., P.106
2) Ibid., P.161
3) Ibid., P.218
4) Moges Kifle, Ye Mussolini Mistir (Secrets of Mussolini), Addis Ababa, Hamle 16, 1949, P.103.

A. NATURAL DISASTERS

1) Earthquake

From a seismic point of view, the region is critically located partly in the zone of weakness of the earth's crust. The low-land part of Wello constitutes the northern part of the Main Ethiopian Rift Valley. This region is unstable and actively marked by volcanic activities. It has experienced the effects of seismic activities frequently. The lowland part of Wello is dominantly a pastoral community which has cultural and environmental structures which make the casualties and damages to property insignificant in comparison to the settled and crowded regions. However, in the future, the damage and effect of earthquakes will be magnified proportionally to the rate of urbanization and economic growth.

A brief look into the history of earthquakes and earth tremors in this region shows that it has experienced geologic hazards and it is located in a seismic zone.

Earthquakes and Earth Tremors in Wello[1)]

1631 Seismic tremors were reported felt almost continuously over a period of several months in Awsa, south-eastern Afar (lower Awash Valley). The town of WARABA (its present name is still unknown) was destroyed.

1845/02/12 On February 12 in mid-afternoon, three earthquakes shook western Ethiopia. The magnitude of the first shock is estimated at about 6.5.
- In the district of Lasta, north-west Wello, a landslide covered up a whole village.
- In Wara Haimanot (11.2°N, 39.7°E) (probably refers to any town in Were Himano) south of Magdala three persons were trapped in a crevasse and died.

1906/05/26 On May 26 an earth tremor was felt some 13 kms. north of Dessie in Borumeda (11.2°N, 39.7°E).

1906/05/18 An earthquake of magnitude 6 occurred near Serdo in central Afar.

1951/12/11 Earthquake of magnitude 4.7° in central Afar.

1964/07/03 Earthquake in Wello (Dessie) with a magnitude of 5.0 (Intensity M.M. V-VI). Fissures in the walls of some buildings in Dessie. Tremors extensively felt but no damage reported.

1965/04/14 An earthquake of magnitude 4.3 occurred in Dessie (11.10°N, 39.5°E).

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1) Compiled from a catalogue of earthquake records collected by the Geophysical Observatory at Addis Ababa (no title, no date).

A. NATURAL DISASTERS

1) Earthquake

From a seismic point of view, the region is critically located partly in the zone of weakness of the earth's crust. The Somaliland part of Wello constitutes the northern part of the main Ethiopian Rift Valley. This region is unstable and actively marked by volcanic activities. It has experienced the effects of seismic activities frequently. The lowland part of Wello is dominantly a pastoral community which has cultural and environmental structures which make the casualties and damage to property insignificant in comparison to the settled and crowded regions. However, in the future, the damage and effect of earthquake will be magnified proportionally to the rate of urbanization and economic growth.

A brief look into the history of earthquake and earth tremors in this region shows that it has experienced peculiar hazards and it is located in a seismic zone.

Earthquake and Earth Tremors in Wello[1]

1637 Seismic tremors were reported felt almost continuously over a period of several months in Ifat, southeastern Afar (Lower Awash Valley). The town of Walalo (its present name is still unknown) was destroyed.

1906/05/12 On February 12 in mid-afternoon, three earthquake shocks were felt in western Ethiopia.

- In the district of Ibanta, north-west of Debre Berhan, estimated at about 6.
- In Wara Hakimoot (11.20°; 39.50°) town in Were Himano) south of Lake Hayk, covered up a whole village.
- In Wara Hakimoot (11.20°; 39.50°) town in Were Himano) south of Lake Hayk, trapped in a crevasse and died.

1906/05/29 On May 29 an earthquake of magnitude 6.3 occurred in Dessie in Bourneda (11.10°, 39.70°).

1906/06/12 An earthquake of magnitude 6 occurred near Debre Berhan in central Afar.

1951/12/11 Earthquake of magnitude 6.7° in central Afar.

1954/07/03 Earthquake in Wello (Dessie) with [illegible] (Intensity VII) in Dessie. Tremors were felt but no damage reported.

1955/04/14 An earthquake of magnitude 6.3 occurred in Dessie (11.10°, 39.70°).

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[1] Compiled from a catalogue of earthquake records collected by the Geophysical Observatory at Addis Ababa (no title, no date).

1969/03/29 Earthquake of magnitude 6.2 in Serdo (11.57°N, 41.19°E). Town completely destroyed. Out of 420 people 24 lost their lives and 167 were injured within minutes of the shock, a further 15 died later of injuries.

1971/11/13 An earthquake of magnitude 5.3 (Intensity M.M. IV-V) felt over most of central Ethiopia, especially around Dessie.

1972/08/18-19 An earthquake of magnitude less than 4.8 occurred around the escarpment of northern Wello (Guf Guf Graben).

1973/04/03 Felt over central Afar, namely Dubti, Loggia, Mille and Serdo.

1974/12/17-18 In Kombolcha (11.07°N, 39.7°E) and Dessie an earthquake of magnitude ranging from 2.9 - 4.0 was reported. People run out of their houses, and no damage reported.

From these records and other studies on seismic activities in the country, Dessie area and central Afar have a high concentration of seismic hazards. The major towns at risk and which need precautionary measures within the region can be easily identified. For the purpose of this paper, we shall present towns located within and above intensity contour VII (MM).

Towns at risk with more than 2,000 inhabitants[1]
(Pop. 1970 Eth.C.,[2] % stone houses around 1960 Eth.C.[3]

1) Towns within Intensity Contour VII

	Towns	Approx. Pop.	% Stone Houses
a)	Alamata	8,000	2
b)	Bati	10,000	0
c)	Haik	5,000	0
d)	Kobo	10,000	0
e)	Korem	7,000	0
f)	Woldia	16,000	0
g)	Wuchale	4,000(x)	

The list is not complete. There may be more towns with population above 2,000 within the intensity contours, and in some cases also smaller towns should perhaps be included.

Population figures are based on recent counts by Kebeles. Figures marked (x) are from CSO Statistical Abstract figures for 1966 E.C. updated by approximately 5% annually.

Information on percentage of households living in stone houses is obtained from Survey of Major Towns in Ethiopia, CSO Statistical Bulletin No. 1, Dec. 1968. The figures are over ten years old and their validity of today may be questioned.

1) Towns within Intensity Contour VII

	Towns	Approx. Pop.	% Stone houses
a)	Ajanuta	5,000	5
b)	Beti	12,000	0
c)	Neik	8,000	0
d)	Kolo	30,000	0
e)	Koren	7,000	0
f)	Wolkin	15,000	0
g)	Uncia	6,000(x)	

(Pop. 1,750 Eth. C., 7% stone houses around 1550 Eth.C.)

Towns at risk with more than 2,000 inhabitants[1]

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and Serdo.
19?4/03/03 Felt over central Afar, namely Dubti, Logeia, Mille

18 the escarpment of northern Wollo (East Gut Graben).
19?4/03/18- An earthquake of magnitude less than 4.0 occurred around

felt over most of central Ethiopia, especially around Desmie.
19?4/11/12 An earthquake of magnitude 5.3 (Intensity M.M. IV-V)

their lives and 167 were injured within minutes of the
town completely destroyed. Out of 470 people 94 lost
Earthquake of magnitude 6.2 in Serdo (11.5°N, 41.1°E).

2) Towns within Intensity Contour VIII

a)	Assayta	4,000(x)	no. inf.
b)	Dessie	58,000	4.2
c)	Kombolcha	7,000(x)	1
d)	Mille	---	no. inf.

3) Towns within Intensity Contour IX

a)	Loggia	---	no. inf.
b)	Serdo	---	no. inf.

2) Flood

The lowland part of Wello is featured by the Awash River which meanders lazily into the chain of lakes in that part of the region. In this part of its final course it has a number of major tributaries from the highlands - Mille and Logia - and seasonal tributaries from the South-East Highland. It is natural to have seasonal flooding in the lower reaches of major rivers. The level of the river is entirely determined by the rain in the highland. In this region which is inhabited by the pastoralists - in this case the Afars - the flood periods created additional grazing areas for the Afars along the adjacent plains. On the basis of their past experiences they had been able to water their pasture and also evacuate in time from the flood zone. However, with the introduction of commercial agriculture, their systematic control of flood, at least the seasonal river bank overflow, had been undermined.[1)]

The areas that experienced flood before 1966 (1974 G.C.) were:[2)]

a) Around Mugad in 1947 (1955 G.C.) - 3 houses were destroyed.
b) Dessie Town in 1952 (1960 G.C.) - one man washed away,
c) Ambassel Awraja in 1955 (1963 G.C.) - 8 people died, 50 houses and harvest destroyed,
d) Sekota Town in 1965 (1973 G.C.) - one man died, 1 man injured, 3 heads of cattle killed. A tower was destroyed and all the property in it were completely destroyed,
e) Rayana Kobo Awraja in 1964 (1972 G.C.) - 2 people died,
f) Wag Awraja in 1965 (1973 G.C.) - one iron bridge was put out of use.

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1) For further discussion refer to - Lars Bondestam, "People and Capitalism in North-Eastern Lowlands of Ethiopia", in the Journal of Modern African Studies, 12, 3 (1974) PP.423-439, and Ashenafi Moges, "Flood Risks and Vulnerability in Different Regions of Ethiopia", Disaster Preparedness Planning Programme, Relief and Rehabilitation Commission, September 1978.

2) Geophysical Observatory, "Yetefetro Adegawoch BeEthiopia" (Natural Disasters in Ethiopia), Tikmt 1971 Eth.C., PP.43-77.

Towns within Isohyet Contour VIII

a)	Assayta	4,000(x)	no. ind.
b)	Oasis	80,000	4
c)	Konkol'da	7,000(x)	1
d)	Wille	---	no. ind.

Towns within Isohyet Contour IX

a)	Lorgia	---	no. ind.
b)	Sorio	---	no. ind.

9) Flood

The lowland part of Wello is featured by the Awas River which meanders lazily into the chain of lakes in that part of the region. In this part of its final course it has a number of major tributaries from the Highlands - Wello and Logia - and seasonal tributaries from the South-East highland. It is natural to have seasonal flooding in the lower reaches of major rivers. The level of the river is directly determined by the rain in the highland. In this region which is inhabited by the pastoralists - it also case the Afars - the flood periods created additional grazing areas for the Afars along the adjacent plains. On the basis of their past experiences they had been able to water their pasture and also evacuate in time from the flood zone. However, with the introduction of commercial agriculture, their systematic control of flood, at least the seasonal rivers both overflow, had been prevented.

The areas that experienced flood before 1965 (Area 6.C.) were:

a) Around Ahuma in 1947 (1956 6.C.) - 3 houses were destroyed.
b) Oasis Town in 1952 (1960 6.C.) - one man washed away.
c) Imbassel Awrajo in 1954 (1958 6.C.) - 9 people died, 80 houses and harvest destroyed.
d) Selota Town in 1955 (1959 6.C.) - one man died, 3 men injured, 3 heads of cattle killed. A tower was destroyed and all the property in it were completely destroyed.
e) Bayana Tuke Awrajo in 1954 (1959 6.C.) - 5 people died.
f) Lake Awramie in 1956 (1973 6.C.) - one iron bridge was put out of use.

For further discussion refer to - Lars Bondestam, "People and Capitalism in North-Eastern Ethiopia", in the Journal of Modern African Studies, "Flood Risks and

The flood disasters reported after 1966 (1974 G.C.) except for the floods of 1968 (1976 G.C.) which washed away about 30 cattles, and of 1969 (1977 G.C.) which destroyed property worth about 1500 Birr, flooded Dessie on both occasions, may be attributed to the misuse - commercialization of the Awash Valley.[1)]

After the commercialization of the Awash Valley began the first documented flood is in Dubti 1966 and 1967 (1974 and 1975 G.C.). The Ethiopian Red Cross in its Service Report indicated that up to 3,000 people were engulfed by flood and bridges were destroyed. Relief assistance in form of grain, ready food, clothing and medicines were provided. Ethiopian Nutrition Institute gives an original explanation to the real cause of the flood - pre-flood release to save the commercial plantations.

> "It was reported by the flood victims that an estimate of 2,000-3,000 cattle were washed away and about a hundred people missing (there was not any official confirmation on this report). The team would like to express its deep concern about improper act of Dubti Mitchell Cotts Company reparding the deliberate move of directing the flood to the settlement (villages) of the Afars without either informing them or moving them out from their settlement areas."[2)]

Around the same period, UNDP/FAO in its report on water management in the valley indicates that, even though there have been several flash-floods during the last 12 years, the Dubti Settlement Farm (identified as a flood path) had been destroyed on three occasions from August 1973 to August 1974.

> "The flood of August 1973 reached a peak level on the gauge at the Tendaho Plantation Share Company's Dubti pump station of 6.50m, and did not fall below 6.00m for ten days.----
> On the 22nd March 1974 the river level rose to 7.25m, on the Dubti gauge, overtopping the protective bunds and inundating the settlement village.---
> When the flooding of August 1974 occurred, the gauge reached a height of 6.85m, on the night of the 8th August and remained at an average level in excess of 6.40m, for ten days.[3)]

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1) Loc. cit.

2) ENI 36/74. "Emergency Activity in the Awash Flooded Area of Tendaho (Dubti)". A report by an Ethiopian Nutrition Institute team that was in Wello from 17-7-66 to 20-7-66 Eth.C.

3) D.J. Baker, "Additional Engineering Matters - Water Management in the Awash Valley", UNDP/FAO/ETH. 72/006. Informal Technical Report No.30 February 1975, P.38.

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The latest report of flooding in the valley is in 1971 (1979 G.C.). Over 2500 people were engulfed for about 3 days and over 200 cattles washed away in the villages of Wahli Gobi, Dehinle Fera, Hilfigi and Gale Fuga around Mille and Assayta.[1]

3) Epidemics

The impact of epidemics on the loss of life and/or the liquidation of an active and potential productive agriculture force creates or aggravates famine. Most often epidemics precede or follow-up a famine. When famine which creates a favourable terrain for the thriving of epidemics strikes hunger-weakened population, its consequences are extremely devastating. Chronically hungry-people, children, old people, pregnant and nursing mothers, are the first and perfect victims because "they have far less resistance to disease and are far more susceptible to invasion by the parasites that proliferate in the poor countries."[2] The high mobility of starved people who serve as vectors (carriers) and the inadequate hygiene and sanitation contribute to the magnitude and intensity of the epidemics.

Smallpox had been serious in the last century. According to Pearce it was the most destructive complaint over the entire land.[3] Pearce as quoted by Pankhurst, identifies Axum, Adwa, and all the places in Amhara, Tigre, Enderta and neighbouring districts of Semien, Lasta, Begemdir and Gondar as ravaged by the smallpox outbreak in 1811-12. Further on, he describes its devastating consequences"

> "The smallpox at this time committed such ravages throughout the country, that all thoughts of war were abandoned. As the malady increased it became more like a plague than the smallpox, and in great many towns and villages the people lost all their children and numbers of grown-up persons, who had not had the disease before, died also."[4]

During the latter years of Emperor Tewdros' reign (1855-1868) another outbreak was reported. According to Blanc the disease was making "fearful ravages"[5] and Rosenthal noted that "thousands" were carried off in the Makdala area.[6] The

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1) Relief and Rehabilitation Commission, "At Assayta River Flooded and Caused Damage" in "Yezareyetu Ethiopia", Miazia 6, 1971 E.C.
2) Susan George, Ibid., P.31
3) Pankhurst, Ibid., P.623
4) Loc. cit.
5) Loc. cit.
6) Loc. cit.

The latest report of flooding in the valley in 1973 (1970 E.C.). Over 2500 people were counted for about 3 days and over 300 cattles washed away in the village of Wmdil Godi, Debinie Fere, Wilfil and Gelo Fuga around Mille and Awasyta.[1]

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[1] Relief and Rehabilitation Commission, "At Awasyta River Flooded and Drowned People" in "Yemareyetu Ethiopia", Addis A, 1973 E.C.

general condition in the northern provinces (including Wello) as reported by Courbon is:... "There were few people without smallpox scars and that the mortality among the infected was high: 50% in the case of children and 80% in that of adults."[1]

Smallpox outbreak was accompanied by cholera and typhus outbreak in the Great Ethiopian Famine of 1889-92. Records and reports on smallpox outbreak since the 1890's are not so far easily available; but British reports indicate that the disease contributed to a high death rate in most parts of the country in 1899-1900.[2] In the second decade of this century, the Italian physican, Dr. Brielli reported that the Dessie area was frequently attacked in 1913.[3]

Cholera is more associated with famine and its outbreak is high in military camps and other centres of population concentration where inadequate hygiene and sanitation prevail. In 1834 Kirk noted that the cholera epidemic outbreak appeared first on the Wello frontiers and spread southwards and was marked by vomiting, purging and spasma, with death usually resulting in 24 hours.[4] The epidemics of 1836-37 which was accompanied by famine resulted in a high death rate. Krapf as quoted by Pankhurst, indicated that this outbreak had "considerably thinned" the population of Wello and Lasta.[5]

The next outbreak which first appeared in October 1865 at Massawa spread to most parts of the country. According to Munzinger the outbreak of 1865-66 made 'dreadful ravages' among the Danakils.[6] This outbreak had also devastated Tewodros's camp in 1866.

During the famine of 1889-92 the cholera outbreak assumed to be imported from Mecca by returning pilgrims was intensified by the famine conditions. This outbreak referred to as 'Ya Nefas Beshta' (Disease of the Wind) caused a high mortality everywhere. The next recorded outbreak appears to be only in Wello in 1906.

Another fatal epidemic is typhus. No detailed records are available but reports indicate that in 1866 there was an outbreak in Tewodros' camp. Probably, it is this outbreak that Gebre Selassie, Menelik's chronicler refers to:

> "During that period a disease called "Fengil" (Drop Dead) followed your trails and killed your troops. Also in the countryside many people were deprived of their lives. A mourner said: your war drum (Negarit) was branded with death; the departed never returned and the existing don't wait for you". (Translation ours).[7]

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1) Ibid., P.624
2) Ibid., P.625
3) Loc. cit.
4) Loc. cit.
5) Loc cit.
6) Loc. cit.
7) Gebre Selassie, Tarika Zaman za Dagmawi Minilik (History of the Reign of Minilik II), Addis Ababa, 1959 E.C. P.51.

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Ibid., p. 204.
Ibid., p. 190.
Loc. cit.
Loc. cit.
Loc. cit.
Loc. cit.

In 1889-91 it succumbed the already hunger-weakened population in most parts of the country.

Cattle plague occasionally break out killing most, if not all, livestock. Thus depriving the peasant from his means of production - the plough oxen. The regular outbreak of cattle plagues has made the restocking of the livestock for the wretched peasant a difficult task. Two major outbreaks which affected Wello were the plagues of 1879 and 1888-92. The famine of 1880-1881 was presumably caused by the serious outbreak of cattle plague which had spread from the Adal country in 1879 and had destroyed completely the cattle in some areas.[1] The second outbreak which accounted for an immense livestock mortality (Caprici estimated that 90% of the cattle perished, while Skinner believed that not more than 7% or 8% were spared)[2] started in the north and moved southwards. According to Alaqua Lamma in his recollection of the conditions stated that:

> "Within three days all the cattle in the province were paralysed, refused to graze and died. The epidemic then spread to Tigre, and during the rains of that year (i.e. between July and September) swept across all the northern provinces, travelling by way of Tigre, Begemder and Lasta to Gojam...".[3]

A decade later, another British observer, A.B. Wylde narrates the information he got from the chief of Koa in Lasta - "In less than ten days he had lost 56 out of his 57 plough oxen and all his cows, the only survivors being two or three heifers and some calves".[4]

Similar outbreaks may have been experienced since then. However, it has been reported that in the first decade of this century (1905-1906) cattle disease was endemic in most parts of the country.[5]

4) Famine

The absence of a precise documentation on the time, magnitude and intensity of past famines had forced us to present only the highlights of famine experience. However, we have attempted to deal, as far as possible, to present the factors that will affect food production directly or indirectly. The objective

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1) Richard Pankhurst, "Some Factors Depressing the Standard of Living of Peasants in Traditional Ethiopia," Journal of Ethiopian Studies, Vol. IV, No.2, Addis Ababa, July 1966, P.49.
2) Ibid., P.51
3) Ibid., P.50
4) Ibid., P.51
5) Ibid., P.60.

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Cattle plague occasionally broke out killing most, if not all, livestock. Thus depriving the peasant from his means of production - the plough oxen. The regular outbreak of cattle plagues has made the restocking of the livestock for the wretched peasant a difficult task. Two major outbreaks which affected Wello were the plagues of 1879 and 1888-92. The famine of 1888-92 was primarily caused by the serious outbreak of cattle plague which had spread from the Adal country in 1879 and had destroyed completely the cattle in some areas.[1] The second outbreak which accounted for an immense livestock mortality (Darnell estimated that 30% of the cattle perished, while Skinner believed that not more than 7% or 8% were spared)[2] started in the north and moved southwards. According to Alaqua Ageren in his recollection of the conditions stated that:

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A decade later, another British observer, A.B. Wylde narrator the information he got from the chief of Kon in Lasta - "In less than ten days he had lost 80 out of his 87 plough oxen and all his cows, the only survivors being two or three heifers and some calves".[4]

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1) Famine

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[illegible] Pankhurst, "Some Factors Depressing the Standard of Living of Peasants in Traditional Ethiopia," Journal of Ethiopian Studies, Vol. IV, No.2, Addis Ababa, July 1966, P.49.

[illegible], P.51

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is to facilitate an easy inference for the presentation of famine producing factors, It is assumed that areas where military activities have been carried out, natural disasters occurred, epidemics broke out or devastated by locusts or pests have in most cases experienced famine of various degrees depending on the state of preparedness and the intensity of the disaster causing factors. In this part we shall try to present briefly the history of famine in Wello briefly under three different periods: pre-1900, 1900 to 1950, and 1950 to the present.

a) Pre-1900

According to Pankhurst, 26 major famines have been recorded for the period 1540-1300. From 1800-1900 more experiences may be cited of which the Great Famine of 1889-92 stands distinctly above the others. One may correctly assume that Wello had experienced wholly or partly most of the famines cited. We shall briefly cite some of the famine experiences during the last century, in particular, the last two decades of the century.

One of the earliest 19th century climatic failure was in 1835 which was followed by devastating famine in 1836-37. Wello region, particularly Lasta, had suffered significantly because the famine had been accompanied with an outbreak of cholera. Again there was a famine in 1880-81 which was preceeded by the outbreak of cattle plague in 1879 in the Adal (Afar) area.

The next major famine which ravaged the country including Wello was the Great Famine of 1888-1892, known as the 'Kifu Ken (The Evil Day). This famine took place in alliance with drought, outbreak of cattle plague and epidemics. The danger to follow this famine had been clearly stated by Antonelli:

> "In so improvident a country, where the harvest is consumed even before the new season arrives, it is easy to foretell the horrible consequences to which Ethiopia will be condemned when through lack of animals the fields cannot for several reasons be sufficiently worked," 1)

Michael Aragawi, a Protestant Missionary, as quoted by Pankhurst, describes the terrible conditions that prevailed in the region:

> "Famine has spread over the whole of middle and western Abyssinia, and everyone thinks only how to save his life. The misery is indescribable. Food prices have risen to unheard of heights...". 2)

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1) Pankhurst, Ibid., P,58
2) Ibid., P,56

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last two decades of the century.

Besides the loss of most of the plough oxen, the situation was worsened by the climatic fluctuations. The year 1888-1889 appears to have been excessively hot and dry, moreover, in 1890 dry weather seems to have been prevailing throughout the country.[1] Some five or six years later, A.B. Wylde as quoted by C.A. Wood and R. Lovett, notes that there was a failure of winter and spring rains causing the death of many people.[2]

b) 1900 - 1950[3]

Absence of information on famine experiences during this period also doesn't facilitate a thorough discussion on the topic. Just like the preceeding period, periods of famine should be inferred from the general political and economic situations of the period. RRC notes, without indicating the specific regions, that there were famines in the country in 1909 - 1912, 1922, 1927 (on the eve of the Italian occupation) 1937, 1940-43, 1950 and 1956 (all dated in the Ethiopian calendar)[4] One may assume that at least some parts of the region may have experienced these famines.

The early part of this period must have been a challenging one due to the impact from the Great Famine and the Battle of Adwa 1895-6 (G.C.). Period of recovery was extended by the locust ravages and cattle plagues. In 1905-06 (G.C.) cattle pest was endemic in most parts of the country. The northern provinces (including Wello) were ravaged by locust. According to Crouzet, prices soared up and "in many places one could again see crowds of starving people and walking skeletons".[5] Wood and Lovett remark that there was a severe drought in 1913-14 (G.C.)over much of the Sahel, including Ethiopia.[6] Again, the locusts triggered another severe famine in 1928 (G.C.) and 1929 (G.C.).[7] The situation during the Italian occupation may be assumed to be one of chronic food shortage and probably of famine in some cases.

Ibid., P.52

C.A. Wood and R.Lovett, "Solar Cycle Influence on Ethiopian Rainfall and Droughts", Geophysical Observatory, the University - an expanded version of a paper originally published in Nature, 251, 594-6 (1974)

Unless specified otherwise, all the dates are in Ethiopian Calendar in this section of the paper. The Ethiopian Calendar is about 7 years and 8 months behind the Gregorian Calendar (G.C.). To change the Ethiopian Calendar to the Gregorian Calendar add 7 years to the Gregorian Calendar for the period extending from Meskerem to Tahsas 22/23, and add 8 years for the period from Tahsas 22/23 to Pagume 5/6.

Relief and Rehabilitation Commission, "Progress Report", Addis Ababa, Yekatit 1969.

Pankhurst, Ibid., P.60

Wood and Lovett, Ibid., P.227

Pankhurst, Ibid., P.60.

Besides the Lunar chronology, the situation was worsened by climatic fluctuations. Winter 1880-1889 appears to have been exceptionally hot and dry, moreover, in 1890 dry weather seems to have been prevailing throughout the country.[1] Twenty-five or six years later, B. Wylde as quoted by C.A. Wood and M. Lovett, notes that there was a failure of water and spring rains, causing the death of many people.[2]

1900 - 1950

Absence of information on tamaexpeditores during this period also made it impossible to trace the discussion on the Triple. Possible the preceding period, peculiar of famine and of interred drought economical political and economical peculiarities of the port. RC notes, without indicating the specific reasons, whether wars in the country in 1900 - 1913, 1914-1927 (on the Italian occupation) 1935, 1936-1950 (all dated in the Ethiopian calendar) [illegible] that at least some parts of the region [illegible] these famines.

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[illegible] and R. Lovett, "Solar Cycle [illegible] Ethiopian Medical Journals", [illegible] Observatory [illegible] - an unpublished [illegible] of a description [illegible] Addis Ababa, 1951, 50[illegible] 1956). [illegible] specified otherwise, all the dates are in the Ethiopian Calendar is about years [illegible] the Ethiopian Calendar (0.C.). To change [illegible] months between the Ethiopian Calendar and Y years to the [illegible] Ethiopian Calendar to the Ethiopian Calendar add 7 years to Tahsas [illegible] Ethiopian Calendar, [illegible] period extending from Hedar 23, 23 to Tahsas [illegible], and add 8 years for the period from Tahsas 24, 23 to Tahsas [illegible] of and Rehabilitation Commission, "Provinces Report",

c) 1950 - 1970

The period from 1950-1970 is characterized by chronic food shortages and famine in Wello. It is in this period that Wello experienced one of the worst famines in its history, probably exceeding or equal to the Great Ethiopian Famine of 1889-92 (G.C.). However, it should not be forgotten that the whole region or parts of it have never been out of a famine situation. The 1964-65 famine was just a cumulative result of the situation. This may be easily noticed from the following brief outline of famine experience.

i) The Unpublicized and Undocumented Famine of 1951

Unlike the famine of 1950-51 in Tigrai, the experience of Wello during this famine is not documented. From the experience of Tigrai, 1949 and 1950 had been a dry year. In most cases the famine of 1950-51 in Tigrai had been duplicated in Wello. This is most probably why Richard Greenfield remarked that "at least 100,000 people died in Tigre and Wello in 1958-59 (G.C.)".[1] Moreover, the Inquiry Commission set up to investigate into the Wello Famine, political corruption and economic mismanagement hints that ".... drought hit certain areas (particularly Wello) as early as 1951,..."[2]

ii) Another Round of Drought - Famine of 1957-58

There was an absence and shortage of rain during 1957. The failure of the 'Belg' and 'Meher' rains in the region triggered off a famine. From the 12 awrajas in the Administrative Region with the exception of four awrajas - Were Ilu, Wadla Delanta, Borena and Awsa - all were victimized. The worst affected were Wag and Lasta with at least 50,000 dead.[3]

Lasta Awraja was one of the two worst affected areas and the first report came from Bugna Mekitil Woreda. The report indicated the intensity of the famine, that people have been forced to eat "Wushshi" (tree root). Further reports indicate that 400,000 people are starving and need immediate relief supply.[4] The governor was ordered to collect the supply from the capital of the province but didn't do as instructed and consequently the grain allocated was destroyed in the store.[5]

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1) Richard Greenfield, Ibid., P.321
2) "Details on Drought Made Public," Ethiopian Herald, August 28, 1974
3) "The Inquiry Commission Made Public Its Findings on the Wello Drought and Its Effects", Addis Zemen, Nehassie 21, 1966 (E.C.)
4) Inquiry Commission, "The Drought in Wello and the Famine that Followed", Tikimt 1968, P.4. This is a 139 pages report in Amharic of the findings of the Inquiry Commission formed sometime in February 1974 (G.C.) to investigate into the causes and effect of the famine and other problems with the emphasis on the Wello Famine.
5) Loc. cit.

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d) 1950 - 1970

In the other affected awraja, Wag, at the beginning of 1958, 100 qt. of relief grain was distributed.[1] Seeds were delivered but were late for the agricultural season. In mid-1958 situations were worse and people were dying in three Kebeles in Sekota Woreda.[2]

In most of the other affected awrajas reports of the drought and famine were forwarded starting around the end of 1957. In most cases the request made was not properly met and also the delivery delayed. There are no exact reports on the affected population, the area affected, the number of recipients, distribution centres, etc... In Ambasel Awraja the first report appeared in Sene 1957 from Kete Meketil Woreda from where later reports indicated many people were dying.[3] As a solution to the food shortage, grain to be sold at a reduced price was delivered. However, people were not willing to buy the grain because they did not have the purchasing power. Since the peasants in Were Himano could not afford to buy the grain at a reduced price, 1500 quintals (1 quintal - qt. is equivalent to a deciton or 100 kgs.) of U.S. relief grain was allocated for free distribution.[4]

In Kalu Awraja 7,500 qt. of relief grain was requested for 30,000 people and additional grain for sale at reduced price.[5] Similarly, the failure of the 'Belg' and 'Meher' rain in Dessie Zuria Awraja had led to the starvation of people and deaths of cattle. 11,036 qt. of relief grain was requested for 75,128 people.[6] In Tikimt 1958, 6,000 qt. was despatched for free distribution.[7] In Yeju Awraja the impact had been similar to the other awrajas. The only difference was that the worst affected part of the awraja was the lowland inhabited by the Adals (Afars). The relief delivered to the awraja was distributed to the highlanders who felt the inflation of grain prices but not to the real victims - the Afars in the lowlands.

In 1958 in Rayana Kobo the first report of the famine came from Alamata Woreda. After a lot of correspondence exchange 180 qt. of grain from the stock allocated for Wag and Lasta at Kobo was distributed.[8] In addition, in 1959 Megabit, 484 sacks of wheat and 382 sacks of sorghum was allocated from the same stock to the Adal (Afar) people in the awraja.[9]

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1) Ibid., P.5
2) Loc. cit.
3) Ibid., P.3
4) Ibid., P.5
5) Ibid., P.6
6) Ibid., P.7
7) Loc. cit.
8) Ibid., P.4
9) Ibid., P.5.

In the other affected awrajas. Aug. at the beginning of 1958, 100 qt. of relief grain was distributed.[1] Seeds were delivered but were late for the agricultural season. In mid-1958 situations were worse and people were dying in three Kebeles in Selale Awraja.[2]

In most of the other affected awrajas reports of the drought and famine were forwarded starting around the end of 1957. In most cases the request made was not properly met and also the delivery delayed. There are no exact reports on the affected population, the area affected, the number of recipients, distribution centres, etc... In Ambasel Awraja the first report appeared in June 1957 from Keta Meloti Worada from where later reports indicated many people were dying.[3] As a solution to the food shortage, grain to be sold at a reduced price was delivered. However, people were not willing to buy the grain because they did not have the purchasing power. Since the peasants in Were Mimano could not afford to buy the grain at a reduced price, 1800 quintals (1 quintal = qt. is equivalent to a decition or 100 kgs.) of U.S. relief grain was allocated for free distribution.[4]

In Kelo Awraja 7,800 qt. of relief grain was requested for 30,000 people and additional grain for sale at reduced price.[5] Similarly, the failure of the 'Belg' and 'Meher' rain in Dessie Zuria Awraja had led to the starvation of people and deaths of cattle. 13,038 qt. of relief grain was requested for 75,120 people.[6] In Tikikt 1958, 6,000 qt. was dispatched for free distribution.[7] In Yeju Awraja the impact had been similar to the other awrajas. The only difference was that the worst affected part of the awraja was the lowland inhabited by the Jidaja (Afars). The relief delivered to the awraja was distributed to the highlanders who felt the inflation of grain prices but not to the real victims - the Afars in the lowlands.

In 1958 in Dayane Kebe the first report of the famine came from Alaenta Worada. After a lot of correspondence 150 qt. of grain from the stock allocated for Wag and Lasta at Kobo was distributed.[8] In addition, in 1958 Degabit, 40% necks of wheat and 30% necks of sorghum was allocated from the same stock to the Adal (Afar) people in the awraja.[9]

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[1] Ibid., p.6
[2] Loc. cit.
[3] Ibid., p.3
[4] Ibid.

At the beginning of 1959, the Afar elders from Arbeta area (Ambasel Awraja) indicated the existence of famine and requested relief assistance. The problem continued until the end of the year by the time the same situation was also reported from the Dodota Kebele in the awraja.

iii) The Recent Major Fatal Famine 1963 - 1966

Most of the awrajas that experienced the fatal famine in 1965-66 began early in 1963, in some cases earlier. The weather summary for this region indicates that in 1963 'krent' Dessie, Ambassel and Kalu, in 1965 'krent' the whole of Wello province and in 1965 'krent' Awsa, Rayana Kobo and Eastern Yeju had a precipitation of below the normal of 20 years average.[1]

The survey of the food situation in this region in 1965 has also been summarized as follows: The harvest in Rayana Kobo, Yeju, lowland part of Ambassel, lowland part of Lasta has been completely destroyed and in the other awrajas with the exception of the Dega areas producing barley the harvest has been partially destroyed.[2]

When one considers the causes of the famine in the lowland part, in particular the nomadic Afars living along the Awash River, one must not myopically limit the reasons to inclemency of the climate but also the commercialization of the Valley. Bondestam in his brief discussion on the impact of commercialization of the Awash Valley states that:

> "With the introduction of cash-crop production, some of the Afar were forced to leave their river-watered pastures - where they had lived more or less permanently since the 16th and 17th centuries - to become increasingly dependent on the availability of rain. This has led to a relative over-population of the less fertile areas to which they had to move, with consequent over-grazing livestock starvation, followed by diminishing herds and malnutrition. It is the rainfall in the highlands, of course, which determines almost entirely the level of the river; so the Afar are lost if they are denied access to this lifeline when there is a drought in the lowlands)".[3]

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1) Planning and Programming Department, Ministry of Agriculture, "Report of the Crop Condition Survey for the 1966 E.C. Main Harvest," Sene 1966 E.C. PP.XXXVI-XXXVII.
2) Inquiry Commission, Ibid, P.37
3) Bondestam, Ibid., PP.428-429.

In 1963 in most of the awrajas failure of the main rain was reported, particularly in Rayana Kobo, Awsa, Ambasel and Lasta. Relief requests were made as early as late 1963. However, the delivery of requested relief was delayed by a year or more. The situation in Awsa and Rayana Kobo had been worsening from day to day. Migration of people, social break-ups and outbreak of epidemics were reported in 1964 and 1965.

In 1964-1965 the famine had spread to Were Himano, Dessie Zuria, Yeju, Wag, Wadla Delanta, Kalu and Borena awrajas. Since going into the details would be unnecessary, we shall present only the highlights of the famine.

The first report of the population affected and the required relief appeared as early as Miazia 1965. The report dated 4/8/65 from the regional administrator states that in the whole region of Wello:

1) 738,285 people are affected and need 184,572 qts. of relief grain,
2) 178,584 qts. of seed for 595,280 hectares of land,
3) so far 110-120 people have died in each kebele,
4) medicine available is not enough for the 8,942 people affected by malaria and smallpox.[1] The next report of Miazia 8, 1965, puts the affected population at 365,000 people out of whom 36,500 were children and the relief requested was 75,000 qts. of grain.[2] This estimation was based on the findings of an Inter-Ministerial Committee that had been touring in the affected areas from Megabit 20, 1965 to Miazia 5, 1965. This committee estimated that in the 12 awrajas there were 2,950,000 people out of which 1,378,000 people were living in the low-lands. The affected population in the lowlands was 26.5%, that is, 365,200 people. The committee recommended that 75,000 qts. grain for 300,000 people at the rate of 25 kg/head (period not mentioned) and powdered milk and Fafa from the Ethiopian Nutrition Institute for 36,520 children, that is 10% of the total affected population, should be delivered immediately.[3] A report from the governor dated Nehassie 22, 1965, puts the total number of affected people at 712,001 on the basis of victims reporting in Dessie and other awrajas. The breakdown is as follows:

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1) Addis Zemen, Nehassie 21, 1966 E.C.
2) Loc. cit.
3) Inquiry Commission, Ibid., P.68.

Dessie Town (8,560), Rayana Kobo (212,506), Wag (19,201), Yeju (163,008), Awsa (54,000), Kalu (85,616), Ambasel (36,030), Dessie Zuria (23,000), Wadla Delanta (28,800), Were Himano (20,000), Borena (44,000), Lasta (18,000).[1] On the same date a further request of 42,600 qts. of grain to be distributed at 17 distribution centres was made.[2]

The records and reports of the relief distributed appear to be vague and poorly organized. An Inter-Ministerial Committee formed to assess food shortages in the country reported that from mid-Miazia to Pagume 1965, 44865 qts. of grain and 152,541 kgs. of rehabilitative foods were distributed.[3] The governor of Wello reported that the relief supplied from the period of relief inflow until Tikimt 16, 1966 was 58,462 qts. of grain for 513,144 people. Its breakdown on the basis of the sources of the supplies is: Governmental - 35,915 qts. for 310,110 people, Private Organizations - 22,547 qts. for 203,034 people.[4] The Relief and Rehabilitation Commission has stated that from November 1973 to June 1975 G.C., a total of 496,143.16 qts. of grain and 36,360 qts. of rehabilitative foods were distributed from March 1974 to first-half of November 1974. The breakdown of the grain distribution on the awraja level is: Ambasel 26,966.84 qts, Awsa 131,999.85 qts, Dessie Zuria 55,776.30 qts, Wag 17,348.37 qts, Kalu 111,669.39 qts, Yeju 66,893.21 qts, Rayana Kobo 60,489.50 qts and others 25,000.00 qts.[5]

Before national and international relief supplies began to flow into the affected areas, death and migration were the only available alternatives for the victims. The existence of a chronic food shortage and the extension of the drought over a long period had forced the people to migrate to other provinces in search of food.

The first wave of migrants that were noticed by officials at Addis Alem Woreda in Menagesha Awraja, Shewa, in Tir 1965 came from Were Himano, Borena and Wadla Delanta. Their exact figure is not known but officials at different times put the figure first at 104, then at 738 and later as reported by the police, it was around 2,000.[6]

Ibid., P.115
Ibid., P.116
Ibid., P.114
Ibid., P.117
Relief and Rehabilitation Commission, "May Starvation Cease" A report of 1½ years of the Commission's activities, Meskerem 2, 1968 (Sept. 13,1975) PP.14-17
Enquiry Commission, Ibid., P.41.

They were guarded and uncared for. 500 qt. of grain was allocated and 148 qt. was distributed at the rate of 10 kg/head for 739 of them. The rest, 352 qt. was planned to be distributed at their final destination.[1] Resettlement of 954 of these people was to be carried out in any one of the following five provinces - Sidamo, Wollega, Illubabor, Kefa or Gamo Gofa.[2] The second wave of migrants came to Sendafa in Yekatit 1965. Their situations were also similar to the first group.

The findings of a surveillance carried out in 1975 G.C. indicated that age-specific migration rates increased with age up to the age of 45 and then decreased.[3] The intensity of migration was highest in Awsa Awraja followed by Were Himano, Wadla Delanta and Rayana Kobo.[4] It can be noted that the peak periods of unusually high migration in the whole of Wello was between March and August 1974 G.C. The peak periods varied on regional basis: highland - June to August 1974 G.C., lowland (western part) - March to May 1974 G.C., and eastern lowlands - February to May 1974 G.C.[5]

The problem faced in the attempt to quantify the number of migrants has also been a challenge to estimate human mortality in the region. The mortality report varies from below 20,000 to above 100,000. The official government release indicated that until Sene 1965, human death was put at 17,668.[6] A study of shelter population in the region revealed that there was a significant difference in the age specific mortality and that children under 5 years and the aged people were easily exterminated.[7] Ethiopian Nutrition Institute attempted to quantify the mortality rate per age group for 1972-73 G.C.[8]

1)	children below 5 years of age	600/1000
2)	5 years - 14 years	143/1000
3)	15-44 years	97/1000
4)	above 45 years	300/1000

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1) Ibid., P.43
2) Ibid., P.44
3) Mario Maffi, "Wello, Two Years After the Crisis" (Results of February and July 1975 Surveillance), Consolidated Food and Nutrition Information System, Sept. 1975 P.20
4) Loc. cit.
5) Ibid., P.24
6) Inquiry Commission, Ibid., P.109
7) Mario Maffi, Ibid., P.9
8) Inquiry Commission, Ibid, P.109.

On the basis of a survey of 5 awrajas, (Ambasel, Kalu, Rayana Kobo, Yeju, Awsa) it has been estimated that at least 106,000 must have died on the assumption that the total population of the 5 awrajas is 504,000 and mortality rate is 181/1000 in 1965.[1] In the other awrajas it may be assumed that thousands may have died.[2] This figure is also similar to the estimation made by Dimbleby (BBC-TV) who put the figure to at least 100,000. On the other hand, the Provincial Health Officer estimated that 96,000 people died in 5 months in 16 shelters at the rate of 20 people per day.[3]

Regarding the loss of cattle, ENI indicates that 80% of the cattle had perished and about 15% have been sold out by the farmers which leaves about 5% of the original cattle population in the area.[4] The depletion of the livestock population is significantly felt because more than half of all families in the region do not possess cattle.[5] The findings of the 1975 G.C. survey of the region revealed that the livestock mortality rates for the period from September 1974 G.C. to February 1975 G.C. in the eastern lowlands was 20.7% for camels, 10.5% for goats and 8.7% for cattle.[6] The lowland awrajas of Wello - Awsa, Kalu, Ambasel, Yeju, and Rayana Kobo - have lost at least 50% of their livestock population.

After the hidden famine had been publicized all local and foreign efforts were made to stop the ravages of starvation. In 1973-74 at the climax of the famine, 13 roadside shelters which harboured some 65,000 people and 40 distribution centres were functioning.[7] In 1974 some 40 voluntary organizations were working simultaneously in Wello.[8] Since then rehabilitation projects such as: resettlement programmes, child care, cottage industries, rural road construction, water resource development, etc..., are being implemented by the concerned governmental authorities, agencies and other relief organizations.

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1) Ibid., P.110
2) Loc. cit.
3) Loc. cit.
4) Loc. cit.
5) Mario Maffi, Ibid., P.37
6) Loc. cit.
7) Relief and Rehabilitation Commission, "Efforts, Achievements and Needs," Addis Ababa, November 1976, P.2.
8) Mehari Gebre Medhin and Bo. Vahlquist, "Famine in Ethiopia - A Brief Review", The American Journal of Clinical Nutrition, 29 September 1976, P.1017.

v) The Latest Famine Experience of Western Wello

Since the last major famine of 1973/74 G.C., parts of the region have never been out of a famine situation due to the impact of the last famine and natural factors - unfavourable climatic conditions, pests, etc. The amount of relief grain delivered annually to Wello may be an additional indication besides the regular reports of the Food and Nutrition Surveillance Programme. The annual relief despatch to Wello in tons had been: 46,944 in 1973/74 G.C., 4,800 in 1975 G.C., 5,500 in 1976 G.C, 5,196 in 1977 G.C., and 13,609 in the first 5 months of 1978 G.C.[1)]

The disasterous situation in the western part of the region is attributed to crop failure starting in 1975/76 G.C. The four awrajas of Western Wello had poor harvest in 1975/76, 1976/77 and 1977/78 at least 75% of the main harvest was destroyed. The worsening situation of the food shortage in the region had been regularly reported in the publications of the Food and Nutrition Surveillance Programme, particularly, Food Supply System Reports, "Belg" Synoptic Report (May 1977), The Rains of October: A Special Report (November 1977), Preliminary Report on Wello Survey (January 1977) Food Shortages Survey Report on Wello - Lasta, Wadla Delanta and Were Himano Awrajas (May 1978). On the findings of the January 1978 survey by Disaster Area Assessment Unit, it was estimated that at least 600,000 people were affected. Relief operation started in June 1978 and 123,930 qts. of grain was allocated to be distributed in 14 distribution centres. Two months after the operation began the number of the affected population had gone up to 1.2 million. Since reports on this famine in Western Wello had been presented extensively in other papers, it is unnecessary to go into the details here.[2)]

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1) FAO/RRC, "Draft Proposal for Movement of Surplus Population from Famine Prone Areas", 1/6/78.

2) For further detailed information refer to the various publications of the Food and Nutrition Surveillance Programme, some of which are mentioned above in this paper; R.J. McKerrow "Report on Trip to Wello - 1-13 October 1978", League of Red Cross Societies, Addis Ababa, 24 October 1978; for the relief operation - Ashenafi Moges, "Wello Emergency Operation - 1978", Disaster Preparedness Planning Programme of the RRC (July 1978), and various reports of the Provisional Emergency Aid Co-ordinating Committee.