



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

# Wheat-to-Bread Processing Facilities Mapping Study for Northeast Syria

Quarter 1, March 2021



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## Introduction

With the existence of the Peace Spring Operation (PSO) zone, the wheat-flour to bread value chain of north east Syria (NES) has been influenced by the reconfigured power dynamics. The offensive PSO escalation which culminated in the establishment of a “buffer zone” in NES is perceived to continue impacting the wheat-flour to bread value chain segments and its actors across the region.<sup>1</sup> In addition to a decline in wheat production, bakeries, mills, silos which are key infrastructure for food security in Syria and have suffered greatly since the onset of the conflict due to strained supply chains, severed access routes, and damages due to intentional targeting by armed actors. Accordingly, humanitarian actors have been supporting relevant wheat-flour to bread program activities that contribute to meeting the short and long-term needs of affected communities. This report highlights the Syrian peoples’ overall requirements for the wheat-flour to bread value chain which aims to assist humanitarian relief organizations in planning and project formulations related to the bread program support in NES.

## Study objectives

Given that bread is a key staple in the Syrian diet, humanitarian organizations also assist bakeries across Syria to increase the supply of bread, as well as to improve household access to bread at a stabilized price. Hence, there was a flagged need by the Food Security and livelihood (FSL) cluster in NES, and the members of Bakeries and Bread Coordination Group (BBCG) in NES to have a better understanding of the market dynamics and map the processing facilities in the wheat-flour to bread value chain in NES. The study aims to provide recommendations to the implementing partners as per the following analytical questions:

1. Assess the capacity and functionality of wheat-flour to bread processing facilities in NES;
2. What is the existing gap of bread production in NES to meet the bread needs of the local population;
3. What are the main bread production barriers and the needed support to fill this gap;
4. Assess the accessibility and affordability of bread in NES;

## Geographical coverage

Thirty-three sub-districts were assessed in March 2021 across four governorates: 14 sub-districts in Al-Hasakeh, 8 in Deir-ez-Zor, 6 sub-districts in Aleppo, and 5 in Ar-Raqqa. Overall, 708 wheat-flour to bread processing facilities were mapped in NES, out of these 708 facilities, 449 were bakeries, 219 were mills, and 40 were silos.

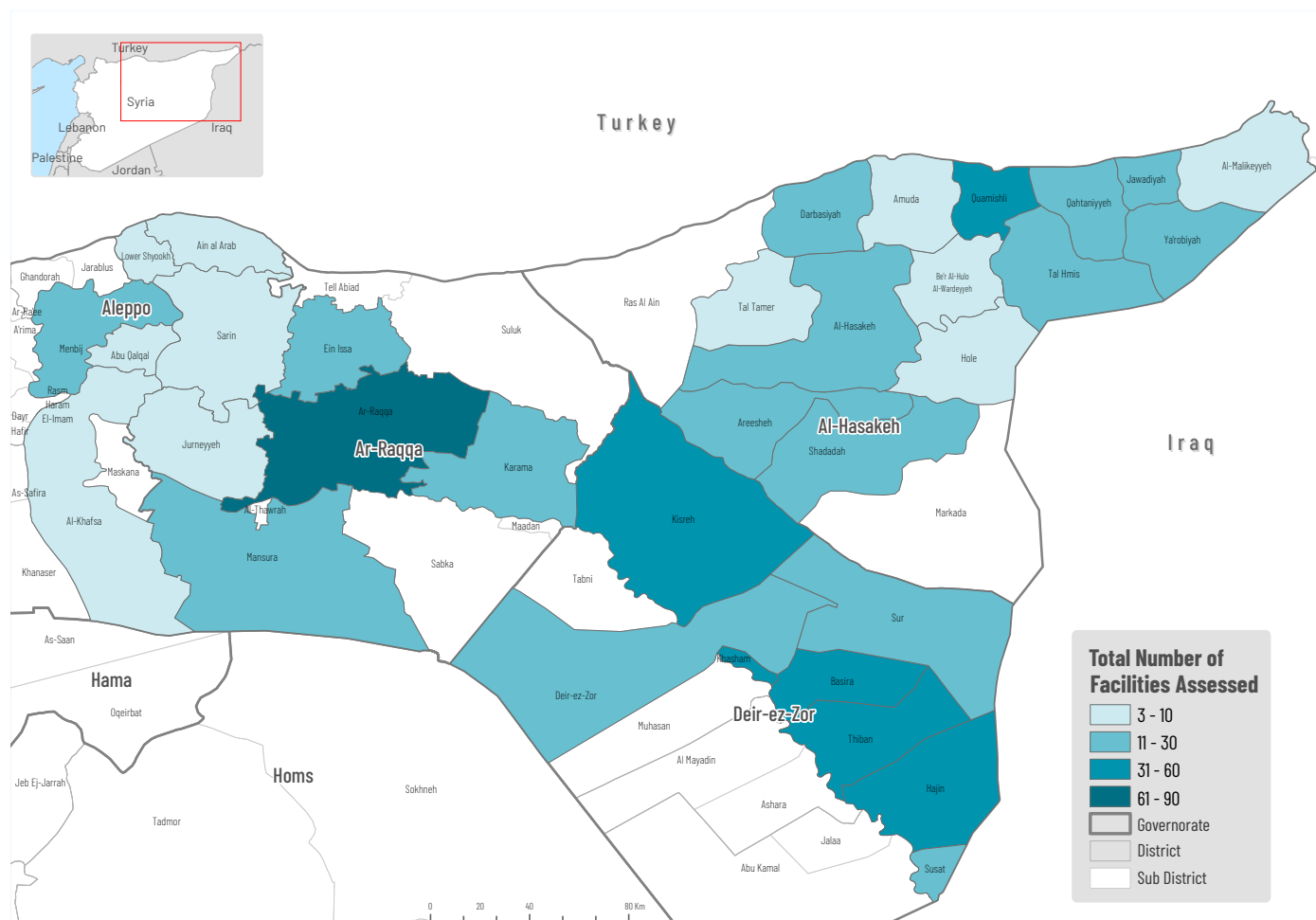


Figure 1: Assessed Facilities in NES, March 2021

As illustrated in Figure 2: “Wheat-Flour to Bread Processing Facilities in NES, March 2021”, Al-Hasakeh governorate came first with the number of mapped bakeries and silos (158 bakeries, 17 silos) whereas, Deir-ez-Zor came first with the number of mapped mills (112 mills).

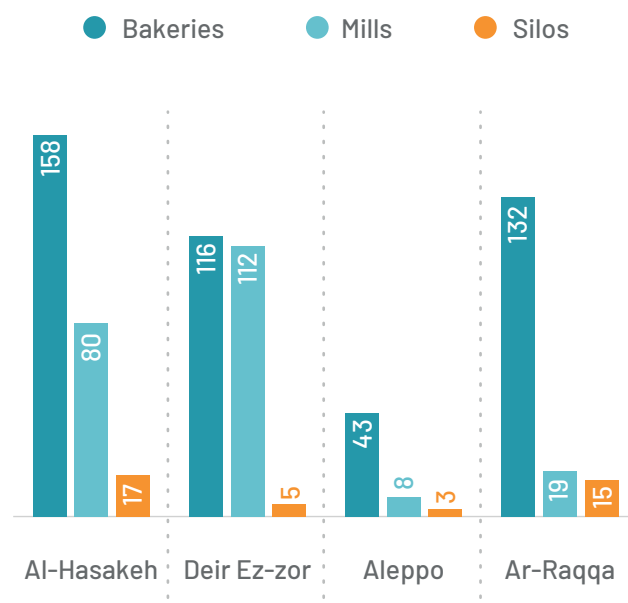


Figure 2: Wheat-flour to Bread Processing Facilities in NES, March 2021

## Methodology

The key informant interviews with market actors were carried out by enumerators, using three different questionnaires targeted to each processing facility (Bakery, Mill, and Silo). These questionnaires were developed by iMMAP in close coordination with the FSL Cluster and BBCG in NES.

**Data collection tools development:** iMMAP designed three different facility mapping tools for silos, mills, and bakeries, respectively. These data collection tools were designed to identify and assess the highest number possible of:

- Public and private wheat-flour to bread processing facilities, providing a general profile overview of ownership.
- Functional wheat-flour to bread processing facilities and whether they are being supported by subsidized programs.
- Damaged wheat-flour to bread processing facilities and related malfunctioning equipment/machines.

Enumerators met with facility owners/managers to carry out the mapping of silos, mills, and bakeries. The surveys were aimed at exploring the operational capacity of the functional wheat-flour to bread processing facilities.

**Data collection-** Upon finalizing the data collection tools, iMMAP provided online training for the enumerators and took into consideration the enumerators' feedback to amend the tools accordingly. The next step was field testing, before kicking off the data collection activity.

**Sampling-** A predefined list of wheat-flour to bread facilities was used to kick off the data collection exercise, which was provided by the FSL Cluster partners of NES was adopted to cover as many facilities as possible across the defined study area.

**Data analysis** - The completed questionnaires were transferred from Syria to the iMMAP office in Amman, Jordan, through the Kobo Collect program, whereby iMMAP used the data to build a Microsoft Excel database, which was used to create relevant tables, charts, and graphs for reporting. The iMMAP Geographical Information System team developed maps for the report using ArcGIS software. Finally, the narrative report was drafted by iMMAP analysts and researchers, and the iMMAP production unit worked on the graphic designing component of the report, factsheets, and their layouts.



## The status of the wheat-flour to bread facilities

The number of reported operating bakeries was high, given that 84% (n=375) of the assessed bakeries were operational, likewise, for the mapped mills 81% (n=178) were operational. However, the number of reported operating silos was low as 55% (n=22) were operational.

Operating mills recorded the highest percentage of functionality across the assessed processing facilities with 67% (n=117) being able to work with full functionality, followed by silos with 50% (n=11) being able to work with full functionality, then bakeries came last where the percentage of bakeries who were able to work with full functionality was limited to 43% (n=163). Nonetheless, overall shortages in wheat, fuel, and electricity and the increasing operational and input material costs coupled with malfunctional machinery placed a burden on the wheat-flour to bread processing facilities which limited their functionality, production, and profitability.

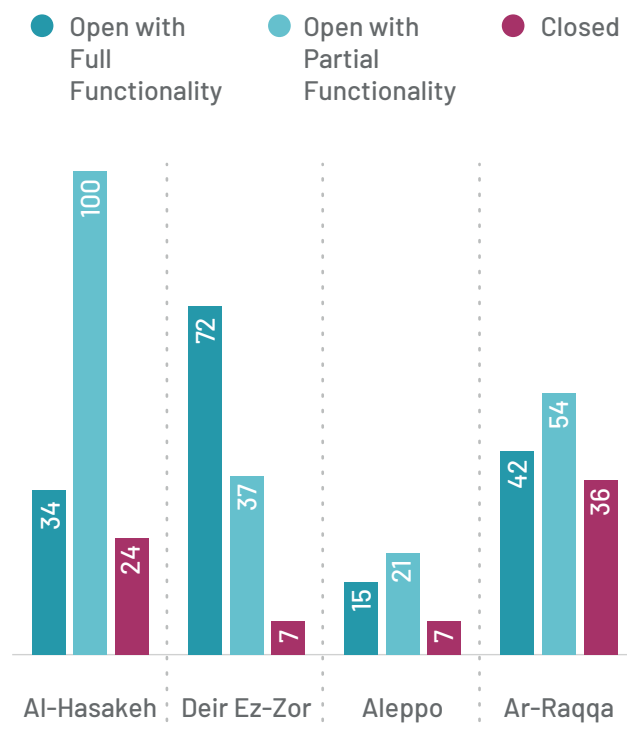


Figure 3: Bakeries Status in NES, March 2021

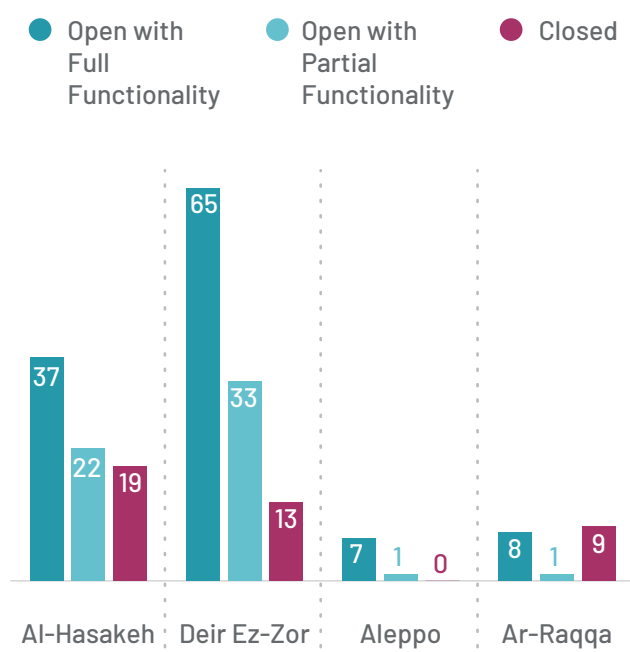


Figure 4: Mills Status in NES, March 2021

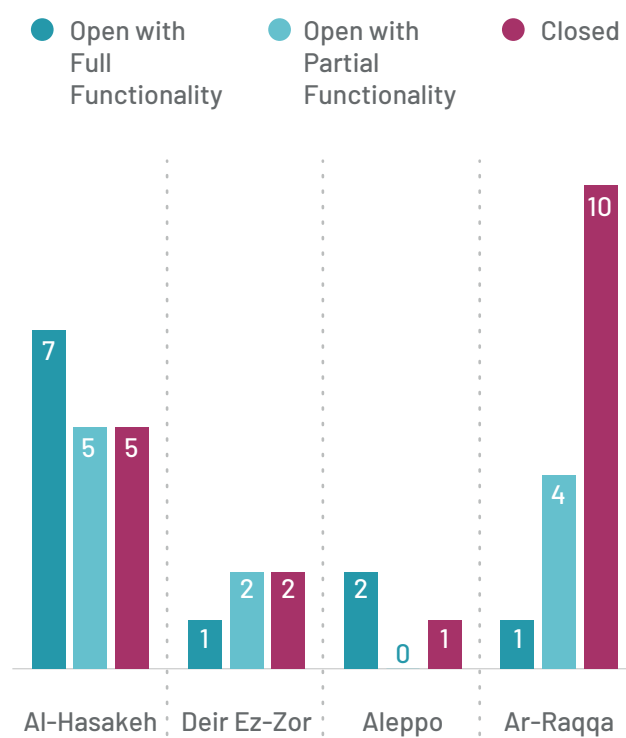


Figure 5: Silos Status in NES, March 2021

## Percentage of functionality vs actual

The reported total storage capacity of all assessed silos was 860,000 MT, with an average of 66,154 MT per silo. As for mills, the reported maximum weekly production capacity of all assessed mills was 17,552 MT of flour, however, the mills' actual weekly production was 11,566 MT of flour. As for bakeries, the reported maximum weekly production capacity of all assessed bakeries was 17,568 MT of bread, however, the bakeries' actual weekly production was 6855 MT of bread. The functionality of bakery facilities stood at 39% across the 375 assessed operational bakeries across the NES region of Syria. This indicated that the operational bakeries in NES were producing at 39% of their full production capacity, during the reporting period.

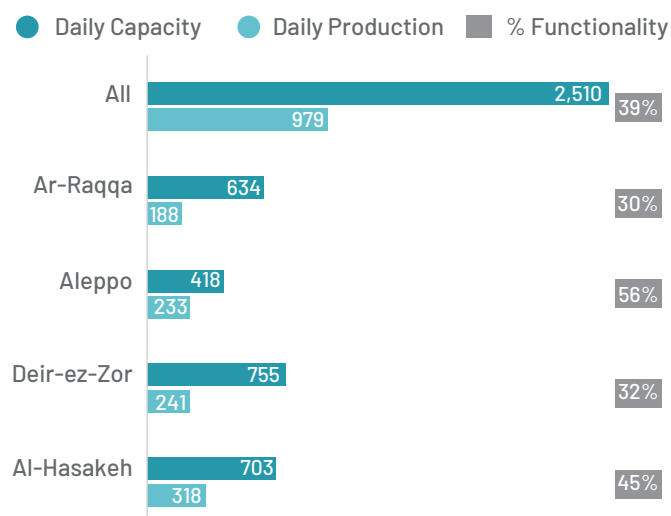


Figure 6: Daily Bread Production Capacity for Bakeries in NES, March 2021

Figure 6: "Daily Bread Production Capacity for Bakeries in NES, March 2021", illustrates that Al-Hasakeh governorate came first in terms of the largest amount of daily production of bread (MT of baked flour) with 318 MT, this was followed by Deir-ez-Zor governorate with 241 MT, then Aleppo governorate with 233 MT. Ar-Raqqa governorate had the least amount of daily production of bread with 188 MT. It is worth mentioning that Aleppo governorate recorded the highest functionality rate of 56%, meaning that the bakeries in Aleppo were producing at 56% of their full production capacity. However, Ar-Raqqa governorate recorded the lowest functionality rate with 30%.

## Wheat-flour to bread facilities ownership

Overall, the number of processing facilities that were reported being publicly owned was lower as compared to those that reported for private ownership. Only 9% (n=40) of the assessed bakeries were publicly owned. Also, the reported percentage of publicly owned mills was even lower, as only 4% (n=9) of the assessed mills were publicly owned. However, in regard to the silos, 98% (n=39) were reported as publicly owned. On the other hand, some bakeries 4% (n=20) were reported to be under both public and private ownership, where in some cases, the Local SANES owns the building, machinery and equipment, and a private investor rents for operations.



## Wheat-flour to bread facilities management

The majority 93% (n=203) of assessed mills were reported to be managed by the owners, 4% (n=8) managed by Local Self Administration (LSA), and 3% (n=6) managed by a staff member. On the other hand, the majority 75% of interviewed silos were managed by LSA, 8% by the committee, and 5% by a staff member. Nonetheless, the majority 80% (n= 300) of assessed bakeries were reported to be managed by the owner, 11% (n=41). Only 13 bakeries (3% of the total opened bakeries) were reported to be managed by LSA, and 3 bakeries reported to be managed jointly with LSA. Also, it is worth noting that only 3 bakeries reported that they were managed by a committee; these committees consisted of a number of investors who were partnering together and jointly managing the bakeries, however, final decisions for the management are made by LSA.

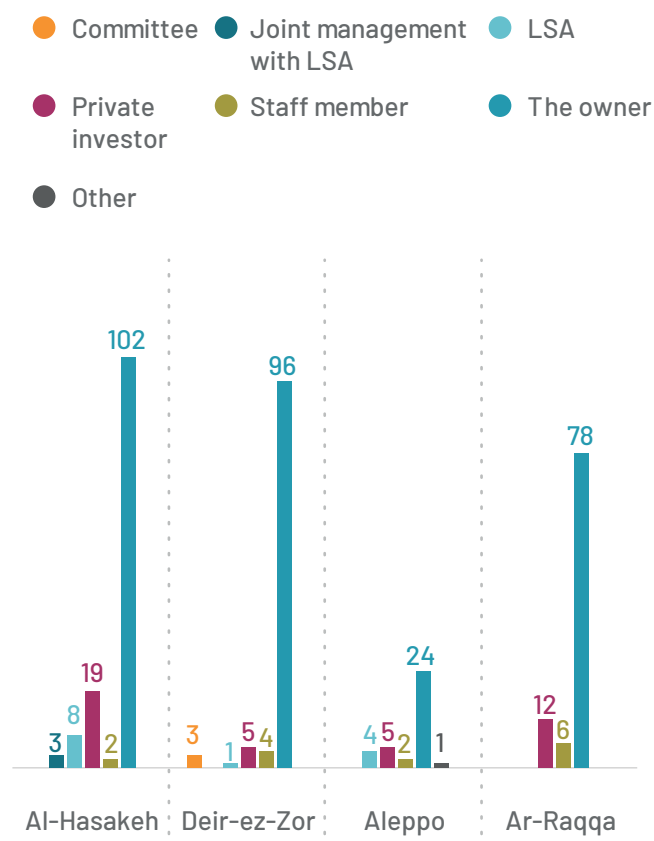


Figure 7: Bakery Management in NES, March 2021

## Bakery bread production and types of bread produced

In NES, the percentage of produced subsidized bread was reported to be 71% of total production (4859 MT/Week), followed by unsubsidized bread with 20% (1350 MT /week), then tourist bread 8% (576 MT/Week), NGO free bread 0.5% (34 MT/Week), and unspecified other types of bread with 0.5% (34 MT/Week).

It is worth noting that the percentage of produced subsidized bread in Aleppo and Ar-Raqqa governorates was as high as 81%, 1313MT/ week in Aleppo, and 1069 MT/week in Ar-Raqqa. Al-Hasakeh and Deir-ez-Zor governorates had lower percentages of subsidized bread produced as compared to Aleppo and Ar-Raqqa governorates, given that in Deir-ez-Zor governorate 69% (1159 MT/week) and in Al-Hasakeh governorate 63% (1395 MT/week) of their produced bread was subsidized.

Nonetheless, the total population in the 33 assessed sub-districts in NES was 2,625,528 persons, hence, the daily needs of bread in the assessed areas was 866 MT<sup>2</sup>, whereas the daily produced subsidized bread was limited to 695 MT of bread. This indicated that 20% of the population in NES (n= 525,106 persons) did not have access to subsidized bread. It is worth mentioning that bakeries at 3 out of the 33 assessed sub-districts reported that they did not produce subsidized bread (Khasham, Al-Malikeyyeh, and Quamishli).

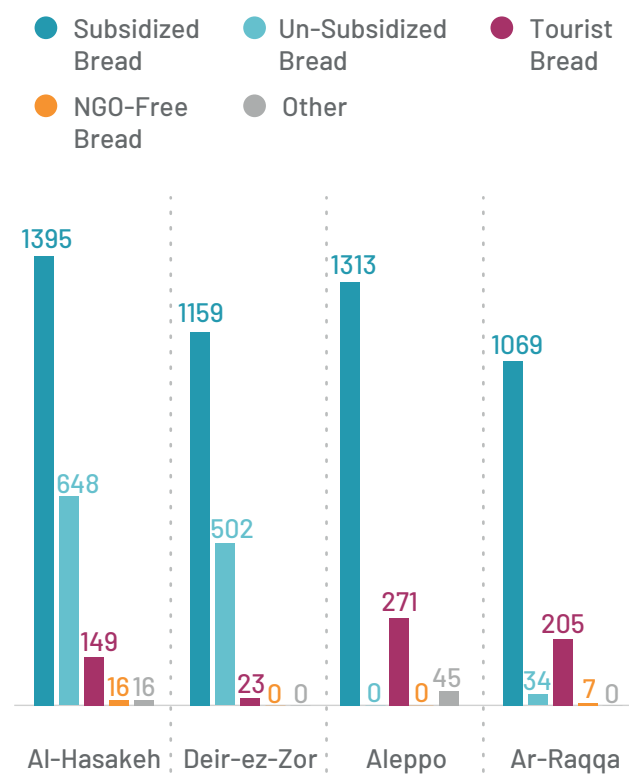


Figure 8: Bakery Production in NES, March 2021

## Bakery support status

The majority of the interviewed bakery representatives 64% (n= 239) reported that they are currently receiving humanitarian aid support, this denotes a decrease in the number of supported bakeries as compared to Q4, 2020 (n=257). This change was mainly caused by the decrease in the number of supported bakeries in Al-Hasakeh governorate. Nonetheless, this round of Q1, 2021, Ar-Raqqa governorate had the highest number of supported bakeries (n=74), while the number of supported bakeries in Idleb governorate was the lowest, as only 33 bakeries had access to support. However, Al-Haskaeh governorate had the highest number of unsupported bakeries that reached 72.

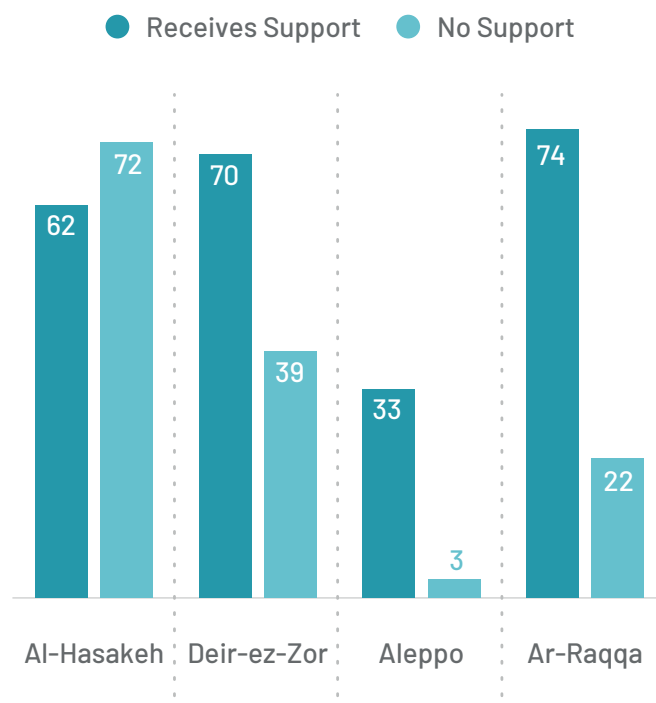


Figure 9: Bakery Support in NES, March 2021

## Source of bakery support

As illustrated in figure 10: Source and Type of Support in NES, March 2021, the majority of supported bakeries (91%) indicated that they receive support from LSA. The main support that the bakeries received from LSA was flour distribution, energy: fuel and electricity, and yeast support. Whereas the main support that the bakeries received from NGOs was flour and yeast input distribution support. All governorates had access to more than one source of support to cover some of their needs. Flour and yeast were the two main reported types of support that were provided by LSA. Eight bakeries were supported by LSA, and 3 bakeries supported by NGOs reported receiving operational support, while 12 bakeries supported by LSA and 3 bakeries supported by NGOs reported receiving wheat-flour to bread facilities rehabilitation support.

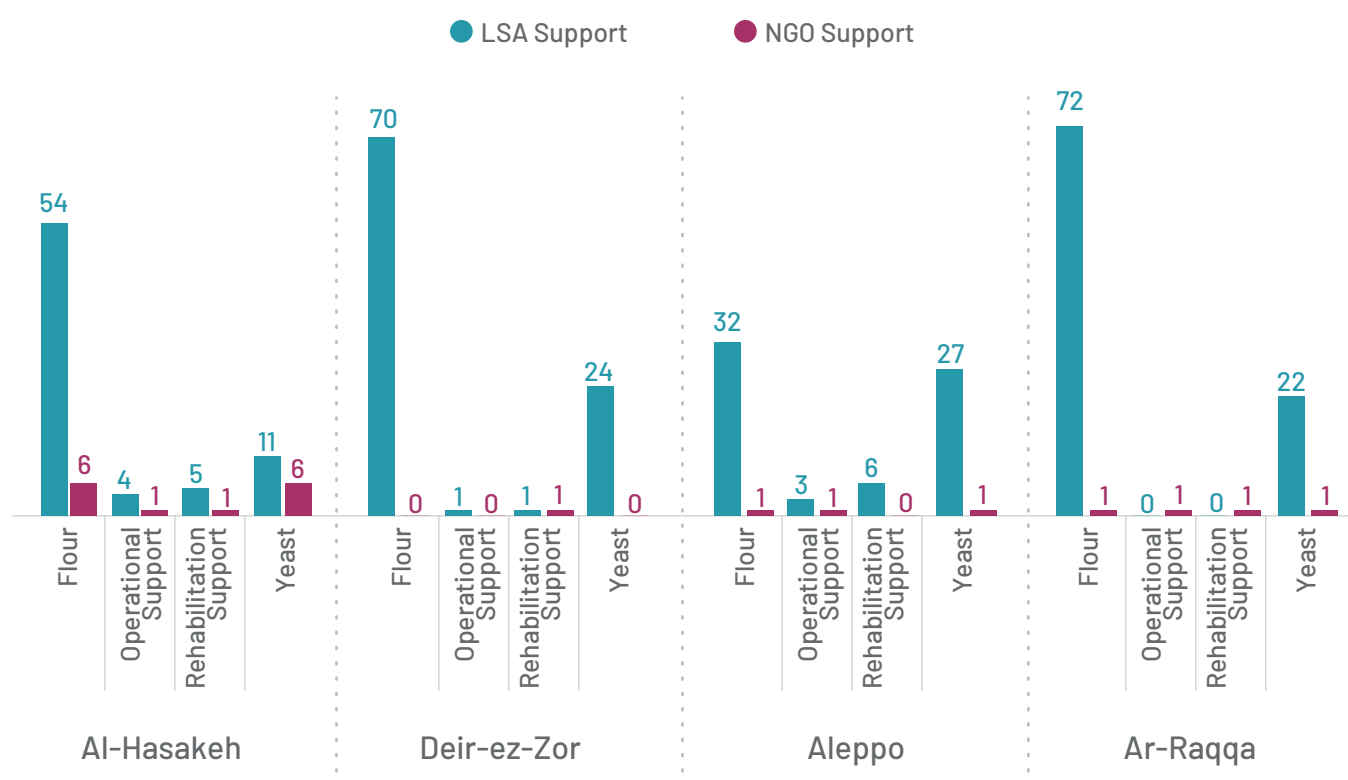


Figure 10: Source and Type of Support in NES, March 2021

## Needed support

The majority of operational bakeries (n=185) indicated their needs for maintenance or rehabilitation support including building infrastructure rehabilitation (97), new equipment (54), and machine maintenance (492) given that a bakery could need of more than one type of support.

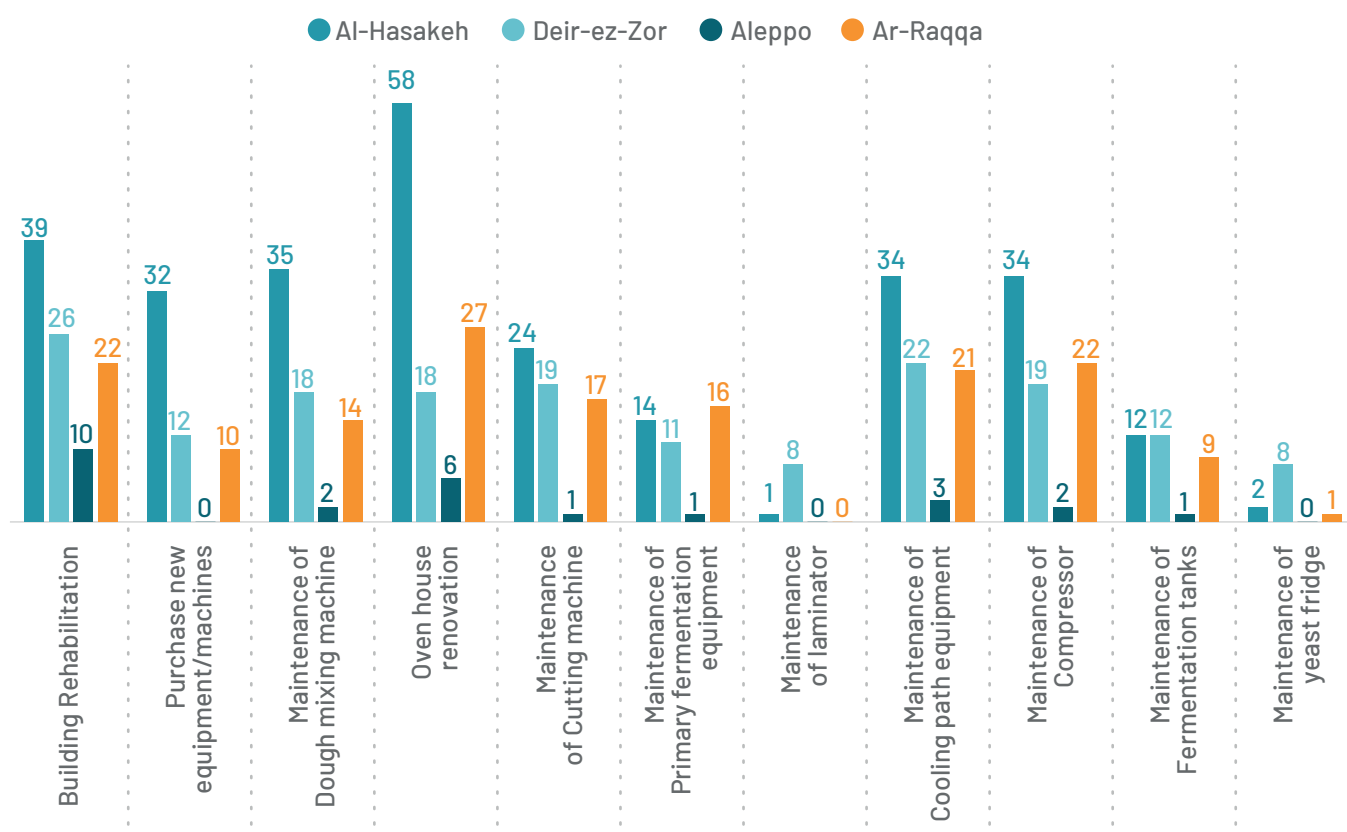


Figure 11: Bakery Needed Support in NES, March 2021

The total estimated cost of building infrastructure rehabilitation for all the assessed bakeries was 394,360 USD, whereas the total equipment maintenance cost reportedly required was 994,677 USD and the total cost of purchasing new equipment was 1,025,500 USD. On the other hand, 71% (n=132) of the bakeries that reported the need for maintenance or rehabilitation support indicated that they relied on external technicians to maintain their machinery and equipment.

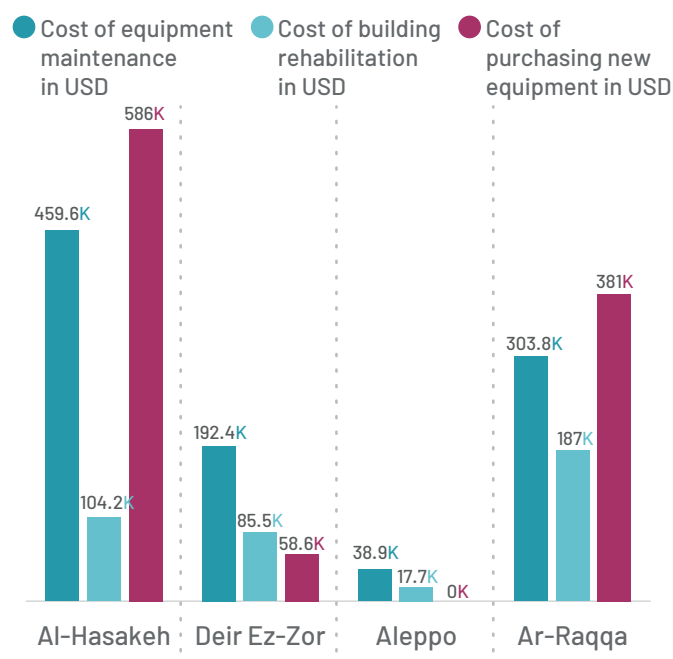


Figure 12: Cost of Bakery Support Needs in NES, March 2021

## Availability of bread production inputs

In terms of bread production inputs availability, bakeries in the assessed areas reported that locally milled flour was available (81%, n= 302), likewise, yeast was reported to be widely available (98%, n=369), and fuel was available as well (98%, n=368).

On the other hand, **73% of interviewed bakeries reported that bread was available (ranged between always and fairly available), however, 27% reported that bread was rarely available (23%) or not available at all (4%). This is a major decrease in bread availability in comparison to the last round in Q4 2020, where 84% of interviewed bakeries reported that bread was available, while 16% reported that it was not.** The bakeries that reported that bread was not available at all (4%, n=16) are located in Ar-Raqqa and Al-Hasakeh governorates, in Karama, Ar-Raqqa, Amuda, Jawadiyah, Al-Haskaeh, and Tal Hamis sub-districts, and the cited reason for this low availability was a shortage of flour and the low number of bakeries there.

Much of the flour used by the bakeries for bread production is locally milled flour 99% (6755 MT/week). The table below displays the quantity and source of flour used per week in NES during Q1, 2021.

Governorate	Sum of local flour quantity in (MT /Week)	Sum of imported flour quantity (MT /Week)	Total Flour (MT)	% of Local Flour	% of Imported Flour
Al-Hasakeh	2229	0	2229	100%	0%
Deir-ez-Zour	1650	34	1684	98%	2%
Aleppo	1628	0	1628	100%	0%
Ar-Raqqa	1248	66	1314	95%	5%
<b>Grand Total</b>	<b>6755</b>	<b>100</b>	<b>6855</b>	<b>99%</b>	<b>1%</b>

Furthermore, many bakeries reported that they are facing challenges in getting locally milled flour given the notable increase in input prices, distance from distribution centers, and the quality of the flour. On the other hand, 59% of the interviewed bakeries in all governorates reported that it was hard to find imported flour as a result of trader routes and border crossings closure, the high price of imported flour, and the price fluctuations due to the instability of the SYP/USD exchange rates. Along with these reasons, bakeries in Ar-Raqqa and Al-Hasakeh reported that local flour is available at a subsidized price by LSA, and LSA limits the importation of flour from Turkey, and this is why imported flour is fairly unavailable in the region.

Nonetheless, in regards to flour supply source, assessed mills in the NES region reported that they directly supply the flour more to bakeries (54%) than to traders (46%). Mills mainly sourced wheat grain in Aleppo governorate from LSA, while mills in Al-Haskaeh, Ar-Raqqa, and Deir-ez-Zour governorates obtained wheat mainly from farmers, followed by wheat traders, and by LSA.

## Quality control laboratory testing

Overall, 90% of the interviewed bakeries reported that there were no laboratory tests carried out in their area for the bread production inputs such as flour and yeast. Few bakeries (10%) reported that they test their production inputs, and this includes manual examination, LSA examination, laboratory testing, and inputs supply inspector examination. Nonetheless, 82% of the bakeries reported that the laboratory tests for bread manufacture are not mandatory in Syria. At a governorate level, Aleppo had the highest number of bakeries (n=22) that reported that there was production inputs testing.

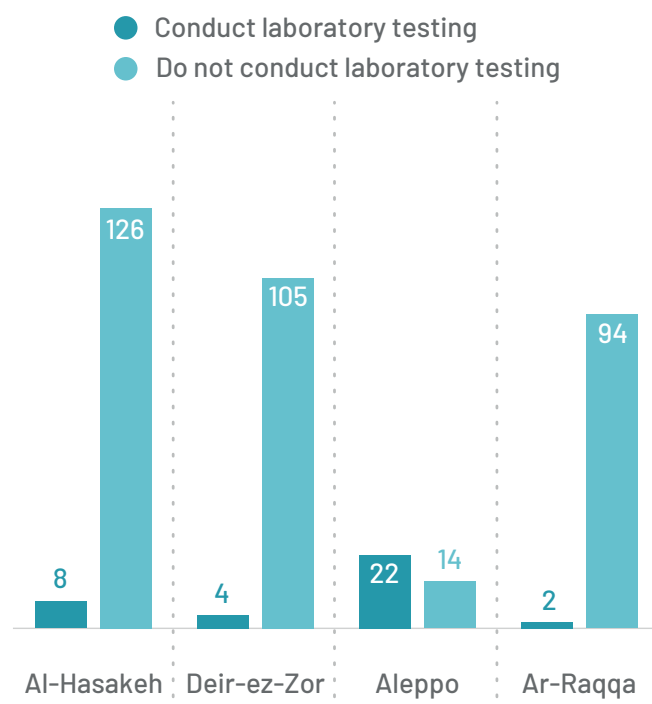


Figure 13: Bread Production Inputs' Laboratory Testing in NES, March 2021

## Bread Production cost

The average production cost of one MT of bread in the NES region was reported to be 114 USD. Overall, the production cost on average has increased in comparison to the last round in Q4 2020 where the average cost of producing one MT of bread in the NES region was reported to be 97 USD. Figure 14 presents the cost of producing one MT of bread across all NES governorates. Deir-ez-Zor governorate had the highest reported average cost with 163 USD/MT of bread production, this was followed by Ar-Raqqa governorate with 100 USD/MT of bread production, then Al-Hasakeh governorate with 98 USD/MT and Aleppo governorate came last with 68 USD/MT of bread production.

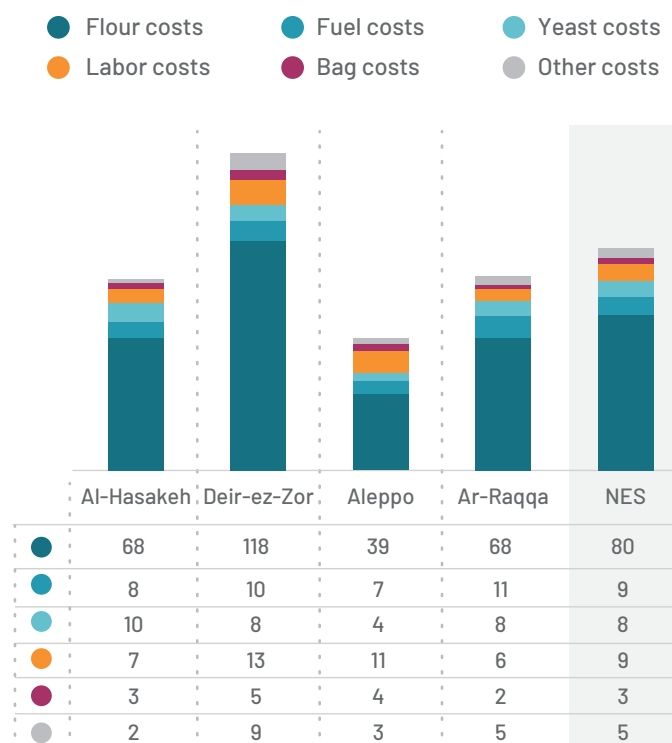


Figure 14: Cost of Producing 1 MT of Bread in NES, March 2021



## Bread production surplus

A new indicator was added to the wheat-flour to bread bakery mapping activity during this first round of 2021, to calculate the surplus or excess produced bread after-sales. Overall, 12% (n=44) of operating bakeries reported they had a surplus of bread after-sales, i.e. a quantity of bread that could not be sold. On average, these bakeries reported that 10% of all their produced bread was excess bread, and the main usage of this excess bread was selling it as animal feed for local herders, and sometimes distributing it as free bread to vulnerable people.

## Bread distribution (shortage vs. surplus)

This is also a new indicator that was introduced in this round aiming to follow up with bakeries that are in areas with a noted surplus or a shortage in the previous round in Q4 2020. The bakeries were asked about their thoughts on why they think there was a shortage or a surplus in their area in Q4 2020 and asked them what is happening to the excess produced bread. The bakeries in areas that indicated a surplus of produced bread in their area reported that the surplus was either consumed in the same sub-district or was sold to nearby areas. More specifically, the bakeries reported that most of the extra bread is usually sold to restaurants (20%) or wasted and used as animal feed (53%). Also, some bakeries (23%) reported that they tend to distribute the excess bread for free for those in need in the same area or in camps.

Also, it is worth noting that many bakeries in surplus areas reported that there was no excess bread produced, and this could be explained by the fact that the assessment's gap calculation for the previous round was based on the minimum needs' standard.

## Bakeries' customer type

To enhance the accuracy of bread gap analysis and by applying the lessons learned from previous bakery mapping rounds, a new indicator was added this round to have information regarding the type of bakery customers. The data showed that the majority, 83% of bakery production was being sold to households, however, the remaining 17% of the produced bread by bakeries were sold to restaurants.

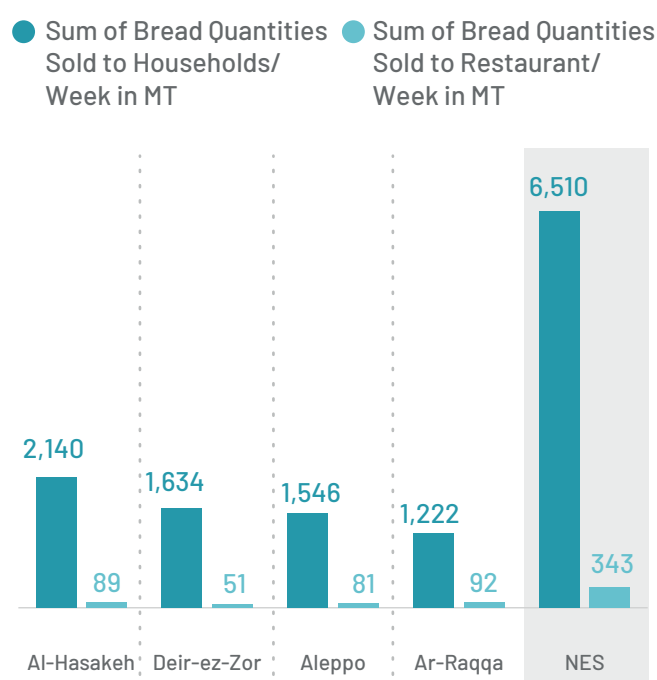


Figure 15: Bakeries' Customer Type in NES, March 2021

## Bakeries' bread selling modality

Majority of interviewed bakeries, 66% reported that they sell their produced bread at a subsidized price; also, they indicated that they sell 25% of their produced bread at an unsubsidized price. Some bakeries 8% reported that they have contracts with NGOs to deliver the produced bread free of charge to vulnerable families through bread distributors.

At a governorate level, 81% of the bakeries in Ar-Raqqa governorate sell subsidized bread which is the highest in comparison to other governorates.

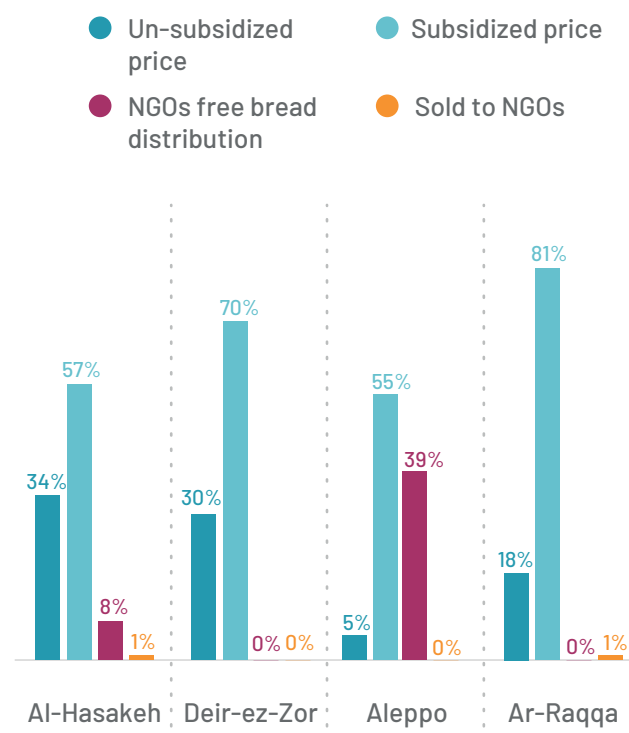


Figure 16: Bakeries' Bread Selling Modality in NES, March 2021

## Currency used for bread process (Bread and Flour)

In terms of currency used, all bakeries reported that they sell the produced bread using SYP, however, there was 1 bakery in Ar-Raqqa governorate in Ein Issa sub-district that reported using Turkish Lira. Also, 3 bakeries in Ar-Raqqa governorate in Karama sub-district reported using both SYP and USD in bread sales. However, bakeries reported that procurement of bread production inputs was not limited to SYP currency, instead, it expanded to foreign currency as well, mainly USD. About, 53%, (n=197) of the interviewed bakeries reported that they only use SYP, while (37%, 137 bakeries) reported that they used SYP and USD. Nonetheless, only one bakery reported that it uses Turkish Lira in the procurement of bread production inputs, this is the same bakery in Ein Issa sub-district in Ar-Raqqa governorate that reported using Turkish Lira to sell produced bread.

## Price of bread and flour

The price of imported flour in the assessed areas was reported to be higher by 66% as compared to the price of locally milled flour. The median reported price for one MT of imported flour was 340 USD, whereas the median reported price for one MT of locally milled flour was 225 USD. As for bread, the price varied from one sub-district to another, see figure 17: Bread Prices in NES, March 2021. The reported median price of subsidized bread was (110 SYP/kg), the reported median price of unsubsidized bread was (1000 SYP/kg), and the median price of tourist bread was recorded (750 SYP/kg).

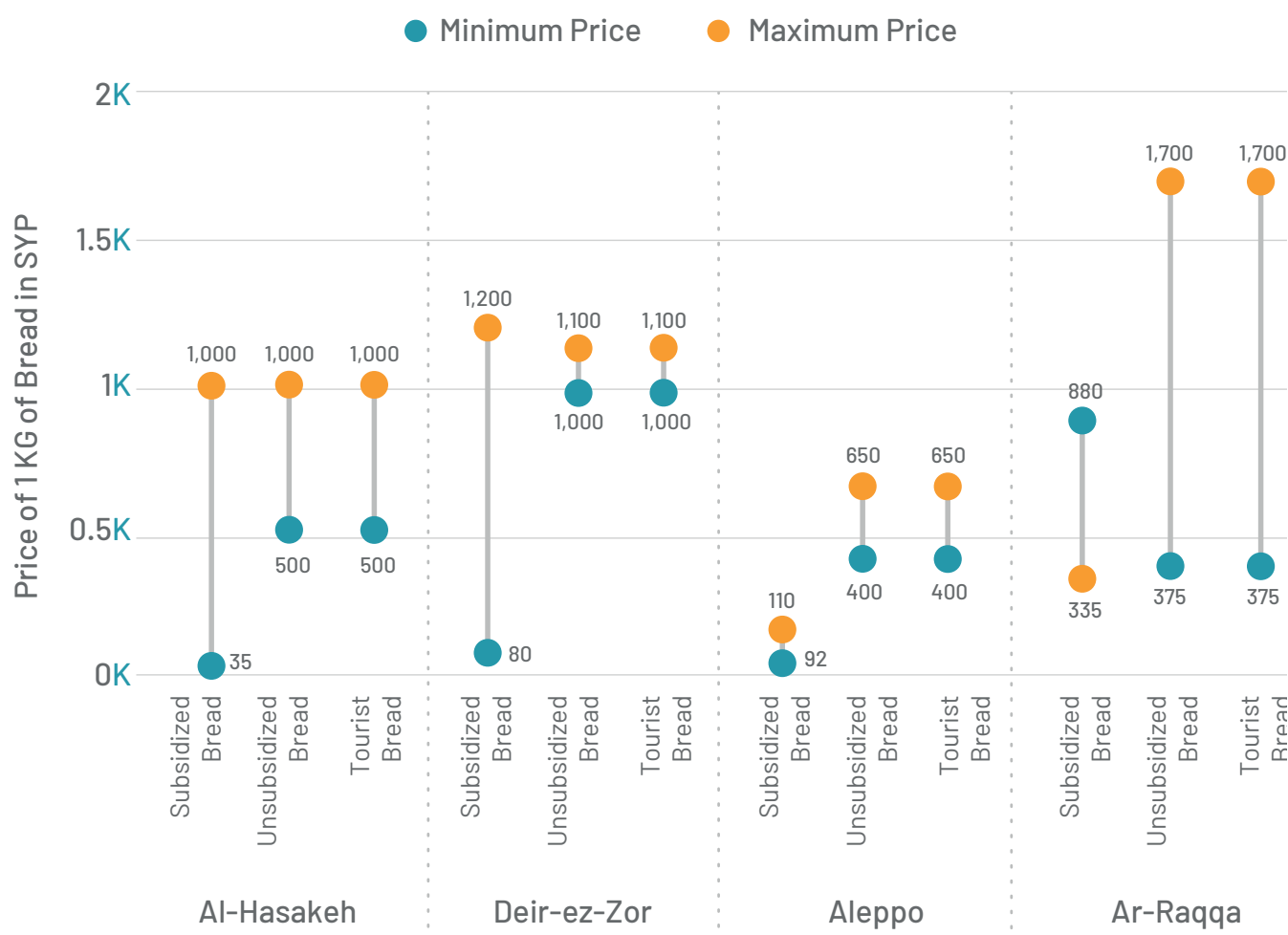


Figure 17: Bread Prices in NES, March 2021

## The role of Local Self Administration in setting the price

This indicator was recently added to the wheat-flour to bread bakery mapping activity during this first round of 2021. This indicator gives a better understanding of how the LSA determines the price of bread in NES. Nonetheless, the majority of the bakeries 90% reported that the LSA is responsible for determining the price of bread in their area, whether it is through the Bread and Bakeries Department, local and municipal councils, or the Economic Office. The LSA is mainly responsible for setting the price of subsidized bread in exchange for its support by providing production inputs. The LSA sets the price after reviewing and studying the market and calculating total production costs of bread depending on the support provided and currency exchange rates in the case of the flour, yeast, and/or fuel subsidies that are provided, labor costs, and other costs associated with production are calculated to determine the bread selling price and the bakery's profit. On the other hand, for unsupported bakeries, the price of bread is determined by the owner of the bakery according to the production costs and the prevailing currency exchange rates.

## The impact of the NGO work on the subsidized bread

This indicator was also recently added to the wheat-flour to bread bakery mapping activity during this first round of 2021. This indicator aims to highlight how NGOs' work and support the impact on subsidized bread provision in NES. For instance, in this round, 42% of interviewed bakeries reported that NGO support reduces final bread prices. When NGOs provide bakeries with free or low-cost production inputs, this reduces the bakeries' production costs and thus lowers the price of bread and increases the quantity of produced bread. Therefore, allowing NGOs to achieve the humanitarian goal of meeting the bread needs of vulnerable people, as more bread is produced at affordable prices. However, given that the NGOs' support to some bakeries lowers their bread selling price, this negatively affects unsupported bakeries as it lowers their profitability because people tend to buy subsidized bread because it is less expensive. In many instances, this has pushed unsupported bakeries to lower their prices to allow them to compete.

## Recommendations

### Extend Wheat-flour to Bread Support in Deir-ez-Zor and Al-Hasakah

Access to subsidized bread is not consistent across the governorates, the assessment showed that people's access to subsidized bread was as high as 81% in Ar-Raqqa and Aleppo governorates, while Deir-ez-Zor and Al-Hasakeh governorates access was only 69% and 63% respectively. This indicates a need to expand or upscale bread program support to areas where there is limited access to subsidized bread. Also, the total population in the 33 assessed sub-districts in NES was 2,625,528 persons, hence, the daily needs of bread in the assessed areas was 866 MT<sup>3</sup>, whereas the daily produced subsidized bread was limited to 695 MT of bread. This indicated that 20% of the population in NES (n= 525,106 persons) did not have access to subsidized bread. On a subdistrict level, assessed bakeries in Al-Malikeyyeh and Quamishli in Al-Hasakeh and in Khasham Deir-ez-Zor reported that they did not produce any subsidized bread. Also, assessed bakeries in Amuda and Qahtaniyyeh in Al-Hasakeh and in Hajin in Deir-ez-Zor indicated that they produce very small quantities of subsidized bread.

### Continue and expand wheat-flour to bread facility rehabilitation, maintenance, and procurement activities

Upscaling of rehabilitation of building infrastructure, machine maintenance, and equipment procurement for bakery and mill facilities is recommended especially in areas where there is high population density and a shortage of production due to the facilities' limited capacity to produce. For instance, the majority of silos in Al-Hasakeh governorate indicated they need support to rehabilitate their building infrastructure or machines. Supporting facilities in Al-Hasakeh governorate is recommended given that it has the largest population (988,829 persons) in NES region. Given that, if silos were supported and they regain their ability to function at a higher capacity and supply local wheat to mills, this overall will support the wheat-flour to bread value chain.

Another recommendation would be the call for youth vocational training support for bakery labor on different aspects such as waste management, and machine maintenance. Many bakeries relied on external support to maintain their machinery and equipment.

## Strengthen Coordination with the Local Authorities

The wheat-flour to bread value chain in NES is relatively centralized and controlled by the Local SANES, who provides input and focuses their efforts to ensure stable bread prices in the market. Therefore, it is recommended for humanitarian partner organizations to coordinate closely with the local authorities to ensure better facilitation of flour distribution and at the same time, fill the gaps that the local authority is unable to cover. This way, access to bread for subsidized prices would be more uniformly distributed across the different governorates. Again, as mentioned above, some bakeries in both Al-Hasakeh and Deir-ez-Zor indicated that they do not produce subsidized bread at all. Unsupported bakeries that sell unsubsidized bread in some areas can directly affect the overall prices of bread in the market and in turn, make it less affordable.

## Introduce and Expand Laboratory Testing at the Bakery Level

The assessment revealed that 90% of interviewed bakeries reported that there are no laboratory tests carried out in their area for the bread production inputs such as flour and yeast. Evidently, there is a need for more reliable quality control systems and services in all assessed governorates. The current quality control practices at the bakery level are very limited and confined to conventional manual examination and LSA examination, with very few facilities providing laboratory testing for flour and yeast.

## Continue Support for Local Wheat to flour Production

Local wheat production is critical for the resilience of the wheat-to-bread market systems. Therefore, it is recommended to continue supporting local wheat farmers with subsidized farming inputs to ensure the continuation of the local wheat to flour supply chain, allowing it to reach the bakeries and end consumers.

## Further Studies and Continuous Market Monitoring

The wheat-flour to bread market system is highly unstable and constantly faces changes given the SYP currency exchange rate volatility, ongoing conflicts, and the ongoing COVID-19 pandemic. Therefore, it is recommended to collect data regularly on the silo, mill, and bakery operations. This will ensure that the existing humanitarian partners' interventions and programs in the NES region are aligned with recent political and market trends and needs. Moreover, this will help further understand the local context to improve gap and output estimates and allow for trend analysis to continuously inform bread programs' design related to wheat, flour, and bread interventions.