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# AGRICULTURE

A primary pillar for economic re-construction in post-conflict Yemen

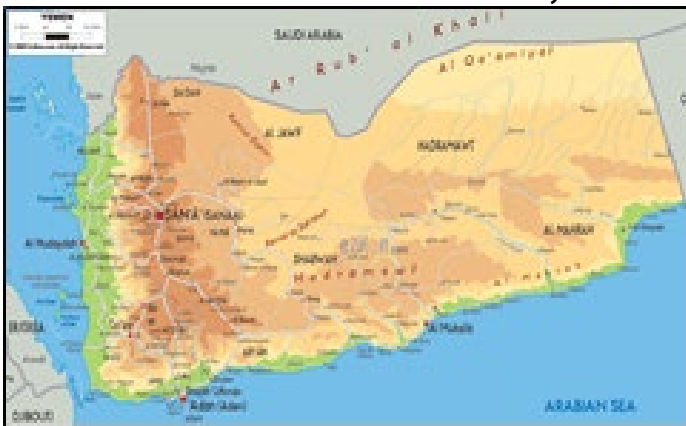
*Alhasan Alkaff, March 2019*



## Introduction

Yemen, a land of diverse and fertile landscapes once serving as cross-roads for trade and communication was described by the Romans<sup>1</sup> as “Arabia Felix” meaning “Flourishing Arabia” (اليمن السعيد). The country was indeed the first to cultivate coffee<sup>2</sup>, and dominated the trade in spices and oriental aromatic resins and gums. The Yemen of today is not quite the same. In November of last year it was described by the UN Secretary General as the ‘worst humanitarian crisis’, where 3 quarters<sup>3</sup> of the population are in need of humanitarian assistance. Following decades of poverty, and over 4 years of conflict, Yemen is on the brink of collapse.

Looking ahead, through a lens of hope and aspiration, Yemen’s post-conflict leaders, assuming they will agree to embark on the road of peace and nation building, will have to set their priorities as the country comes out of one of the most devastating conflicts of its modern history. Priorities will include restoration of law and order, demobilisation of armed groups as well as a revival of the country’s frail institutions. However, any future government will need to address key sectors that would re-build the essential social and economic foundations of the country.



Ezilon Maps – Physical map of Yemen

This policy brief aims to demonstrate why the agriculture sector in Yemen should be a key economic priority. By capitalising on Yemen’s landscape and demographics, a revolution in its current agricultural model will help secure food supply for the country’s poorest and will play a pivotal role in re-building society through employment and infrastructure. Moreover, agriculture can eventually be transformed into a national source of income by exporting high value produce such as coffee and honey to neighbouring GCC countries.

## Why should agriculture be a primary focus in Yemen’s post-conflict economic plan?

### a. An agricultural revolution in Yemen is realistic

Agriculture can and should be a starting point for post-conflict reconstruction in Yemen for the simple reason that the country does not lack the natural and environmental requirements for food production. The geography of Yemen is indeed varied where one can find three different agricultural ‘regions’: The Tehama Plain, the Western Highlands, and the Eastern Plateau – each with their own unique landscapes, climates and potential for agricultural produce<sup>4</sup>.

### b. Local food production can directly help the most vulnerable

Another argument for the case of prioritizing agriculture is that it addresses the challenges of the most vulnerable segment of the Yemeni population – those affected by severe food insecurity. The country currently imports 90% of its food requirements meaning that the recent loss in the currency’s purchasing power (131%<sup>5</sup>) led to a surge in food prices and contributed significantly to the wide-spread starvation.

1 Encyclopedia Britannica. (2018). Yemen | People, History, & Facts. Available at: <https://www.britannica.com/place/Yemen#ref484769> [Accessed 09 October 2018].

2 Gilbert, D. (2018). The History of Mocha Coffee & Yemeni Coffee Culture. Perfect Daily Grind. Available at: <https://www.perfectdailygrind.com/2017/09/history-mocha-coffee-yemeni-coffee-culture/> [Accessed 09 October 2018].

3 United Nations Office at Geneva. (2018). Remarks by the Secretary-General to the Pledging Conference on Yemen. Available at: [https://www.unog.ch/unog/website/news\\_media.nsf/\(httpNewsByYear\\_en\)/27F6CCAD7178F3E9C1258264003311FA?OpenDocument](https://www.unog.ch/unog/website/news_media.nsf/(httpNewsByYear_en)/27F6CCAD7178F3E9C1258264003311FA?OpenDocument) [Accessed 12 October 2018].

4 World Wildlife Fund. (2018). Arabian Peninsula: Yemen and Saudi Arabia | Ecoregions | WWF. [online] Available at: <https://www.worldwildlife.org/ecoregions/at1321> [Accessed 26 October 2018].

5 Sana’a Center (2018). The Yemen Review - September 2018. The Yemen Review. [online] p.50. Available at: [http://sanaacenter.org/files/TYR\\_Sep\\_2018\\_en.pdf](http://sanaacenter.org/files/TYR_Sep_2018_en.pdf) [Accessed 26 October 2018].

Through subsistence farming and local trade, agriculture can help reduce the dependency on imports, and increase local food production to meet the basic survival needs of the population.

### c. The impact of agriculture on the Yemeni job market

A key economic priority in post-conflict Yemen will be to safeguard job security and get people 'back to work'. As of 2016, 54% of the Yemeni workforce depended on agriculture, and approximately 74% of the population was 'linked' to the agriculture sector (according to the Ministry of Agriculture<sup>6</sup>). This signifies the potential scale and impact of advancing the agricultural sector in Yemen thereby supporting its relevance as a priority in a post-conflict economic plan.

### d. Agriculture spurs infrastructure improvements

The development of the agriculture value chain in Yemen would also play a significant role in contributing to infrastructure development. From input producers, to farmers, to distributors and intermediaries – a significant segment of the population would be affected by an agricultural revolution conveying the potential of the development of local infrastructure.

### e. The possibility for agriculture as a national source of income

In addition to providing solutions to urgent problems such as food security, employment and basic infrastructure, agriculture in Yemen can also be turned into a source of economic wealth. Among the numerous negative externalities of qat<sup>7</sup> (a local narcotic drug that accounts for 30% of water use and is 6 times more profitable than most food crops<sup>8</sup>), it limits the production of other agricultural products which can potentially generate national income. By incentivizing and facilitating the production of other goods such as coffee and honey, Yemen can eventually become a food exporter.

## Main challenges for the agriculture sector in Yemen

Before taking a look at how the future Yemeni government can revolutionise its agriculture sector, this section will briefly outline some of the main challenges that have limited or may limit agricultural development in Yemen:

- **Water** – Exploitation and mis-management due to groundwater underpricing and overuse, lack of law enforcement to limit illegal well-drilling, and above all, a lack of water capturing and conservation systems<sup>9</sup>.
- **Competition from qat** – The high profitability of the drug de-incentivises farmers from growing other crops.



Gpstravelguides.com – Wadi Doan in Hadhramawt, Eastern Yemen. Known for high-quality honey production.



Me-confidential.com – Terraced highlands in western Yemen

6 Ministry of Agriculture (2016). The Importance of the Agriculture Sector. Sana'a, p.1.

7 Lallanilla, M. (2018). Why the Herbal Stimulant 'Khat' Was Banned. [online] Live Science. Available at: <https://www.livescience.com/37948-what-is-khat-cathinone.html> [Accessed 02 November 2018].

8 New Agriculturist. (2010). New Agriculturist: Country profile - Yemen. [online] Available at: <http://www.new-ag.info/en/country/profile.php?a=1371> [Accessed 02 November 2018].

9 Glass, N. (2010). The Water Crisis in Yemen: Causes, Consequences and Solutions. [online] p.20. Available at: [http://www.yemenresources.ndsp-yemen.pdf-yemen.com/wp-content/uploads/2016/09/Global\\_Majority\\_e\\_Journal\\_1-1\\_Glass.pdf](http://www.yemenresources.ndsp-yemen.pdf-yemen.com/wp-content/uploads/2016/09/Global_Majority_e_Journal_1-1_Glass.pdf) [Accessed 15 November 2018].

- **Lack of productive skills, techniques & capabilities** – Leading to low sector productivity, and a lack of diversification in produce over the years<sup>10</sup>
- **Infrastructure** – Aggravated by the war, issues such as electricity, access to markets, and transport have become major challenges limiting the agriculture value chain.
- **Poorly designed agricultural policies since the 1970s** – “Agricultural policy was based on the premise that the arid and largely mountainous terrain of Yemen was incapable of producing high-quality grain crops, especially wheat, at prices competitive on the international market” leading to encouraged migration from the terraced highlands<sup>11</sup>.

## Driving forth a modern agricultural revolution in Yemen

Taking into account the desperate humanitarian situation in Yemen, the first proposed set of policy recommendations are focused around supporting food security and economic independence for households. The second set of policy recommendations are aimed at supporting market-oriented production systems by developing the staple-food value chain for domestic demand and building export-based value-chain systems for high-value goods such as coffee and honey.

### Short-term strategies

#### a. Decentralising agriculture: Setting up regional task-forces focused on knowledge and resource sharing to support smallholder farming and boost subsistence agriculture.

Yemen has 20 governorates with varying landscapes ranging from rugged mountains with 3000m+ peaks, terraced landscapes, ever green forests, wadis, deserts and coastal areas<sup>12</sup>. Despite this diversity, only 3% of Yemen's land is cultivated<sup>13</sup>. By setting up regional task-forces, each region or cluster of regions (Tehama, highlands & eastern provinces) would have an 'agricultural center' that would work with small communities to develop the most-suitable produce for that particular area.

#### b. Steadily phase out food donations and support local food production

Millions of poor families in Yemen rely on donor programs for their survival<sup>14</sup>. Despite addressing hunger in the short-term, these programs are not sustainable. The government, alongside NGOs and donor organisations (and the regional task forces) should slowly reduce food aid and launch a region-specific food production support program geared to:

- Ensure local inputs and seeds are available for farmers
- Equip farmers with basic tools, equipment & productive farming methods
- Provide access to markets

A possible institutional set-up for programs as such would be Public-Private-Partnerships (PPPs) where the Public Sector's responsibilities are brought together with private sector capabilities.

#### c. Launch a network of organized projects geared to capture, distribute, and store water nationwide

A successful agricultural revolution in Yemen depends on the nation's ability to address water mismanagement. Most farmland in Yemen depends on natural and direct rainfall, as the country's water capturing, and distribution activities are very limited. According to the Ministry of Agriculture<sup>15</sup>, 47% of

<sup>10</sup> World Bank (2015). The Republic of Yemen - Unlocking the Potential for Economic Growth. p.82.

<sup>11</sup> Mundy, M. (2017). The war on Yemen and its agricultural sector. p.8.

<sup>12</sup> World Wildlife Fund. (2018). Arabian Peninsula: Yemen and Saudi Arabia | Ecoregions | WWF. [online] Available at: <https://www.worldwildlife.org/ecoregions/at1321> [Accessed 26 October 2018].

<sup>13</sup> Middle East Centre. (2018). The Once Happy Land: Economic prospects for Yemen after the War. [online] Available at: <http://blogs.lse.ac.uk/mec/2017/12/30/the-once-happy-land-economic-prospects-for-yemen-after-the-war/> [Accessed 22 November 2018].

<sup>14</sup> Yemen Food Security Information System (FSIS) Development Programme (2015). Yemen Food Security Update. [online] p.5. Available at: [http://www.fao.org/fileadmin/user\\_upload/rne/docs/Yemen-FS-Update-March-2015.pdf](http://www.fao.org/fileadmin/user_upload/rne/docs/Yemen-FS-Update-March-2015.pdf) [Accessed 22 November 2018].

<sup>15</sup> Ministry of Agriculture (2016). The Importance of the Agriculture Sector. Sana'a, p.1.



farmland in Yemen depends on rainfall, 38% on wells, and the rest on floods and streams. A system of projects dedicated to water capturing and distribution is a simple yet necessary step to manage water more effectively and thus support agriculture. Furthermore, the series of projects can and should be tailored to the 3 different agricultural provinces to capture, distribute and store water as effectively as possible.

## Long-term strategies

### d. Establishing two value chain systems:

- Domestic value chain for cereals, crops and livestock
- Export-based value chain for high-value goods such as coffee, honey and fish

The first objective would be to move from subsistence farming, to a domestic value chain for crops (sorghum, millet, maize, wheat, barley, pulses, and vegetables), and livestock (sheep, goats, camels, poultry). An enabling factor is that Yemeni women already play a key role in farming, accounting for three quarters of farming in the country and covering 60% of crop production. This means that entire families can make a living from agriculture by specialising across different steps of the value chain. The key, however, to unlocking the value chain in Yemen would be to stimulate the private sector.

The rationale for a second value-chain system aimed at exporting is that high-value produce in Yemen can be sold internationally for very high prices. According to Bloomberg, Yemeni coffee from Al Mokha is sold at \$240 a pound. Hadhrami honey is also sold at steep prices in Saudi Arabia and the UAE. Unfortunately, access to international markets is limited due to quality issues and infrastructure. By developing laws and regulations that ensure minimum standards of quality, the Yemeni Ministry of Agriculture can attract local entrepreneurs and established companies alike to produce high-value goods with the purpose of selling to markets around the world.

### e. Incentivise production of high-value goods by introducing qat taxation

Qat is a locally produced stimulant that has suffocated Yemen's economy and society for decades. A perfect example of market failure, where its production de-incentivises the production of local crops and foods, and its consumption distorts productivity, health and well-being. A fundamental pillar of a successful agricultural revolution, and probably the most challenging policy to implement would be to tax qat. Taxing this narcotic, and potentially limiting its consumption using laws and regulations, would contribute the following:

- Increase government revenues
- Improve water efficiency
- Encourage production of necessary staple foods
- Stimulate production of high-value goods
- Improve labour productivity

### f. Introduce technology as a key pillar for farming infrastructure to enable higher yields and improved international trade

In order to transition from subsistence farming to a market-oriented agricultural system, the country should build its capabilities in other complementing sectors, especially technology. The role of the aforementioned regional task-forces would be to act as centres for research, development and innovation that would support individual farmers and companies to reduce costs, access markets, and increase production through technology. The Pathways for Prosperity Commission conducted a study on how farming technologies, including renewable energy sources, digital platforms for communication, and data analytics, can contribute to inclusive growth and reduced costs for farmers. Reduced costs, higher production and improved communication all contribute to enhancing the competitiveness of the Yemeni agriculture sector and improving the prospects of trading with the GCC and Africa.

## Conclusion

A so-called 'Arabia Felix', or 'Flourishing Arabia' is not a far-fetched dream for Yemen. The country can bring back its historical importance in trade, first by focusing on agriculture, and ahead lie ample opportunities for various sectors including tourism and shipping. This long-term vision requires a government with high integrity working for the citizens' best interest.

In conclusion, the development of agriculture should be a key focus to support the social and economic needs of the country. Reviving agriculture in Yemen is indeed possible and will allow the government to target the nation's most vulnerable, will support the development of nation-wide infrastructure, boost employment and set the stage for economic growth and prosperity.

### About DeepRoot

DeepRoot is a boutique consulting firm passionate about Yemen's development. We aim to achieve our vision by helping international development actors, the private sector, local civil society organizations and the Yemeni Government anchor their interventions in a deep understanding of Yemen's national and local contexts, and international best practices.

Our theory is simple, international best practices and experiences are necessary and important but unless they are refined by a deep understanding of the realities in Yemen, they will not produce the results that the country needs.

We help our clients by researching and engaging stakeholders at all levels, analysing their needs and interests and advising on policy and project design and implementation. To learn more about Deeproot, please visit our website at [www.deeproot.consulting](http://www.deeproot.consulting)

### About the Author

**Alhasan Alkaff** is an associate consultant with DeepRoot Consulting. He is currently a BBA candidate at ESADE Business School (Spain) and Nanyang Technological University (Singapore). He is Yemeni-British and grew up between the Middle East and Europe, having spent time in the UAE, KSA, UK, Spain, Germany and Singapore. During his time at ESADE, he was elected as President of the Student Council and was a representative on the Board of Directors of the university. Alhasan's academic and policy interests lie in the fields of International Trade & Finance, Healthcare, and Agriculture.

