

# Strategic Analysis Paper

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## Crisis in Yemen: Food, Water and the 'Slow Motion Coup'

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### Key Points

- Yemen is the most food insecure country in the Middle East and has the eighth-worst hunger rate globally.
- Currently, over 10 million Yemenis, or 42.5 per cent of the population, are food insecure.
- Yemen's population is expected to double in the next twenty years. This added pressure on already scarce resources may cause Yemen to be the first country to 'run out' of water.
- Yemen's food and water production capacity is limited and it relies on the international market to supply 60 per cent of its food needs.
- Ongoing political instability and conflict undermine food security by damaging economic infrastructure, causing internal displacement and contributing to food price inflation.

### Summary

Yemen is critically food, water and energy insecure. Political turmoil and resource constraints mean that the situation is likely to worsen in the years to 2025. Yemen suffers from widespread poverty, demand pressures from a rapidly growing population and a deteriorating economy. The country's agricultural sector is struggling and water reserves are diminishing to the point that the capital, Sana'a, is likely to be the first city in the world to completely run out of water. Further, Yemen's social and political unrest, exacerbated by

economic stagnation, poverty and institutional incapacity, could have serious effects on regional stability and global security.

### Analysis

Yemen's food and water insecurity is intrinsically linked to its political and social [instability](#). Ongoing conflict has disrupted food supply chains and agricultural production, shifted consumption patterns by displacing populations, eroded investor confidence in the economy and pushed thousands of people into poverty. Scarce natural resources and the limited availability of food and water have exacerbated this instability. Yemen is a country on the precipice of failure; its current insecurity has created one of the world's major humanitarian crises.

#### Political Instability and the Houthis' Coup

The Republic of Yemen was established in 1990 by the unification of the Yemen Arab Republic (North Yemen) and the People's Democratic Republic of Yemen (South Yemen). The unification, however, failed to end tensions between the northern and southern regions and political infighting continues to create violence in many parts of the country. The Arab Spring, which spread to the country in January 2011, precipitated social unrest and outbreaks of violence. Saleh, Yemen's long-term president was forced to resign in November 2011 as the Gulf Cooperation Council (GCC) brokered a power transfer agreement.

Yemen's political situation is currently chaotic. In September 2014 the Houthis (Shia rebels) seized the capital Sana'a and in January 2015 took over the Presidential Palace. On 22 January, Yemen's Sunni President, Abd Rabbo Mansour Hadi; the Prime Minister, Khaled Bahah; and the entire cabinet that was formed in November, resigned their posts. The resignations occurred after President Hadi, under duress, was forced to sign a peace deal with the Houthis, one that contained a mechanism to make constitutional changes and conceded to the Houthis the right to appoint government officials.

Publicly, the Houthis have said they will appoint a Presidential Council to administer Yemen, but it is unclear how the country will run in Hadi's absence. The Houthis have strong influence in Northern Yemen, but their power is limited in the South. Ongoing conflict between Northern and Southern Yemenis has led to significant internal migration and contributed to Yemen's high number of internally displaced persons. There is a continual struggle to manage *jihadist*, secessionist and tribal conflict throughout Yemen. This situation could revive hopes in the South for the separate Southern State that existed prior to 1990.

This situation is relevant to global stability for a number of reasons. Yemen is strategically located next to Saudi Arabia and the Bab al Mandab Strait, through which commercial oil tankers carry approximately [3.4 million](#) barrels of oil (3.5 – 4 per cent of global supply) per day. Political upheaval in Yemen has the potential to destabilise the wider Middle East region and create problems for global oil supply. The chaos in Yemen could also create a significant recruitment ground for terrorist networks. Yemen is home to what is believed to be the most dangerous off-shoot of Al Qaeda, Al Qaeda in the Arab Peninsula (AQAP), which has a [proven](#) ambition to carry out attacks on the West.

## Food and Water Security in Crisis

Over half of Yemen's population is food insecure. According to the [World Food Program](#) 4.5 million Yemenis are severely food insecure, while six million are moderately so. In 2013, the [Integrated Food Security Phase Classification](#) identified four of Yemen's 19 governorates as having reached an 'emergency' level of food insecurity. A further nine were in 'crisis' and the remaining six 'stressed'.

Conflict has exacerbated food insecurity. Population displacement has left those dependent on subsistence food production unable to grow and access enough food for their families. Furthermore, [instability](#) is creating greater challenges for aid organisations and international food donors in their efforts to access and support Yemenis in crisis. Conflict is hampering aid programs and undermining much needed agricultural development and support. [The National Food Security Strategy](#) does not have the required political and economic stability to allow its implementation and challenges persist for the [FAO](#) as it works to modernise Yemen's agricultural sector and achieve a measure of food security at a grass-roots level.

Agricultural productivity is low across the country with approximately seven per cent of its land arable and only three per cent of this regularly cultivated. Agricultural production declined by 10.3 per cent in 2011 due to displacement, instability, damaged irrigation infrastructure and destroyed farmland. Water scarcity has further limited production levels. According to [International Policy Digest](#), a report by Sana'a University estimates that 70-80 per cent of the conflict in rural areas is related to water shortages. These shortages are also driving internal migration; populations from rural areas are moving to Sana'a in the hope of securing employment and greater access to scarce resources.

The production of *qat* is a serious and ongoing problem for both food and [water security](#) in Yemen. This addictive, narcotic plant has replaced thousands of hectares of food crops including grapes, apricots, sorghum and wheat and accounts for approximately 40 per cent of Yemen's agricultural water consumption. Consumed by up to 90 per cent of the adult male population, this cash crop both drains much needed resources and creates a burden on family incomes, with as much as a third of income spent on *qat*.

An estimated 90 per cent of Yemen's water is used for agricultural production. Following the discovery of oil in the 1970s, subsidies for oil led to the widespread utilisation of drilling rigs and the development of bore wells. A rapid increase in the extraction of groundwater resulted, making unsustainable levels of water extraction a continuing problem across the country.

Yemen is one of the five most water-stressed countries in the world according to a report by the World Bank; with as little as 86 cubic metres of water available per capita per annum. Water tables are draining rapidly, particularly in the upper highlands and regions surrounding Sana'a. The majority of agriculture in this region relies on irrigation from ground water wells.

While physical scarcity is a significant barrier to water security, 'institutional scarcity' further exacerbates this problem. Quoted in a Geographical [article](#) earlier this year, Dr Omar Ahmed

Bamaga, Associate Professor at the Centre of Excellence in Desalination Technology at King Abdulaziz University in Saudi Arabia, said bad management and a weak rule of law are responsible for many of Yemen's existing water challenges. Neighbours with similar water scarcity challenges are not faced with the same crisis levels as Yemen. Economic and relative political stability in these states have created an environment in which solutions and alternatives to water scarcity have been developed and implemented.

### **Population, Migration and Poverty**

Poverty in Yemen is the result of poorly developed infrastructure, inequitable distribution of strategic resources such as safe water and land, and a lack of adequate access to healthcare and education. It is one of the poorest countries in the Middle East, with more than [54 per cent](#) of the Yemeni population living in poverty.

With a population of approximately 26 million people, Yemen is also challenged by an overwhelmingly young, dependent demographic. The median age is 18.8 years and 46 per cent of the population is under the age of fifteen. A high youth unemployment rate feeds growing social instability and discontent. The country already has an unemployment rate of around 35 per cent. Yemen's National Population Council (NPC), estimates that 2.2 million new jobs will be needed in the next twenty-two years.

Population growth continues to accelerate significantly, creating mounting pressure on dwindling natural resources. Yemen's current food and water demand, meanwhile, already far exceeds supply. Patterns of demand are also skewed by significant numbers of internally displaced persons and refugees.

According to the latest figures from the [UNHCR](#), there are more than 658,000 people within Yemen who are either internally displaced, seeking asylum or refugees. All of these require assistance. Of this number, approximately 236,000 are Somali refugees who have fled civil war. The majority of internally displaced Yemenis are located in the northern governorates where tribal clashes and conflict continue. The role of Yemen as a transit country and the large numbers of internally displaced people (IDPs) only exacerbate its instability and food and water insecurity.

### **Institutional Challenges**

Institutional and political instability, underpin Yemen's inability to address the plethora of challenges it faces. Major economic weaknesses require medium- and long-term structural reforms. Without an improvement in political stability and action to sustainably stimulate the economy, Yemen will continue to suffer from low growth levels for an extended period. The country is highly dependent on imports for its food supply. Constraints on domestic production have led Yemen to import as much as 90 per cent of its staple foods, equating to 55-60 per cent of the overall food supply. Dependence on external markets has left it vulnerable to price shocks on global markets. This vulnerability is exacerbated by limited food storage capacity and low food reserves.

Yemen's reliance on imports for its food supply means that food security is closely tied to its economic performance. Despite support from the International Monetary Fund in the 1990s, Yemen has failed to diversify its economic structure or to achieve sufficient growth in the non-oil economy. Data indicates that the political and economic situation has been deteriorating in Yemen since the second half of 2009, leading to a sharp decline in economic output. Without concerted action on investment and reform, there is little hope for economic recovery.

### **Looking Forward: Yemen's Food and Water Security Outlook to 2025**

The current state of national instability leaves little opportunity to alleviate the food and water crises. Improving agricultural productivity remains an elusive goal. Even in a more stabilised environment, resource depletion will limit the gains that can be made in domestic food production. For these reasons, Yemen will continue to rely on global markets for most of its food needs. Sustaining trade-based food security, however, relies on continued economic growth, but the medium- to long-term growth outlooks for Yemen are not promising.

If no decisive action is taken on reform and investment, poverty and food insecurity are likely to increase further. The IFPRI discussion paper, 'Managing Transition in Yemen', estimates that an additional US\$3 billion to US\$6.5 billion is needed to accelerate growth and achieve a measure of poverty reduction by 2020.

Per capita water supplies are already shockingly low and as the population continues to grow, Yemen will face severe water shortages. Policing water extractions is near impossible and those with vested interests in maintaining the status quo wield greater influence and power than local water authorities. Despite attempts to meter water consumption in the capital, illegal bore wells and tampering with meters is rampant.

Putting a stop to *qat* production would go a long way towards reducing water consumption and expanding the availability of arable land for food production. Convincing Yemenis this is critical for long-term food and water security, however, will require institutional capacity, commitment and resources that are unavailable due to the current political climate.

The adoption of modern water technologies has the potential to alleviate pressure on water demand. Drip irrigation for agricultural production, including *qat* production, could reduce agricultural water usage. Demand-side management is critical to addressing scarcity. In one [community](#) the repair of water-harvesting terraces and the use of modern water technology for agriculture have reversed the dependence on groundwater and stimulated the local economy. The UN and the Dutch Embassy, working with the water ministry, have also launched a three-year project to work with farmers on reducing groundwater extraction and conserving resources. Community-led development and support offers the most promising opportunity to begin addressing unsustainable water management practices.

Despite the significant aid input over the past five years, the situation in Yemen remains precarious. The United States has contributed approximately US\$1.4 billion in economic and

military aid since 2009; fragile, polarised governments, however, struggle to absorb that aid and the assistance has been insufficient to achieve greater stability. A recent report from [Rand Corp](#) found that security assistance, like that implemented in Yemen, does not correlate with a reduction in state fragility when the state is experiencing extremely high levels of instability. The report found that the best results in increasing stability came from the supply of non-material aid, such as education, law enforcement and assistance in counternarcotics.

The situation in Yemen is spiralling out of control. On the brink of civil war, the country's lack of political governance and ongoing violence leave little scope for improving long-term food and water security. While the international community continues to focus both aid and political influence on countering terrorism through supporting "[corrupt and repressive regimes](#)", there is little hope for progress.

A different strategy is required to address the many challenges Yemen faces in developing even basic food, water, economic, health and social security. Prioritising grass-roots development assistance, with a focus on education, capacity building, infrastructure and local management of food and water security, would prove to be a more fruitful investment in foreign aid. Investing in human capital at the local level is also Yemen's greatest hope for achieving food and water security for its population.

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