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Yemen, Factor 16: Education

Yemen: Spreading Awareness

The Greek geographer Ptolemy called Yemen “Fortunate Arabia.” Due to its climate and soil fertility, it was highly conducive to supporting a steady population. Centuries later, the Romans renamed Yemen “Happy Arabia,” referring not only to its rich and diverse land, but also to its thriving agriculture and trade. Certainly, the complementary names given to Yemen were appropriate at their given times, but they would hardly stand today. Abounding conflicts, a decline in resources and efficiency, and a lack of female recognition place Yemen as the most impoverished nation in the Middle East and the eighth most food insecure in the world (Comprehensive Food Security).

Yemen’s dire situation is surprising, especially when recognizing its strategically important location and relative variety of climates. Situated on the Arabian Peninsula, Yemen directly borders Saudi Arabia to the north and Oman to the east. It is 527,968 square kilometers, which is slightly larger than the size of two Wyoming’s. Benefitting its trade is one of the world’s busiest trading ports, the Gulf of Aden. Although it is a comparatively small nation, Yemen’s climate includes narrow coastal plains, flat-topped hills, rugged mountains, and upland desert plains.

Throughout the centuries, the situation of Yemen’s land and people has changed completely. The Republic of Yemen officially formed in 1990, and political instability has followed it nearly every step of the way. In 1994, the new nation experienced a civil war, and since then, the government has experienced numerous uprisings. The predominantly Muslim nation is devoted to deep-rooted tribal traditions and religious practices, which have been the source of many problems, especially for women.

In addition to Yemen’s political instability and strong Muslim standards, a number of other factors have contributed to its detrimental situation. First of all, agricultural land is increasingly used on crops that do not benefit the country’s food needs. In particular, qat, a nationally popular narcotic leaf, is extending its production area nine percent a year while grain areas continue to decrease (Yemen Food Security). Secondly, Yemen relies on oil as a major export, but steady oil declines are depleting the economy. Furthermore, Yemen has one of the fastest growing populations in the world, with twenty-six million citizens now and a growth rate of three percent per annum (Republic of Yemen: Economic). Added to these problems are a highly decreasing water supply, a heavy reliance on imports, and poor farming practices.

Although the nation’s entire population suffers from Yemen’s economic fragility, none suffer so strongly as the rural citizenry, which comprise over seventy percent of the population (Yemen Humanitarian Needs). Stuningly, almost half of the rural population is poor (Yemen- Economic Rights). On top of this, eighty percent of the nation’s poor live in rural areas (Republic of Yemen: Economic).

Typically, Yemeni rural families have four children and live with extended family. Often, because of a farm’s inability to meet economic needs, the family’s young male will live in an urban community or become a migrant worker to make extra income. The remainder of the family works on the farm. Agriculture directly employs 33.1 percent of the population, but directly and indirectly uses fifty-four percent of the population (Republic of Yemen).

Meeting the rural family’s food requirements involves utilizing three dominant food groups, in addition to occasional fruits, vegetables, and meat. A family consumes grains daily, which include wheat, rice, and sorghum. Wheat and rice are ninety percent imported and one hundred percent imported, respectively.

The second most important food group is sugar, which comes from honey from family-owned hives. Normally, it is consumed six days a week. Lastly, the oil and fat group is devoured five days a week, coming mostly from imported sesame oil. Families use additional food in condiments or from crops grown on their farms (Comprehensive Food Security).

Second to food, education is very important to Yemeni rural families; however, it is not often prioritized, as statistics reflect high rates of illiteracy. Estimations claim that fifty-three percent of men and seventy-one percent of women are illiterate (Republic of Yemen: Economic). Teaching methods are traditional, consisting of memorization and lectures that are endured for nine compulsory years and three years of secondary school. While large cities and towns boast public schools, it is more unusual to find them in rural areas. Schools are generally coeducational, while an increasing number are gender specific. In the last few years, girls-only schools have experienced a noteworthy rise in prominence (Abdul, Alim, et. al.)

Unfortunately, the vast majority of girls do not complete their education. When a farm struggles to make ends meet, it is not unusual to end the daughter's education. At home, females work in the fields, fetch water, and take care of livestock, as well as do housework and care for children. Furthermore, early marriage, a lack of female teachers, long distances to schools, and Islamic traditions are reasons most families do not prioritize female education. In rural communities, there is one female student for every ten male students (Abdul, Alim, et. al.). As a result of a lack of education, food insecurity in women-headed households is significantly greater than in households headed by males (Comprehensive Food Security).

Surprisingly, struggling families usually cut health care before education, but in reality, health care almost does not exist. Since the physician density is 0.2 for every thousand people and the hospital bed density is 0.7 for every thousand people, it is no wonder that Yemen's state of health is a mess (Yemen). Especially in rural communities, it is difficult to find government clinics. Shortages of oxygen and fuel limit the effectiveness of health care facilities, and basic access to essential medications is thwarted by ridiculously high prices (Mis). In some cases, people are given untested veterinary medications.

While education and health care are important, most rural families truly define their lives by their farming, both with agriculture and livestock. Of all landholders, sixty-two percent have less than two hectares (one hectare is 2.47 acres), while forty-four percent of rural dwellers have no land, and live as tenants or sharecroppers (Yemen- Property Rights). Typically, rural families possess one or two cows, five to ten goats, and a few beehives. If a family is below the poverty line, the number of animals is significantly less, yet beehives remain. For many families, livestock is not only their means of food, but also a savings account. When financial struggles arise, the livestock can be sold as a last resort. Sometimes, animals even determine the crops grown. Sorghum, for example, is utilized as a grain for humans and a fodder for animals. Other normal Yemeni agriculture includes coffee, tree crops, and qat. The majority of the time, Yemeni farmers sell directly to local and regional markets where citizens buy their food.

Farming Yemeni land involves a variety of practices which depend on the area and wealth of the farmers. To irrigate the land, fifty-one percent of farmers use rainwater, thirty-one percent use wells, and nineteen percent use other sources. Often times, the flood irrigation technique is utilized, which is effective but wastes fifty to sixty percent of the water (Republic of Yemen: Economic). Due to poor water conservation, Yemen's annual freshwater withdrawal is estimated at 6.6 cubic kilometers, or 165 percent of renewable resources (Republic of Yemen: Economic). Yemen's dangerous water crisis is not all self imposed, however; a lack of engineered systems and losses of earth canals cause poor irrigation. Additionally, crop yields are not abundant because seeds are often unimproved and imported while fertilizer is underused. Meanwhile, plowing and harvesting equipment rentals fluctuate according to diesel prices, thereby influencing a farm's ability to cultivate land economically. These agricultural problems spell out disaster for Yemen's rural farmers and the nation itself.

Every day, rural families in Yemen struggle, facing problems that appear insurmountable. Continued political and economic conflicts escalate, slowing productivity. Woefully, Yemen's GDP per capita was \$3,900 in 2014, placing it as 178th out of 230 countries (Yemen). Many problems exist due to nationwide debt, a heavy reliance on imports, and a widespread lack of knowledge. Women are highly disadvantaged; therefore, they are given a minimal chance of lifting families out of poverty. Moreover, farmers are unaware of new farming practices and irrigation to maximize crop production and save water. Additionally, nutrition awareness is almost entirely unknown, as more than eighty-five percent of children have poor micronutrient diets (Comprehensive Food Security). The combination of gender inequalities, the farmers' lack of knowledge and access to advanced practices, and poor general nutrition allow Yemen's food insecurity to escalate; therefore, these problems should be addressed foremost.

Although the barriers to typical rural families are widespread and severe, many can be overcome if adequate knowledge is developed. For females, a decrease in illiteracy would allow a loss of vulnerability and a realization of rights guaranteed under Yemen's Constitution. Legally, Yemeni women are able to vote, be landholders, work independently, and do all things that men can, yet very few realize this. If women comprehended their own freedoms, they fully would be able to participate, share ideas in communities, and embrace new practices and technologies. To help farming families further, awareness campaigns launched by the private sector and a revitalization of the dying extension system would hopefully cause a saving of water, a maximization of crop output, an influx of new farming alternatives, and an increase in wholesome food. As a result, food insecurity would diminish greatly.

Presently, some work has been done to raise populace awareness and educational opportunities, but it is far from being nationally effective. First, to address the female educational problem, the United Nations (UN) launched the World Food Program (WFP) in Yemen in 2003. In exchange for female attendance, the WFP offered families three separate distributions of 150 kilograms wheat and eight kilograms vegetable oil. Undoubtedly, the plan worked, as girls' attendance spiked by more than sixty percent. However, the program was by no means national, since only 86,000 girls were targeted in 2010, and 35,000 in 2014. With a young female population into the millions, many girls were excluded. Funding shortfalls have left the UN with no choice but to continue offering a limited program (Came).

Another huge advocate for female literacy is the United States Agency for International Development (USAID), which continues to help Yemen's Ministry of Education. USAID's work includes building and remodeling Yemeni schools, training more female teachers, and equipping teachers to create interactive learning environments. Like the WFP, USAID's efforts have been wildly successful, but it has accommodated relatively limited amounts of people so far.

Besides women's education, farmers are beginning to access information on superior farming ideas. Particularly noteworthy is the awareness campaign launched against qat. Qat is a genuine problem for Yemen's economy. In fact, it consumes ten percent of the average family's income, and is chewed more than six hours a day by the majority of men (Republic of Yemen: Economic). Not only is qat a consummation of money, but it also uses a great deal of vital resources, as estimates claim that it takes almost half of Yemen's irrigation water (El Dahan). In the United States it is also a Schedule One drug, to be placed alongside heroin and cocaine. Exclusively, Yemeni's qat is used within its borders, giving it little hope as a potential export.

Combating qat's detrimental effects is the governorate of Haraz, a formerly thriving qat producer who through private education awareness campaigns found new and better things to grow. Launched by the Qat Uprooting and Agricultural Development Project, the program pushes farmers to grow coffee, fruit, and vegetable saplings, with some initial compensation. At first, farmers were fearful of losing money, but from persuasion and private education, they learned greater alternatives. Moreover, the initiative pressed the government to build dams, water barrages, and roads to facilitate cultivation. Now, Haraz is scheduled to be qat-free by 2020 (In Yemen, Replacing Qat). Besides this movement, the Ministry of

Agriculture also supports qat's elimination by rewarding farmers who convert their land. Those who uproot qat are given access to improved seeds, fertilizers, modern irrigation facilities, and agricultural guidance. Despite many efforts, movements to eliminate qat remain small-scale, as do the rest of the nation's education awareness movements.

Along with private-sector campaigns, farmers can learn to improve their practices from the Ministry of Agriculture and Irrigation's extension program. Unfortunately, the extension program exists almost entirely by name. The lack of existence goes back almost fifteen years, and is mostly due to poor funding. Only one percent of Yemen's budget goes to the Ministry of Agriculture and Irrigation (Republic of Yemen: Economic). Because of a lack of funds or access to research, Yemen's extension has no management techniques, minimal knowledge pertaining to agronomy, and no Marketing Information System to provide advice on markets for products. Added to this is the fact that there are very few farmers' associations, which have been instrumental for struggling countries, such as Guinea, to prosper agriculturally.

Without a change in trends, Yemen's food insecurity will quickly accelerate. The population is growing rapidly, yet the economy is unprepared to serve its needs. Food will continue to be expensive, as import demand is increasing. Millions more will need food, but if prices continue based on the global market, food will not only be unaffordable, but widely unavailable. As of now and the visible future, farmers are unprepared to maximize the production of crops because they are unaware of superior practices and have little money to enhance their work. Women are given few opportunities to better the economy, as they are not given tools to promote success. An assortment of national issues further renders the government unable to give assistance, including political trauma, a hazardous water crisis, and undeniable government corruption. Any reinforcement of these factors, in addition to weather disasters, will damage an already handicapped nation.

To improve the education and awareness in Yemen, effective local projects must be scaled to a national level. For instance, the WFP's school girl incentive should be accessible to thousands of more girls, as it will result in a significantly greater attendance. Perhaps, instead of food being the sole reward, alternative incentives such as seeds, fertilizers, animals, or farming discounts could be given. Additionally commendable is the Dhamar Rural Development Project, an affair funded by the International Fund for Agricultural Development, which allowed women to gain literacy while learning critical credit and business skills to lift them out of poverty. Moreover, movements to uproot qat and economically grow crops should spread to regions beyond the governorate of Haraz. For all these goals to be reached, funding must be present and budgets must be realigned.

Besides expanding local projects, Yemen must enhance its food security by implementing new ideas within the government, communities, and organizations. The first important project is educating its women. In order to increase female school attendance, the government must hire more female teachers, build more schools, and place more women in the Ministry of Education. To reach the goal of hiring more female teachers, the government should begin hiring at least one female teacher per rural institution, later working to obtain a certain percentage. In turn, families who are uncomfortable with sending their daughters to male-teaching schools will have no excuse. Since a college degree is extremely challenging for Yemeni women, a female teaching job should become more accessible. On the job training, in-service professional support, and the use of media education are potential tools toward attaining the necessary qualifications. In addition to hiring more female teachers, Yemen's government should support the building of more schools in rural communities. Families are much more likely to allow their daughters to attend school if it is close by, as a recent study from Egypt confirms (Abdul, Alim, et. al.). In order for these changes to occur for female education, it is imperative that the government places more women in the Ministry of Education, which may have as low as nine percent women (Abdul, Alim, et. al.). At a minimum, the ministry should set a target of employing at least thirty percent females in the future.

Besides the critical role of the government, the International Fund for Agricultural Development should expand their role of empowering women through teaching them critical literary and marketing skills.

Complementary to the education of women is the expansion of agricultural awareness campaigns and the extension system in Yemen. To promote learning of qat's detriments and the ability to use other crops and technologies, the government and private sector should launch programs on national television and radio. Nutritional programs should be required at schools, including an agriculture-related class for rural communities. Additionally, the government should mandate qat to be removed by a certain year, requiring its gradual replacement. Lastly, to facilitate knowledge through the nation's extension, Yemen badly needs funding. Its budget has suffered lately due to subsidies, civil service benefits, and major defense spending. Realistically, Yemen's extension must be promoted by foreign aid. Since Yemen possesses a potentially enormous terrorist threat within its borders, Yemen's neighbors and the United States should be eager to invest in any work that would hinder Yemeni extremism. By funding Yemen's extension, foreign nations would enable Yemeni extension workers to obtain the proper resources for presenting farmers with new technology, regularly researching better practices, and empowering men and women alike to cultivate their farms as best as possible.

Today, "Fortunate Arabia" is a sad recollection of a once prosperous nation. Its golden years have withered away from the passing of time and inevitable changes. Still, Yemen has a potential to embrace, and the time to recover is now. Fourteen point seven million Yemenis are in need of humanitarian assistance, an overwhelming fifty-eight percent of the population (Yemen Humanitarian Needs), but without help from the outside, Yemen's situation will continue to be insurmountable. Due to varied political conflicts, underprivileged women, a dying oil sector, expanding of nutritionally useless crops, and a widespread lack of agricultural improvement, Yemen's food security and economy struggles immeasurably.

Still, there is hope for Yemen. If humanitarian organizations and the Yemeni government work together to educate and extend awareness of various new ideas, technologies, and practices, much can be achieved. Through movements to educate women, spread awareness campaigns, and expand Yemen's extension, Yemen's economy and food security can be greatly improved. If only Yemenis knew how much water could be saved by better irrigation. If only they knew how many more crops could be grown with fertilizers and improved seeds. If only they knew how many families could become food secure by an investment in the education of women. How much more could the economy benefit if the nation's uprooting of qat births an increase in wholesome agriculture and a foreign market for exports! Developing knowledge is the key to tackling Yemen's food security issues.

As Yemen's population continues increasing by the second, so does its food insecurity. By 2016, approximately 780,000 Yemenis will be born, and of those, more than four in ten will be food-insecure, and more than one in ten will be acutely malnourished (Comprehensive Food Security). Particularly, rural households will suffer, as about half of its population will struggle in food insecurity. Starting today, the government and private organizations must follow the words of the Yemeni proverb, "A friend in time of need is a friend indeed" (Inspirational Proverbs). Yemeni leaders need to recognize the needs of their people and implement increased educational opportunities to help them start on the path toward food security.

Works Cited

- Abdul, Alim, et. al. *Accelerating Girls' Education in Yemen*. UNICEF. United Nations Children's Fund, Feb. 2007. Web. 2 July 2015.
- Al-Haj, Ahmed. "Yemen's Fuel Prices Nearly Double After Government Ends Subsidies." *The Christian Science Monitor*. The Christian Science Monitor, 30 July 2014. Web. 06 July 2015.
- Al-Yarisi, Amal. "Working, Not Learning, the Norm for Women in Rural Villages." *Yemen Times*. Yemen Times, 7 July 2012. Web. 06 July 2015.
- Came, Barry. "Food Keeps Girls in School in Yemen." *World Food Program*. World Food Program, 20 May 2013. Web. 06 July 2015.
- Comprehensive Food Security Survey: Yemen*. Rep. World Food Program, 2014. Web. 3 Jul. 2015.
- Conditions in Rural Yemen: Findings from the RAPL Baseline Survey*. Rep. World Bank, 2010. Web. 3 Jul 2015.
- El Dahan, Maha. "Political Conflicts Worsening Yemen Food Security: UN Agency." *Reuters.com*. Thomson Reuters, 29 Sept. 2014. Web.
- Enabling Poor People to Overcome Poverty in Yemen*. Rep. International Fund for Agricultural Development, 2011. Web. 30 Jun. 2015.
- Faheem, Kareem. "Malnutrition Hits Millions of Children in Yemen." *New York Times*. The New York Times Company, 18 Dec. 2014. Web. 6 July 2015.
- Glasser, Sarah. "Blockade of Yemeni Ports Has Unintended Consequences on Food Security, Somali Fishing Industry | New Security Beat." *New Security Beat*. New Security Beat, 23 Apr. 2015. Web. 06 July 2015.
- "Greenhouses Inspire Farmers to Innovate." *U.S. Agency for International Development*. U.S. Agency for International Development, 2 Dec. 2013. Web. 6 July 2015.
- "IFAD in Yemen." *Rural Poverty Portal-IFAD*. International Fund for Agricultural Development. Web. 06 July 2015.
- "In Yemen, Replacing Qat with Less Harmful Agriculture." *Catalysts for Change*. Institute for the Future. Web. 6 July 2015.
- "Inspirational Proverbs, Quotes, and Sayings." *Inspirational Stories*. Afterhours Inspirational. Web. 10 Jul. 2015.
- "Leading by Example: Young Yemeni Women Teach Their Communities Key Skills." *Rural Poverty Portal*. International Fund for Agricultural Development. Web. 6 July 2015.
- Lister, Tim. "Why We Should Care About Yemen." *CNN.com*. Cable News Network, 23 Nov. 2011. Web. 28 Aug. 2015.
- Mis, Magdalena. "Yemen Healthcare Services on Brink of Collapse, WHO Says- TRFN." *Reuters.com*. Thomson Reuters, 21 Apr. 2015. Web. 16 July 2015.

Nasser, Farah. "Let's Learn to Go Without Qat, Say Yemenis." *CNN.com*. Cable News Network, 12 Apr. 2012. Web. 06 July 2015.

Nasser, Amiga. "In Haraz, Steps for Qat-Free Yemen." *Yemen Times*. Yemen Times, 11 Feb. 2013. Web. 6 July 2015.

Obadiah, Ali Hassan, et. al. "Extension Worker as a Leader to Farmers." *The Journal of International Social Research* 1/4 (2008): 368-87. Web. 6 July 2015.

"Pioneering Direct Farmer Support in Guinea." *Rural Poverty Portal*. International Fund for Agricultural Development, Web. 6 July 2015.

"Republic of Yemen." Ministry of Agriculture and Irrigation. *National Agriculture Sector Strategy*, 2012. Web. 2 Jul. 2015.

Republic of Yemen: Economic Opportunities Program. Rep. International Fund for Agricultural Development, 2012. Web. 6 Jul. 2015.

"Rural Poverty in Yemen." *Rural Poverty Portal*. International Fund for Agricultural Development. Web. 6 July 2015.

United States Federal Research Division. *Country Profile: Yemen*. Aug. 2008. Web. 1 Jul. 2015.

Woronowycz, Roman. "Girls in Front Row of Yemen's New Education Drive." *USAID*. United States Agency for International Development, 10 Jul. 2015. Web. 28 Aug. 2015.

"Yemen." *Central Intelligence Agency*. Web. 1 Jul. 2015.

"Yemen: Female Education Remains Key Challenge." *IRIN Middle East*. Integrated Regional Information Network, 6 Sept. 2007. Web. 3 July 2015.

"Yemen: Food Incentives for Girl Education." *IRIN Middle East*. Integrated Regional Information Network, 11 Sept. 2005. Web. 6 July 2015.

"Yemen Food Security Takes a Knock." *IRIN Middle East*. Integrated Regional Information Network, 25 Feb. 2010. Web. 6 July 2015.

Yemen Full Country Visit Report. Rep. United Nations System High Level Task-Force on the Global Food Security Crisis, 2009. Web. 6 Jul. 2015.

Yemen Humanitarian Needs Overview. Rep. Office for the Coordination of Human Affairs, 2009. Web. 10 Jul. 2015.

Yemen- Property Rights and Resource Governance Profile. Rep. United States Agency of International Development, 2010. Web. 5 Jul. 2015.

"Yemen Sets 2013 Budget with \$3.2 Billion Deficit." *Reuters.com*. Thomson Reuters, 23 Dec. 2012. Web. 6 July 2015.

"Yemenis." Junior World mark Encyclopedia of World Cultures. 1999. *Encyclopedia.com*. Web. 6 Jul. 2015.