Deteriorating outcomes likely with continued reductions in income and increased food prices

KEY MESSAGES

- In Yemen, important information gaps remain. Nonetheless, recent data from WFP mVAM surveys, household interviews, a UNICEF SMART survey, and NGO partners all confirm that a significant population faces severe acute food insecurity. These data, along with information on water availability, food prices, and income, also suggest that food security has deteriorated substantially since last year.

- It is likely that significant populations are facing Emergency (IPC Phase 4) outcomes, especially those trapped in active conflict areas or displaced. The risk of acute malnutrition also remains high due to the high disease burden and reduced access to health care. Although information is limited, it is likely that at least six million people are currently in need of food assistance. Although vital assistance is being provided by humanitarian partners, the scale of current needs is well beyond response capacity.

- Available evidence indicates that most typical sources of income for poor households have been adversely affected during the conflict, while food prices in most areas have been well above pre-crisis levels. A continuation of current trends of reduced household income and increased food prices could lead to deteriorating food security outcomes in the coming months.

- In late October, reports indicated that the Yemeni rial (YER) began to depreciate against the U.S. dollar (USD) and other currencies, at unofficial rates. With Yemen’s heavy reliance on food imports, including for 85 percent of its cereals consumption, depreciation of the rial would likely put further upward pressure on food prices.

SEASONAL CALENDAR FOR A TYPICAL YEAR

Source: FEWS NET

This map represents acute food insecurity outcomes relevant for emergency decision-making. It does not necessarily reflect chronic food insecurity. To learn more about this scale, click here.
DATA SOURCES

Information in this report comes from a variety of sources. Local researchers hired by FEWS NET collected data in nine governorates during late July and early August, and in nine governorates in late September and early October (Figure 4). This included the collection of spot prices, key informant interviews with traders, farmers, NGO workers and others, in addition to 172 household interviews during the first round of data collection, and 225 during the second round. This report also includes data from the shipping tracking service FleetMon, WFP’s recent phone-based food security surveys and price monitoring, and key informant interviews with UN and NGO staff operating inside Yemen.

CONFLICT

Ground fighting since March 2015 between pro-government alliance forces backed by the Saudi-led coalition and Al Houthies backed by forces loyal to former president Saleh has driven a humanitarian crisis, marked by disruption to livelihoods, as well as shortages and limited access to fuel, food, and water. Ongoing insecurity in contested governorates and the expansion of ground conflict to new areas suggests further deterioration of the humanitarian situation in the coming months.

In 2015, Yemen has seen an increase in violence perpetrated by several parties. A northern Yemen-based faction called Houthis (also known as Ansar Allah) led offensives, while Saudi Arabia and its coalition of allied states (hereafter Coalition) led counteroffensives. Other actors included the southern secessionist movement, Al Hirak, southern tribes, Local People’s Committees (LPCs) — collectively referred to as southern resistance - and pro-Yemen transition government military units. Meanwhile, Yemen also faced violence from self-proclaimed affiliates of the Islamic State of Iraq and al-Sham (ISIS) and al Qa’ida in the Arabian Peninsula (AQAP).

The ongoing violence continues to impact access to food and water, as well as humanitarian assistance programs. Not only does ongoing fighting make it difficult for relief agency personnel to reach areas of greatest need to administer food aid and medical treatment, but there have also been attacks by unknown assailants specifically targeting relief personnel.

In August 2015, the coalition pushed Houthi forces out of Abyan Governorate. Saudi Arabian and Emirati ground forces entered Aden on August 25, 2015 to support the Popular Southern Resistance forces in gaining control of southern Yemen. During September 2015, Aden, Abyan, Ibb, and Ta’izz experienced the greatest insecurity and travel restrictions out of governorates surveyed. The security situation in Aden remains unstable and fluid.

Since April 2015, Ta’izz has continued to be hit by Coalition airstrikes and rockets launched by Houthi forces. Fighting on the streets of Ta’izz City between Popular Resistance and pro-Houthi forces has escalated since late August 2015. As Ta’izz became a new front line in the push to remove Houthi forces from southern and central governorates, the damage and loss of life reached such levels that Yemen’s government in exile declared Ta’izz a “disaster area” on August 25, 2015. UN OCHA reports that movement of commercial goods and humanitarian assistance into the three city districts of Al Mudhafer, Al Qahirah, and Al Salh has been very limited since early September 2015.
Coalition airstrikes also continued throughout the past two months in many governorates, including Sa’dah, Amran, Ibb, Al Bayda, Ta’izz, Al Hudaydah, Hajjah, and Sana’a. Ma’rib became the site of a major ground offensive by at least 4,000 Yemeni fighters and hundreds of Arab Coalition forces in early September 2015, preceded by airstrikes in late August, which have continued in September and October.

**SHIPPING AND TRADE**

**Imports:** Yemen continues to import staple food commodities, with increased bulk carrier vessels arriving in Aden and Al Hudaydah and fewer into Salif, contrary to the pattern observed in August. According to OCHA, Yemen imported approximately 70 percent of its average monthly needs in September. Official figures are not available as of October 30, but a preliminary review of OCHA figures suggests October staple food imports are likely to be above 50 percent of average monthly needs. The number of bulk carrier arrivals, FEWS NET’s rough proxy for staple food imports, suggests these imports may be as high as 70 percent. According to OCHA, imports of fuel are significantly more constrained than those of food. Monthly fuel imports reached a maximum of 69 percent of average monthly needs in July, followed by decreases to just 19 percent in August, and only one percent in September. Data on fuel imports for October 2015 is not yet available.

**Port functioning**

- **Salif:** The port of Salif, near Al Hudaydah on the Red Sea, remains open although bulk carrier and cargo vessel arrivals were substantially lower in October (2) compared to previous months (7 in August, 7 in September). This is likely due to increased traffic through other ports following the re-opening of the ports of Al Hudaydah and Aden. The port of Salif is currently dependent on generators for electricity, and fuel for the generators is frequently scarce. Contacts at the port indicate there are no current restrictions on the berth at Salif, which can discharge 30,000 MT of cargo per day. The port can reportedly berth two motor vessels (M/Vs) at a time.

- **Al Hudaydah:** The Port of Al Hudaydah has re-opened following airstrikes on August 17 that closed the port and damaged four of its five cranes, which remain beyond the repair capabilities of port engineers. The port authority has confirmed the port can still receive container vessels on ships that have their own cranes for offloading, or for which mobile cranes are rented. In addition, electricity outages in Al Hudaydah have rendered the port dependent on generators for power, and fuel for the generators is frequently scarce. In September, the number of cargo ships berthing at Al Hudaydah was up compared to August, and average waiting times for port entry decreased from 13.2 days in August to 3.6 days in September. Data from FleetMon and anecdotal corroboration from OCHA indicate bulk carrier arrivals in Al Hudaydah increased in late October, while the number of cargo vessel arrivals increased from a yearly low of five in August to 13 in September and 14 in October, which is about half of the pre-crisis level. The port can reportedly berth two to three motor vessels (M/Vs) at one time.

- **Aden:** The port of Aden appears to have regained its position as a key port of entry, following its re-opening in late July 2015. Bulk carrier arrivals have increased from zero in August to two in September and three in October. Cargo vessels...
reached a near pre-crisis level of 24 ships in September, although this has slowed to 15 in October. The port of Aden’s container terminal, wharf, and oil harbor can berth up to 12 motor vessels (M/Vs) at one time, although port officials recommend against this due to logistical concerns.

- **Mukalla and Mokha:** Reports from the MCCC and FEWS NET researchers suggest the ports of Mukalla and Mokha are receiving a substantial number of dhows and that UNICEF, traders, and other actors are able to use these ports unhindered. It is also reported that ships re-directed from Al Hudaydah and Salif are delivering their cargo onto dhows bound for the ports of Mukalla and Mokha, though it is unclear what proportion of these commodities are being shipped in this manner.

### Overland trade

Yemen’s six land border control facilities and their reported status as of early October (FEWS NET researchers):

- **Baqem – A’lb:** Sa’dah Governorate (closed July 2015 due to military activities).
- **Al Buqa – Al Khadhra:** Sa’dah Governorate (closed).
- **Haradh – Al Tuwal:** Hajjah Governorate (closed July 2015 due to military activities).
- **Al Abr – Al Wade’ah:** Hadramaut Governorate (access to Saudi Arabia). No data about the quantity and type of goods traded with Saudi Arabia via Hadramaut is available.
- **Shihan – Mazyunah:** Al Mahara Governorate (access to Oman).
- **Hawf – Sarfayt:** Al Mahara Governorate (access to Oman).

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1 FleetMon uses technology that tracks ship entry into port areas. This data may not reflect the number of ships that have successfully berthed or unloaded cargo. This data may also not reflect delays occurring between the time of arrival and the time of berth. This information is for estimation purposes only.
Trade between governorates

Logistics cluster access constraints maps classify key trade routes within Yemen as “Open”, “Warning” or “Closed”. As of October 26th, most roads in the country were classified as “Open.” Since August, the Aden-Abyan road has reopened. However, important exceptions included the Sana’a-Ma’rib road and all roads leading to Ta’izz. Moreover, a significant number of bridges have been destroyed or damaged, including those connecting Sana’a to Ma’rib and Al Mahwit, one connecting Al Mahwit to Al Hudaydah, one between Amran and Hajjah, and one between Al Mokha and Al Hudaydah. However, the access constraints map does not “address security issues.” Therefore, to complement this map, local researchers hired by FEWS NET were asked to collect information from traders and local households on their perceptions of security along key trade routes. They report that ongoing conflict has constrained movement between governorates and market functioning. Major routes indicated as “Closed or Extremely Dangerous” include Al Bayda-Abyan, Lahij-Ta’izz, Mokha-Ta’izz, and Ad Dali-Ibb (Figure 8).

Figure 9a. Commodity Availability, August weeks 3 and 4

Figure 9b. Commodity Availability, October weeks 1 and 2
FOOD AVAILABILITY

After improving temporarily in August, market supplies of key food items again deteriorated in September and early October, with only sporadic availability reported for several basic foods, including wheat flour. As of the 2nd week of October, wheat flour was only sporadically available in 17 of the 22 markets monitored by WFP (Figure 9b). In August, by contrast, wheat flour was generally available in 12 of the 22 monitored markets (Figure 9a).

PRICES

Staple food prices²

With the exception of a temporary decline in August, staple food prices have been rising gradually since the escalation of the conflict in March, according to market monitoring by WFP and partners. In May 2015, average wheat flour prices in Yemen were approximately 33 percent higher than the February 2015 average.³ By mid-October, average wheat flour prices had risen to 47 percent above the February average (YER 201/KG), their highest levels during the conflict.

Given ongoing insecurity within governorates and along key trade routes, prices remain volatile. Outbreaks of conflict can disrupt market functioning with rapid impacts on prices. For example, the price of wheat flour in Ta’izz dropped from 240 YER/kg in mid-July to 160 YER/kg in early August only to rise back to 240 YER/kg in late August following a resurgence in fighting. By mid-October, the price had reached 280 YER/kg, the highest among monitored markets in the country and 104 percent higher than the February average (Figure 11). It should be noted that WFP and partner price monitoring focuses on key urban markets. Prices may be generally higher and more volatile in rural areas. NGOs operating in several areas have indicated that prices may rise drastically in rural markets, returning to typical levels only after new supply shipments arrive.

Figure 11. October week 2 wheat flour prices and the percent change from February 2015 six market average

² These analyses are based on price data collected by WFP and NGO partners. September 14-October 5, 2015 collection of spot prices by FEWS NET contracted researchers were generally in line with the WFP/NGO managed data.
³ The February average includes the six markets monitored by WFP prior to the outbreak of conflict: Sana’a, Sa’da, Amran, Aden, Hajjah, and Hudaydah.
Water availability and prices
The drastic increase in water prices in July 2015, as compared to February 2015 pre-conflict prices, slowed down in August and September. Aden and Abyan saw decreased water prices in September 2015 as compared to February, both for consumption and domestic use. This reflects the positive impact that the July 17, 2015 return of Aden to Yemen government control had in some of the southern governorates, because it led to improved access to fuel, used for pumping and transporting water. Prices of water for consumption are noticeably high in Al Mahwit, Al Bayda, and Al Hudaydah. Households in Ibb report not only paying more for both domestic and consumption water, but also having less access to water for household use. The low level of access to water in Ad Dali and Ta‘izz (somewhat unavailable) reported by household survey respondents is a result of the rising intensity of fighting between Houthi-Saleh Militias and the local resistance/Arab Coalition. Naturally sourced water from springs, rain, and creeks continues to be a major resource for rural households, where it is available to the public for free or for a small fee.

Diesel availability and prices
Diesel prices remain well above the pre-crisis level throughout most of the country. Even at their lowest level since the start of the conflict, in August, average prices were still 160 percent above the official rate from February (Figure 12). In mid-October, prices were up by 270 percent, and remained very high in Ta‘izz (900 YER/liter), Al Hudaydah (700 YER/liter), Ibb, Sa‘dah, Hajjah, and Sana’a City (600 YER/liter). FEWS NET collected spot prices for diesel in late September and early October. Although the spot checks indicated prices somewhat lower than the WFP data indicates in most governorates for September and early October, they also suggested significant price volatility, with the researcher in Lahij reporting a price of 1,000 YER/liter.

INCOME SOURCES
The majority of respondents interviewed by FEWS NET’s local researchers, including both the July/August and September/October 2015 rounds of household interviews, reported a decline in household income in comparison to the same period of 2014. This is consistent with reports from NGO partners, including ACTED, ACF, and DRC and with the August UNICEF SMART survey in Hudaydah which reported that, over the previous four months, ~60 percent of household had lost a portion of their income and ~10 percent had lost all income.

In the nine governorates where FEWS NET researchers collected data:

Non-agricultural labor/Self-employment (15-50 percent of income)⁴: Though detailed information is limited, partners and households interviewed by FEWS NET researchers indicate that wages/salaries from non-government sources have been disrupted by conflict. This includes income from private businesses and wages for occupations like: building trades/construction workers, day laborers, mechanics, taxi drivers, port workers, and small traders.

Government (10-30 percent of income): The majority of surveyed households depend on a government salary or pensions for income, and payments have continued despite the crisis. However, some households surveyed have noted a delay in the receipt of salaries, or have reported the payment of salaries on a quarterly basis. Depending on the area, people are receiving these payments through their local post office, bank branches, or remittance services.

⁴ Figures cited after each source reflect the average proportion of income (across all wealth groups) provided by each source based on a reanalysis of 2005 Yemen HIES data.
Sale of agricultural products (0-20 percent): Declines in income from staple crop sales and cash crop sales are assumed due to reduced fuel availability for irrigation and transport, market disruptions, reduced area planted, and mediocre rainfall in some areas. Given that farmers rely on water pumps to irrigate their farms, the acute shortage of fuel continues to negatively affect their productivity and income. However, little specific information on these income sources is available. In household interviews, some of the greatest declines in proportion of income occurred in cash crop sales in Al Bayda, Ad Dali, and Ta’izz. For livestock, reports from some areas indicate that prices are low and that households are selling more animals than usual to offset the reductions of impact in other income sources and high prices on purchasing power. Spot prices for sheep and goat collected by FEWS NET researchers in July/August and September/October indicated that prices generally remained stable or increased somewhat during the period. However, high demand for livestock during the Eid al-Adha holiday in September is assumed to have maintained upward pressure on prices.

Safety net (0-15 percent): Social welfare programs like social security are only being paid among governorates surveyed in Abyan, Al Bayda, Ibb, Lahij, and Ta’izz, while in Aden these amounts are paid to people on a first-come-first-serve basis, until the available cash runs out.

Agricultural Labor (0-15 percent): Across a range of governorates, many respondents reported that demand for agricultural labor has declined due to increased costs faced by farmers. Some landowners have begun working their farms rather than hiring labor. The 68 percent of respondents who rely on income from agricultural labor reported a decline in their revenue, in addition to the decline in agricultural wage rates.

Remittances (0-15 percent): In governorates surveyed by FEWS NET, people use banks, international remittance services such as MoneyGram and Western Union, and national remittance services like Al Kuraimi and Al Jazeera, which have branches across Yemen in both urban and rural areas, to send and receive remittances. According to researchers in Al Hudaydah, Al Bayda, Aden, and Ta’izz, some bank branches are still functional, though they sometimes have to deliver wires in Yemeni riyals (YER) that were initially sent in foreign currencies. In Ad Dali, only one bank remains functional: Al Ahli Bank, which suffers from the same lack of hard currency and delays in remittance transfers. Banks and remittance service offices have either never had branches in some villages, or had to close them due to the security situation. The only functional remittance offices in surveyed governorates are in Aden, Al Mahwit, Lahij, and Ta’izz, though with long lines and low cash flow, people from rural areas will still travel to the nearest city to receive remittances, as they do in all other surveyed governorates. The cost of travel from villages to the city will vary based on location and the price of fuel in the black market, but it ranges between YER 1,000 -10,000 [USD 5-47].

SEASONAL PROGRESS

The main rainy season in Yemen typically occurs between March and August. Rainfall has a bimodal distribution with two peaks in precipitation, one in April/May and one in July/August. A seasonal dry spell typically occurs in June. This year, rainfall has been better than last year (Figure 16). NOAA’s ARC data (Figure 14), as well as USGS CHIRPS estimates (Figure 15), indicate that cumulative rainfall has been average to above-average in Red Sea coastal areas and much of the Central Highlands. In the arid eastern governorates of Hadramaut and Al Mahrah, where agricultural production is limited, rainfall has been below normal. This is supported by Normalized Difference Vegetation Index (NDVI) imagery (a measure of vegetation), which indicates average to above-average conditions in the Central Highlands in October. Evapotranspiration anomaly (ETa) imagery (a measure of soil moisture) does not indicate any broad areas of major departure from typical conditions.

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5 This includes staple crops, cash crops, livestock and fish
Placing

Yemen produces an average of roughly 850,000 MT of cereals per year. Roughly half is sorghum, a quarter is wheat, and the remainder a mix of maize and barley. Vegetables (~1,000,000 MT), fruits (~1,000,000 MT), meet, and milk are other important food commodities produced in Yemen. Qat is the primary cash crop. Cereal crop harvests occur between May and November. Key cropping areas are depicted in green in Figure 17. During 2015, the ongoing conflict has affected agricultural production in a variety of ways, including reduced fuel to power irrigation pumps (~1/3 of cereals are irrigated), increased production costs, reduced availability of labor to work on farms, and fear of traveling to fields due to ongoing insecurity.

Reduced area planted has been confirmed by two sources. First, households interviewed by FEWS NET researchers in July/August reported declines in area planted compared to 2014 in Hudaydah, Al Mahwit, Ibb, Lahij, Sa’adah, and Ta’izz governorates. Declines in cash crop planting were also reported, though in a smaller number of areas (Figure 13).

These field reports are complemented by a USGS assessment of planted area. Based on the location of key cropping areas and the availability of imagery, USGS analyzed high resolution satellite imagery from three locations, one in western Ta’izz, one in central Sana’a, and one in southeastern Lahij (Figure 17). Imagery captured during the 2015 growing season was divided into a 100-meter dot grid and interpreted by staff at the USGS Earth Resources Observation and Science (EROS) Center in Sioux Falls, South Dakota. Each grid dot was classified as not cultivated, cultivated this year, fallow, or settlement (See Figure 18 for an example). A similar analysis was conducted using imagery from the 2013 growing season (a relatively normal year for cropping). The two sets of results were then compared to assess whether any changes to cropped area had occurred. This comparison suggests that cropped area has declined by ~7 percent in Ta’izz and Sana’a (Figure 19). In Lahij, this analysis indicates that cropped area increased by roughly 9 percent, though this is a less heavily cropped area and so the absolute value of this increase is relatively smaller. Note that during image interpretation, fields were classified as cultivated if any crops were present, even if only a small portion of the grid square was planted or crop conditions were poor. Therefore, the actual planted areas could be lower than estimated.
HEALTH AND NUTRITION

Damages to hospitals and health centers in many governorates have drastically limited the provision of medical care and services, particularly for traumatic injuries. This includes Al Sab‘een hospital in Sana’a whose catchment area includes more than three million people.

Routine immunization activities have been disrupted; however, WHO, UNICEF, and GAVI launched a campaign on August 15 to vaccinate more than 5 million children under 5 years of age against polio and approximately 1.5 million children 6 months to 15 years of age against measles and rubella.

Limited access to health care services and a breakdown in water and sanitation conditions have facilitated the spread of communicable diseases. For 2015 through October 3rd, there had been 8,004 suspected dengue fever cases in Yemen in 17 governorates, particularly concentrated in Al Hudaydah and Ta’izz. Respiratory tract infections, acute diarrhea, pneumonia, and suspected malaria have been leading causes of morbidity.
A SMART survey conducted in Al Hudaydah between August 8-13 reported exceptionally high levels of morbidity among children 6-59 months of age: the occurrences of diarrhea, cough, fever, and suspected measles in the 2 weeks preceding the survey were 41.7 percent, 41.8 percent, 47.7 percent, and 2.8 percent, respectively. Coverage of vitamin A supplementation and immunization services was sub-optimal. Only 52.5 percent, 81.2 percent, and 86.5 percent of children had received vitamin A supplementation, the pentavalent3/polio3 vaccination, and the measles vaccination, respectively.

Researchers in Al Bayda, Al Hudaydah, Ibb, Lahij, and Ta’izz have indicated that outside of hospitals and clinics, there are no programs to address acute malnutrition, although vitamin A campaigns have taken place in Al Bayda, Ibb, and Ta’izz in August 2015. Acute malnutrition programs in Abyan, Ad Dali, Al Mahwit, and Aden are reported to be fully functional, and range between 69 units in Al Mahwit, to only one in Aden. Al Sadaqa Hospital is the only center in the governorate of Aden equipped with a Therapeutic Feeding Center. The center serves the residents of nearby Abyan and Lahij.

Of all surveyed governorates, admission information was only available to researchers in Abyan, Al Hudaydah, Al Mahwit, and Ibb. According to the Abyan Governorate Health Office, admissions of malnourished children rose from a total of 136 in 2014, to 557 in 2015. In Al Mahwit, according to Al Jumhuri Hospital records, 1,800 cases were admitted in 2014, and 2,216 in 2015. The upward trend can also be seen in Ibb, from the Maternal and Child Hospital records, with 29 cases of acute malnutrition from January to April of 2014, and 97 during the same period in 2015.

**FOOD ASSISTANCE**

Since April, WFP has provided food assistance to an average of 870,000 people each month, ranging from ~100,000 people in June to ~1,500,000 people in September. As different size rations were distributed in different areas, it is useful to calculate “Full Ration Equivalents (FRE)" for comparison purposes. By this measure WFP distributed, on average, the equivalent of 470,000 full rations per month between April and September (Figure 20). This assistance has been concentrated in Aden, Sa’dah, Amran, Sana’a, Ta’izz, and Al Hudaydah. On average, WFP reached 80,000-185,000 beneficiaries per month between July and September in each of these governorates (55,000-100,000 FRE). Figure 21 depicts average food aid distributions (in FREs) for July, August, and September 2015.

As of early October, WFP was distributing wheat grain, rather than wheat flour, due to fuel-related limitations on milling. Recent FEWS NET interviews in Ibb, Aden, and Hudaydah indicate that households try to get the grain milled locally, but that if this is not successful only half of interviewed households reported being able to grind at home. Other households reported not using the grain or feeding it to animals. Household were generally unfamiliar with methods of preparing whole grain for consumption.

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6 A full ration is defined as 20kg/cereal/person/month
FOOD SECURITY OUTCOMES

Current information on food security outcomes in Yemen has been very limited during 2015. However, some new data has been collected over the past four months. In combination with information on various contributing factors (e.g., food prices, market functioning, food aid delivery) these data provide improved insight into the current severity of acute food insecurity. Nonetheless, these conclusions should be considered carefully given significant and ongoing information gaps.

WFP mVAM

In October, WFP completed a third round of mobile surveys (mVAM) in Yemen, with a sample of 2,400 respondents from 21 governorates, with more than one-third of the respondents being internally displaced. This survey followed two previous rounds of mVAM information collected in late July/early August, with 1,147 respondents across 22 governorates, and in September, with 2,400 respondents from 21 governorates. The surveys used a call center based outside of Yemen. These interviews collected two food security indicators: the Food Consumption Score (used to derive Food Consumption Groups [FCG]) and the Reduced Coping Strategies Index (rCSI). Summary results are provided below along with comparisons to data collected in Yemen in 2014 and to data collected in other countries. Note that given cell phone ownership patterns, the WFP sample is likely biased towards “younger, somewhat better-off men who live in urban areas.” This suggests that food security outcomes could be worse than suggested by these data.

Food Consumption Score (FCS): The WFP mVAM data indicates some deterioration of food consumption in September and October as compared to July/August. Overall, 22.6 percent of the sample in October indicated “poor” food consumption (18.1 percent in July/August), and another 19.7 percent were “borderline” (19.5 percent in July/August). Figure 22 compares the proportion of households with “Poor” food consumption in the three 2015 mVAM surveys with levels measured during the April 2014 CFSS. The most significant deterioration of FCS between the October 2015 data and the April 2014 CFSS was reported in Al Hudaydah (10 percent “poor” to 19 percent “poor”), Aden (8 percent to 17.2 percent), Amran (14 percent to
32.2 percent), Dhamar (21 percent to 31.2 percent), Al Jawf (10 percent to 31.2 percent), and Raymah (21 percent to 38.7 percent). Governorates with “poor” FCS reported by more than 30 percent of respondents in the October mVAM survey included Ma’rib, Amran, Dhamar, Ad Dali, Al Jawf, Raymah, and Hajjah. In Ibb, Shabwah, Al Bayda, Ta‘izz, and Sana’a, more than 20 percent of respondents reported “poor” FCS.

**Figure 22.** Percent of households with “Poor” food consumption, Aug – Oct 2015 mVAM average vs. April 2014 CFSS

![Figure 22](image)

**Figure 23.** Median rCSI by governorate, August-October 2015 mVAM average vs. April 2014 CFSS

![Figure 23](image)
As in the first round of data collection in July/August, the September and October data indicates worse food consumption indicators among internally displaced persons (IDPs). In September, 31.1 percent of IDP respondents were experiencing “poor” food consumption and 23.8 percent “borderline.” According to the Task Force on Population Movement estimates for October, approximately 2.3 million people have been displaced during the conflict, with the highest numbers of displaced people residing in Aden (393,508), Ta’izz (300,585), Hajjah (280,821), Ad Dali (185,588), Abyan (163,118), Al Bayda (149,108), and Ibb (120,231).

Sierra Leone and South Sudan provide points of comparison. In South Sudan, April/May 2015 surveys in Ayod and Mayendit counties found that 60-75 percent of households had “Poor” food consumption and 15-20 percent had “Borderline” food consumption. During this period, Mayendit was classified as Crisis (IPC Phase 3) and Ayod was classified as Emergency (IPC Phase 4). In Sierra Leone, a WFP EFSA conducted in June 2015 found that nationally, 32 percent of households had “Borderline” food consumption and 13 percent had “Poor” food consumption. In Kailahun, one of the worst affected areas 56 percent of households had “Poor” food consumption and 32 percent had “Borderline” Food Consumption. During this period FEWS NET classified Kailahun as in Crisis (IPC Phase 3).

Reduced Coping Strategies Index (rCSI): The median rCSI, averaged for the three 2015 WFP mVAM surveys, was 15.7. In July/August, the median for IDP households (24.9) was higher than for non-displaced households (16.0). Median rCSI across governorates surveyed in October ranged from 6 to 27. The highest median rCSI were found in Hajjah, Raymah, Al Jawf, Ad Dali, Dhamar, Amran, and Ibb. Figure 23 compares the median rCSI, averaged from the three 2015 mVAM surveys, with levels measured during the April 2014 CFSS. With the exceptions of Al Mahrah, Lahij, Aden, Shabwah, and Sa’da, the median rCSI was higher than in 2014. Again, as points of comparison, April/May 2015 surveys in Ayod and Mayendit counties reported median rCSI of 27 and 18, respectively. In Sierra Leone in June 2015, the national median rCSI was 12 and the median in Kailahun was 18.

FEWS NET household interviews

During late September and early October, FEWS NET researchers interviewed households across eight governorates. As part of these interviews, responses to the Household Dietary Diversity Score (n=222) and Household Hunger Score (n=227) were collected. Summary results are provided below. Note that these data are not representative and should therefore be interpreted with caution.

Household Dietary Diversity Score (HDDS): The HDDS asks households about the consumption of 12 food groups during the prior 24 hours. Among the 222 surveyed households, the mean HDDS was 5.07. Households in Ibb and Al Hudaydah displayed the lowest HDDS, with 3.53 for Ibb and 3.7 for Al Hudaydah. Households in Abyan and Al Bayda displayed the highest dietary diversity, with average HDDS of 7.35 and 7.5. Cereals were the most common items prepared and consumed by households surveyed in the 24 hours prior to responding to the survey, with only ten out of 225 surveyed households not consuming cereals. Fruits were the least consumed food category among surveyed households, with 190 out of 225 households not consuming fruits in the recall period.

Household Hunger Score (HHS): Households were also asked about the frequency with which they experienced three manifestations of food insecurity during the past 30 days: having no food of any kind in the house due to a lack of resources, one or more household members going to sleep at night hungry because there was not enough food, and one or more household members going 24 hours without any food. Among 227 surveyed households, 68 (30 percent) scored 2 or higher, indicating “moderate” hunger in the household, and 19 of these (8.4 percent), scored 4 or higher, indicating “severe” hunger in the household. Of the 19 households indicating “severe” hunger, 15 of these were in Al Hudaydah Governorate.

Food and Non-Food Needs Forgone: As shown in Figure 24, households surveyed were asked to indicate which of the categories of food and non-food items they can no longer acquire. Households in all surveyed governorates have had to give up certain foods due to lack of income. The most common food group forgone was meat, chicken, fish, and beans; followed by fruits and vegetables, and then dairy. This points to a potential lack of protein-rich foods in the diet of these households. Non-food items given up due to lack of funds include medicine, transportation, and communication.

Figure 24. Food and non-food needs forgone, late September/early October
In August, UNICEF completed two representative SMART surveys covering Al Hudaydah and Aden governorates. In Al Hudaydah the GAM prevalence was 31.0 percent and the SAM prevalence was 8.9 percent. The Crude Death Rate (CDR) was 0.19/10,000/day and the US Death rate (USDR) was 0.14/10,000/day. In Aden, the GAM prevalence was 19.2 percent and the SAM prevalence was 2.5 percent; however, the CDR and USDR have not yet been reported (Figure 25). In both cases, the prevalence of acute malnutrition is higher than in 2014.

The high prevalence of acute malnutrition in Al Hudaydah is especially concerning and warrants immediate attention. Past experience in Al Hudaydah suggests that increased disease prevalence and reduced access to health services may be more important drivers of this increase in acute malnutrition than household food insecurity. First, the current GAM prevalence is similar to the prevalence reported in the 2011/12 CFSS of 27.9 percent and a 2011 SMART survey of 31.7 percent. In 2011 the prevalence of GAM in Al Hudaydah was substantially higher than in any other part of the country, despite the fact that data collected as part of the 2011 CFSS indicated that the prevalence of food insecurity in Al Hudaydah was relatively low. In fact, the prevalence of food insecurity is typically lower than most governorates and Al Hudaydah persistently demonstrates a GAM prevalence well above the national average. Second, the burden of morbidity (including diarrhea) is consistently very high in Al Hudaydah and was high in the two weeks preceding the recent survey, as described above. Since 2009, the prevalence of GAM was higher among children who had morbidity in the past two weeks vs. those who did not in all stratified analyses of CFSS and SMART survey data.
The UNICEF survey also collected information on coping strategies, reporting that nearly 80 percent of households have borrowed food or money to purchase food, 60 percent have reduced meal size, 45 percent have reduced meal frequency, and 35 percent have gone to bed hungry. Information on the recall period used for these coping strategies questions or on the frequency of their use is not currently available.

**AREA ANALYSES**

**TA’IZZ**

Ta’izz Governorate, in southwestern Yemen, is primarily comprised of two livelihood zones: the lowland “wadi sorghum, millet, vegetable, fruit, and livestock” zone 11, and the “highland qat, grain, fodder, and livestock” zone 10.

In zone 10, qat production is a major economic driver throughout the year. Most of the grains produced in zone 10 are sold as animal fodder. As in other highland zones, livestock plays an integral part in household access to cash and food. Poor households in this zone are heavily dependent on market purchases for food, although they typically use most of their small holdings for grain production. Poor households mostly rely on labor provided by better-off neighbors and supplement this income with livestock sales and credit. In zone 11, livelihoods are dependent on wadi-irrigated agriculture, particularly the cultivation of grains, fruits, and vegetables. Livestock keeping is also an integral part of household livelihoods. Poor households cultivate small plots of land and produce minimal amounts of food for consumption. The bulk of their food is sourced as payment in grain for working on better-off households’ farms. Poor households typically earn more by collecting and selling firewood than from their livestock sales. With limited resources to rely on during normal years, the poor are more vulnerable to shocks as they occur and have few options to recover from food or cash deficits. During times of crisis, some of the few options are increased sale of labor, credit, and gifts.

**Current Situation**

According to 2014 CFSS data, levels of poverty and wasting were high in Ta’izz. However, levels of acute food insecurity were relatively low, with Ta’izz Governorate most likely Stressed (IPC Phase 2) at that time.

Several factors have contributed to increasing food insecurity in Ta’izz since the escalation of conflict in March 2015. These include price increases for staple foods, very large increases in the cost of other key items including fuel and cooking gas, reduced income-earning options, restrictions to market supply and access routes in some areas due to the ongoing conflict, reduced remittances received due to limited functioning of remittance services particularly in rural areas, population displacement due to conflict, and reductions in local staple crop production and demand for agricultural labor.

- Wheat flour prices through the first two weeks of October were YER 280/KG, 105 percent above the February average price in the six markets monitored at that time. This was the highest price recorded across markets monitored in governorates throughout the country. With the exception of early August, wheat flour prices in Ta’izz have been elevated throughout the conflict, at YER 198/KG (+ 45%) in May, YER 181/KG (+ 32%) in June, YER 190/KG (+ 39%) for July, and YER 280/KG (+ 105%) in September.

- Diesel prices through the first two weeks of October were at YER 900/liter, as compared to YER 150/liter in February. Diesel prices have been very high throughout the conflict, with periods where it was reported as unavailable. The average price for June was YER 1,000/liter, and for July it was YER 1,175/liter. Diesel is important for several reasons, including transportation of food and providing power to pump groundwater for irrigation and consumption. As many poor households typically rely on labor opportunities provided by better-off households for income for food purchases, the drastic increase in the cost of irrigation adversely affects the income of poor households through decreased demand for agricultural labor.
The cost of cooking gas in September was YER 8,000/bottle (18 KG), the highest price reported in markets monitored.

Most households surveyed by FEWS NET in Ta‘izz in July/August and in September/October reported a decline in income as compared to the same periods of 2014. Due to the escalation of air-strikes and ground fighting, many sectors in Ta‘izz City have been adversely affected, including petty trade, construction, and private sector businesses. Ta‘izz is the largest industrial base in Yemen, and these sectors provide important labor opportunities for poor households.

FEWS NET surveys indicate that ongoing insecurity in Ta‘izz pushed many residents to relocate to other cities and rural areas. This population shift has increased pressure on small, unequipped village markets and remittance services, and also increased demand for food and water where there is an insufficient supply. Ta‘izz had the most restricted trade route access in September and October 2015 of governorates monitored by FEWS NET, due to ongoing violence from Houthi and anti-Houthi actions, damaged infrastructure, and travel checkpoints.

FEWS NET July/August and September/October 2015 information indicates that several remittance services have stopped operating in Ta‘izz during the period, including CAC Bank, IBY, and YBCD. In September, respondents indicated that remittances were down by 90 percent from 2014 due to branch closings.

Heavy ground fighting in Ta‘izz is ongoing, particularly in Ta‘izz City and surrounding rural areas. Significant displacement has been reported within Ta‘izz. The Task Force on Population Movement’s October report estimates that there are approximately 300,000 IDPs within the governorate.

Sorghum, maize, wheat, and millet harvests are ongoing, having started in September. Cumulative rainfall this season in Ta‘izz has been adequate. However, FEWS NET information indicates that production expectations are for significantly reduced food crop production as compared to a normal year and last year, due to disrupted water access, roadblocks, power outages, and fuel shortages. Cash crop production was reported to have increased in Ta‘izz, because farmers prioritized cash crops due to faster growing cycles. Agricultural wages were reported to have increased due to an increase in living expenses, but the demand for workers dropped.

FEWS NET market surveys indicated that prices for goats and sheep had dropped between July/August and September/October, by 11 percent for goats and 4 percent for sheep. It is likely that downward pressure on livestock prices was partially mitigated during the period by high demand for livestock leading up to Eid al-Adha in late September.

Due to multiple shocks to household access to food and income sources, it is estimated that Ta‘izz Governorate is currently in Emergency (IPC Phase 4) acute food insecurity.

Most Likely Food Security Outcomes

Continuing conflict in Ta‘izz will continue to disrupt most major sources of income and food for poor households. Households with access to remittances or other social support will rely increasingly on these sources to access food. These reductions in income, along with above-average food prices, will continue to limit purchasing power, resulting in persistent food consumption gaps for poor households. These consumption gaps are likely to increase during the October 2015 to March 2016 period as households exhaust coping mechanisms such as consumption or sale of livestock. Therefore, Ta‘izz Governorate is likely to remain in Emergency (IPC Phase 4) throughout the period.
SA’DAH

Current Situation

Sa’dah has been experiencing some of the greatest levels of physical insecurity from the ongoing conflict. Heavy, near daily airstrikes have continued during the past few months, particularly in districts bordering Saudi Arabia as well as most recently the central Haydan District, causing further displacement and disruption for trade activities. The MSF-supported Haydan Hospital has reportedly been damaged. In some rural areas, military targets are present in agricultural/mountainous areas. As a result, these areas are being targeting by Saudi airstrikes, severely impacting farmers. Although currently, air strikes are mostly not targeting urban areas, between late March and June significant damage was done to local infrastructure in Sa’dah City, as well as Sahar and Majz Districts.

Although not a representative sample, households interviewed by FEWS NET researchers in July/August indicated that their income had declined since 2014. These responses were consistent with reports from partner organizations. Government base salaries were still being paid as of August, but bonuses and allowances had not been paid since January 2015. Remittance services in Sa’dah are generally not functioning, forcing households to travel outside of Sa’dah (often to Amran) to withdraw transfers. Since August, some transfer services began to reopen, but their capacity to respond to local demand is severely limited. Restrictions on movement within the country and to neighboring Saudi Arabia are also impacting household access to markets and labor opportunities. Due to the security situation, FEWS NET researchers were not able to access Sa’dah during the September/October round of data collection.

Field reports indicate that local fodder availability has been restricted by limited cultivation activity, which would typically contribute to animal feed in the form of crop residuals. The price of fodder from outside the governorate, mainly from Al Hudaydah, has increased due to damaged bridges on routes between Hajjah, Al Hudaydah, and Sana’a, while the Al Hudaydah-Sa’dah route is closed. Poor households, which typically own five to seven heads of livestock, are reportedly selling their animals at prices 50 percent below normal. Households are thought to be selling livestock they can no longer tend to and destocking before they are displaced from the area.

The cultivation of cash crops, primarily qat, is a significant source of income for many households in a typical year. Since the increase in conflict this year, area cultivated is down very significantly. Marketing of cash crops is also impacted, as low production, high fuel/transportation costs, and disrupted market functioning contribute to reduced incomes from cash crop sales.

Staple food production is similarly impacted. In a normal year, Sa’dah contributes to around two percent of total domestic cereal production, with agricultural labor an important source of income for poor households. The continuing conflict has contributed to high agricultural input costs, and for fuel, restricting agricultural activities. Harvests of legumes (harvested in July/August) and maize (harvested in June-August) are likely to have been well below-average.

The high level of physical insecurity has also contributed to reduced trade activity and market functioning in most parts of the governorate. Both border crossings with Saudi Arabia are closed and trade routes to the south have limited functionality. Market availability of staple foods, which is limited in urban areas, is expected to be even further limited in rural areas. Wheat flour prices have increased substantially during the conflict, reaching YER 200/KG during the first two weeks of October, 46 percent above the February six-market average. Reports have indicated that, in some rural markets, prices are rising several fold at times when supply shipments have not been received recently. Shortages of cooking gas have been reported for months, and some reports indicated it was unavailable in October.

The availability of and access to water is also of concern. The high cost of water is limiting household capacity for purchase. Limited revenues and high fuel costs limit the ability to pump water in urban areas. Water in rural areas is more accessible, but often comes from less improved sources.
According to the Comprehensive Food Security Survey (CFSS), with data from March and April of 2014, Sa’dah was the most food insecure governorate in Yemen. Nearly 60 percent of the population had “Borderline” or “Poor” food consumption according to WFP’s Food Consumption Score, 53 percent had an rCSI greater than 20, and 55 percent were moderately or severely food insecure according to the Household Hunger Score. This year, physical insecurity, limited food availability in the governorate, reduced incomes, high prices, and restricted household access to markets have further exacerbated household food insecurity. Large food consumption gaps for poor and very poor households are considered likely. As such, Sa’dah is expected to be facing Emergency (IPC Phase 4) acute food insecurity, with an increased risk for very high acute malnutrition and excess mortality.

Most Likely Food Security Outcomes

There is no indication that the conflict will ease in the coming months. While the payment of government base salaries may continue, disruptions to transfer services for remittances, and private sector and agricultural labor incomes, are likely to continue. Food availability on markets will remain restricted, and market prices could be expected to remain well above average. Imports of fuel will remain well below pre-crisis levels, contributing to maintaining high diesel and petrol prices, particularly on the black market. Cooking gas will also continue to be less accessible to most poor households due to limited availability and high prices. Disruptions to electricity, fuel supply, and trade routes are likely to continue to affect urban households dependent on water deliveries by truck. The cost of water for consumption will remain above pre-crisis levels, particularly for households dependent on diesel-powered pumps and trucked water. As no improvement in the food security situation is anticipated, Sa’dah is expected to remain in Emergency (IPC Phase 4) through at least March 2016.

AL MAHWIT

Current Situation

Al Mahwit has been less directly affected by fighting during the escalation of conflict since March than neighboring areas, with only a few airstrikes reported in the governorate. However, it has been indirectly affected by conflict-related decreases in staple food and fuel imports, increased transportation costs due to well above-average fuel prices and checkpoints along major routes, and the resulting increases in staple food prices on markets.

Trade routes between Al Mahwit Governorate and other major urban areas remain mostly open to traders. The direct route from Al Hudaydah to Al Mahwit, which cuts across the northern part of the governorate on the way to Sana’a and Amran, is reported to be fairly safe, but airstrikes have damaged bridges on this route between Al Hudaydah and Sana’a, making shipping goods more difficult. Moreover, increased checkpoints have increased transportation costs. As of July, the cost of shipping a sack of flour had increased to YER 500 from the YER 200 pre-crisis cost. The route between Al Hudaydah and Sana’a, which crosses southern Al Mahwit, is reportedly to be in fair condition. Markets in Al Mahwit are reportedly functioning normally.

FEWS NET’s rapid assessment in late September and early October and reports from partners suggest that wheat flour remains available on markets in Al Mahwit, though availability is reduced as compared to July 2015, and from prior to the increase in conflict in March. Likewise, declines in the availability of sugar and vegetable oil have been reported, with cooking oil, petrol, and diesel remaining sporadically available.

Prices for wheat flour in Al Mahwit have varied greatly since March, first rising to between 32 and 46 percent above their pre-crisis level (YER 136/kg) by late July, before dropping significantly by late August to YER 100/kg, or about 27 percent below their pre-crisis level. However, those decreases have proven short-lived, with increases in September and October to YER 167-180/kg, again near 32 percent above the pre-crisis price. Cooking gas has shown dramatic price increases, hitting YER 6,500/bottle, compared to YER 3,500/bottle in September and YER 2,000/bottle in March. Prices for gasoline and diesel also remain well above average. Recent fluctuations in the availability and prices of these commodities suggest future price
behavior will continue to depend on import and trade dynamics. Recent price increases will limit poor households’ ability to access staple foods, and will likely inhibit any improvement in food security outcomes. FEWS NET’s rapid food security assessment and information from key informants suggests that poor households are continuing to receive income, although perhaps at below-average levels. Money transfer systems typically used for remittances remain in operation, though with long lines and low cash flows, and rural households may need to travel further to more urbanized areas to withdraw transfers. Non-agricultural income appears to be below average in urban and rural areas of Al Mahwit. Key informants suggest the effects of high prices and reduced trade have led to a slowdown in economic activities that usually provide labor, such as construction and daily labor in markets. This reduction in employment opportunities has led some members living in urban areas to return to their rural households, where purchasing power is already low. With cooking gas prices well above average, it is possible that increased collection and sale of firewood, a normal livelihoods strategy for poor households, may offer some increased income-earning potential. Incomes from government salaries are continuing to be paid at their normal levels, although payments may be delayed or paid quarterly, rather than monthly. In any case these salaries will likely be more beneficial to better-off households for whom this is a more important source of income.

FEWS NET’s rapid assessment and key informants suggest that poor households have been employing atypical coping strategies to try to meet their minimum food and livelihood protection needs. FEWS NET’s rapid assessment suggested agricultural households are switching a large share of their production from longer-cycle food crops to short-cycle cash crops due to increased needs for cash in the short term. Key informants report households increasing purchases on credit, as well as decreasing the quantity and quality of foods by reducing their consumption of meat, vegetables, and fruit, and relying more heavily on cereals such as wheat and rice, and when possible, livestock products such as milk and ghee. Key informants have also reported some more extreme, though perhaps isolated, coping strategies such as using land as collateral for food purchases on credit or even the sale of land. Normally, households typically would resort to selling their last productive livestock (which is more difficult for key informants to witness or get information on) prior to resorting to the sale of land. As a result, the mortgaging of some livelihood assets such as land, even if limited, may signal that an important share of households are increasing their sale of livestock, perhaps at unsustainable levels.

Food security outcomes likely improved as staple food prices declined in July and August, but food access is likely more constrained now that prices have once again increased above their pre-crisis levels. Below-average access to income and above-average staple food prices and essential commodities such as cooking gas have likely limited normal household livelihood expenditures. Furthermore, reports that households are engaging in unusual coping such as increased borrowing and a probable increase in sales of productive livestock suggest households are engaging in unsustainable levels of coping in order to prevent food consumption gaps. As a result, Al Mahwit is currently in Crisis (IPC Phase 3). There are currently no major assistance operations ongoing in this governorate.

**Most Likely Food Security Outcomes**

October normally marks the start of harvests of sorghum and coffee in this zone, as well as the onset of agricultural labor activities for the first season of wheat/barley and legumes. Information on second-season area planted is limited, but key informants reported significant (up to 40 percent) reductions in area planted in staple food crops during the first season along with some reported increases in area planted in cash crops. Based on the assumption that total area planted will be moderately below average, below-average levels of agricultural income are also expected through December 2015.

Based on the assumption that staple food prices will remain above average at near their current levels, **Al Mahwit is expected to remain in Crisis (IPC Phase 3)** through March 2016. In the event significant conflict were to affect trade routes between Al Hudaydah and Sana’a, prices for staple foods and other essential commodities would likely increase significantly in Al Mahwit. Moreover, interruption of trade between Al Hudaydah and Sana’a would likely reduce commercial activities in Al Mahwit that are depending on business along the major transportation routes.