

## **Ethics of Food Security Strategies**

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### **Abstract**

Between 2000-2013, developed and emerging countries purchased over 83 million hectares of land in poorer nations, over two-thirds of which according to Oxfam have a serious hunger problem. Approximately 40% of this agricultural output is sent to the investor countries for profit, biofuels, and to insure a stable food supply. These practices raise a number of ethical and legal issues such as illegal land appropriation (“land-grabbing”) facilitated by weak government policies and lack of protections for indigenous and impoverished rural populations. First, who has a right to own and utilize agricultural land, and should food be treated as a profit-making commodity in conditions of malnutrition and hunger? Also, is it ethical to purchase food or land from poorer nations when wealthier nations have not addressed serious food spoilage, management and waste issues in the food supply chain (up to 30-50% of consumption stage food products in developed nations are discarded due to improper storage and handling)? The Arabian Gulf States are deeply concerned about food security, and have been purchasing land in foreign countries at accelerating rates. The State of Qatar, similar to other Gulf states, is hyper-arid with only 4-15% of potentially arable land; water withdrawal rates are unsustainable, and 100% of drinking water is produced by energy-intensive desalination plants. Thus Qatar currently imports over 90% of its food. Qatar has invested in land purchases in Europe and Africa, but recently has shifted policy towards a technological solution called the ‘greening of the desert,’ including solar-powered desalination plants and hydroponics. If successful, the knowledge base from the initiative could provide more self-sustainable agriculture in the Middle East, a higher level of food security, and an end to foreign land purchases. This contribution reviews the ethical issues involved in the

currently available food security program options for the Middle East and Arabian Gulf. (Abstract)

**Keywords:** Food security MENA; Arabian Gulf–food security; ethics of food; agricultural ethics.

## 1. Introduction

Food security became a critical issue during the 2007-8 global economic crisis which sparked a related food crisis. Qatar experienced sharp food price rises of 40% in 2007-8 (Khan, 2012). The reason for food price spikes may have included weather, speculation in food futures, oil price increases (petrochemicals used in food transport, storage, mechanized farming, and fertilizer) and diversion of foodstuffs such as corn towards biofuels. Food importing countries particularly in the Arabian Gulf became alarmed at the food export restrictions imposed by Argentina, Ukraine, and India to preserve domestic food supplies, and overseas land purchases of agricultural lands and forests accelerated. Agricultural land purchases peaked in 2009, but are still ongoing – Africa (Sudan, Tanzania, Ethiopia) received the most land investment, with recent deals of 56.2 million hectares in Africa, or approximately 4.8% of Africa's total agricultural land, equivalent to the entire area of Kenya (Anseeuw et al., 2012). The issue of food security, however, is not new to the Gulf region due to a food poisoning incident in the Gulf in the late 1960s (discussed below), and due to water rights disputes and the Arab-Israeli conflicts. In addition, Arab countries in the 1970s and 80s attempted food cooperation across the Muslim world and set up the Arab Authority for Agriculture Investment and Development in Khartoum, established to handle food security in the Arab speaking countries, but there were few tangible results from this initiative.

Food here is defined as a basic need, according to David Braybrooke's criteria in that it allows an individual to carry out his or her four primary social roles of citizen, worker, parent, and householder; thus food is fundamental to social structure, sustainability and survivability (1987). Therefore, for example, diversion of corn (maize) to biofuels removes food from the global market, and in a situation of food scarcity would be unethical since food is a greater necessity for survival than fuel. The signatories to the UN International Covenant on Economic, Social and Cultural Rights agreed to the fundamental human right to be free from hunger, and to "improve methods of production, conservation and distribution of food" and "to ensure an equitable distribution of world food supplies" (UN, 1966).

## 2. Methodology

The mechanisms, protocols and policy frameworks of the GCC food security programs were reviewed to obtain technical details about these programs. Due to restrictions on the public dissemination of these government programs and their sensitive nature, not

all GCC food programs could be scrutinized in depth, in which case anecdotal or popular media evidence was used. The potential ethical dilemmas posed by each of the major food program strategies were then analyzed within the ethical framework of distributive justice, basic needs philosophy, utilitarianism, and general moral philosophy. Modern key figures who have written either on food ethics directly or in part include Peter Singer, John Rawls, Gregory Pence, and David M. Kaplan. Conclusions drawn may be applied to food security issues world-wide, except that the water-scarce MENA and Gulf regions possess special considerations due to the critical food-water nexus.

### **3. Food Security Program Ethical Considerations**

#### **3.1 Overseas Land Purchases**

The documented abuses of land-grabbing (Oxfam, 2012) are relatively straightforward from an ethics standpoint: clearly, forcible appropriation of land taken from owners who have clear title and legal rights to that land under the laws of their nation is unethical, immoral and illegal. The International Land Coalition (Tirana Declaration) has defined 'land grabs' as appropriations "in violation of human rights, particularly the equal rights of women; (ii) not based on free, prior and informed consent of the affected land-users; (iii) not based on a thorough assessment, or are in disregard of social, economic and environmental impacts, including the way they are gendered; (iv) not based on transparent contracts that specify clear and binding commitments about activities, employment and benefits sharing, and; (v) not based on effective democratic planning, independent oversight and meaningful participation" (2013). However, more subtle ethical issues include the concepts of customary land rights, eminent domain, and the greatest good for the greatest number concept (Benthamite utilitarianism) that could justify the sacrifice of individual land rights for the public good (greater food production). The concept of public good is widespread in most cultures, for example *maslaha* in Islam.

According to the Land Matrix, "investors from [the] Middle East are the most interested in food crop production with a total of 100 reported projects of which 26 have been implemented. Investments in food crop production represent 66% of the demand for farming land by investors from [the] Middle East" (Anseeuw, 2012). The Saudi Arabian food relationship with Ethiopia represents a possible ethical problem that appears to involve a wealthy country investing \$100m for barley, wheat and rice production that is sent back to Saudi Arabia while an almost equal amount of food shipments (\$116m) has been sent by the World Food Programme to Ethiopia between 2007-2011 to combat hunger and malnutrition (*Economist*, 2009). Potentially, overseas land purchases, however, could be ethically negotiated if the country possesses excess capacity, respects local rights and customs, and benefits are equitably distributed; however, evidence suggests that many land deals are exploitative and morally suspect.

### **3.2 Food Management Policy – Self Sufficiency and Related Strategies**

In addition to overseas land purchases, food security can also be created through self-sufficiency. This strategy is prominent in Saudi Arabia and Qatar, which both suffered deaths and hospitalizations of hundreds of citizens in 1967 from a shipment of flour accidentally poisoned with the organophosphate Endrin. In response, both countries began milling their own flour, and Saudi Arabia eventually expanding a cereals growing program using fossil water irrigation. Self-sufficiency contains many diverse elements, such as reduction in food wastage from better management of the supply chain – proper refrigeration and transport, for example, is key in the Gulf where temperatures can exceed 50° C. Encouraging less consumer waste through education or media has been unsuccessful due to high incomes (food is a very small percentage of the overall household budget of wealthy Gulf Arabs) and the recent easy access to food products. Since total available food supply at any one time is finite, those who consume or waste more take food away from those who are forced to consume less. Thus unnecessary and wasteful consumption harms others and is unethical.

Increasing domestic food production to reduce imports is another self-sufficiency strategy with both moral harms and benefits. Increased agricultural production provides employment and possibly foreign direct investment. However, increased agricultural activity takes away resources from other economic activities, diverts labor, and may increase poverty rates, since agriculture in many countries is one of the lowest paid sectors. Self-sufficiency takes on another dimension in the Arabian Gulf. Most of the GCC nations are classified as arid or hyper-arid, suffering from absolute water scarcity – since water is one central component of crops, investor nations are essentially buying and importing water in the form of food imports. Because of high evaporation rates and inefficient irrigation systems in deserts, importing food thus may be more environmentally friendly and economically sensible than self-sufficient irrigated farming in the Gulf. Gulf food self-sufficiency involving increased domestic production therefore paradoxically may create harms to its own citizens.

Also, dietary / medical ethics should impact food security planning. All Gulf nations are suffering pandemic rates of obesity and diabetes, a certain percentage of which arises simply from overeating and sedentary lifestyle. Temperance in food habits has traditionally been an important moral issue in Greek and Roman philosophy, for example Stoicism. What we eat has also spawned a whole area of animal rights ethics, including vegetarianism and veganism – if a country is food insecure and faces soil and water degradation from overuse of farmland, utilitarianism dictates that the least resource-intensive dietary habits be adopted, i.e. obtaining proteins, carbohydrates and other nutrients from beans, pulses, and grains rather than animals, which vegans and vegetarians claim require more energy, land and water to produce a caloric equivalent to vegetable sources. However, some agronomists claim that free-range pastoralism of goats, sheep, and camels in sparselands is highly efficient especially if milk products are additionally used. Also, camels can drink extremely brackish water and excrete potable milk, effectively serving as walking desalination plants for the Bedouin.

### 3.3 Technological Solutions

Despite fears of a population bomb involving Malthusian decline and starvation (forecasted by Paul Erlich's *Population Bomb* in 1968, which predicted 100s of millions of deaths from starvation, specifically in India and Egypt in the 1970s), food production has roughly kept pace with human population growth in the 20<sup>th</sup> and 21<sup>st</sup> centuries. The technological innovations of the Green Revolution (dwarf rice cultivars, fertilizer, pesticides) greatly increased human food supply, thus devoting resources to this kind of research appears to be ethically beneficial. However, critics point to several alleged harms of technological approaches to food production increases such as monoculture (reduction of both agricultural and wild biodiversity) which can cause catastrophic loss from pathogens or insects as occurred during the Irish potato famine. Also, small farmers may experience the loss of power and freedom as they become increasingly dependent on large corporations for seeds (including non-reproducing hybrids), fertilizers, and pesticides. Thus the food scarcity / overpopulation thesis continues to spawn a variety of distributive justice debates about sterilization, birth control, and the responsibilities of high consumption developed countries towards low consumption developing ones, since the carrying capacity of the earth has perhaps been artificially overextended by inexpensive fossil fuels. Thus massive food scarcity may arise after the exhaustion of hydrocarbon fuels. Additionally, Rush points out that the focus on technological solutions to food security unfortunately "minimizes the need for difficult ethical reflection on our industrialized way of life in relation to either the poor or to the natural environment" (Rush, 2013).

Large agro-businesses generally adopt an anthropocentric view that the environment exists to satisfy human needs and morally can be exploited to its maximum extent for those ends. This perspective brings up the ethical problem of stewardship. Although ethics is generally applied to human agents, environmental ethics posits that humans also have an ethical relationship with the environment, such as land and other organisms. For animist religions, the natural environment holds spiritual value, and nature ethics and ritual determine which lands are off bounds for food production, what foods to plant (to satisfy particular deities), etc. The UN Food and Agriculture Organization points out that: "there is growing agreement that nature itself must be valued. As our power to modify nature grows, there is also an increasing recognition of the beauty, complexity and integrity of nature, and of the limits to humans' restructuring of the natural world" (FAO, 2001). In order to accept ethical claims with respect to the environment, one must accept the intrinsic moral status of nature as axiomatic to one's moral system, since claims of moral responsibility to what many view as abstract or inanimate objects ("nature") or "earth" are difficult to prove and justify. The ecological space paradigm (esp) discussed by Peeters et al. "urges people to not exceed their fair share of ecological space," in other words, proposing the just distribution of the products of nature (Peeters et al., 2012). One benefit of technological strategies for food security is that the knowledge gained through research and experience is easily scalable and portable, potentially benefitting a large number as

long as intellectual property rights regimes (patents and trademarks) are not too restrictive.

#### 4. Conclusion

Each food security strategy solution entails a unique set of ethical conundrums. Water scarce areas present particular concerns not seen elsewhere since their vulnerable ecosystems raise issues about ethical stewardship of natural resources as well as sustainability and responsibility towards future generations, since processes such as desertification may be irreversible. The technical solution appears to be the most ethically neutral since it generates knowledge that can be transferred to benefit others and is adaptable to current agricultural practices. Molden claims that even with rapidly increasing human population, “75% of the additional food we need over the next decades could be met by bringing the production levels of the world’s low-yield farmers up to 80% of what high-yield farmers get from comparable land” (Molden, 2007).

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