### **Wheat-to-Bread Processing Facilities Mapping**

### STUDY FOR NORTHWEST SYRIA APRIL 2022





### Introduction

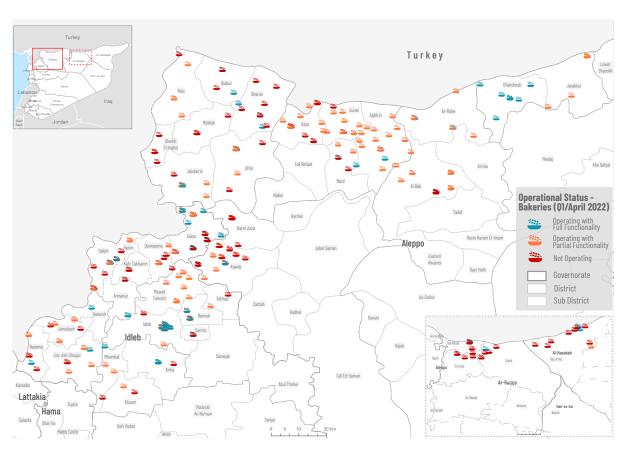
To keep the bread support programs in Northwest Syria (NWS) up-to-date, iMMAP, in collaboration with the BHA partners, Food Security and Livelihood (FSL) Cluster teams, IPs in the southern Turkey hub and the Bread and Bakery Technical Working Group (BBTWG), conducts a regular mapping and monitoring exercise for the public and private processing and production facilities in the wheat-flour to bread value chain in NWS. This exercise aims to:

- Assess the capacity and functionality of wheat-flour to bread processing facilities in NWS (including Afrin, Peace Spring area and Euphrates Shield area).
- · Assess accessibility, affordability, and prices of flour/bread in NWS.
- Identify existing gaps in bread production in NWS to meet the bread needs of the local population
- Identify the main production barriers and needed support to fill this gap.
- Map wheat-flour to bread value chain actors, plans and achievements in NWS

Provide a clear end-to-end view of the bread supply chain in NWS. The seventh round of the Wheat-flour to bread processing facilities mapping exercise in NWS was conducted in, March-April 2022. iMMAP's data collection partner and 17 BBTWG member partners conducted the data collection. Thirty-nine sub-districts were covered across 4 governorates: 18 sub-districts in Idleb governorate, 17 sub-districts in Aleppo governorate, 3 in Ar-Raqqa governorate, and 1 in Al-Hasakeh governorate. The data collection team was not able to reach Arima subdistrict in Aleppo governorate. The total number of assessed facilities was 443 wheat-flour to bread processing facilities that were mapped in NWS; 394 are bakeries, 38 are mills, and 11 are silos.

### **Key Findings**

The percentage of reported operating bakeries was 64% (n=254) of all assessed bakeries, where 83% were private bakeries, 14% were publicly owned bakeries, and 3% had joint ownership (public and private). Compared to the previous round in 04, 2021, the percent of operational bakeries decreased by 8%. The main reported reasons for closure were related to high competition, high operational cost, and no access to support. In Al-Hasakeh governorate, there were reported closure reasons attributed to displacement. Atareb and Al-Bab subdistricts recorded the highest number of non-operational bakeries (18 and 12 respectively) where 83% of these bakeries were privately owned. On the other hand, 61% of the mapped mills (n=23) reported that they were operational of which 74% are privately owned, and 3 out of 4 mapped silos reported that they were operational.



Map 1: Bakeries Operational Status in NWS, April 2022

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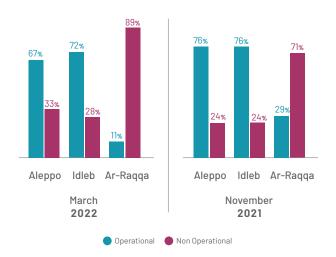


Figure 1: Operational Status

 Bread availability in NWS was still not meeting the local standard of minimum bread quantity needs and had decreased compared to 04 2021.

The individual daily portion of produced bread (all types of bread) in NWS was limited to 215.3g, representing only 65% of the local standard minimum daily needs of bread (330g) per individual. Compared to the last round of 04 2021, the individual daily portion of produced bread decreased by 2% which was 220g/induvial. The situation in Al-Hasakeh (Ras Al Ain subdistrict) and Idleb governorates were the worst across the assessed governorates in NWS where the individual daily portion of bread were limited to 52g, 169g respectively (16%, and 51% of the local minimum daily needs of bread per person), thwas was followed by Ar-Raqqa governorate with 190g (58% of the local minimum daily needs of bread per person), and Aleppo governorate recorded the highest individual daily portion of bread with 304g (92% of the local minimum daily needs of bread per person).

The reasons behind the low individual daily portion, can be attributed to high operational cost, lack of access to support, and need for machine maintenance as reported by bakeries that were not operating at 100% capacity. Or thwas can be related to the low number of bakeries at subdistrict level, that were not able to cover the demand of the population.

 Subsidized bread in NWS covered 31 percent of the individual's local standard of minimum bread quantity needs.

Although bread was reported to be relatively available in NWS, and the percent of individual daily portion of subsidized bread was higher than 04, 2021, the access and affordability of bread remained a challenge for vulnerable people in NWS. Only 48 percent of the total produced bread was subsidized, thwas means that individual daily portion of subsidized bread was limited to 103g (31% of the local minimum daily needs of bread per person). At governorate level, Al-Hasakeh (Ras Al Ain subdistrict) and Idleb governorates recorded the lowest access to subsidized bread where the individual daily portion of subsidized bread were 40g, and 48g respectively (12%, and 14.5% of the local minimum daily needs of bread per person), followed by Ar-Ragga governorate with 190g as the individual daily portion of subsidized bread (58% of the local minimum daily needs of bread per person). Aleppo governorate recorded the highest access to subsidized bread where the individual daily portion of subsidized bread was 197g (60% of the local minimum daily needs of bread per person). The high individual portion in Aleppo mainly came from the North Aleppo region where the individual daily portion of subsidized bread reached 309 g (94% of the local minimum daily needs).





 The quantity of produced bread in NWS slightly decreased by 1 percent in 01, 2022.

The quantity of total produced bread in NWS recorded a slight decrease of 1% which was equivalent to 55 MT/week, when compared to 04, 2021 (the calculation excludes Al-Hasakeh governorate which was not covered in the last round). The decrease in production was linked to the high operational cost, and continuous increase of flour and fuel. The total recorded production in 01, 2022 was 6,976 MT/week; with 3,419 MT/week in Aleppo, 3,373 MT/week in Idleb governorate 23, 161 MT/week in Ar-Raqqa governorate, and 23MT/week in Al-Hasakeh (Ras Al Ain subdistrict).

 Increase in free-bread distribution programs in NWS in Q1, 2022, after it had witnessed a significant decrease in Q4, 2021.

Compared to the previous round, Q4 2021, NGOs in NWS thwas round Q1, 2022 increased the quantity of free bread by 48% (from 441 MT/week to 651 MT/Week). Despite the increase compared to Q4, 2021, the quantity of free bread remained lower when compared to Q2 2021, where it had reached 838 MT/week. Moreover, the production of free bread was absent in Al-Raqqah governorate and Al-Hasakeh (Ras Al Ain subdistrict).

### **Wheat-to-Bread Processing Facilities Mapping**

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#### Overall alarming increase in bread and flour prices in NWS in Q1, 2022.

The average reported selling price of 1 kg of subsidized bread in NWS in Q1, 2022 increased by 43% and reached 2.86 TRY/kg whereas it was 2 TRY/kg in the previous round, Q4, 2021. The average reported selling price of 1 kg of unsubsidized bread in NWS was 8.3 TRY/kg which increased by 60% compared to Q4 2021 (5 TRY/kg). Locally milled flour and imported flour prices continued to increase in NWS between Q1,2022 and Q4 2021. Locally milled flour prices increased from 376 USD/MT in Q4 2021 to 455 USD/MT in Q1 2022 and imported flour price increased from 421 USD/MT in Q4 2021 to 505 USD/MT in 01 2022.

#### The availability of local wheat grain and locally milled flour remained a huge challenge in NWS.

Many bakeries (n=174) reported limited availability of locally milled flour, representing 68.5% of the assessed bakeries. Overall, in NWS, the main reported reason behind the limited availability of local flour throughout the year was the climate induced aridity-induced shock on wheat output production. The low levels of rainfall and water scarcity in North Syria negatively affected wheat production, and in turn, thwas led to a negative supply shock of wheat grain and flour to the bread production bakeries.

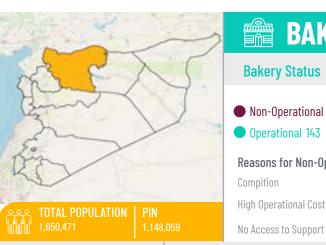
#### · Mills' capacity remained not fully utilized.

The maximum reported weekly wheat grain to flour milling capacity of all operated mills in NWS was 4,728 MT in Q1, 2022, whereas the actual reported weekly milling capacity of all operated mills in NWS was 3,548.5 MT. On average, the mills' functionality stood at 75% across the assessed operational mills across the NWS region. The actual milling capacity covered 81% of the flour quantity used by local bakeries, however only 9% of flour used by assessed bakeries in NWS was locally produced. Thwas finding can be linked to the availability finding in the previous paragraph where majority of bakeries reported low availability of locally milled flour, leaving bakery owners with limited flour choices.

Aleppo April 2022







#### **BAKERIES** 214



**Bread Production** 

Daily Production (MT)

Subsidized Bread

Tourist Bread

Unsubsidized Bread

USD 4%

TL 88%

**OUALITY CONTROL** (LAB TESTING)

34

### **Bakery Status**

Non-Operational 71

Reasons for Non-Operation

Operational 143

Compition

### Functionality

Partial

### 28 (20%) Full 115 (80%)

### **Ownership**

n <b>©</b> n	Dutinaka	107 (000/ )
	Public	19 (9%)



#### Free Bread (NGO) 34 Others 738g Average Subsidized Bread Package Weight Average Unsubsidized Bread Package Weight 622g

108

S Price (TL) /KG Daily Production 488 MT 1-9 6-10 7-18

Full Daily Capacity1,425 MT

of Total Population

Daily Bread Needs

of PiN Population

Current Productivity

Daily Bread Needs 545 MT

**Subsidized Bread** Availability to PiN

83%

### **Bakery Management**

Bakery Owner 113 (79%) 14 (10%) Private Investor 5(3%) **Employee** 7(5%) Joint LC 1(1%) Committee 2(1%) AFAD 1(1%) Other 0(0%)

### **Availability**

**Bread** 

Yeast



**Fuel** 



Fairly Available







### **Support Status**

Never Received Support 13 (9%) Used to Receive Support 16 (11%) **Currently Receive Support** 114 (80%) LC NGO AFAD 5% Rehabilitation Operational 5% Support 79% Flour 30 65 Yeast 11%

### Source and Price of Flour

Local Flour Imported Flour 450-570 \$/MT 285-585 \$/MT 84% 15% 16% Trader 47% Mill 0% LC NGO AFAD



### Mills Status

Operational 6



### Reasons for Non-Operation

Wheat Shortage

High Operational Cost

### Functionality

2 (33%) Full Partial 4(67%)

#### **Ownership** Public 7 (54%) 6 (46%) Mix 0(0%)

### Reasons for Limited

Wheat Shortage and High Operational Cost

**Functionality** 

High Operational Cost

N/A

### Milling Capacity

Maximum Capacity 2,545 MT Current Capacity 2,080 MT

of Support

MILLS SOURCE OF WHEAT

Production Functionality



82%

Farmers, NGOs

Traders, LC

### Market Actors Supplied by Mills

Bakeries Supplied Traders Supplied 16

### **Silos Status**

Non-Operational Operational

SILOS



**Ownership** 

0 (0%)

### **Functionality**

1(50%) 🚔 Public 4(100%) Full

1(50%) **Private** 

Wheat and Fuel Shortage, Reasons for Non-Need for Building Operation Rehabilitation

### **Needed Support for Silos**

Building Rehabilitation Machine Rehabilitation

SILOS SOURCE OF WHEAT

**Estimated Cost of Machines** and Rehabilitation

Silos Capacity



Silos Maximum Storage Capacity

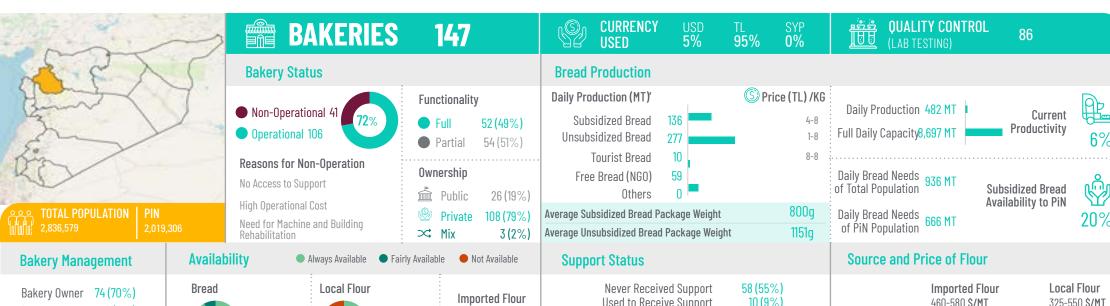
25,000 MT

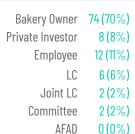
\$10,000

Idleb April 2022

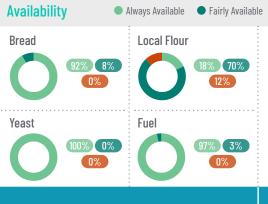






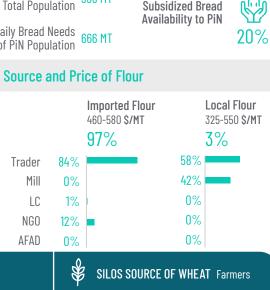


Other





		oupport otatus					
orted Flour			ceived Sup eceive Sup eceive Sup	port	58 (9 10 38 (3		
					NGO	LC	AFAD
	Type of Support	Rehabilitation 2%	pport	0	0	2	
5%		Rehabilitation 2% Operational Support 5% Flour 55%		of Sul	2	0	2
0%		ype	Flour	55%	on in	36	3
		Yeast	38%	S	29	0	3
MILLS SOURC	E OF	WHEAT Farmer	s, Traders		SIL	_0	3





2(2%)





### Reasons for Non-Operation

Wheat and Fuel Shortage

High Operational Cost



Mix

2 (40%)

2 (15%)

11 (85%)

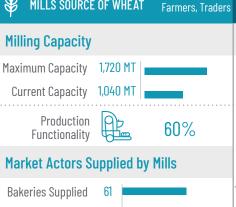
0(0%)

### Reasons for Limited **Functionality**

Wheat Shortage

High Operational Cost

N/A



Traders Supplied 35

### **Silos Status**



#### **Functionality Ownership** 0 (0%) 🚔 Public

Full 1(100%) Partial 1(100%) Private

Reasons for Non-  $N/\Delta$ Operation

### **Needed Support for Silos**

**Building Rehabilitation** Machine Rehabilitation

**Estimated Cost of Machines** and Rehabilitation

### Silos Capacity



Storage Capacity 110,000 MT

\$120,000

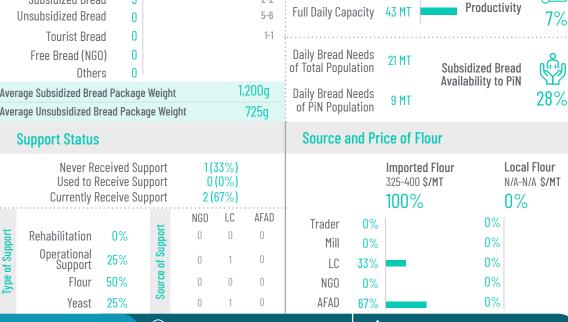
Al-Hasakeh April 2022





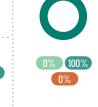
Current











Imported Flour







SILOS SOURCE OF WHEAT N/A

**Needed Support for Silos** 

Building Rehabilitation

Machine Rehabilitation

and Rehabilitation

**Estimated Cost of Machines** 

### Mills Status

Non-Operational 6 Operational 7



### Reasons for Non-Operation

Wheat and Fuel Shortage

Need for Machine Rehabilitation



**Ownership** 

Public

### Functionality 1(14%)

6 (86%)

Wheat and Fuel Shortage

Water Shortage

1(8%) 12 (92%) High Operational Cost 0(0%)

### Reasons for Limited **Functionality**

Production Functionality

**Current Capacity** 

Milling Capacity Maximum Capacity



64.5 MT

### 66%

### Market Actors Supplied by Mills

**Bakeries Supplied Traders Supplied** 

### **Silos Status**

Non-Operational Operational

### **Functionality**

Ownership 0(0%) m Public Full



Operation

0 (0%) 🚱 Private

Rehabilitation

# Reasons for Non- Need for Building

6 (86%)

Silos Capacity

Silos Maximum Storage Capacity

0 MT

\$0

Ar-Ragga April 2022









Mills Status



Reasons for Non-Operation
N/A

Reasons for Non-Operation	Ownership							
N/A		Public	1(14%)					
N/A	9	Private	6 (86%)					
	<b>X</b>	Mix	0(0%)					

Functionality

Partial

Full

2 (40%)

3 (60%)

### Reasons for Limited **Functionality**

Wheat and Fuel Shortage

High Operational Cost

Need for Building Rehabilitation

Milling Capacity		
Maximum Capacity	366 MT	
Current Capacity	364 MT	
Production Functionality		99%
Market Actors Su	upplied b	y Mills
Bakeries Supplied	2	
Traders Supplied	0	

#### Non-Operational 0% O Operational **Functionality Ownership** 0(0%) 🚔 Public ■ Full 0(0%) 0 (0%) **Private** Partial 0 (0%) Reasons for Non- $N/\Delta$

Silos Status

Operation

**Needed Support for Silos** Building Rehabilitation Machine Rehabilitation **Estimated Cost of Machines** \$0 and Rehabilitation Silos Capacity Silos Maximum 0 MT

Storage Capacity

# **Annex Table 1: NWS Bread Needs and Production Gap Analysis**





Sub-District	Total population	PiN	Weekly bread needs of population in MT	Weekly bread needs of PiN in MT	Weekly subsidized bread in MT	Weekly unsubsidized bread in MT	Weekly unsubsidized tourist bread in MT	Weekly NGO-free bread in MT	Weekly other types of bread in MT	Total weekly bread production in MT	Bread availability to the population - % of population bread needs covered by total production	Subsidized bread availability to the population - % of population bread needs covered by subsidized & free bread	availability to PIN -	Bread production gap in MT per week	gap in MT	Subsidized & free bread production gap in MT per week for PiN	Number of operating bakeries	Number of supported bakeries		%Unsupported bakeries	Weekly full bread production capacity in MT	productivity
Afrin	194,055	99,938	448	231	6	176	22	15	24	243	54%	5%	9%	205	427	210	1	17	16	94%	634	38%
Bulbul	35,613	19,389	82	45	56	0	8	0	0	64	78%	69%	126%	18	26	-12	2	4	2	50%	98	65%
Jandairis	94,530	34,956	218	81	17	156	2	60	0	235	108%	35%	95%	-17	142	4	2	10	8	80%	413	57%
Mabtali	27,799	12,413	64	29	11	0	7	0	0	18	28%	17%	38%	46	53	18	1	4	3	75%	42	43%
Raju	49,351	39,235	114	91	8	45	8	0	0	60	53%	7%	8%	54	106	83	1	6	5	83%	189	32%
Sharan	52,568	30,881	121	71	68	11	0	0	0	79	65%	56%	96%	42	53	3	3	10	7	70%	182	43%
Sheikh El-Hadid	12,366	4,946	29	11	26	6	0	0	0	32	112%	90%	224%	-3	3	-14	1	5	4	80%	63	51%
Al Bab	190,541	147,952	440	342	619	21	0	27	0	667	152%	147%	189%	-227	-206	-305	18	30	12	40%	1,141	58%
Ar-Raee	23,640	9,718	55	22	96	0	0	0	110	206	376%	175%	425%	-151	-41	-73	7	7	0	0%	441	47%
Aghtrin	96,129	66,244	222	153	245	23	0	0	0	269	121%	110%	160%	-47	-23	-92	14	15	1	7%	1,274	21%
Azaz	301,296	286,522	696	662	296	69	0	81	32	478	69%	54%	57%	218	319	285	22	31	9	29%	1,870	26%
Mare	69,781	46,144	161	107	47	7	0	0	0	55	34%	29%	44%	107	114	59	4	6	2	33%	399	14%
Suran - Aleppo	95,980	35,550	222	82	175	25	0	0	0	200	90%	79%	213%	22	47	-93	10	12	2	17%	980	20%
Ghandorah	30,387	11,879	70	27	184	15	0	0	0	199	284%	262%	669%	-129	-114	-156	10	10	0	0%	497	40%
Jarablus	82,055	48,618	190	112	263	10	0	5	0	278	147%	141%	238%	-88	-78	-155	11	11	0	0%	931	30%
Atareb	183,679	157,886	424	365	19	141	0	52	0	212	50%	17%	19%	212	353	294	3	26	23	88%	539	39%
Daret Azza	67,942	53,026	157	122	78	46	0	0	0	124	79%	50%	64%	33	79	45	4	10	6	60%	280	44%
Ras Al Ain	63,161	27,370	146	63	18	2	3	0	0	23	16%	12%	28%	123	128	45	2	15	13	87%	301	8%
Ein Issa	37,723	19,197	87	44	0	0	0	0	0	0	0%	0%	0%	87	87	44	0	4	4	100%	-	NA
Suluk	38,342	5,964	89	14	49	0	0	0	0	49	55%	55%	356%	40	40	-35	1	8	7	88%	98	50%
Tell Abiad	44,829	19,924	104	46	112	0	0	0	0	112	108%	108%	243%	-8	-8	-66	1	6	5	83%	168	67%
Ariha	104,664	64,317	242	149	164	25	0	0	0	189	78%	68%	110%	53	78	-15	5	6	1	17%	365	52%
Ehsem	32,102	9,630	74	22	0	21	0	0	0	21	28%	0%	0%	53	74	22	0	2	2	100%	77	27%
Mhambal	43,308	26,693	100	62	57	59	0	0	0	117	116%	57%	93%	-16	43	5	2	4	2	50%	203	57%
Armanaz	76,839	44,878	177	104	61	26	0	0	0	87	49%	34%	59%	90	116	43	3	4	1	25%	224	39%
Dana	1,126,535	999,777	2602	2309	166	810	0	268	0	1244	48%	17%	19%	1358	2168	1876	6	47	41	87%	2,557	49%
Harim	71,424	29,675	165	69	0	98	0	0	0	98	59%	0%	0%	67	165	69	0	5	5	100%	392	25%
Kafr Takharim	35,751	27,160	83	63	45	10	0	0	0	55	67%	54%	72%	28	38	18	1	3	2	67%	175	31%
Qourqeena	103,628	44,994	239	104	41	3	0	0	0	44	18%	17%	39%	196	199	63	2	6	4	67%	119	37%
Salgin	222,267	181,522	513	419	50	129	0	0	0	179	35%	10%	12%	334	463	369	0	14	14	100%	434	41%
Bennsh	52,701	25,569	122	59	0	67	35	0	0	102	83%	0%	0%	20	122	59	1	6	5	83%	168	60%
ldleb	295,287	166,851	682	385	0	337	16	39	0	392	57%	6%	10%	290	643	346	0	12	12	100%	1,547	25%
Maaret Tamsrin	330,657	268,481	764	620	205	116	0	38	0	359	47%	32%	39%	405	521	377	7	11	4	36%	1,061	34%
Sarmin	15,665	6,478	36	15	0	8	18	0	0	26	72%	0%	0%	10	36	15	0	4	4	100%	70	37%
Teftnaz	23,334	14,804	54	34	0	25	0	0	0	25	46%	0%	0%	29	54	34	0	2	2	100%	63	40%
Badama	53,872	29,041	124	67	0	22	0	45	0	67	54%	36%	67%	57	79	22	2	6	4	67%	52,682	0%
Darkosh	87,166	25,032	201	58	49	86	0	0	0	135	67%	24%	85%	66	152	9	2	3	1	33%	193	70%
Janudiyeh	57,789	26,318	133	61	29	5	0	21	0	55	41%	38%	83%	78	83	11	3	5	2	40%	168	33%
Jisr-Ash-Shugur	103,591	28,085	239	65	84	95	0	0	0	179	75%	35%	130%	60	155	-20	4	7	3	43%	378	47%