

**INTRODUCTION**

To inform humanitarian cash programming, the northeast of Syria (NES) Cash Working Group (CWG) conducts a monthly Joint Market Monitoring Initiative in northern Syria. The exercise assesses the availability and prices of 36 basic commodities that are typically sold in markets and consumed by average Syrian households, including food and non-food items, water, fuel, and cell phone data.

Of these, 18 items comprise the Survival Minimum Expenditure Basket (SMEB; see [fig. 8-9](#); and [11](#)) which represents the minimum, culturally adjusted items required to support a 6-person household for a month. For further information, please see our [methodology](#).

**ON-LINE DASHBOARD**

To facilitate the interaction with the JMMI, an interactive dashboard is available on-line. The dashboard is designed to allow users to navigate more easily and draw geographical and temporal comparisons across different currencies. To use the on-line interactive dashboard, click [here](#).

- 8 supporting partners

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- 4 governorates

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- 11 districts

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- 29 sub-districts

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- 59 communities

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- 1,770 shops (vendor key informants)

**COST OF NES SMEB<sup>A</sup>**

772,807 SYP ▲ +10%  
128 USD ▼ -2%

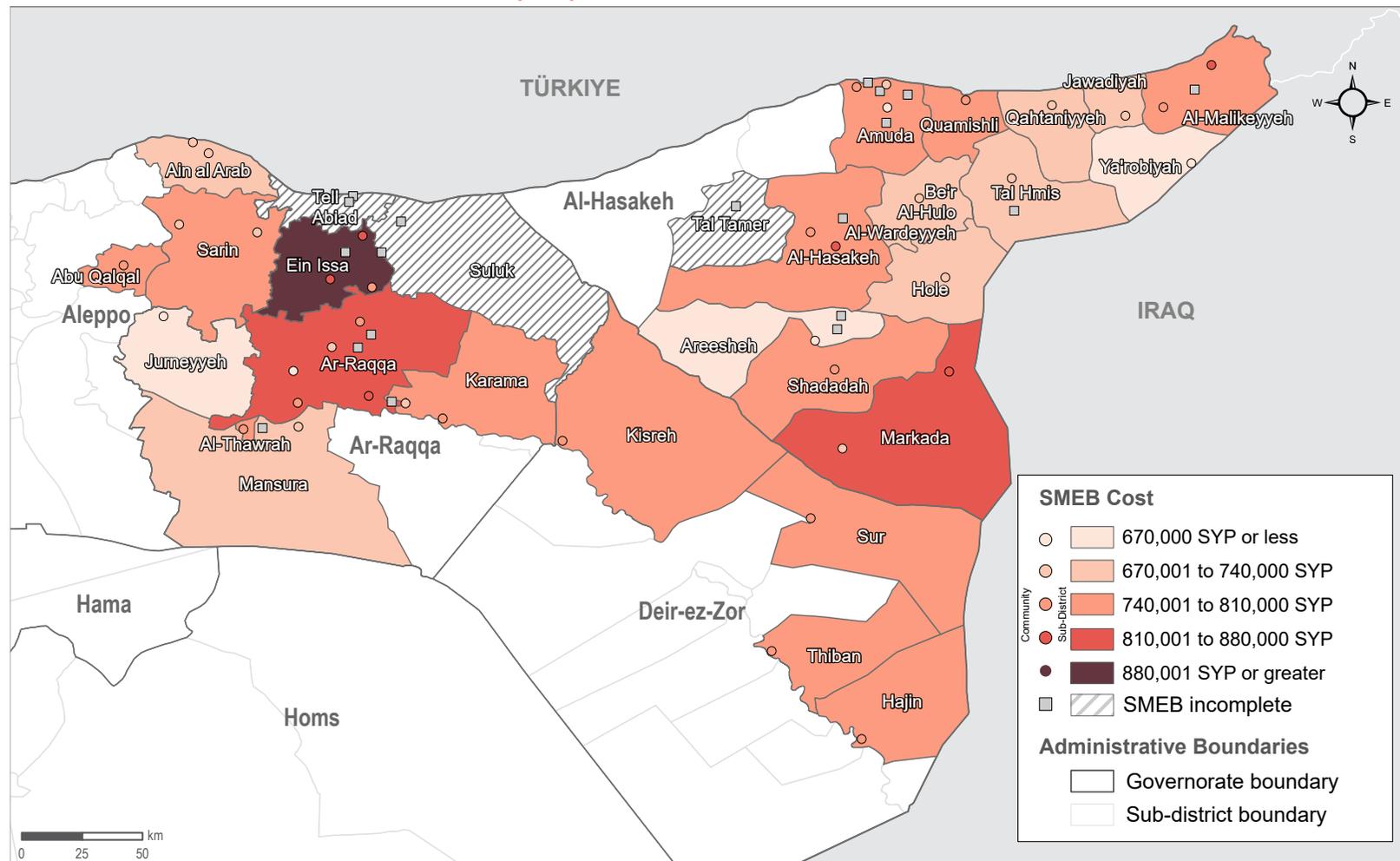
**COST OF NES FOOD BASKET<sup>A</sup>**

597,056 SYP ▲ +11%  
99 USD ▼ - 1%

**NES EXCHANGE RATE<sup>A</sup>**

USD/SYP  
6,045 SYP ▲ +12%

**MEDIAN SMEB PRICE PER SUB-DISTRICT (SYP) - FIG. 1**



A. For price and change % calculations, only the communities within a sub-district with consistent coverage across months are included. This also applies to the following tables.

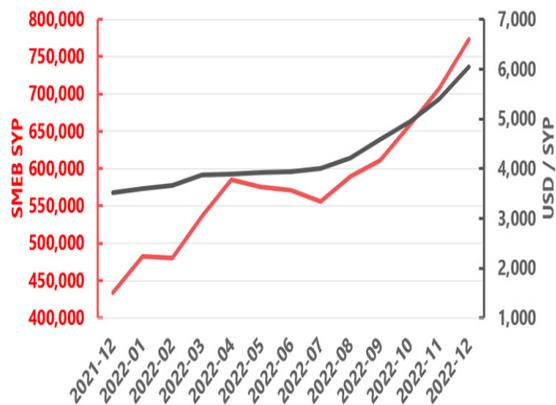
## IN THIS FACTSHEET

As the JMMI generates a large amount of data, this factsheet is limited to a high level analysis. For more detailed data, consult the [dataset](#) and [online dashboard](#).

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### NORTHEAST SYRIA SMEB PRICE TRENDS VS USD TO SYP INFORMAL EXCHANGE RATES - FIG. 2



### KEY DEVELOPMENTS

The overall SMEB value in NES increased by 10% in December to 772,807 SYP (128 USD). Food prices in SYP in NES increased in December at a higher rate compared to previous months. Price increases were in large part driven by depreciation of the SYP against the USD (12% since November). In addition, the Turkish offensive into NES has heavily impacted commercial activity and production damaging key infrastructure.<sup>1</sup> In particular, attacks on oil and gas facilities have exacerbated existing fuel shortages, impacting households' ability to secure fuels for heating and cooking.

The price of cooking fuels increased substantially in December largely due to increases in the price of manually refined kerosene which also declined in availability by 10%. Given low availability of kerosene and substantially higher prices, majority of households rely on gas. The price of subsidised gas remained stable in December however, distribution has been impacted by recent attacks on gas facilities.<sup>2</sup> This has forced many to rely on high black-market prices and turn to unsafe methods to provide heat.<sup>3</sup> At the same time winter clothing items have increased in price by between 50% and 70% compared to this time last year.

The price of fresh vegetables continued to increase and has more than doubled in the past six months (fig. 4) due to reliance on imports from Government of Syria (GoS) areas outside of local production season. Extreme fuel shortages in GoS areas are likely driving up transportation costs.<sup>4</sup> Continued increases in the price of bulk food and non-food items were largely attributed to the increase in the exchange rate as these are typically imported in USD.

The price of water trucking increased in December, most notably in Ar-Raqqa governorate (fig. 7). The increase was likely attributed to disrupted services following the recent attacks on energy infrastructure and ongoing increases in transport costs.

Price inflation remains a key pressure on market functionality as reported by surveyed vendors (fig. 12). In addition, the percentage of vendors in Deir ez-Zor governorate reporting that supply cannot meet demand almost doubled in the last month. In general, the unstable security situation in NES has reportedly spurred households to limit their spending in case of displacement; traders have in turn reduced procurement of supplies.

### MEDIAN SMEB PRICE PER SUB-DISTRICT - FIG. 3

|  | SMEB SYP       | 1 month change | 6 month change | SMEB USD <sup>B</sup> |
|--|----------------|----------------|----------------|-----------------------|
| <b>Northeast Syria SMEB <sup>C</sup></b> | <b>772,807</b> | <b>10%</b>     | <b>35%</b>     | <b>128</b>            |
| Northeast Aleppo Governorate             | 741,232        | 8%             | 48%            | 125                   |
| Abu Qalqal                               | 741,232        | 10%            | 48%            | 138                   |
| Ain al Arab                              | 729,804        | 7%             | 47%            | 135                   |
| Sarin                                    | 741,886        | 9%             | 40%            | 136                   |
| Al-Hasakeh Governorate                   | 770,289        | 11%            | 32%            | 125                   |
| Al-Hasakeh                               | 790,716        | 10%            | 36%            | 146                   |
| Al-Malikeyyeh*                           | 795,930        | 8%             | 45%            | 147                   |
| Amuda*                                   | 746,682        | 11%            | 25%            | 138                   |
| Areesheh                                 | 667,165        | -2%            | 14%            | 124                   |
| Be'r Al-Hulo*                            | 717,751        | 12%            | NA             | 134                   |
| Hole                                     | 709,855        | 9%             | NA             | NA                    |
| Jawadiyah*                               | 696,063        | 7%             | 29%            | 129                   |
| Markada                                  | 814,934        | 12%            | 42%            | 151                   |
| Qahtaniyyeh*                             | 707,494        | NA             | 45%            | 132                   |
| Quamishli                                | 772,384        | 18%            | 33%            | 143                   |
| Shadadah                                 | 768,195        | 9%             | 21%            | 142                   |
| Tal Hmis*                                | 713,055        | 15%            | 47%            | 131                   |
| Ya'robiyah*                              | 635,778        | 3%             | 37%            | 118                   |
| Al-Thawrah*                              | 767,087        | NA             | 44%            | 143                   |
| Ar-Raqqa Governorate                     | 810,187        | 7%             | 41%            | 146                   |
| Ar-Raqqa                                 | 810,187        | 7%             | 41%            | 151                   |
| Ein Issa                                 | 905,978        | 23%            | 57%            | 168                   |
| Jurneyyeh*                               | 600,605        | -4%            | 8%             | 111                   |
| Karama                                   | 782,531        | -1%            | 40%            | NA                    |
| Mansura*                                 | 713,787        | 4%             | NA             | NA                    |
| Deir-ez-Zor Governorate                  | 711,059        | 6%             | 25%            | 132                   |
| Hajin                                    | 772,226        | NA             | NA             | 143                   |
| Kisreh                                   | 786,022        | 5%             | 38%            | 147                   |
| Sur                                      | 773,230        | 9%             | 45%            | 143                   |
| Thiban                                   | 786,826        | 12%            | 41%            | 146                   |

B. USD values are calculated as per the informal exchange rate recorded in the same geographical area. Please see this month's JMMI dataset for informal exchange rates by area.

C. \* For these sub-districts, water trucking prices were not available and is not included in the SMEB price.

## PRICE TREND ANALYSIS

Food prices in SYP in NES increased steeply in December by 11% and decreased slightly in USD indicating that inflation continues to be largely driven by currency depreciation against the USD. In addition, commercial activity and production have been heavily impacted by the Turkish offensive on key infrastructure in NES including grain silos, power plants, gas stations, oil fields and transport routes.<sup>5</sup> Damage to energy infrastructure in Al-Hasakeh in particular has impacted business activity and disrupted electricity to Alouk water plant that serves more than 460,000 people within the governorate.<sup>6</sup>

The cost of the SMEB in Quamishili sub-district in Al-Hasakeh notably increased by 18% in the last month (Fig. 3), largely attributed to a sharp increase in the price of bulk food items potentially indicating supply routes have been impacted by the recent shelling in this area.<sup>7</sup> In addition, the SMEB value rose by 23% in the past month in Ein Issa sub-district located close to the Turkish controlled areas. While the SMEB value had been steadily increasing in this sub-district since July 2022, December prices saw a sharp increase putting the value substantially higher than other sub-districts in NES. The increase in this sub-district was largely attributed to increases in the price of imported bulk food items, manually refined kerosene used for cooking, and water trucking, indicating supply routes may have been impacted by the recent insecurity. This compounds already challenging living conditions in the Tel Abyad area that worsened following the Turkish military operation in 2019.<sup>8</sup>

The price of fresh vegetables continued to increase in December and has more than doubled in the past six months (Fig. 4). This is likely due to higher reliance on imports from GoS areas and greenhouses with higher production costs while locally produced vegetables are out of season. Extreme fuel shortages in GoS areas are likely driving up transportation costs.<sup>9</sup> Increases in bulk food and non-food items were largely attributed to the increase in the exchange rate as these are typically imported from Türkiye in USD. The price of cooking oils increased across governorates, despite relative stability in the past six months. The price of cooking oils in December were slightly higher than they were in April 2022 after the initial shock of the Ukraine crisis. This is likely attributed to increased importation costs with the rise in the exchange rate and increasing transportation costs.

The price of bread remained stable overall (Fig. 5); however, there was a notable increase in the price in Deir ez-Zor governorate where it remains most expensive due to unavailability of subsidised bread. In general, households are able to buy a limited amount of subsidised bread, meaning many purchase additional bread at private bakeries to cover needs at drastically higher prices.<sup>10</sup> The price of flour overall remained stable between November and December but has increased by 40% in the past six months (Fig. 6). This stems from reduced local production as a result of low rainfall, drought, politicised cross-border water flows, poor supply of electricity, and increased fuel prices for farmers.<sup>11</sup> In addition, the Ukrainian crisis has impacted the cost of imported flour. The decision to continue exports through the Black Sea has increased supply chain certainty overall but gains from global price cooling are hampered by the exchange rate.<sup>12</sup>

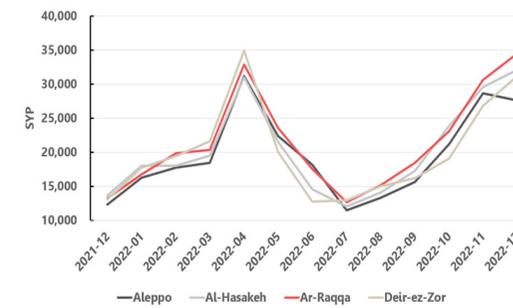
The price of water trucking also increased, most notably in Ar-Raqqa governorate (Fig. 7). The increase was reportedly attributed to disrupted services following the recent attacks on infrastructure and ongoing increases in transport costs which particularly impact areas further from water sources. In addition, the authorities recently banned digging of additional wells in response to concerns about the level of the water table and on-going disruptions of Alouk water station. The decision has reportedly increased reliance on private water trucking at rising costs and with high risks of cholera contamination.<sup>13</sup>

The price of cooking fuels increased substantially in December largely due to increases in the price of manually refined kerosene which also declined in availability by 10%. Given low availability of kerosene and substantially higher prices, majority of households rely on gas. The price of gas remained relatively stable following notable increases in price since September 2022 as a result of a reduction in the subsidy.<sup>14</sup> Further, reduced allocations have forced many to purchase additional canisters to cover their needs.<sup>14</sup> These prices ranged between 50,000 and 100,000 SYP in Al-Hasakeh on the free market when available.<sup>15</sup> This is despite re-opening of the Swedish Gas Plant that was damaged by Turkish air strikes in November delaying distribution in several areas.<sup>16</sup>

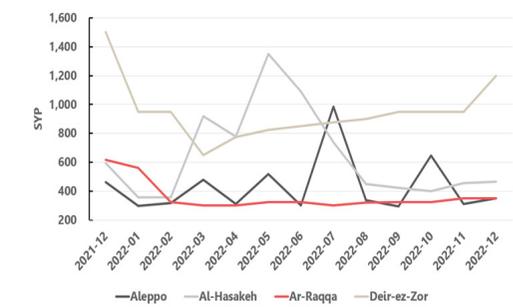
The price of manually refined and high-quality petrol increased substantially in December, while the price of manually refined and high-

quality diesel remained stable. The price of high-quality fuels continued to increase most notably in Aleppo and Ar-Raqqa governorates. Turkish attacks on oil and gas facilities have exacerbated existing fuel shortages, impacting households' ability to secure fuels for heating and cooking.<sup>17</sup> Shortages and delays in distribution of heating fuel has forced many to rely on high black-market prices and turn to unsafe methods to provide heat.<sup>18</sup> At the same time winter clothing items have increased in price by between 50% and 70% compared to this time last year.

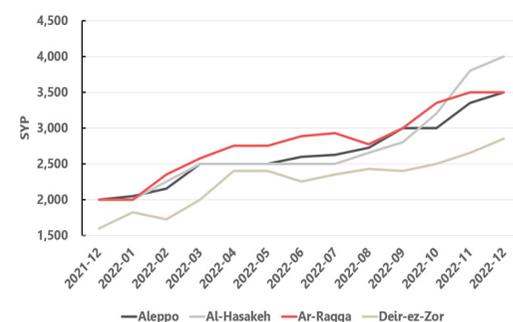
**SMEB VEGETABLE PRICES IN NES - FIG. 4**



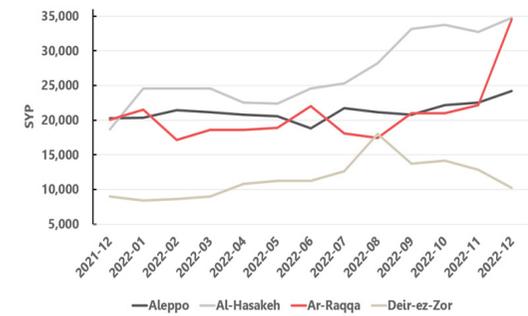
**BREAD PRICES PER 8 PIECES NES - FIG. 5**



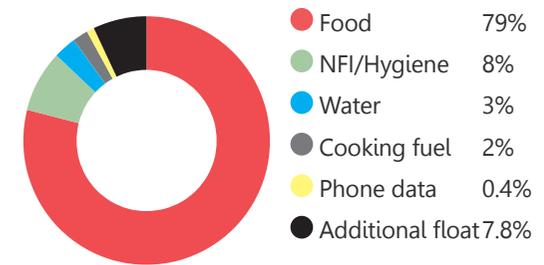
**FLOUR PRICES IN NES - FIG. 6**



**SMEB WATER TRUCKING PRICES IN NES - FIG. 7**



**SMEB COMPOSITION<sup>p</sup> FOR NORTHEAST SYRIA - FIG. 8**



**SMEB CONTENTS - FIG. 9**

| Food          |        |                    |       |
|---------------|--------|--------------------|-------|
| Bread         | 37 kg  | Rice               | 19 kg |
| Bulgur        | 15 kg  | Salt               | 1 kg  |
| Chicken       | 6 kg   | Sugar              | 5 kg  |
| Eggs          | 6 kg   | Tomato paste       | 6 kg  |
| Ghee/veg. oil | 7 kg/L | Vegetables (fresh) | 12 kg |
| Red lentils   | 15 kg  |                    |       |

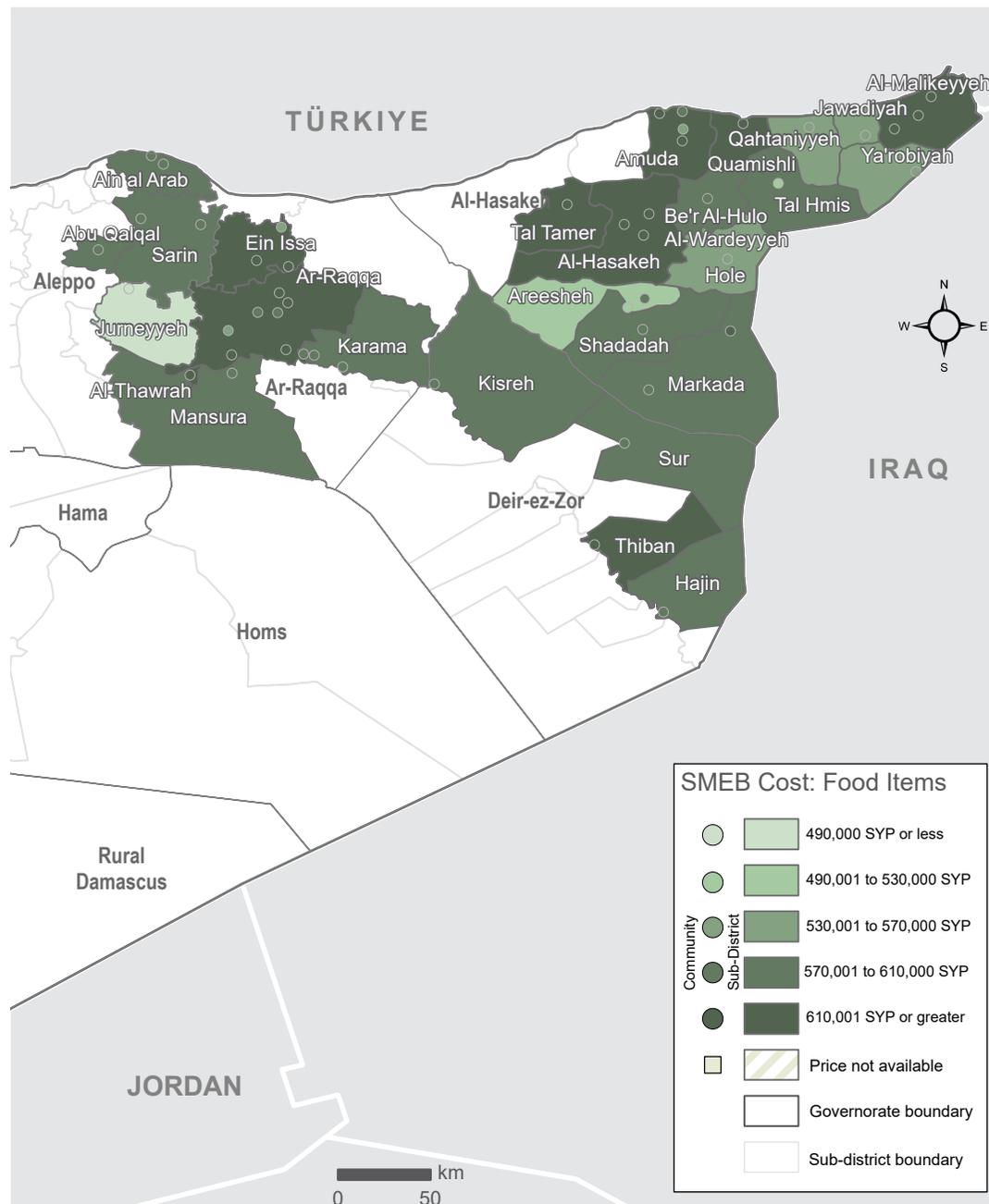
| Hygiene (NFI)     |         |               |               |
|-------------------|---------|---------------|---------------|
| Bathing soap      | 12 bars | Toothpaste    | 200 g         |
| Laundry/dish soap | 3 kg    | Sanitary pads | 4 packs of 10 |

| Other          |        |                     |               |
|----------------|--------|---------------------|---------------|
| Cooking fuel   | 25 L   | Phone data          | 1 GB          |
| Water trucking | 4500 L | "Float"/other costs | 7.5% of total |

The SMEB Total is the median cost of the minimum, culturally adjusted items required to support a 6-person household for a month.

D. Due to rounding figures may not total 100%

## SMEB FOOD COMPONENT COST ACROSS NES, BY SUBDISTRICTS AND COMMUNITIES - FIG. 10



## PRICE OF ALL SMEB ITEMS - FIG. 11

| Item                             | Unit <sup>E</sup> | Price SYP      | 1 month change | 6 month change | Price USD <sup>F</sup> |
|----------------------------------|-------------------|----------------|----------------|----------------|------------------------|
| <b>Northeast food Syria SMEB</b> |                   | <b>597,056</b> | <b>11%</b>     | <b>39%</b>     | <b>99</b>              |
| <b>Bulk food items</b>           | SMEB              | 327,850        | 11%            | 39%            | 54.23                  |
| Bulgur                           | 1 kg              | 5,000          | 11%            | 47%            | 0.83                   |
| Red lentils                      | 1 kg              | 6,000          | 4%             | 33%            | 0.99                   |
| Rice                             | 1 kg              | 4,450          | 0%             | 27%            | 0.74                   |
| Salt                             | 500 g             | 800            | 0%             | 33%            | 0.13                   |
| Sugar                            | 1 kg              | 4,500          | 8%             | 50%            | 0.74                   |
| Tomato paste                     | 1 kg              | 8,125          | 0%             | 63%            | 1.34                   |
| <b>Fresh vegetables</b>          | SMEB              | 32,850         | 10%            | 123%           | 5.43                   |
| Tomatoes                         | 1 kg              | 2,800          | 12%            | 87%            | 0.46                   |
| Potatoes                         | 1 kg              | 2,500          | -4%            | 56%            | 0.41                   |
| Cucumbers                        | 1 kg              | 3,500          | 17%            | 250%           | 0.58                   |
| Onions                           | 1 kg              | 2,000          | 27%            | 122%           | 0.33                   |
| <b>Cooking oils</b>              | SMEB              | 70,000         | 8%             | 10%            | 11.58                  |
| Ghee                             | 1 kg              | 10,000         | 5%             | 11%            | 1.65                   |
| Vegetable oil                    | 1 L               | 10,000         | 11%            | 9%             | 1.65                   |
| <b>Non-veg perishables</b>       |                   |                |                |                |                        |
| Bread                            | 8 pc              | 400            | 0%             | 5%             | 0.07                   |
| Chicken                          | 1 kg              | 9,000          | 5%             | 36%            | 1.49                   |
| Eggs                             | 30 pc             | 14,000         | -3%            | 47%            | 2.32                   |
| <b>Non-food items</b>            | SMEB              | 56,099         | 7%             | 44%            | 9.28                   |
| Bathing soap                     | 1 pc              | 2,000          | 0%             | 60%            | 0.33                   |
| Sanitary pads                    | 10 pc             | 2,500          | 9%             | 25%            | 0.41                   |
| Toothpaste                       | 100 g             | 3,200          | -1%            | 28%            | 0.53                   |
| Laundry powder                   | 1 kg              | 5,750          | 8%             | 21%            | 0.95                   |
| Dish soap                        | 1 L               | 4,800          | 10%            | 37%            | 0.79                   |
| <b>Cooking fuels</b>             | SMEB              | 13,125         | 54%            | NA             | 2.17                   |
| Kerosene (manually refined)      | 1 L               | 1,800          | 20%            | 64%            | 0.30                   |
| LP gas                           | 1 L               | 400            | 0%             | 129%           | 0.07                   |
| <b>Water trucking</b>            | SMEB              | 26,284         | 17%            | 39%            | 4.35                   |
| Water trucking (1000 L)          | 1 m3              | 5,841          | 17%            | 39%            | 0.97                   |
| <b>Other</b>                     |                   |                |                |                |                        |
| Phone data                       | 1 gb              | 3,000          | 0%             | 0%             | 0.50                   |

E. The SMEB unit refers to the current SMEB allocation of the item, as outlined in [fig. 9](#)

F. USD values are calculated as per the informal exchange rate recorded in the same geographical area. Please see this month's JMMI dataset for informal exchange rates by area.

## MARKET FUNCTIONALITY

Among other supply-based indicators price inflation remains the key pressure on market functionality with 84% of vendors reporting on it as a key challenge (fig. 12). The percentage of vendors reporting on this challenge has steadily increased since July 2022 in tandem with increased prices of monitored items (Fig. 2). Notably, the percentage of vendors in Deir ez-Zor governorate reporting that supply cannot meet demand almost doubled in the last month; 43% of vendors reported on this challenge in December. In general, the unstable security situation in many areas has reportedly caused households to limit their spending to prepare for potential displacement and traders have in turn reduced procurement of supplies.

Outage of oil pumps across the region have meant bakeries and vehicles are not receiving diesel and bombing of such infrastructure has impacted other vital services and market functionality.<sup>19</sup> For example, bombing of a key gas plant that supplies a power station in Al-Hasakeh has critically impacted electricity provision in the

area. In addition, electricity plants rely on oil to fuel turbines, and oil pumping is in turn impacted by disruptions in electricity provision impacting transportation of goods.<sup>20</sup>

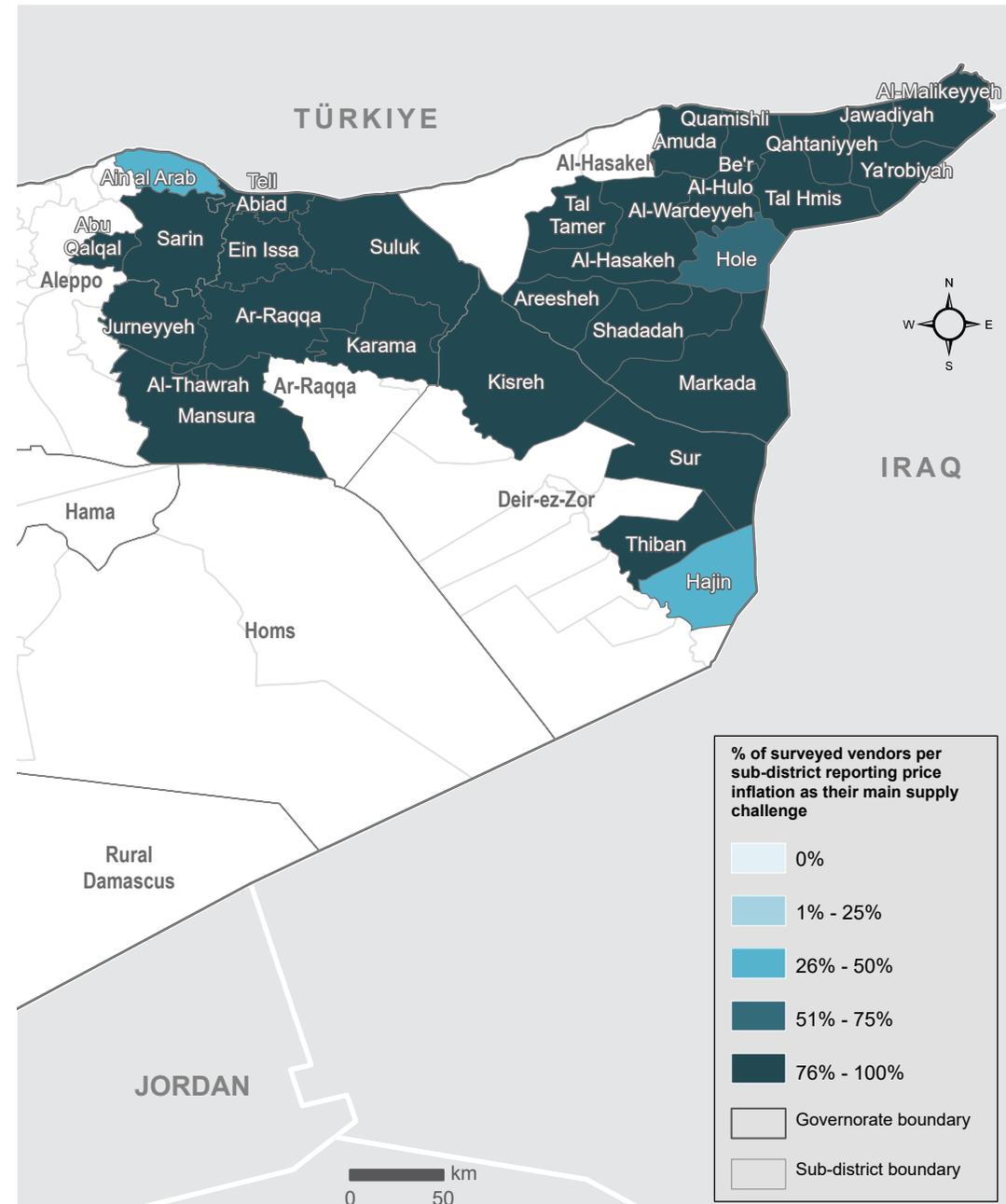
Many vendors in NES remain vulnerable to such supply chain disruptions. In December, 100% of surveyed butchers and fresh vegetable stores reported that they would run out of stock in less than three days if unable to restock. In addition, 100% of bakeries in Al-Hasakeh reported they would run out of stock in three days if unable to re-stock. Such vendors are required to re-stock frequently due to the perishable nature of their produce.

Limited stock of USD remains a key challenge across NES with all surveyed vendors reporting they have shortages of at least one denomination. Limited stock of smaller denominations impacts customers' ability to make purchases. In December 59% of vendors reported limited stock of 5 USD denomination and 70% of vendors reported limited stock of 10 USD denomination.

## SUPPLY CHALLENGES REPORTED<sup>G</sup> BY SURVEYED VENDORS - FIG. 12

|                                | AREA        | REPORTED % |
|--------------------------------|-------------|------------|
|                                | <b>NES</b>  | <b>84%</b> |
| <b>PRICE INFLATION</b>         | NE Aleppo   | 59%        |
|                                | Al-Hasakeh  | 89%        |
|                                | Ar-Raqqa    | 87%        |
|                                | Deir-Ez-Zor | 74%        |
|                                | <b>NES</b>  | <b>15%</b> |
| <b>SUPPLY CANT MEET DEMAND</b> | NE Aleppo   | 3%         |
|                                | Al-Hasakeh  | 19%        |
|                                | Ar-Raqqa    | 9%         |
|                                | Deir-Ez-Zor | 43%        |
|                                | <b>NES</b>  | <b>12%</b> |
| <b>NO ISSUES</b>               | NE Aleppo   | 38%        |
|                                | Al-Hasakeh  | 4%         |
|                                | Ar-Raqqa    | 10%        |
|                                | Deir-Ez-Zor | 21%        |
|                                | <b>NES</b>  | <b>9%</b>  |
| <b>SUPPLIER LIMITED SUPPLY</b> | NE Aleppo   | 15%        |
|                                | Al-Hasakeh  | 13%        |
|                                | Ar-Raqqa    | 3%         |
|                                | Deir-Ez-Zor | 5%         |

## VENDORS REPORTING PRICE INFLATION AS THEIR MAIN SUPPLY CHALLENGE ACROSS NES - FIG. 13



G. Multiple choice responses are not expected to total 100%. Please see this month's JMMI dataset for all supply challenges reported by vendors.

## ABOUT

To inform humanitarian cash programming, the northeast of Syria (NES) Cash Working Group (CWG) - in partnership with local and international NGOs - conducts a monthly JMMI in northern Syria. The exercise assesses the availability and prices of 36 basic commodities that are typically sold in markets and consumed by average Syrian households, including food and non-food items, water, fuel, and cell phone data.

## METHODOLOGY

In order to be included in the JMMI, markets must be permanent in nature, large enough to support at least two wholesalers, and diverse enough to provide a sufficient variety of goods and commodities. Additionally, the shops surveyed within each market must be housed in permanent structures and must sell certain items to be eligible for inclusion.

Prices are calculated by taking the median of the next level of aggregation: community and sub-district prices are both drawn from the median prices collected from different vendors. District medians are calculated from sub-district medians, governorate figures are calculated from district medians, and regional figures are calculated from governorate medians.

For more details about the methodology, access the online [JMMI dashboard](#).

In light of the fluctuation of the Syrian Pound (SYP)'s value and resulting market disruption, prices should be seen as representative only of the markets and dates where and when information was collected (5th - 12th December 2022).

## LIMITATIONS

All JMMI data is only indicative for the specific time frame within which it was collected, and trend lines in graphs may not be continuous where data is missing. Usually, data is collected during the first Monday-to-Monday of each month. The JMMI data collection tool requires enumerators to record the cheapest available price for each item, but does not require a specific brand, as brand availability may vary. Therefore, price comparisons across regions may be based on slight variants of the same product. Non-food items (NFIs) are particularly challenging to standardize as they vary significantly in terms of types, brands, and specifications. The JMMI methodology aims to balance consistency and comparability considerations with geographical variations in availability.

Due to issues of access, security and partner capacity, the markets included in the JMMI may vary on a monthly basis. As such, the reported changes in the more aggregate levels (governorate, district) may be driven by shifts in coverage rather than actual changes. For this reason, we recommend all users to consider local markets and lower levels of aggregation (sub-district, community) when using JMMI data for more specific trend analyses.

It is important to keep in mind that some vendors might feel more or less inclined to share their actual experiences (fearing that the information shared might be used by competitors or in some way against their business), while others might adjust their answers based on the expected effect that they will have on humanitarian programming. Similarly, even though all enumerators received the same training,

some might have more previous experience and might therefore be better able to produce higher quality data.

Part of the data collection takes place remotely using vendor contact information collected in advance by the JMMI partners, in order to prevent the spread of COVID-19. Market monitoring can be challenging, especially through remote interviews. At the same time, the JMMI has over seven years of accumulated experience, strong internal coordination and external relation with vendors, and vast longitudinal data, which supports the accuracy of findings.

## JMMI AND THE CASH WORKING GROUP

The JMMI exists within the framework of the Cash Working Group (CWG). In northwest Syria (NWS), the CWG was established in May 2014 to analyse the impact of the ongoing conflict on markets in Syria and guide the implementation of humanitarian cash and voucher programmes within those markets. In northeast Syria (NES), the CWG was established in 2018, to fulfil a similar purpose in that region.

For more information about the CWG in NES, please contact the cash working group coordinator at [cashcoordnes@gmail.com](mailto:cashcoordnes@gmail.com)

## PARTNERS

Each month, around 20 different organizations work together to collect market data. Participating organisations train their enumerators on the JMMI methodology and data collection tools using standard training materials developed

by REACH, who is then responsible for processing the data.



## REACH

REACH Initiative facilitates the development of information tools and products that enhance the capacity of aid actors to make evidence-based decisions in emergency, recovery and development contexts. The methodologies used by REACH include primary data collection and in-depth analysis, and all activities are conducted through inter-agency aid coordination mechanisms.

For more information about REACH, please contact the REACH JMMI focal point, Safa'a Harahsheh, at [safaa.harahsheh@reach-initiative.org](mailto:safaa.harahsheh@reach-initiative.org) or visit the [REACH Syria Resource Centre](#).

## ENDNOTES

1. Al-Monitor, 'Escalating Turkish strikes cripple civilian infrastructure across northeast Syria', 29 November 2022, <https://www.al-monitor.com/originals/2022/11/escalating-turkish-strikes-cripple-civilian-infrastructure-across-northeast-syria>
2. Syrian Observatory for Human Rights (SOHR), 'Alarming living crises, Turkish airstrikes on vital institutions and infrastructure affect civilians in Al-Hasakeh countryside', 26 November, 2022, <https://www.syriahr.com/en/277647/> and North Press Agency, 'Turkish shelling deprives 17,000 families of gas in Syria's Kobani, 19 December 2022, <https://npasyria.com/en/89241/>
3. SOHR, 'Stifling crises, Syrians in Al-Raqqa use waste and dry dung as alternatives for heating as fuel prices soaring', 11 December, 2022, <https://www.syriahr.com/en/280545/> and North Press Agency, 'People of Syria's Tel Abyad languish amid soaring prices and harsh winter, 29 December, 2022, <https://npasyria.com/en/89827/>
4. SOHR, 'Fuel shortages in Syria exacerbate economic crisis', 13 December, 2022, <https://www.syriahr.com/en/280010/>
5. North Press Agency, 'Farmlands in Syria's Manbij under continuous shelling', 26 December 2022, <https://npasyria.com/en/89631/>; North Press Agency, 'Turkish escalation impacts industrial sector in Syria's Kobani, 22 December 2022, <https://npasyria.com/en/89421/>; and North Press Agency, 'Turkish bombardment paralyzes commercial activity in Syria's Kobani', 13 December 2022, <https://npasyria.com/en/88966/>
6. Al-Monitor, 'Escalating Turkish strikes cripple civilian infrastructure across northeast Syria', 29 November 2022, <https://www.al-monitor.com/originals/2022/11/escalating-turkish-strikes-cripple-civilian-infrastructure-across-northeast-syria>
7. NES NGO Forum, 'Uptick of hostilities lead to power cuts and result in increased humanitarian and environmental risks', 25 November 2022, <https://nesngoforum.org/wp-content/uploads/2022/11/NES-Forum-Statement> and Human Rights Watch, 'Northeast Syria: Turkish strikes exacerbate humanitarian crisis', 7 December 2022, <https://www.hrw.org/ar/news/2022/12/07/northeast-syria-turkish-strikes-exacerbate-humanitarian-crisis>
8. North Press Agency, 'People of Syria's Tel Abyad languish amid soaring prices and harsh winter, 29 December, 2022, <https://npasyria.com/en/89827/>
9. SOHR, 'Fuel shortages in Syria exacerbate economic crisis', 13 December, 2022, <https://www.syriahr.com/en/280010/>
10. SOHR, 'Rising US dollar, Autonomous Administration raises price of high-quality bread', 9 December 2022, <https://www.syriahr.com/en/279518/>
11. iMMAP, 'Post-harvest study of wheat production in Northeast Syria', 2021/2022 Winter Season, December 2022, <https://immap.org/product/post-harvest-study-of-wheat-production-in-northeast-syria-nes/>
12. World Food Program (WFP) Syria Country Office, VAM Food Security Analysis, Market Price Watch Bulletin, November 2022, Issue 95, [https://fscluster.org/sites/default/files/documents/wfp\\_syria\\_price\\_bulletin\\_nov\\_2022.pdf](https://fscluster.org/sites/default/files/documents/wfp_syria_price_bulletin_nov_2022.pdf)
13. iMMAP, Nes Context Update, November 2022, <https://immap.org/product/context-update-northeast-syria-october-2022/>
14. Syria TV, 'Autonomous Administration' Raises the Price of a Gas Cylinder by 150% in Al-Hasakeh', 24 October, 2022, <https://www.syria.tv/>
15. North Press Agency, 'Turkish shelling deprives 17,000 families of gas in Syria's Kobani, 19 December 2022, <https://npasyria.com/en/89241/> and SOHR, 'Alarming living crises, Turkish airstrikes on vital institutions and infrastructure affect civilians in Al-Hasakeh countryside', 26 November, 2022, <https://www.syriahr.com/en/277647/>

16. Syria TV, '100,000 gas cylinder in Hasaka and accusations of collusion between SDF and the regime', 13 December 2022, <https://www.syria.tv/> and iMMAP, NES Context Update, January 2023, <https://immap.org/wp-content/uploads/2016/12/>

17. Human Rights Watch, 'Northeast Syria: Turkish strikes exacerbate humanitarian crisis', 7 December 2022, <https://www.hrw.org/ar/news/2022/12/07/northeast-syria-turkish-strikes-exacerbate-humanitarian-crisis>; Al-Monitor, 'Escalating Turkish strikes cripple civilian infrastructure across northeast Syria', 29 November 2022, <https://www.al-monitor.com/originals/2022/11/escalating-turkish-strikes-cripple-civilian-infrastructure-across-northeast-syria>; and SOHR, 'Alarming living crises, Turkish airstrikes on vital institutions and infrastructure affect civilians in Al-Hasakeh countryside', 26 November, 2022, <https://www.syriahr.com/en/277647/>

18. SOHR, 'Delayed distribution of diesel, mass resignation by members of "Kominat" in Al-Raqqa, 1 December 2022, <https://www.syriahr.com/en/278494/>; SOHR, 'Stifling crises, Syrians in Al-Raqqa use waste and dry dung as alternatives for heating as fuel prices soaring', 11 December, 2022, <https://www.syriahr.com/en/280545/> and North Press Agency, 'People of Syria's Tel Abyad languish amid soaring prices and harsh winter, 29 December, 2022, <https://npasyria.com/en/89827/>

19. North Press Agency, 'Turkey's airstrikes, water war aggravate plight of Syrians', 28 November 2022, <https://npasyria.com/en/88233/>

20. Al-Monitor, International oil assets reported hit as Turkey strikes Syria's Kurdish zone, 2 December 2022, <https://www.al-monitor.com/originals/2022/12>