HUMAN HEALTH AND NUTRITION

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“The future belongs to the few of us who are willing to get our hands dirty”

BACKGROUND

In many developing countries, agriculture serves as a backbone of the economy and food supply. Somalia, situated in East Africa, in a region known as “The Horn of Africa”, and is known for having the longest coastline in mainland Africa. Agriculture here remains a large portion of the population. However, due to recurring droughts, conflict and limited infrastructure, agricultural production in Somalia is negatively affected.

IMPORTANCE OF AGRICULTURE FOR HUMAN HEALTH AND NUTRITION IN SOMALIA

The relationship between agriculture and human health is significant because food production directly influences nutrition levels. In Somalia, weakened agricultural systems have contributed to widespread malnutrition, especially in children. Agricultural produce being a main source of food for many civilians and yet being so inaccessible is dangerous, not only for the environment but also to the already rapidly decreasing population rate.

THE AIM OF THIS RESEARCH

The aim of this research is to examine how agricultural challenges affect human health and nutrition in Somalia, While actively trying to come up with solutions on how to better agricultural production in Somalia.

RESEARCH QUESTION

This research is guided by the following question:” How does agricultural production influence human health and nutrition in Somalia?”.

OVERVIEW OF STRUCTURE

This research will begin by discussing the importance of agriculture in food production. It will then examine the major agricultural challenges facing Somalia. Thereafter the study will analyse the impact of these challenges on human health and nutrition. Finally, recommendations aimed at improving agricultural sustainability and public health in Somalia will be presented.

DEFINITIONS OF KEY CONCEPTS

Human health is defined as the condition of a person's body and mind that allows them to live productively and cope with daily life.

Nutrition refers to the process whereby the body takes in and uses food to grow and produce energy.

HOW AGRICULTURAL SYSTEMS IN SOMALIA INFLUENCE HUMAN HEALTH AND NUTRITION

Human health and nutrition are directly linked to agriculture because agriculture produces the food that people eat. The type, quality and quantity of food produced through farming determine people's nutritional intake and overall health status.

FACTORS AFFECTING GOOD AGRICULTURAL PRODUCTIVITY IN SOMALIA

Firstly conflict, Terrorism is one of the ongoing conflicts in Somalia involving a group called "Al-Shahab". The group controls roughly 30% of Somalia's territory. While a 2023–2024 government offensive initially regained ground, al-Shabaab has largely recovered those areas, demonstrating high resilience(taken from "Counsel of foreign relations, September ")This group fights against the Somali government, wants strict Islamic rules, and they carry out bombings, which in an agricultural case is our biggest problem. These constant bombings damage the land that could be used to plant crops harvest. The UN reports state that armed conflict in Somalia has *"rendered agricultural land abandoned, littered with explosives, and disrupted farming and trade"*, which has directly harmed agricultural production and access to farmland.(World Food Programme).

Militants have poisoned water sources, making farming, particularly in rural areas, impossible and forcing farmers to abandon their land. Based on a 2017-2018 drought impact and needs assessment, the 2016-2017 drought in Somalia caused over USD 3.25 billion(1,852,500,000,000 SOS) in total damages and losses. Water scarcity has forced farmers and pastoralists, who rely on the Juba and Shebelle rivers, to abandon their land.



In this Thursday, Oct. 21, 2010 file photo, al-Shabab fighters display weapons as they conduct military exercises in northern Mogadishu, Somalia. Al-Qaida's decision to extend its terror franchise to al-Shabab which was once a nationalist movement, may only be a desperate joining of hands to prop up two militant groups that are both losing popular support, analysts said. Mohamed Sheikh Nor/ASSOCIATED PRESS

This is a clear link between violence and damage to agricultural land and livelihoods.

Secondly drought, Somalia depends heavily on rain-fed agriculture. When drought happens crops like maize or sorghum die, reason being they need enough water to grow and without rain they cannot do so.This leads to farmers harvesting a low amount of crops or even nothing at all.



Drought in Somalia: 'If things go on like this, we will also lose our lives'

By **Sarah Easter**
August 26, 2022

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Asha Mohammed, 43, on her dry tomato field. All photos by Sarah Easter/CARE

Most families in Somalia are pastoralists, meaning they depend on livestock for income and food. During drought, water sources dry up and nutritious grass for grazing becomes scarce. This leads to animals being dehydrated, weak and slim all this leading to death. With no livestock to produce milk, meat and create income, life in Somalia becomes very difficult, with mo4e and more people having to skip meals, eat food that is not nutritious and even resort to eating wild or poisonous plant.



Drought in East Africa: How communities in Somaliland are adapting

17 April 2023



By: *Horn Observer Staff Reporter* | 13 February 2026 20:38

People from the Hudor community walking to fetch water from a new water source constructed by Action Against Hunger. Photo credit: Action Against Hunger

In addition, water shortages and poor sanitation in rural farming communities increase the spread of waterborne diseases. This further worsens health outcomes, as malnourished individuals are more exposed to infections.

Lastly financial cuts to food aid. When funding for food aid is reduced in Somalia, it directly increases food insecurity, which means people don't have reliable access to enough safe and nutritious food, organizations reduce the number of people they can feed. If families stop receiving monthly food parcels or cash vouchers, they end up eating fewer meals, low portion sizes and sometimes eating nothing at all. These strategies may help short-term but make long-term food insecurity worse.



Food Aid in Somalia Could Halt Within Weeks Due to Funding Shortages, WFP Warns

By Reuters | Feb. 20, 2026

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FILE PHOTO: Internally displaced Somali women carry their relief packages after receiving dry relief food from Kuwait charity, during the Muslim holy fasting month of Ramadan, in Mogadishu, Somalia March 12, 2025. REUTERS/Feisal Omar/File Photo

"*The WFP reports that emergency food assistance in Somalia has been slashed because of a severe funding gap dropping support from about 2.2 million people60o just over 600 000,meaning fewer people get food aid which contributes to the rising food insecurity rate.*"(World Food Programme).

SOLUTIONS TO HELP IMPROVE HEALTH AND NUTRITION IN SOMALIA

Firstly, instead of expensive greenhouses, communities could build small huts make from wood poles, mud bricks, recycled metal sheets and plastic sheeting. These huts should have roofs that can be opened and closed, they would remain open during rainfall to collect water and bring in sunlight, they should remain closed during extreme heat, strong winds and unsafe situations. This system would protect crops from harsh climatic changes or unexpected conflict damage. It also allows farming closer to homes, reducing travel to dangerous open fields.

Secondly, drip irrigation systems should be installed within the huts. Instead of flooding fields, civilians could use water filled plastic bottles with tiny holes to put above crops in the hut. This way, water drips directly onto plants roots. This system uses 30% to 60% less water, prevents water waste, keeps soil moist longer and reduces the need to go fetch extra water for plants often. This way even recycled materials can be used to make these simple systems.

The same types of huts can be used for animals too, adding windows for more sunlight and the same drip irrigation system but instead of the water slowly dripping into the container through tiny holes, bigger holes can be made, ensuring that the water containers are always full.

HOW THE SOLUTION WILL BE FUNDED

A joint funding model that includes government, NGO's, private companies and communities could be created. Such a system ensures that all aspects of the project are funded for. The shield-save-supply system also contributes to funding since it is focuses on food production and excess harvest could be sold to the public and a percentage of the money that is earned can be put back into the system, reducing the need for constant. donations.

HOW EACH FUNDER BENEFITS FROM INVESTING IN THE PROJECT

The shield-save-supply system allows the government to invest further in healthcare, education and infrastructure by increasing agricultural production, creating employment and enabling community members to earn income from selling surplus harvest. As incomes rise communities spend more money in local businesses, stimulating the local economy thus increasing tax revenue. In this way the system supports both poverty reduction and long-term national development.

By investing in the Shield-save-supply system, NGO'S help create a greater social impact since the project aims to reduce hunger and poverty. Their input towards ensuring the success of the project helps increase progress towards their mission. By investing, NGO's strengthen their relationships with communities, donors, partners and governments, which increases their chances of expanding further.

Private companies able to fulfil their corporate social responsibilities by investing in the system, which is very vital for increasing their popularity, building community trust and

attracting potential partners. By supporting a project that has a positive impact on society, the company's reputation rises and increases customer support. Because the project provides training, it creates skilled individuals who could be future experienced workers for the company.



HOW THE SYSTEM WILL BE MAINTAINED

The Shield-Save-Supply System would be maintained through a community-based maintenance model. Each community using the system would have trained maintenance teams responsible for inspecting, cleaning, and repairing the Shield-Save-Supply chambers and drip irrigation equipment. Farmers would receive training on daily operation and basic maintenance to ensure the system remains in good condition.

A maintenance schedule would include regular inspections, cleaning irrigation lines, checking water storage systems, and replacing worn or damaged parts when necessary. To fund these activities, a small percentage of the income earned from selling surplus crops would be contributed to a community maintenance fund. This fund would cover routine maintenance and replacement parts. For major repairs or technical issues, government partners, NGOs, and private companies would provide additional technical support and specialised equipment.

By combining local ownership, regular maintenance, and a dedicated maintenance fund, the Shield-Save-Supply System can continue operating effectively for many years while creating local employment and reducing dependence on external assistance.

THE SYSTEM'S CONTRIBUTION TO THE SUSTAINABLE DEVELOPMENT GOALS (SDG’s)

The Shield-save-supply system contributes directly to eight (8) of the seventeen (17) United Nations Sustainable Development Goals by addressing poverty, hunger, health, educational workshops, partnerships, job creation, and water wastage.

Firstly No Poverty. This is the first goal of the sustainable development goals and it aims to end poverty in all it’s forms. The shield-save-supply system contributes to this goal by identifying needy communities and supplying them with a reliable food source and offering employment opportunities to ensure that financial stability is maintained.

Secondly Zero Hunger. This goal aims to end hunger and improve nutrition. The system contributes to the goal by improving consistent access to enough nutritious food for vulnerable families, supporting long term food security.

Thirdly Good Health and Well Being. This goal aims to ensure good health and well-being for all. The system produces fresh and healthy food and will decrease malnutrition rates, this helps ensure good health for all.

Fourth being Quality Education. The aim of this goal is to ensure inclusive and quality education for all. The system does this by providing training, educational opportunities and skills development, which increases their chances of people getting hired for other jobs.

Next being clean water. This goal despite the title, aims to ensure sustainable management of water. The shield-save-supply system does this by promoting water-saving practices through drip irrigation, reducing water wastage and encouraging efficient use of water in community projects.

Decent work and economic growth is a goal that aims to promote long term employment and economic growth. The system helps beneficiaries gain skills, connecting them with employers, supporting entrepreneurship, and creating jobs through the operation and expansion of the system.

Partnerships for goals aim to strengthen partnerships for sustainable development. The system does so by bringing together government departments, NGOs, private companies, donors, and communities to share funding, resources, expertise, and data to achieve common development goals.



HOW THE SYSTEM IMPROVES HEALTH AND NUTRITION

This system would improve vegetable production, improve access to vitamins (A,C and iron), reduce food insecurity, ensure food sanitation, keep animals safe and provide a more reliable food supply.

During the planning of this system, the cost of materials, risk of crops being destroyed during conflict, the safety of animals and the limited water during drought was put into consideration. This is the perfect way to stay healthy on a budget.

Low-cost protective huts combined with drip irrigation systems could improve agricultural productivity in drought and conflict affected areas by conserving water and protecting crops, thereby enhancing household health and nutrition as well as food security. This system is called the shield-save-supply system.

SCENARIO

Before the Shield-Save-Supply System, Amina, a mother of four in rural Somalia, relied on food aid and often skipped meals so her children could eat. Years of drought destroyed her crops, leaving her family with little food and no reliable source of income. After the Shield-

Save-Supply System was introduced in her community, Amina received access to a Shield-Save-Supply growing chamber instead of relying on food aid. Inside the chamber, she grows tomatoes, spinach, onions, beans, and other crops throughout the year using the system's water-efficient drip irrigation. Her family now enjoys a steady supply of nutritious food and lives comfortably, no longer worrying about where their next meal will come from. She exchanges and sells the surplus vegetables and crops she grows in the Shield-Save-Supply chamber with other community members and local markets, earning a stable income. This income allows her to pay for her children's education, healthcare, and other household needs. A small portion of her earnings is contributed to the community maintenance fund, helping to maintain the Shield-Save-Supply System so that it can continue supporting other families for generations to come.

CONCLUSION

Agriculture could help better situations like this, not only in Somalia but in so many other places around the world and it doesn't have to cost a fortune.A low budget or no resources should not be used as an excuse to watch everything go south. Agriculture has been helping communities thrive and it will continue being important for the future. By investing in agriculture, communities can build a healthier and more stable future.

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