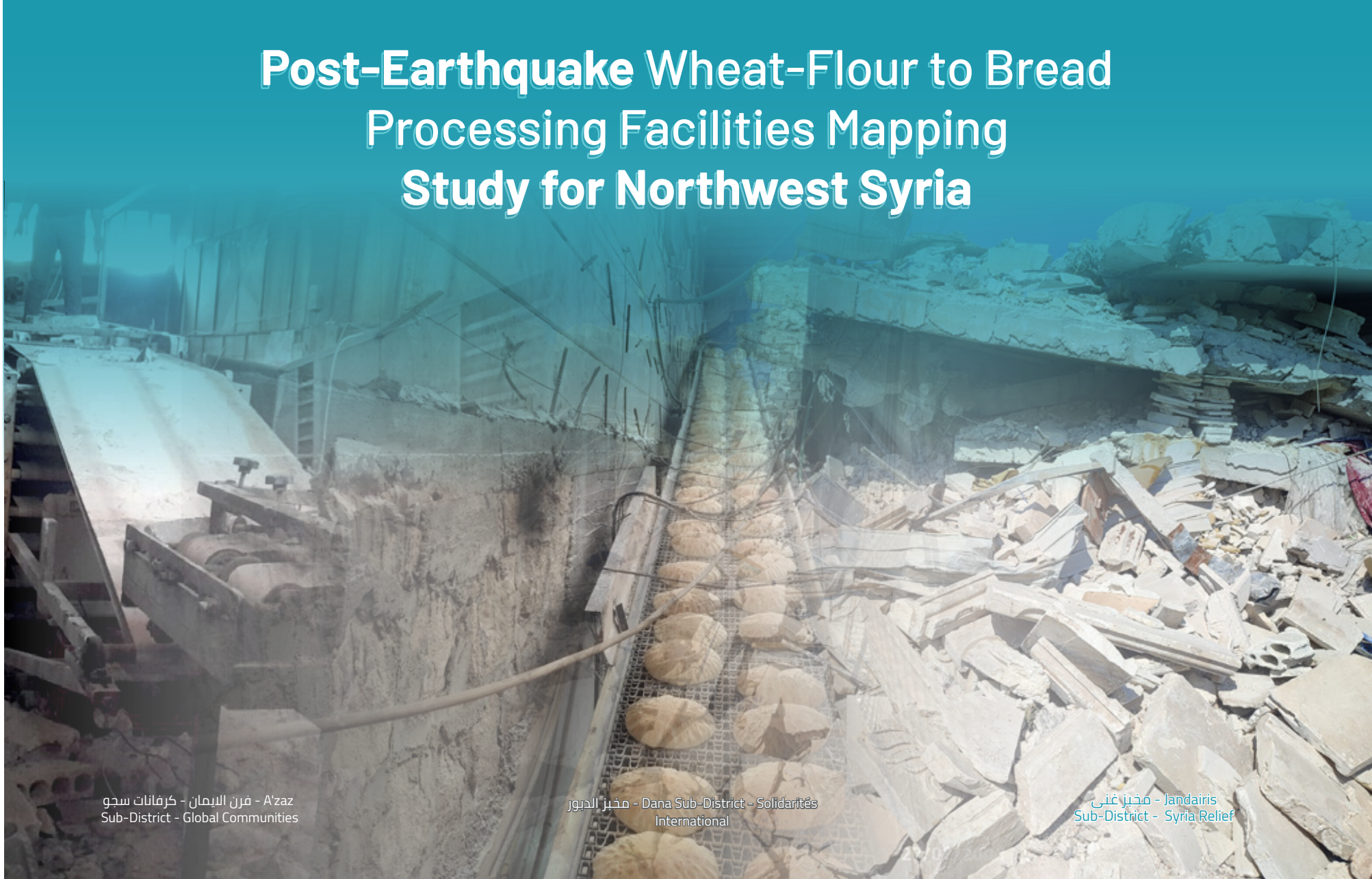




Post-Earthquake Wheat-Flour to Bread Processing Facilities Mapping Study for Northwest Syria



فرن اليمان - كرفانات سجو
A'zaz Sub-District - Global Communities

مخبز الدبور - Dana Sub-District - Solidarités
International

مخبز غنى - Jandairis
Sub-District - Syria Relief

Acknowledgement

iMMAP would like to express its sincere appreciation to all those who contributed to the Wheat to Bread Processing Facilities Mapping for Northwest Syria. This assessment was conducted by iMMAP's Food Security and Livelihood Unit in response to the earthquake that struck Syria and Türkiye on February 6th, 2023.

Special thanks to the NWS Food Security and Livelihood cluster, GOAL, and Solidarités International technical teams for their support in the development and review of the assessment tools.

We would also like to acknowledge the tremendous efforts of the thirteen Bread and Bakery Technical Working Group (BBTWG) member partners who supported iMMAP in the data collection coverage across NWS sub-districts, including:

- ATAA Relief
- BAHAR Organization
- CARE International
- Global Communities
- GOAL Global
- Hand in Hand for Aid and Development
- IYD International Humanitarian Relief Association
- MASRRAT
- Syria Relief
- SADAD Organization
- Shafak Organization
- Solidarités International

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Introduction

In collaboration with USAID_BHA partners, Northwest Syria (NWS) Food Security and Livelihood (FSL) Cluster members, Implementing Partners (IPs) and NWS Bread and Bakery Technical Working Group (BBTWG) members, iMMAP conducted an exceptional mapping and monitoring study of the public and private wheat-flour to bread processing and production facilities across NWS. This round was conducted in the aftermath of the earthquake that struck Türkiye and NW Syria on the 6th of February and aimed to assess its impact on the bread production facilities and the availability of bread in the region. In details, the study aims to:

- Map the wheat-flour to bread value chain actors, plans and achievements in NWS.
- Assess the level of structural and operational damages of the bread production facilities following the earthquake.
- Assess the capacity and functionality of the wheat-flour to bread processing facilities in NWS.
- Assess availability, accessibility and affordability of flour and bread in NWS.
- Identify production gaps to meet the bread needs of the local population.
- Identify the main wheat-flour to bread production challenges and the needed support to overcome them.
- Provide a clear end-to-end view of the bread supply chain in NWS.

Geographical Coverage of the Study

The third¹ round of the Wheat-flour to bread processing facilities mapping exercise in NWS was conducted in February 2023. Thirty-nine sub-districts were assessed across 4 governorates: 18 sub-districts in Idlib governorate, 17 sub-districts in Aleppo governorate, 3 in Ar-Raqqa governorate, and 1 in Al-Hasakeh governorate. Partners mapped the existing wheat-flour to bread processing facilities and collected data from 360 facilities: 297 bakeries, 47 mills, and 16 silos.

Key Findings

Operational Status of Bakeries

The study assessed a total of 297 bakeries across 11 districts, with the highest number of bakeries in Afrin, A'zaz, Harim, and Idlib districts. **Of the bakeries assessed, 81% (n=242) were operational, while 19% reported non-operation.** The main reasons reported for non-operation were the high operational costs, limited access to support, and the inability to compete with supported bakeries. Al Bab district in Aleppo governorate recorded the highest percentage of non-operational bakeries at 54%, mainly due to a lack of access to support and competition with supported bakeries. Additionally, several bakeries reported the lack of flour distribution from the Local Council. The study also found that 27% of non-operational bakeries, mainly located in Afrin and A'zaz districts, temporarily closed following the earthquake due to partial destruction of buildings and equipment, as well as a lack of financial liquidity to operate. For more information on the damages sustained by bakeries, iMMAP has created an [interactive dashboard](#) to capture the bread production facilities status following the earthquake.

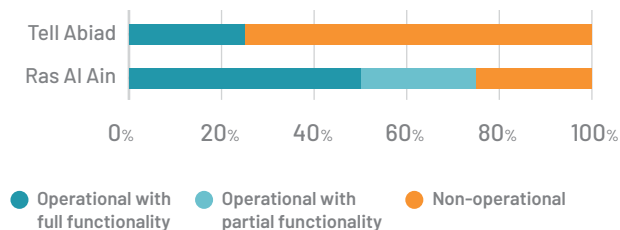
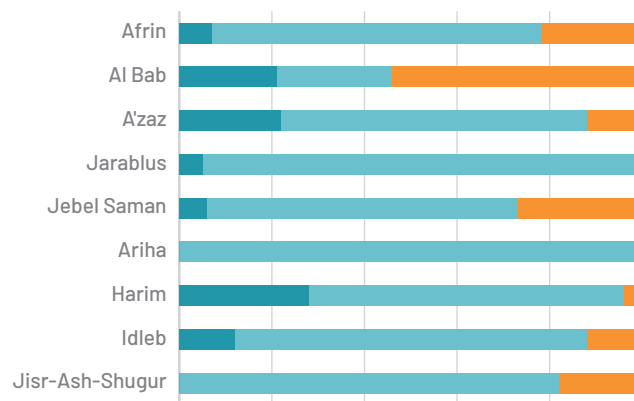


Figure 1. Operational Status of Bakeries per District

Damages and Rehabilitation Needs – Summary of Bakeries, Mills, and Silos

The study conducted a comprehensive assessment of the damage incurred by bread production facilities following the earthquake; it covers building structure, equipment, infrastructure, and supply storage.

The level of damage was categorized into three categories: Total Damage, Severe Damage, and Partial Damage:

1. Total Damage: indicates the total destruction of the assessed area leading to its complete non-operation.
2. Severe Damage: indicates the critical damage of the assessed area disrupting its operation and leading to a higher risk of further damage.
3. Partial Damage: indicates slight damage to the assessed area that does not necessarily disrupt its operation.

¹ Nine rounds of Wheat-Flour to Bread Processing Facilities Mapping have been published by iMMAP, one in 2019, two in 2020, three in 2021, and three in 2022. The latest December 2022 report can be accessed through this [link](#).

The damages were categorized into four groups which are as follows:

- 1. Building Structure:** This includes the physical structure of the building such as the foundations, roofs, exterior walls, beams, columns, stairs, shafts, floor/ceiling slabs, exterior glass, and any other structural components present in the building.
- 2. Equipment:** This pertains to all types of equipment used in different bread production facilities.
- 3. Infrastructure:** This refers to the internal structure of the facility which includes its water, electricity, fuel, sewage, and telecommunication systems.
- 4. Supply Storage:** This covers all the raw materials or produced goods that were stored in the facility.

Across the assessed districts, **44% of the bakeries reported damage to their building structure, 38% to their equipment, 3% to their infrastructure, and 2% to their supply storage.** Meanwhile, the mills reported a lower level of damage to their facilities, with 19% of the mills reporting damage to their building structure, 6% to their equipment, 2% to their infrastructure, and none reporting any loss in their supply storage. Furthermore, **out of the two operational silos, one reported damage to its building structure in Idleb district, while the other reported damage to its infrastructure in A'zaz district.** The study's findings highlight the need for infrastructure rehabilitation and financial assistance to support the recovery and rehabilitation of damaged bread production facilities.

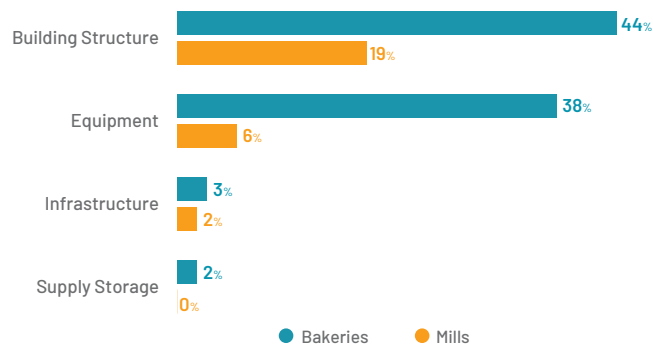


Figure 2. Percentage of Damaged Facilities per Damage Type

Table 1. Summary of Damages

Type of Damage	Level of Damage	Bakeries	Mills	Silos
Structural	Total Damage	1	0	0
	Severe Damage	5	0	0
	Partial Damage	124	9	1
Equipment	Total Damage	3	0	0
	Severe Damage	14	0	0
	Partial Damage	95	3	0
Infrastructure	Total Damage	0	0	0
	Severe Damage	2	0	0
	Partial Damage	7	1	1
Supply Storage	Total Damage	2	0	0
	Severe Damage	1	0	0
	Partial Damage	2	0	0

Key notes on the different types of damages of bakeries:

Structural Damages

- 95% of bakeries structural damages was partial.
- 73% of the structural systems of the damaged bakeries were reinforced concrete frames, 22% were load bearing masonry, and the remaining were steel frames.
- 14% of the bakeries had to halt their operation due to the encountered damages.
- 32% of the damaged operational bakeries reported some risk in operation due to the fear of further damage caused by aftershocks.
- The total cost of building structure repair required by bakeries is **\$433,749**.
- 96% of the bakeries reported their need for support in cash, 20% reported their need for labor, and 37% reported their need for building materials to carry out the necessary repairs.

Equipment Damages

- Among the damage reported to the bakeries' equipment, 85% of it was partial.
- 12% of the bakeries had to halt their operation due to the encountered damages.
- 45% of the damaged operational bakeries reported some risk in operation due to the fear of further damage to the oven house.
- The total cost of equipment repair/replacement required by bakeries is **\$530,671**.
- 86% of the bakeries reported their need for support in cash, 46% reported their need for machine maintenance, and 35% reported their need for replacing their machinery.

Infrastructure Damages

- Among the damage reported to the bakeries' infrastructure, 78% of it was partial.
- 44% of the bakeries that reported damage to the infrastructure reported the damage of water tanks/pipelines, and 56% reported damage to the fuel tanks.
- The total cost of infrastructure repair required by bakeries is **\$45,970**.

Supply Storage Damages

- 60% of the bakeries that reported supply storage damages reported their loss of flour, 60% reported loss of yeast, and 40% reported loss of fuel.
- The total loss of flour was estimated at 90 MT.
- The total loss of raw materials was estimated at **\$45,000**.
- All bakeries reported their need for cash, and 60% reported their need for flour and yeast distributions.

Bread Production

The study found that the maximum production capacity of the operational bakeries assessed in Aleppo and Idleb governorates was 18,214 metric tons (MT) of bread per week. However, **the current production output of these bakeries is only 6,515 MT of bread per week, utilizing 36% of their maximum capacity.** The districts of Harim, A'zaz, and Idleb reported the highest quantities of bread production, as illustrated in figure 3.

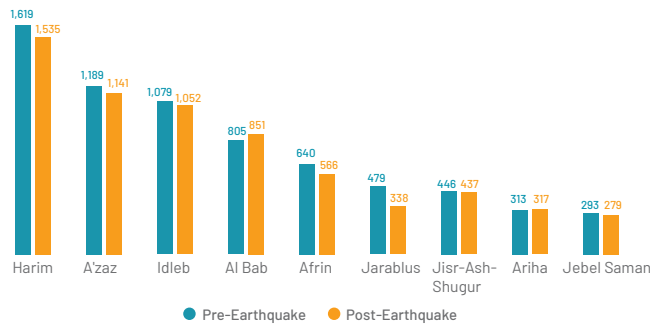


Figure 3. Bakery Production Change per District - Pre and Post Earthquake (MT/Week)

Additionally, as shown in figure 3, most bakeries reported a reduction in the amount of bread produced after the earthquake. In Aleppo and Idleb governorates, **the total production of the bakeries decreased from 6,862 MT per week to 6,515 MT, indicating a decline in productivity levels of 5%.** Among all the districts, Jarablus recorded the highest decline in productivity levels with 29%, followed by Afrin with 12%. Conversely, Al Bab and Ariha districts were the only districts that recorded an increase in productivity levels, with 6% and 1% respectively.

Despite the relatively low decrease in bread production after the earthquake, **the current levels of bread productivity are insufficient to meet the bread needs of the total population. In Aleppo governorate, the total bread production only covers 84% of the population's needs, while in Idleb governorate, it only covers 50%.** Moreover, the individual daily portion of produced bread is currently at 277g in Aleppo governorate and 165g in Idleb

governorate, 2% less than what has been reported in Q4 2022.

These amounts are still below the local standard of minimum bread quantity needs per person, which is 330g.

Governorate	Individual Daily Portion of Produced Bread		
	Q4 2022	Q1 2023	% Change
Aleppo	283.8	276.8	-2%
Idleb	167.7	164.7	-2%

Despite efforts to provide subsidized and free NGO bread, accessibility and affordability of bread still pose a challenge in Aleppo and Idleb governorates. **The weekly production of subsidized and free NGO bread was recorded at a total of 2,097 MT and 1,208 MT in Aleppo and Idleb governorates respectively. This production accounts for 66% of the total weekly produced bread in Aleppo governorate and 36% in Idleb governorate.** These figures remain largely stable in comparison to Q4 2022.

Current Support and Needs

Many of the assessed operational bakeries reported the production of subsidized bread (55%, n=132), accounting for an average of 73% of their production levels. Additionally, 9% (n=7) of the bakeries reported the production of free NGO bread, accounting for an average of 55% of their production levels. Among the bakeries that produce subsidized bread, **57% reported a change in the quantities of produced subsidized bread. Of those, 63% reported a decrease and 37% reported an increase in their subsidized bread production levels.** The decrease was attributed to various factors including the decreased flour quantities distributed by AFAD, unavailability of flour, destruction of roads and closure of borders, and displacement of people in the area. Conversely, the increase was attributed to the increase in the number of displaced people in the area, increased demand for bread, and increased support. The highest level of reported decrease in subsidized quantities was observed in Aghtrin, Jarablus, Suran, and Ghandorah sub-districts, while the highest numbers of reported increase in subsidized quantities were observed in Salqin, Sharan, and Al Bab sub-districts.

Out of the assessed operational bakeries producing free NGO bread, **35% reported a change in the quantities of production, of which 86% reported an increase in their free NGO bread production levels.** This increase was also attributed to the increase in the number of displaced people in the area, increased demand for bread, and increased support.

Over 50% of the assessed bakeries, both operational and non-operational, are currently receiving support, with different sources providing this aid. In details, 45% of the support is provided by AFAD, 42% by NGOs, 5% by local councils (LC), and 8% from other sources such as the Syrian Interim Government (SIG) and the Syrian Public Establishment for Grain in A'zaz. Most of the aid is in the form of flour or yeast distributions, with only a few bakeries receiving support for structural rehabilitation or equipment maintenance.

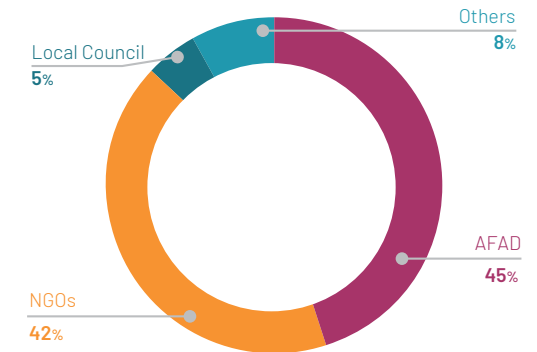


Figure 4. Support Sources

Availability, Sources, and Prices

Bread was mostly reported as always available across NWS, whereas only 15% of the assessed bakeries reported its fair availability. Most respondents that reported limited availability of bread attributed it to several factors such as the low quantity of flour allocated and distributed, the increase in population due to the influx of IDPs, and the increase in prices of bread and its' production inputs.

Regarding the ingredients for bread production, fuel and yeast were generally available without issues. However, 19% of the bakeries reported fair availability of local and imported flour. According to respondents, the limited availability of flour was due to border closures, low allocation and distribution of flour, insufficient support, and fluctuations in prices and exchange rates. Additionally, 78% of the flour used for production is imported from Turkey, while the remaining 22% is locally milled. Most of the locally milled flour was obtained from the General Establishment for Grains (35%), followed by mills and traders (25% each). Traders were the primary source of imported flour (57%), followed by AFAD (30%) and NGOs (9%).

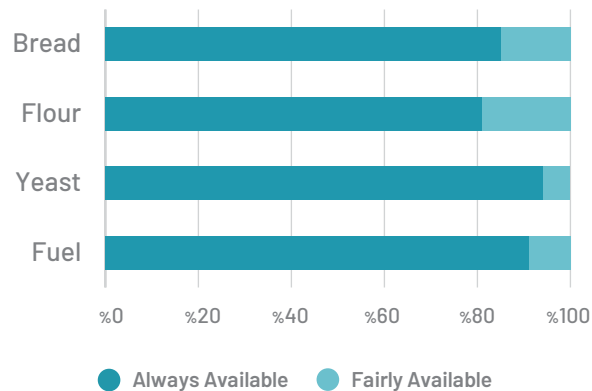


Figure 5. Availability of Bread and Bread Production Inputs

The average reported selling price of 1 kg of subsidized and unsubsidized bread remained stable in comparison to Q4 2022, with subsidized bread being sold at 4.4 TRY/kg and unsubsidized bread at 9.7 TRY/kg. On the other hand, both locally milled and imported flour recorded a decrease in prices between Q4 2022 and Q1 2023. Locally milled flour prices decreased by 5% from 432 USD/MT in Q4 2022 to 410 USD/MT in Q1 2023, whereas imported flour prices decreased by 5% from 460 USD/MT in Q4 2022 to 436 USD/MT in Q1 2023.

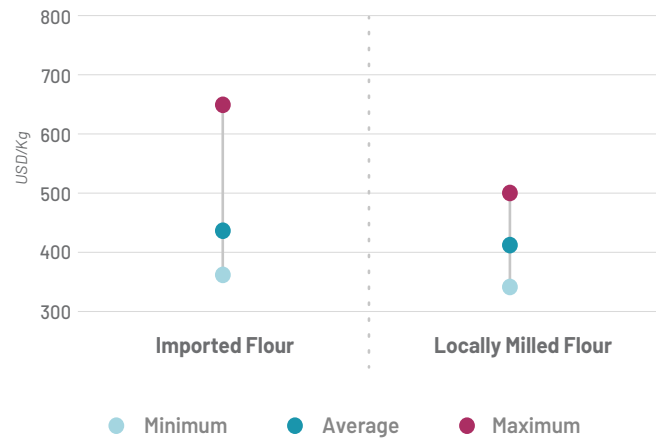


Figure 6. Prices of Imported and Locally Milled Flour (USD/MT)

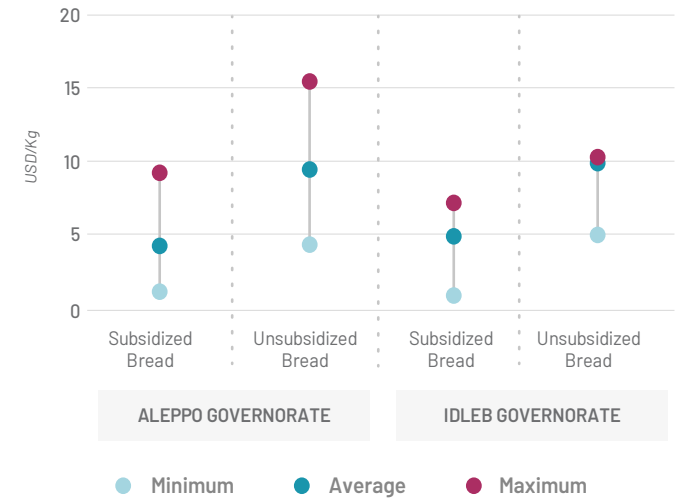


Figure 7. Prices of Subsidized and Unsubsidized Bread (TRY/Kg)

District Level Assessment

Afrin District

Table 2. Summary of Damages in Afrin District

Type of Damage	Level of Damage	Bakeries	Mills	Silos
Structural	Total Damage	1	0	0
	Severe Damage	1	0	0
	Partial Damage	17	1	0
Equipment	Total Damage	1	0	0
	Severe Damage	7	0	0
	Partial Damage	17	1	0
Infrastructure	Total Damage	0	0	0
	Severe Damage	1	0	0
	Partial Damage	1	0	0
Supply Storage	Total Damage	2	0	0
	Severe Damage	1	0	0
	Partial Damage	0	0	0

Bakeries

- 41 bakeries were mapped in Afrin district, out of which 78% are currently operational.
- 29% of the bakeries reported currently receiving support with NGOs (54% being the primary source of support, followed by the Local Council (38%). The support mainly comes in the form of flour and yeast distributions.

Weekly Total Bread Production	Weekly Subsidized and NGO Bread Production
566 MT	215 MT
% of Population Bread Needs Covered	% of PiN Bread Needs Covered
53%	88%

Building Structure

- Out of the bakeries mapped in Afrin district, 46% reported damage to their building structures, with 90% of the damage being partial.
- The total cost of repairing the building structure damage is estimated at \$51,550.
- Cracked walls and roofs accounted for 63% of the damage encountered by bakeries, while 50% of the affected bakeries reported damage in the form of cracks and holes in the roof, resulting in water leakage. Additionally, 17% of the damaged bakeries reported issues with their concrete foundation, while no damage was reported to the concrete columns or structural beams.

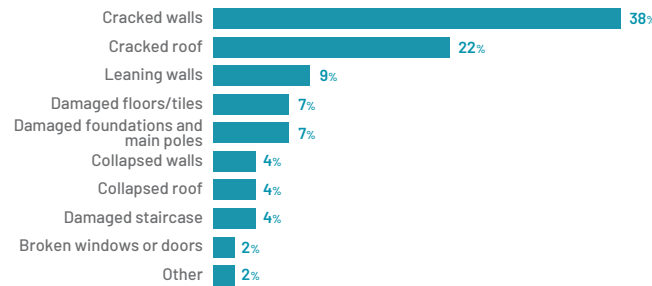


Figure 8. Types of Structural Damages in Afrin District

Equipment

- Out of the bakeries mapped in Afrin district, 61% reported damage to their equipment, with 68% of the damage being partial.
- The total cost of repairing the equipment damage is estimated at \$174,800.
- Among the damages, 46% were reported on the oven house, which poses a significant risk of halting bakery operations.
- The majority of the affected bakeries (84%) require cash support, while 60% and 24% require equipment repair and replacement, respectively.

Infrastructure

- Out of the bakeries mapped in Afrin district, only 5% reported damage to their infrastructure.
- The total cost of repairing the infrastructure damage is estimated at \$1,000.

- One bakery reported minor damage to its water tanks and pipelines and is currently sourcing water from tankers. The other bakery reported significant damage to its electricity generator and is currently relying on the city's electricity lines for power.

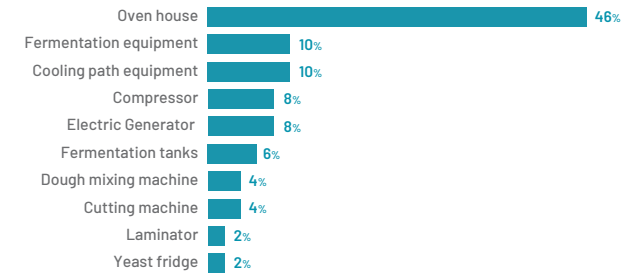


Figure 9. Types of Equipment Damages in Afrin District

Supply Storage

- Out of the bakeries mapped in Afrin district, only 7% reported damage to their supply storage resulting in complete destruction or severe damage to their stored bread or raw materials.
- The estimated loss of flour due to damage was 90 MT.
- The total loss of raw materials was estimated at \$43,000.
- All the bakeries that reported damages to their supply storage reported their need for cash, flour, and yeast distributions to compensate for their losses.

Mills

- Only one operational mill was mapped in Afrin district, located in Jandairis sub-district.
- The mill has a maximum weekly capacity of 500 MT, but currently operates at only 35% capacity, with a current output of 175 MT per week.
- The mill is currently not receiving any support and has encountered partial damages to its building structure and equipment.
- The estimated cost for repairing the building is \$5,000, while repairing the equipment requires \$30,000.
- The building damage is primarily in the form of cracked walls, damaged foundations, and columns.

No operational Silos were mapped.

Al Bab District

Table 3. Summary of Damages in Al Bab District

Type of Damage	Level of Damage	Bakeries	Mills	Silos
Structural	Total Damage	0	0	0
	Severe Damage	0	0	0
	Partial Damage	5	0	0
Equipment	Total Damage	0	0	0
	Severe Damage	0	0	0
	Partial Damage	2	0	0
Infrastructure	Total Damage	0	0	0
	Severe Damage	0	0	0
	Partial Damage	0	0	0
Supply Storage	Total Damage	0	0	0
	Severe Damage	0	0	0
	Partial Damage	0	0	0

Bakeries

- 28 bakeries were mapped in Al Bab district, out of which 46% are currently operational.
- 36% of the bakeries reported currently receiving support with AFAD (63%) being the primary source of support, followed by NGOs (25%) and the Local Council (13%). The support mainly comes in the form of flour distributions.

Weekly Total Bread Production 851 MT	Weekly Subsidized and NGO Bread Production 813 MT
% of Population Bread Needs Covered 162%	% of PiN Bread Needs Covered 317%

Building Structure

- Out of the bakeries mapped in Al Bab district, 18% reported partial damage to their building structure.
- The total cost of repairing the building structure damage is estimated at \$14,200.
- Cracked walls and roofs, and broken windows or doors were the main types of damage encountered by bakeries.
- No damage was reported to the concrete foundation, concrete columns, or structural beams.

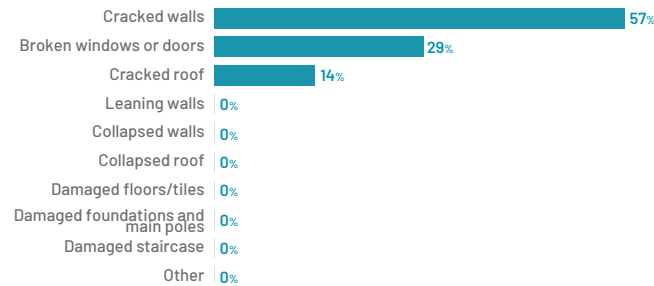


Figure 10. Types of Structural Damages in Al Bab District

Equipment

- Out of the bakeries mapped in Al Bab district, 7% (n=2) reported partial damage to their equipment.
- The total cost for repairing the equipment damage is estimated at \$13,000.
- One bakery reported the damage of the oven house and the risk of its further destruction that will lead to the halt of the bakery's operation, while the other bakery reported the damage of the oven house, fermentation tanks, and compressor.
- Both bakeries reported the need to repair or replace the damaged equipment.

Infrastructure

- No damage was reported to the infrastructure.

Supply Storage

- No damage was reported to the supply storage.

Mills

- Only two operational mills were mapped in Al Bab district, located in Al Bab sub-district.
- The mills are currently not receiving any support and have not sustained any damage to their facilities.
- The mills have a maximum weekly capacity of 1,360 MT, but currently operate at only 62% capacity, with a current output of 840 MT per week.

No operational Silos were mapped.

A'zaz District

Table 4. Summary of Damages in A'zaz District

Type of Damage	Level of Damage	Bakeries	Mills	Silos
Structural	Total Damage	0	0	0
	Severe Damage	1	0	0
Equipment	Partial Damage	50	4	0
	Total Damage	2	0	0
Infrastructure	Severe Damage	3	0	0
	Partial Damage	42	2	0
Supply Storage	Total Damage	0	0	0
	Severe Damage	0	0	0
Infrastructure	Partial Damage	0	1	0
	Total Damage	0	0	0
Supply Storage	Severe Damage	0	0	0
	Partial Damage	1	0	0

Bakeries

- 64 bakeries were mapped in A'zaz district, out of which 88% are currently operational.
- 80% of the bakeries reported currently receiving support with AFAD (80%) being the primary source of support, followed by the Syrian Interim Government (SIG) and Syrian Public Establishment for Grain (20%). The support mainly comes in the form of flour distributions.

Weekly Total Bread Production	Weekly Subsidized and NGO Bread Production
1,141 MT	802 MT
% of Population Bread Needs Covered	% of PiN Bread Needs Covered
87%	153%

Building Structure

- Out of the bakeries mapped in A'zaz district, 80% reported damage to their building structures, with 98% of the damage was partial.
- The total cost for repairing the building structure damage is estimated at \$71,400.
- Cracked walls and roofs accounted for 75% of the damage sustained by the bakeries.
- Concrete foundations were unaffected, although two bakeries did report damage to their concrete columns and structural beams.
- The majority of the damage consisted of cracks and holes in the roofs and floors, which led to water leakage, as well as cracks and some leaning in the walls.

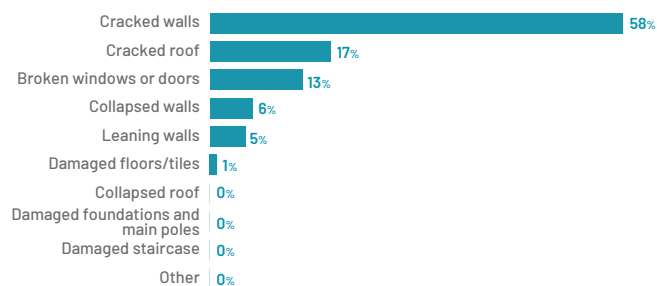


Figure 11. Types of Structural Damages in A'zaz District

Equipment

- Out of the bakeries mapped in A'zaz district, 73% reported damage to their equipment, with 89% of the damage being partial.
- The total cost for repairing the equipment damage is estimated at \$184,000.

- Among the damages, 39% were reported on the oven house, which poses a significant risk of halting bakery operations.
- The majority of the affected bakeries (91%) require cash support, while 51% and 49% require equipment repair and replacement, respectively.

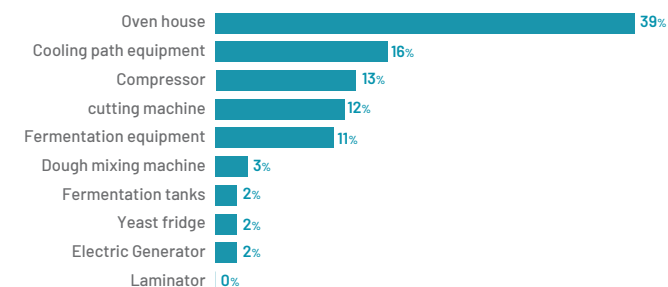


Figure 12. Types of Equipment Damages in A'zaz District

Infrastructure

- No damage was reported to the infrastructure.

Supply Storage

- Only one of the mapped bakeries in A'zaz district reported partial damage to its supply storage of fuel.
- The total loss of raw materials was estimated at \$1,200.

Mills

- Four mills were mapped in A'zaz district, out of which three are currently operational in A'zaz and Mare' sub-districts.
- The mills have a maximum weekly capacity of 890 MT, but currently operate at only 77% capacity, with a current output of 683 MT per week.
- Two mills are currently receiving support from NGOs and private donors in the form of wheat distributions.

Building Structure

- All the mills that were mapped in A'zaz district reported partial damage to their building structures.
- The total cost for repairing the building structure damage is estimated at \$10,500.
- Of the damages reported, 60% were to the walls in the form of cracks, leaning, or collapsed sections. 20% of the damages were to the building foundations and main support poles, while the remaining 20% was attributed to broken windows or doors.

Equipment

- Half of the mills that were mapped in A'zaz district reported partial damage to their equipment, including grinding cylinders, sieves, and washing machines.
- The total cost for repairing the equipment damage is estimated at \$11,000.

Infrastructure

- Out of all the mills that were mapped in A'zaz district, 25% reported experiencing minor damage to their infrastructure, specifically to the water tanks, pipelines, and sewage systems.
- The total cost for repairing the infrastructure damage is estimated at \$3,500.

Supply Storage

- No damage was reported to the supply storage.

Silos

- One operational silo was mapped in A'zaz district, located in Mare' sub-district.
- The maximum storage capacity of the silo is 11,000 MT.
- The silo reported partial damage to the infrastructure that requires \$2,000 cost for repair.

Jarablus District

Table 5. Summary of Damages in Jarablus District

Type of Damage	Level of Damage	Bakeries	Mills	Silos
Structural	Total Damage	0	0	0
	Severe Damage	1	0	0
	Partial Damage	18	1	0
Equipment	Total Damage	0	0	0
	Severe Damage	1	0	0
	Partial Damage	7	0	0
Infrastructure	Total Damage	0	0	0
	Severe Damage	1	0	0
	Partial Damage	3	0	0
Supply Storage	Total Damage	0	0	0
	Severe Damage	0	0	0
	Partial Damage	1	0	0

Bakeries

- 20 bakeries were mapped in Jarablus district, all of which are currently operational.
- All the bakeries reported currently receiving support with AFAD (48%) being the primary source of support, followed by NGOs (43%). The support mainly comes in the form of flour distributions.

Weekly Total Bread Production	Weekly Subsidized and NGO Bread Production
338 MT	267 MT
% of Population Bread Needs Covered	% of PiN Bread Needs Covered
124%	196%

Building Structure

- Out of the bakeries mapped in Jarablus district, 95% reported damage to their building structure, with 95% of the damage being partial.
- The total cost for repairing the building structure damage is estimated at \$111,100.
- Cracked walls and roofs account for 71% of the damage experienced by bakeries.
- There were no reports of damage to the concrete foundations, columns, or structural beams.

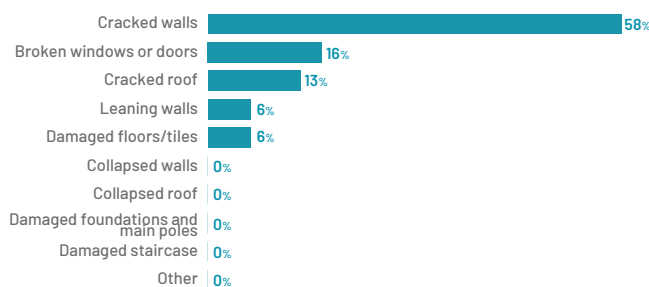


Figure 13. Types of Structural Damages in Jarablus District

Equipment

- Out of the bakeries mapped in Jarablus district, 40% reported equipment damage, with 88% of the damage being partial.
- The total cost for repairing the equipment damage is estimated at \$25,500.
- 67% of the damage reported was to the oven house.
- 80% of the affected bakeries require cash support, while 10% each require support for equipment repair and replacement.

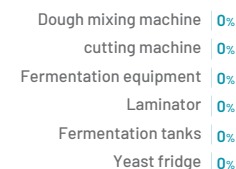
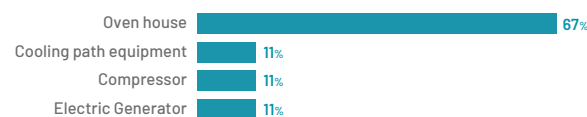


Figure 14. Types of Equipment Damages in Jarablus District

Infrastructure

- Among the bakeries mapped in Jarablus district, 20% reported damage to their infrastructure.
- The total cost for repairing the infrastructure damage is estimated at \$14,270.
- Half of the affected bakeries reported minor damage to their water tanks or pipelines and are currently obtaining water from private sources or the company's water network. The other half reported both minor and major damage to their fuel tanks and are now purchasing fuel from traders after repairing the damage.

Supply Storage

- Only one of the mapped bakeries in Jarablus district reported partial damage to its supply storage of fuel.
- The total loss of raw materials was estimated at \$800.

Mills

- Two mills were mapped in Jarablus district, all of which are currently operational in Jarablus and Ghadorah sub-districts.
- The mills have a maximum weekly capacity of 500 MT, but currently operate at only 96% capacity, with a current output of 479 MT per week.
- One of the mills is currently receiving support from NGOs and the Syria Recovery Trust Fund through wheat distributions, wages, and rehabilitation efforts.
- One of the mills mapped in Jarablus district reported partial damage to its building structure in the form of cracked walls. The estimated cost for repairing the damage to the building structure is \$2,000.

No operational Silos were mapped.

Jebel Saman District

Table 6. Summary of Damages in Jabel Saman District

Type of Damage	Level of Damage	Bakeries	Mills	Silos
Structural	Total Damage	0	0	0
	Severe Damage	0	0	0
	Partial Damage	2	0	0
Equipment	Total Damage	0	0	0
	Severe Damage	0	0	0
	Partial Damage	3	0	0
Infrastructure	Total Damage	0	0	0
	Severe Damage	0	0	0
	Partial Damage	0	0	0
Supply Storage	Total Damage	0	0	0
	Severe Damage	0	0	0
	Partial Damage	0	0	0

Bakeries

- 15 bakeries were mapped in Jebel Saman district, out of which 73% are currently operational.
- Only one bakery reported receiving support from an NGO in the form of flour and yeast distributions.

Weekly Total Bread Production	Weekly Subsidized and NGO Bread Production
279 MT	0 MT
% of Population Bread Needs Covered	% of PiN Bread Needs Covered
46%	65%

Building Structure

- Among the bakeries mapped in Jebel Saman district, 13% reported partial damage to their building structures.
- The estimated cost for repairing the damage to the building structures is \$1,900 in total.
- Half of the damage experienced by the bakeries was in the form of cracked walls and roofs, while the other half was due to leaning walls, broken doors, or windows.
- There was no reported damage to the concrete foundation, columns, or structural beams.

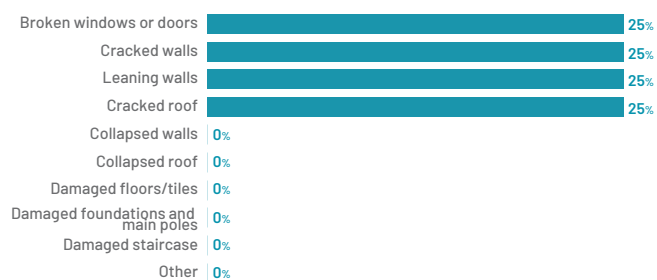


Figure 15. Types of Structural Damages in Jabel Saman District

Equipment

- Out of the bakeries mapped in Jebel Saman district, 20% reported partial damage to their equipment.
- The estimated cost for repairing the damage to the equipment is \$1,400 in total.
- Half of the reported damage was on the fermentation equipment, and the other half was on the cooling path equipment, with no damage reported on the oven house.
- All the affected bakeries require cash support for the repairs.

Infrastructure

- No damage was reported to the infrastructure.

Supply Storage

- No damage was reported to the supply storage.

No operational Mills were mapped.

No operational Silos were mapped.

Ariha District

Table 7. Summary of Damages in Ariha District

Type of Damage	Level of Damage	Bakeries	Mills	Silos
Structural	Total Damage	0	0	0
	Severe Damage	0	0	0
	Partial Damage	5	0	0
Equipment	Total Damage	0	0	0
	Severe Damage	0	0	0
	Partial Damage	3	0	0
Infrastructure	Total Damage	0	0	0
	Severe Damage	0	0	0
	Partial Damage	0	0	0
Supply Storage	Total Damage	0	0	0
	Severe Damage	0	0	0
	Partial Damage	0	0	0

Bakeries

- 9 bakeries were mapped in Ariha district, all of which are currently operational.
- 78% of the bakeries reported currently receiving support from NGOs in the form of flour and yeast distributions.

Weekly Total Bread Production	Weekly Subsidized and NGO Bread Production
317 MT	115 MT
% of Population Bread Needs Covered	% of PiN Bread Needs Covered
74%	115%

Building Structure

- Among the bakeries mapped in Ariha district, 56% reported partial damage to their building structures.
- The estimated cost for repairing the damage to the building structures is \$22,500 in total.
- Cracked walls and roofs accounted for 55% of the damage sustained by the bakeries.
- There was no reported damage to the concrete foundation, columns, or structural beams.

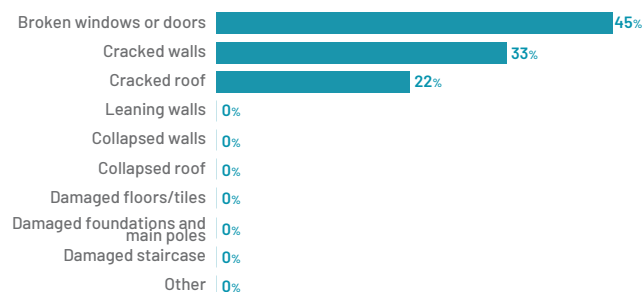


Figure 16. Types of Structural Damages in Ariha District

Equipment

- Out of the bakeries mapped in Ariha district, 33% reported partial damage to their equipment.
- The estimated cost for repairing the damage to the equipment is \$16,000 in total.
- 60% of the reported damage was to the oven house, but there is no current risk of further damage.
- All the affected bakeries require cash support for the repairs, and 67% require equipment repair support.

Infrastructure

- No damage was reported to the infrastructure.

Supply Storage

- No damage was reported to the supply storage.

No operational Mills were mapped.

No operational Silos were mapped.

Harim District

Table 8. Summary of Damages in Harim District

Type of Damage	Level of Damage	Bakeries	Mills	Silos
Structural	Total Damage	0	0	0
	Severe Damage	0	0	0
Equipment	Partial Damage	14	0	0
	Total Damage	0	0	0
Infrastructure	Severe Damage	0	0	0
	Partial Damage	0	0	0
Supply Storage	Total Damage	0	0	0
	Severe Damage	0	0	0
	Partial Damage	1	0	0

Bakeries

- 53 bakeries were mapped in Harim district, out of which 96% are currently operational.
- 32% of the bakeries reported currently receiving support with NGOs (94%) being the primary source of support. The support was mostly in the form of flour and yeast distributions.

Weekly Total Bread Production 1,535 MT	Weekly Subsidized and NGO Bread Production 544 MT
% of Population Bread Needs Covered 40%	% of PiN Bread Needs Covered 47%

Building Structure

- Among the bakeries mapped in Harim district, 26% reported damage to their building structures, with 90% of the damage being partial.
- The estimated cost for repairing the damage to the building structures is \$42,100 in total.
- Of the damage experienced by the bakeries, 58% was in the form of cracked walls and roofs.
- Two of the affected bakeries reported damage to their foundations, one to their concrete columns, and one to their structural beams.

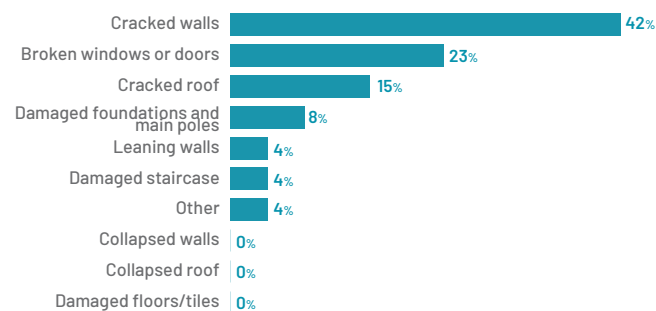


Figure 17. Types of Structural Damages in Harim District

Equipment

- Among the bakeries mapped in Harim district, 19% reported partial damage to their equipment.
- The total estimated cost for repairing the equipment damage is \$67,570.
- Among the reported damages, 38% were to the oven house, with some bakeries reporting the risk of the oven house being destroyed, which could lead to a halt in their operation.
- 50% of the affected bakeries require cash assistance, while 30% require equipment repairs and 50% need equipment replacement.

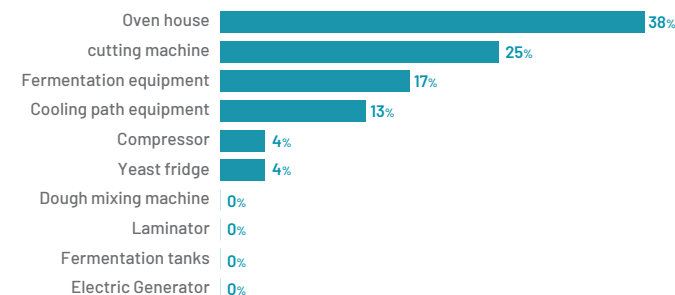


Figure 18. Types of Equipment Damages in Harim District

Infrastructure

- No damage was reported to the infrastructure.

Supply Storage

- Only one of the mapped bakeries in Harim district reported partial damage to its supply storage of fuel.
- The total loss of raw materials was estimated at \$10,000.

Mills

- Five mills were mapped in Harim district, 60% of which are currently operational and located in Dana sub-district.
- The mills have a maximum weekly capacity of 950 MT, but currently operate at only 59% capacity, with a current output of 560 MT per week.
- The mills are currently not receiving any support and have not sustained any damage.

No operational Silos were mapped.

Idleb District

Table 9. Summary of Damages in Idleb District

Type of Damage	Level of Damage	Bakeries	Mills	Silos
Structural	Total Damage	0	0	0
	Severe Damage	1	0	0
Equipment	Partial Damage	6	3	1
	Total Damage	0	0	0
Infrastructure	Severe Damage	2	0	0
	Partial Damage	7	0	0
Supply Storage	Total Damage	0	0	0
	Severe Damage	0	0	0
	Partial Damage	0	0	0

Bakeries

- 34 bakeries were mapped in Idleb district, out of which 88% are currently operational.
- 35% of the bakeries reported currently receiving support from NGOs, mostly in the form of flour and yeast distributions.

Weekly Total Bread Production	Weekly Subsidized and NGO Bread Production
1,052 MT	415 MT
% of Population Bread Needs Covered	% of PiN Bread Needs Covered
63%	102%

Building Structure

- Among the mapped bakeries in Idleb district, 21% reported damage to the building structure, with 86% of the damage being partial.
- The total cost estimated for repairing the damage to the building structure is \$56,000.
- The majority (67%) of the damage sustained by the bakeries was in the form of cracked walls and roofs.
- Some bakeries described the damages as cracks and holes in the roof causing water leakages, and others reported damage to concrete columns in the form of cracks. However, there were no damages reported in the concrete foundation or structural beams.

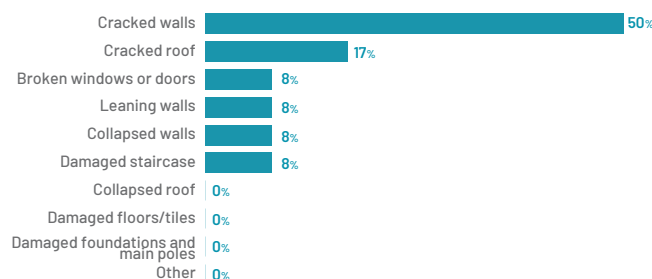
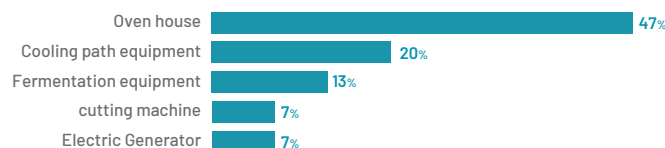


Figure 19. Types of Structural Damages in Idleb District

Equipment

- Among the mapped bakeries in Idleb district, 26% reported damage to their equipment, with 78% of the damage being partial.
- The total estimated cost for repairing the equipment damage is \$30,700.
- 47% of the damage reported was to the oven house.
- 78% of the affected bakeries require cash assistance, while 56% require equipment repairs and 33% need equipment replacement.



Dough mixing machine	0%
Laminator	0%
Compressor	0%
Fermentation tanks	0%
Yeast fridge	0%

Figure 20. Types of Equipment Damages in Idleb District

Infrastructure

- Out of all the mapped bakeries in Idleb district, only 6% (n=2) reported damage to their infrastructure.
- The total estimated cost for repairing the infrastructure damage is \$20,700.
- One of the bakeries reported major damage to their water tanks and pipelines, which has resulted in them sourcing water from tankers. Additionally, both bakeries reported minor and major damage to their fuel tanks.

Mills

- Five mills were mapped in Idleb district, 60% of which are currently operational and located in Idleb and Ma'aret Tamsrin sub-districts.
- The mills have a maximum weekly capacity of 1,420 MT, but currently operate at only 55% capacity, with a current output of 785 MT per week.
- The mills are currently not receiving any support.
- 60% of the mapped mills in Idleb district reported partial damage to the building structure in the form of cracked walls, damaged foundations, and cracks in concrete columns.
- The total estimated cost for repairing the building structure damages is \$31,200.

Silos

- One operational silo was mapped in Idleb district, specifically in Idleb sub-district.
- The maximum storage capacity of the silo is 11,000 MT.
- Partial damage to the warehouse building structure was reported by the silo, which requires an estimated cost of \$4,000 for repair.

Jisr-Ash-Shughur District

Table 10. Summary of Damages in Jisr-Ash-Shugur District

Type of Damage	Level of Damage	Bakeries	Mills	Silos
Structural	Total Damage	0	0	0
	Severe Damage	1	0	0
Equipment	Partial Damage	7	0	0
	Total Damage	0	0	0
Infrastructure	Severe Damage	1	0	0
	Partial Damage	4	0	0
Supply Storage	Total Damage	0	0	0
	Severe Damage	0	0	0
Infrastructure	Partial Damage	0	0	0
	Total Damage	0	0	0
Supply Storage	Severe Damage	0	0	0
	Partial Damage	0	0	0

Bakeries

- 17 bakeries were mapped in Jisr-Ash-Shughur district, out of which 82% are currently operational.
- 47% of the bakeries reported currently receiving support from NGOs in the form of flour and yeast distributions.

Weekly Total Bread Production	Weekly Subsidized and NGO Bread Production
437 MT	134 MT
% of Population Bread Needs Covered	% of PiN Bread Needs Covered
58%	111%

Building Structure

- Out of the mapped bakeries in Jisr-Ash-Shughur district, 47% reported damage to the building structure, with 88% of the damage being partial.
- The estimated cost for repairing the damage to the building structure is \$63,000 in total.
- Cracked walls and roofs accounted for 63% of the damage encountered by bakeries.
- Among the damaged bakeries, 50% reported damage in the form of cracks and holes in the roof leading to water leakages, while only one bakery reported damage to the concrete columns and structural beams. No damage was reported to the concrete foundation.

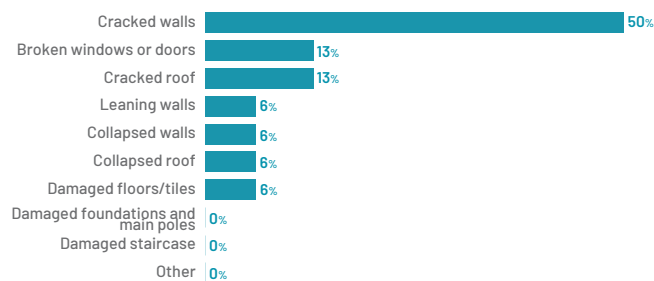


Figure 21. Types of Structural Damages in Jisr-Ash-Shugur District

Equipment

- Out of the mapped bakeries in Jisr-Ash-Shughur district, 29% reported damages to their equipment, with 80% of the damage being partial.
- The total estimated cost for repairing the equipment damage is \$17,700.
- 40% of the reported damage was to the oven house, but there is no current risk of further damage.
- 100% of the damaged bakeries need support in cash, and 40% require support in the form of equipment repair.

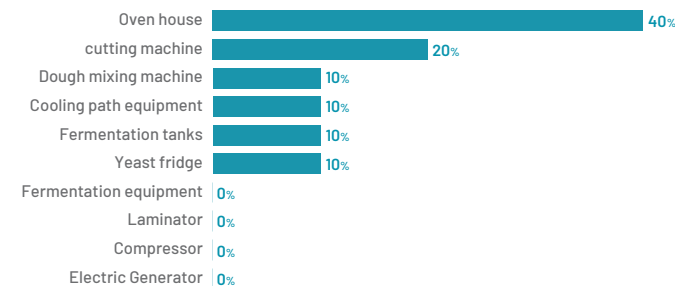


Figure 22. Types of Equipment Damages in Jisr-Ash-Shugur District

Infrastructure

- No damage was reported to the infrastructure.

Supply Storage

- No damage was reported to the supply storage.

No operational Mills were mapped.

No operational Silos were mapped.

Summary

Bakeries

District	# Bakeries	% Structural Damage	% Equipment Damage	% Infrastructure Damage	% Supply Storage Damage
Afrin	41	46%	61%	5%	7%
Al Bab	28	18%	7%	0%	0%
A'zaz	64	80%	73%	0%	2%
Jarablus	20	95%	40%	20%	5%
Jebel Saman	15	13%	20%	0%	0%
Ariha	9	56%	33%	0%	0%
Harim	53	26%	19%	0%	2%
Idleb	34	21%	26%	6%	0%
Jisr-Ash-Shughur	17	47%	29%	0%	0%

Figure 23. Bakery Damages per District

Figure 23 illustrates that A'zaz and Harim districts had the largest number of mapped bakeries, and it also shows that the damage to the building structures and equipment was more significant than the damage to infrastructure and supply storages. A'zaz district experienced the most extensive structural and equipment damage compared to the other districts, while Jarablus district suffered the highest amount of infrastructure damage. Most of the structural damage to bakeries was in the form of cracked roofs and walls and broken doors or windows, whereas the highest reported equipment damage was to the oven house. In terms of infrastructure damage, water tanks, pipelines, and fuel tanks were the most affected areas.

Mills

District	# Mills	% Structural Damage	% Equipment Damage	% Infrastructure Damage	% Supply Storage Damage
Afrin	1	100%	100%	0%	0%
Al Bab	2	0%	0%	0%	0%
A'zaz	4	100%	50%	25%	0%
Jarablus	2	50%	0%	0%	0%
Harim	5	0%	0%	0%	0%
Idleb	5	60%	0%	0%	0%

Figure 24. Mill Damages per District

According to Figure 24 the districts with the largest number of mapped mills were Harim and Idleb. The figure also indicates that the damage to building structures and equipment was more significant than the damage to infrastructure and supply storage. A'zaz district also encountered the most extensive damage to mills, followed by Idleb district. Most of the structural damage to mills was in the form of cracked walls, followed by damage to foundations and main poles. The sieve and washing machines were the equipment with the highest reported damage.

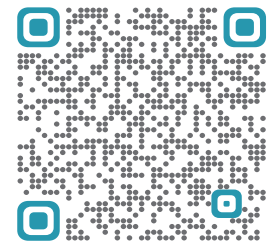
Silos

District	# Silos	% Structural Damage	% Equipment Damage	% Infrastructure Damage	% Supply Storage Damage
A'zaz	1	0%	0%	100%	0%
Idleb	1	100%	0%	0%	0%

Figure 25. Silo Damages per District

Only two operational silos were mapped, which were located in A'zaz and Idleb districts. As illustrated in figure 25 the silo in A'zaz district reported damage to its infrastructure, while the silo located in Idleb reported damage to its warehouse building structure.

TELL US WHAT YOU THINK!



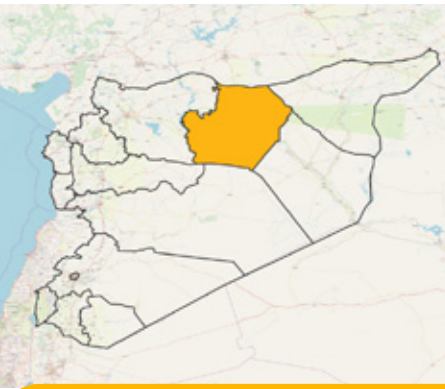
[LINK](#)

Mapping of Wheat-to-Bread Processing Facilities

Ar-Raqqa February 2023



WHOLE OF SYRIA (WoS)
FOOD SECURITY SECTOR
Strengthening Humanitarian Response



TOTAL POPULATION 117237
PIN 70019

BAKERIES 12

Bakery Status



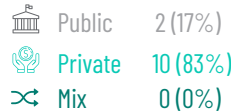
Reasons for Non-Operation

- High Operational Cost
- No Access to Support
- No Financial Liquidity

Functionality

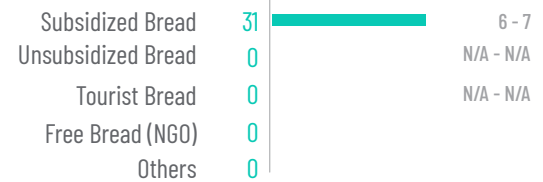


Ownership



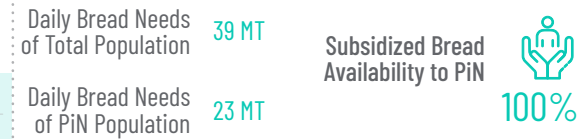
Bread Production

Daily Production (MT)



Average Subsidized Bread Package Weight 2375g

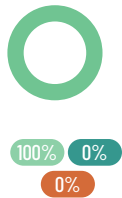
Average Unsubsidized Bread Package Weight N/Ag



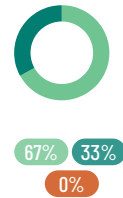
Availability

● Always Available ● Fairly Available ● Not Available

Yeast



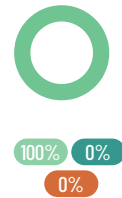
Bread



Fuel



Flour



Support Status

Currently Not Receiving Support 9 (82%)

Currently Receive Support 2 (18%)

Type of Support	Source of Support		
	NGO	LC	AFAD
Rehabilitation	0%	0	0
Operational Support	0%	0	0
Flour	100%	0	2
Yeast	0%	0	0

Source and Price of Flour

100% Imported Flour 580-610 \$/MT
0% Local Flour 485-490 \$/MT

SOURCES

Source	Imported Flour	Local Flour
Trader	33%	0%
Mill	0%	0%
LC	0%	0%
NGO	0%	0%
Other	67%	0%

MILLS 12

Mills Status



Reasons for Non-Operation

- Need for Building Rehabilitation
- Fuel/Electricity Shortage
- High Operational Cost

Functionality



Ownership



Reasons for Limited Functionality

- Fuel/Electricity Shortage
- Low Demand in Area
- High Operational Cost



MILLS SOURCE OF WHEAT

Farmers, Traders

Milling Capacity



Production Functionality 35%

Market Actors Supplied by Mills



SILOS 2



SILOS SOURCE OF WHEAT N/A

Silos Status



Functionality



Ownership



Reasons for Non-Operation: Bombing and Shelling, Displacement Due to War

Needed Support for Silos

Building Rehabilitation 0
Machine Rehabilitation 0
Estimated Cost of Machines and Rehabilitation \$0

Silos Capacity

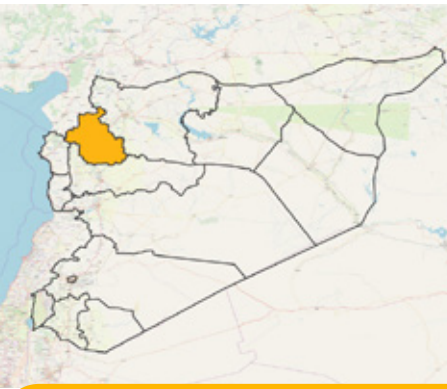
Silos Maximum Storage Capacity 0 MT

Mapping of Wheat-to-Bread Processing Facilities

Idleb February 2023



WHOLE OF SYRIA (WoS)
FOOD SECURITY SECTOR
Strengthening Humanitarian Response



TOTAL POPULATION 2898497
PIN 2149234

BAKERIES 113

Bakery Status



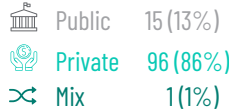
Reasons for Non-Operation

- High Operational Cost
- No Access to Support
- Inability to Compete with Supported Bakeries

Functionality

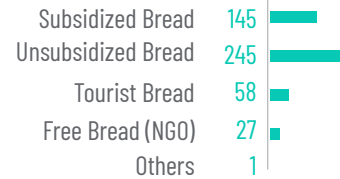


Ownership

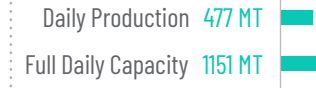


Bread Production

Daily Production (MT)



Price (TL) /KG



Current Productivity



Daily Bread Needs of Total Population 957 MT

Subsidized Bread Availability to PIN



Daily Bread Needs of PIN Population 709 MT

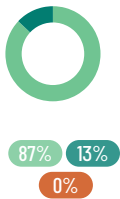
Average Subsidized Bread Package Weight 877g

Average Unsubsidized Bread Package Weight 719g

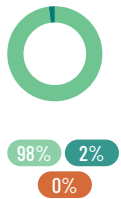
Availability

● Always Available ● Fairly Available ● Not Available

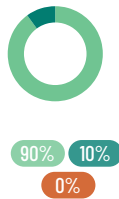
Yeast



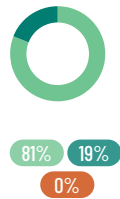
Bread



Fuel



Flour

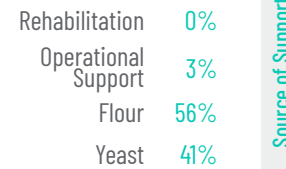


Support Status

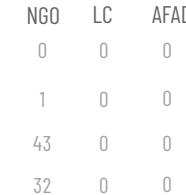
Currently Not Receiving Support 65 (60%)

Currently Receive Support 44 (40%)

Type of Support



Source of Support

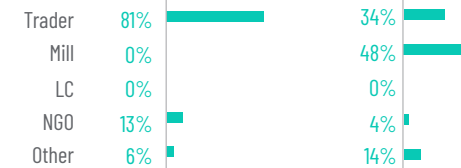


Source and Price of Flour

82% Imported Flour 410-500 \$/MT

18% Local Flour 380-480 \$/MT

SOURCES



MILLS 11

Mills Status



Reasons for Non-Operation

- Need for Machine Rehabilitation
- Wheat Shortage
- N/A

Functionality



Reasons for Limited Functionality

- Low Demand in Area
- Need for Machine Rehabilitation
- Wheat Shortage

Ownership



MILLS SOURCE OF WHEAT

LC, Farmers, Traders, NGOs

Milling Capacity

Maximum Capacity 2370 MT

Current Capacity 1345 MT

Production Functionality **57%**

Market Actors Supplied by Mills



SILOS 1

Silos Status



Functionality



Ownership



Reasons for Non-Operation N/A



SILOS SOURCE OF WHEAT Farmers

Needed Support for Silos

Building Rehabilitation 1
Machine Rehabilitation 0
Estimated Cost of Machines and Rehabilitation \$4000

Silos Capacity

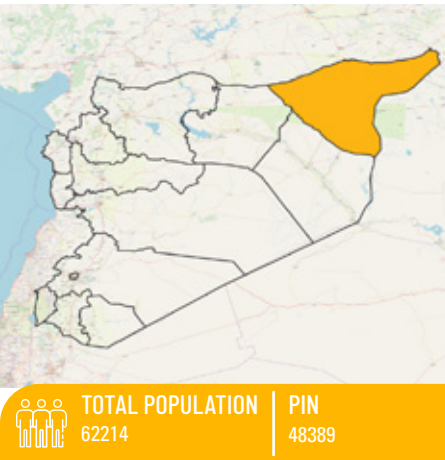
Silos Maximum Storage Capacity **110000 MT**

Mapping of Wheat-to-Bread Processing Facilities

Al-Hasakeh February 2023



WHOLE OF SYRIA (WoS)
FOOD SECURITY SECTOR
Strengthening Humanitarian Response



BAKERIES 4

Bakery Status



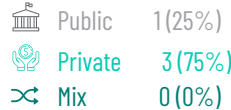
Reasons for Non-Operation

- Displacement Due to War
- Need for Building Rehabilitation
- Need for Machine Rehabilitation

Functionality

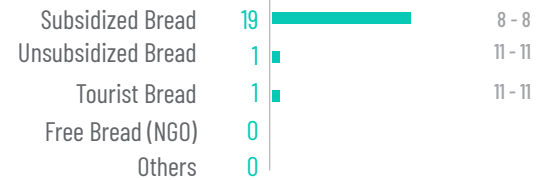


Ownership



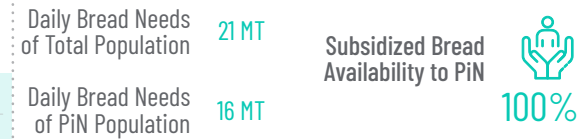
Bread Production

Daily Production (MT)



Average Subsidized Bread Package Weight 500g

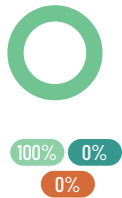
Average Unsubsidized Bread Package Weight 700g



Availability

● Always Available ● Fairly Available ● Not Available

Yeast



Bread



Fuel



Flour



Support Status

Currently Not Receiving Support 3 (75%)

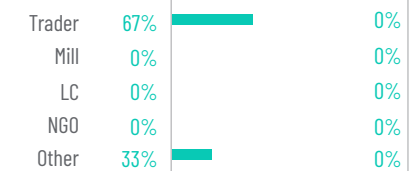
Currently Receive Support 1 (25%)

Type of Support	Source of Support		
	NGO	LC	AFAD
Rehabilitation	0%	0	0
Operational Support	0%	0	0
Flour	100%	0	1
Yeast	0%	0	0

Source and Price of Flour

100% Imported Flour 600-650 \$/MT
0% Local Flour 450-500 \$/MT

SOURCES



MILLS 12

Mills Status



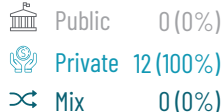
Reasons for Non-Operation

- Fuel/Electricity Shortage
- Need for Machine Rehabilitation
- Need for Building Rehabilitation

Functionality



Ownership



Reasons for Limited Functionality

- Fuel/Electricity Shortage
- High Operational Cost
- No Financial Liquidity

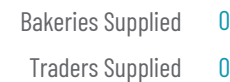


MILLS SOURCE OF WHEAT Farmers

Milling Capacity



Market Actors Supplied by Mills



SILOS 8

Silos Status



Functionality



Ownership



Reasons for Non-Operation: High Operational Cost, No Financial Liquidity, Need for Building Rehabilitation



SILOS SOURCE OF WHEAT N/A

Needed Support for Silos

- Building Rehabilitation 0
- Machine Rehabilitation 0
- Estimated Cost of Machines and Rehabilitation \$0

Silos Capacity

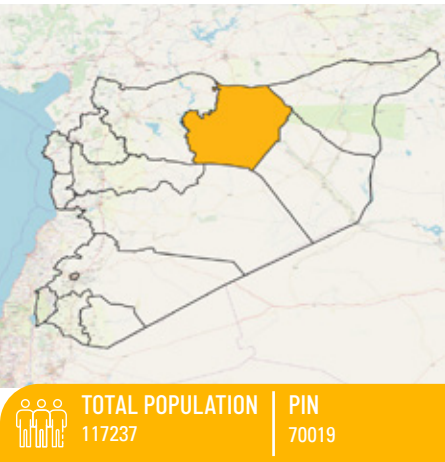
Silos Maximum Storage Capacity **0 MT**

Mapping of Wheat-to-Bread Processing Facilities

Ar-Raqqa February 2023



WHOLE OF SYRIA (WoS)
FOOD SECURITY SECTOR
Strengthening Humanitarian Response



BAKERIES 12

Bakery Status



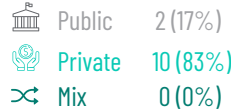
Reasons for Non-Operation

- High Operational Cost
- No Access to Support
- No Financial Liquidity

Functionality

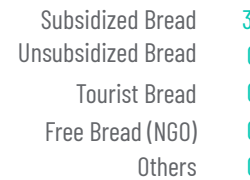


Ownership



Bread Production

Daily Production (MT)



Price (TL) /KG

6 - 7
N/A - N/A
N/A - N/A

Average Subsidized Bread Package Weight 2375g

Average Unsubsidized Bread Package Weight N/Ag



Current Productivity 70%

Daily Bread Needs of Total Population 39 MT

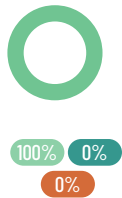
Subsidized Bread Availability to PIN 100%

Daily Bread Needs of PIN Population 23 MT

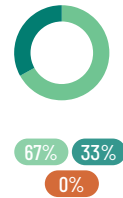
Availability

● Always Available ● Fairly Available ● Not Available

Yeast



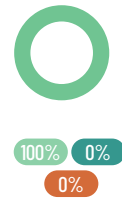
Bread



Fuel



Flour

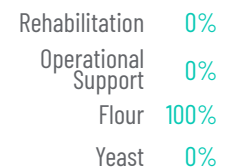


Support Status

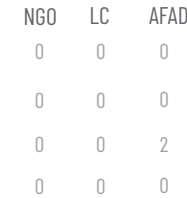
Currently Not Receiving Support 9 (82%)

Currently Receive Support 2 (18%)

Type of Support



Source of Support

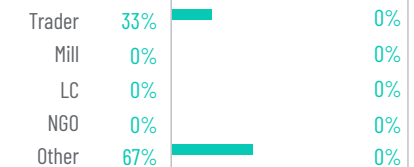


Source and Price of Flour

100% Imported Flour 580-610 \$/MT

0% Local Flour 485-490 \$/MT

SOURCES



MILLS 12

Mills Status



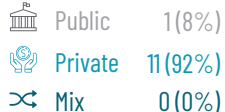
Reasons for Non-Operation

- Need for Building Rehabilitation
- Fuel/Electricity Shortage
- High Operational Cost

Functionality



Ownership



Reasons for Limited Functionality

- Fuel/Electricity Shortage
- Low Demand in Area
- High Operational Cost

MILLS SOURCE OF WHEAT Farmers, Traders

Milling Capacity



Market Actors Supplied by Mills



SILOS 2

Silos Status



Functionality



Ownership



Reasons for Non-Operation: Bombing and Shelling, Displacement Due to War

SILOS SOURCE OF WHEAT N/A

Needed Support for Silos

Building Rehabilitation 0
Machine Rehabilitation 0
Estimated Cost of Machines and Rehabilitation \$0

Silos Capacity

Silos Maximum Storage Capacity 0 MT