

**KEY CATALYST,
COLLECTIVE VOICE:**

**THE EAST, CENTRAL, AND
SOUTHERN AFRICA HEALTH COMMUNITY'S
INITIATIVE ON
FOOD FORTIFICATION AS A
PUBLIC HEALTH INTERVENTION**



*Let thy food be thy medicine
and thy medicine be thy food.*

Hippocrates

EXECUTIVE SUMMARY



Improving nutrition through the efficient and effective delivery of micronutrients and vitamins is critical to reaching several of the UN Millennium Development Goals. With an estimated 100 million women and children in East, Central, and Southern Africa (ECSA) suffering from the effects of micronutrient deficiencies that result from insufficient daily allowances of essential vitamins and minerals, as well as an annual death toll from these deficiencies at close to half a million people, the cause and effect cycle is a reality that cannot be ignored. Policy makers and practitioners recognize that fortifying commonly consumed foods such as vegetable oil, sugar, maize meal, and wheat flour with micronutrients is a proven, cost effective, and sustainable strategy that can ease the enormous human and economic burden that threatens overall security and development in the region. Reducing micronutrient deficiencies ensures child survival and maternal health; sustains quality of life for all, including those living with HIV and AIDS; improves educational and school performance; and increases productivity and economic growth.

The East, Central, and Southern African Health Community [herein referred to as “ECSA-HC” or “ECSA Health Community”] is the only inter-governmental organization concentrating on health and nutrition within the ECSA region. As such, the ECSA-HC enjoys the credibility and authority essential not only to addressing the highest level policy makers but also to holding countries accountable for the consequences of micronutrient malnutrition. In addition, the ECSA-HC is able to coordinate effective regional strategies that reduce repetition and waste limited resources. The ECSA-HC Secretariat ensures strategic collaboration and efficient coordination among its member states, and harmonizes food fortification and nutrition interventions with the support of financial and technical partners.

The story of the ECSA Health Community is one exemplifying local and regional ownership, high-level diplomacy, and practical, committed action. Member states within ECSA believe that working together to tackle public health and nutrition challenges is more effective than operating alone. With this spirit of local ownership and regional partnership, ECSA-HC’s achievements are reflected in the impressive gains made by the countries themselves in combating micronutrient deficiencies in the region through, first and foremost, food fortification interventions.

The ECSA Health Community assists member countries to share and leverage resources, access financial and technical expertise, and develop and accelerate food fortification programs in the region. Food fortification programs require a sequence of epidemiological, policy, regulatory, technological, food control, and financial decisions. The ECSA-HC Secretariat and its member states have sought to create an implementation framework addressing each of these categories so that government oversight, industrial implementation, and consumer financing are harmonized, and food fortification initiatives are strengthened at the policy, regulatory, programmatic, production, delivery, and enforcement levels.

This report is based on a series of interviews, questionnaires, and discussions with government representatives, technicians, and experts from Kenya, Malawi, Tanzania, Uganda, and Zambia, as well as with officials from the ECSA Health Community Secretariat and the donor community. The report details the experiences and outputs, key constraints and successes, and relevance of the ECSA-HC in supporting awareness, knowledge sharing of lessons learned, and ongoing application of food fortification efforts towards the ultimate goal of improving public health and advancing nutrition interventions in the region.

THE MAIN ACCOMPLISHMENTS ARE HIGHLIGHTED AS FOLLOWS:

- Strengthening advocacy through the provision of valid arguments and basic resources to the Ministers of Health, Finance, and Agriculture so that they keep food fortification high on the agenda when discussing public health and nutrition interventions in the region;
- Building motivation for countries to implement their own fortification programs, such as sugar in Malawi and Kenya; oil in Tanzania and Kenya; maize meal and wheat flour in Tanzania, Kenya, Lesotho and Swaziland; and strengthening the oil fortification program of Uganda, and the sugar fortification program of Zambia;
- Creating inter-country dialogue for agreement on guidelines for fortification formulations and preparation of regional standards and regulations around food fortification;
- Strengthening capabilities in food control through manual preparation, discussion, and adaptation; training; exchange of experiences, and guidance on preparing reports;
- Supporting a laboratory proficiency network through which training of national personnel has taken place, as well as periodic testing of the reliability of local laboratories for essential assays to determine micronutrients in fortified foods;
- Promoting the use of data from HIES to estimate food intake and predict coverage and potential benefit of food fortification programs; and,
- Reducing the the level of iodine in salt in Kenya because fortification made the levels too high for healthy consumption (similar action was taken in Uganda and Malawi as a result).



THE REGIONAL ECSA FOOD FORTIFICATION INITIATIVE HAS ALSO ACHIEVED MANY UNINTENDED POSITIVE OUTCOMES THAT ARE ADVANCING THE POLICIES OF FOOD SECURITY AND NUTRITION, AS WELL AS FOOD SAFETY EFFORTS IN THE REGION. NOTEWORTHY EXAMPLES ARE:

- ECSA member states now have several local experts in the areas of food fortification program design, food standards, food control, laboratory analysis of micronutrients in fortified foods, and procedures for monitoring and evaluation, whose abilities are similar to international experts and who have the advantage of being familiar with the local context;
- Strong relationships have been built between the public and private sectors both locally and regionally, which have resulted in the introduction of specific programs in countries that enjoy this collaborative relationship between the two sectors;
- A network of lab technicians and analysts has been established within and between countries, whose scope goes beyond the specific area of food fortification;
- Creditability of ECSA-HC Secretariat has been enhanced, improving its capacity to mobilize resources and increase its influence in the ECSA region in food security and nutrition and with other African institutions, such as NEPAD, WAHO, and ECOWAS;
- Non-ECSA member states (e.g., Ethiopia and Rwanda) are requesting assistance from ECSA-HC regarding best practices and resources on food fortification;
- The number of international and regional partners working on linkages between food fortification and nutrition has exponentially increased. The initial sponsors: USAID, UNICEF-ESARO, MI, and ICC-IDD, are now accompanied by GAIN, WHO, the World Bank, the Flour Fortification Initiative, and IMMPaCt/CDC; and
- Member states have access to funding resources and the attention of donors as a result of their affiliation with the ECSA Health Community. It is estimated that around \$10 million USD has been invested in the member countries by the different partners to support food fortification activities since 2007.





I. INTRODUCTION



Micronutrient deficiencies are a serious international public health concern. They have far reaching consequences in women of reproductive age, including pregnant and lactating women, and in children, especially between 0 and 5 years of age. The negative impact of micronutrient deficiencies has ramifications throughout the human life cycle. Caused by diverse underlying factors, addressing these deficiencies requires the implementation of several complementary strategies. Contributing factors such as the transmission of disease, contamination of food and water supplies, and unhealthy and hazardous environmental factors require the use of interventions beyond dietary improvements.

Many micronutrient deficiencies are caused by a lack of dietary diversity, often stemming from inadequate combinations of foods derived from plant and animal origin. In addition to sources of energy and protein (cereals and sugar, oils and fats, pulses and nuts), a healthy diet should contain appropriate amounts of fresh vegetables and fruits, milk, eggs, and other types of animal protein like fish, poultry, and meat. Low intakes of micronutrients in the diet can be reversed by increasing the diversity of the diet to include the aforementioned foods. If expanding the range of foods is economically or culturally difficult, alternative solutions include incorporating micronutrients into widely consumed edible products (i.e., food fortification). Additional micronutrients can be supplied, if needed, through pharmaceutical presentations either in the form of capsules, tablets, or syrups (i.e., preventive supplementation) or micronutrient powders applied to meals just before preparation or consumption (i.e., home fortification).

Every human being has certain rights regarding health. Access to safe water supplies, preventive care, and healthy environments is key to normal growth, positive development of physical and mental capabilities, and overall good health. The right to adequate standards of health, nutrition, and food is universal. Member states in East, Central, and Southern Africa are signatories to the international covenants, conventions, and protocols which recognize these rights.



As outlined in the Universal Declaration of Human Rights:


Everyone has the right to a standard of living adequate for the health and well-being of himself and his family, including food...

- Article 25 (1)

As indicated in the African [Banjul] Charter on Human and Peoples' Rights:

Every individual shall have the right to enjoy the best attainable state of physical and mental health [and] States Parties to the present Charter shall take the necessary measures to protect the health of their people...

- Article 16 (1) and (2)



The Convention of the Rights of the Child addresses the need for states to take appropriate measures to combat disease and malnutrition through the provision of adequate nutritious foods, clean drinking water and health care, stating that:

State parties shall in case of need provide material assistance and support programmes, particularly with regard to nutrition...

- Article 27 (3)

The Constitution of the World Health Organization commits the organization to

Promote... the improvement of nutrition

- Article 2

as a means of achieving the highest possible level of health for all people (i.e., a fundamental objective of the organization).

In addition, in 1995, member states of the Organization for African Unity, now the African Union, met in Ethiopia to endorse the recommendations of the African Commission on Human and Peoples' Rights and to elaborate a Protocol to the African Charter on Human and Peoples' Rights on the Rights of Women in Africa with the following language pertaining to health and nutrition:

States Parties shall take all appropriate measures to a) provide adequate, affordable and accessible health services, including information, education and communication programmes to women especially those in rural areas; b) establish and strengthen existing pre-natal, delivery and post-natal health and nutritional services for women during pregnancy and while they are breast-feeding...

- Article 14 (2a) and (2b)

States Parties shall ensure that women have the right to nutritious and adequate food. In this regard, they shall take appropriate measures to a) provide women with access to clean drinking water, sources of domestic fuel, land, and the means of producing nutritious food; b) establish adequate systems of supply and storage to ensure food security.

- Article 15 (a)(b)



Acknowledging the importance of these rights, member states within East, Central, and Southern Africa (ECSA) have coordinated policy and practice on health and nutrition interventions through the establishment of the East, Central, and Southern African Health Community (ECSA-HC). Previously known as the Commonwealth Regional Health Community for East, Central, and Southern Africa, this inter-governmental body was established in 1974. It is currently based in Arusha, Tanzania. The ECSA-HC aims to foster cooperation in health and nutrition interventions in its ten active member states: Kenya, Lesotho, Malawi, Mauritius, Seychelles, Swaziland, Tanzania, Uganda, Zambia, and Zimbabwe. The ECSA-HC Secretariat regularly brings together senior officials and policy-makers from the ministries of health, agriculture, trade and industry, and science and technology as well as international organizations and donors once a year with the goal of contributing to the improved health status of the people of the ECSA region. The ECSA-HC seeks a balanced approach to solving health problems with broad implications for the well-being of the ECSA population.

II. JUSTIFICATION FOR THE REGIONAL INITIATIVE IN FOOD FORTIFICATION UNDER ECSA HEALTH COMMUNITY LEADERSHIP

If the owner of the land leads you, you cannot get lost.

Ugandan proverb

Food fortification is a public health intervention proven to be effective in improving dietary nutrient density. Through food fortification, micronutrients are delivered to a cross section of target groups within a given community. If food fortification is appropriately implemented with the participation of the industries that produce staple foods and condiments, many micronutrients can be provided through private sector distribution channels with minimal changes in eating behavior. Food fortification takes advantage of the already existing, centralized production and delivery mechanisms created by the usual trade and distribution networks of mass-consumed edible products within a country or region.

Several characteristics of the process have made food fortification an attractive strategy within the field of public health and nutrition. With industry involvement, proportionally smaller government investments are required, thus freeing funding for other nutrient interventions. Any additional costs that occur when micronutrients are added to food are usually transferred into the product price and therefore paid directly by consumers. The government's role in the areas of policy and program design, standards enactment, supervision, inspection, and monitoring and evaluation, however, remains essential.

Even though most policies and plans of action in nutrition have mentioned food fortification as one of the strategies for alleviating vitamin and mineral deficiencies in the population, it has not been widely practiced in ECSA until recently. Public sector capacity needs to be strengthened so that the sector can assume a leadership role in food fortification, which would include but not be limited to, taking responsibility for engaging and motivating the food industry to accept and participate in such programs



CHALLENGES

The problem of micronutrient malnutrition in the region is well documented by local and international organizations. Despite efforts by various organizations to address the situation through dietary diversification and supplementation, malnutrition indicators have largely remained the same over the years. Improvement in iodine indicators across the general population, due to salt iodization programs, and progress in vitamin A indicators for many pre-school age children, thanks to periodical supplementation campaigns, are exceptions. In East, Central, and Southern Africa, more than 100 million women and children suffer from micronutrient deficiencies, which not only include vitamin A and iron, but also other micronutrients mainly supplied through foods of animal origin. Many more people are vulnerable and at risk. Experts agree that fortifying commonly consumed foods such as vegetable oil, sugar, maize meal, and wheat flour with vitamins and minerals is a proven, cost-effective, and sustainable market-driven strategy to reduce the human and economic burden of micronutrient deficiencies and malnutrition.

While the World Health Organization (WHO) states that over 20% of the population in ECSA countries are vulnerable to micronutrient deficiencies, many nutritionists will say that not all affected individuals are included in that statistic. Phillip Makhumula, a Malawian food fortification consultant involved in several projects in the ECSA region, says:

“Vitamin A deficiencies are present across the board in our countries. People in peri-urban areas and urban areas have access to centrally processed products and they are exhibiting signs of micronutrient deficiencies as it happens with poor rural populations. We must address the market as a whole, because if there is a particular group that doesn't need fortified foods, this would be a very small group in my estimation. And when people say that we are missing the target population, I don't think there's a big margin for error at all. People are consuming and we need to fortify the foods they are consuming.”



Evidence indicates that micronutrient deficiencies are primarily due to inadequate dietary intake of vitamins and minerals. Poor dietary quality, rather than the over-all quantity of food, is the major determinant of inadequate micronutrient status. Popular foods in cities and their surroundings often are very rich in energy, but poor in vitamins and minerals. Examples of this are refined flours and other starchy foods, sugar, and vegetable oil. When people migrate from rural to urban areas they are losing many natural sources of key nutrients, mostly from lack of complex B vitamins (B-1, B-2, niacin, B-6, and folate) and vitamin C.¹ Therefore, despite some industry-manufactured foods having a reach restricted to only urban areas in ECSA countries, it remains important to improve the nutritional value of those products because poor urban populations may not consume essential micronutrients.



¹ As shown in a food intake survey implemented in Uganda in 2008:
http://www.a2zproject.org/pdf/Uganda_Food_Consumption_Survey_Final.pdf

Though the stage for food fortification interventions has long been set, there are many complexities in implementation. Fortification is voluntary in most ECSA countries. In Uganda, voluntary action by industry has led to at least 90% of the oil on the market being fortified. All manufacturers must adhere to standards whether they fortify their oils and fats or not. The quality and quantity of vitamin A introduced to foods is not an unregulated “free-for-all” and those who do not adhere to regulations can be prosecuted. New openings in regional trade, however, threaten the standards in any country when other countries do not regulate to the same standards. Therefore, strengthening enforcement to guarantee the safety and quality of the food supply across all ECSA countries is a necessity.

Without explicit country-by-country mandates in place, accurate monitoring and assessment of the performance and impact of food fortification is also a challenge. According to Makhumula, when one asks who should be responsible for monitoring the success story, no one knows:

“The Ministries of Health should know if food fortification is happening and provide a support tool, as a national priority, that is able to show how much fortification has helped combat the public health concerns within their population. If the Secretariat of the ECSA-HC had the expertise in-house to provide the template for monitoring and evaluation, then countries would be more willing to respond to this. Monitoring and evaluation at the national level could then be adapted locally to introduce appropriate and meaningful monitoring procedures depending on the country context.”

Makhumula adds, “There needs to be a better understanding within the Ministries of Health that fortification is their work, which means a shift in mentality that this is not a special activity.”

The problem, according to Makhumula and others, is that governments are still skeptical that food fortification can occur without exorbitant costs. Even when they appreciate the need, governments do not always have the funding for advocacy around fortification efforts. Governments also believe promoting regional advocacy around these health interventions should come from Arusha where the ECSA Health Community Secretariat sits. Makhumula says,

“It’s a first step to launch advocacy materials at the regional level. But, what happens in Arusha needs to happen at the country level. They should be disseminating reports and working on monitoring and evaluation. The technical knowledge of fortification at the country level is concentrated in very few people. This is a danger because inspectors monitoring products on the market don’t have the information on what is fortified or not. Some don’t even understand why we fortify or how to fortify – and they are supposed to be part of the process. Even principle nutritionists don’t always have common knowledge or social marketing skills to talk about what foods on the market are fortified. People should have information about this – not just those at the top.”



Cognizant of both the region's needs and the challenges member states were facing, in 2004 the Secretariat of the ECSA-HC launched the Regional Food Fortification Initiative with encouragement from its Ministers of Health. Despite the goodwill behind the initiative, the ECSA-HC has faced shortages of both staff and funds. Member states' annual subscriptions support administration activities and staff, but donor funding has been necessary for programmatic activities, including those of the initiative. In recent years, the ECSA-HC has solicited international funding and technical support for support of food fortification and nutrition programs in the region through several UN agencies, the African Union, USAID, the Commonwealth Secretariat (London), WHO, and the World Bank.

According to the ECSA-HC Director of Operations and Institutional Development, Ernest Manyawu, for health and nutrition interventions to have real impact there needs to be an optimal level of expertise behind programming:

"Our programs are not sufficiently funded. We are spread too thin. If you take one example from the Food Security and Nutrition program, there are only two people working within this department, one of which has been provided with partnership support. Between the two of them, they must cover all possible activities and interventions at the regional level, while supporting the country level in every aspect of nutrition in which the ECSA-HC is engaged."

Carol Tom, the USAID/A2Z Resident Advisor in the ECSA-HC Secretariat, agrees:

"It's a lean secretariat. When you think about how it works to provide technical assistance to all the countries in this region, it is difficult to support countries as much as the ECSA-HC wants to. It must select the activities to support based on need and sometimes it cannot follow through an activity to the end or scale up because there is not the capacity to do so. If the ECSA-HC Secretariat starts a new project in a country, which may later require more financial or technical support than first expected, the project can stall."

Being the only regional body exclusively focused on health in the ECSA region is considered a strength of the ECSA-HC, but one must be mindful of the potential for weakness as well. Allie Kibwika, Director of Operations and Institutional Development at ECSA-HC's Secretariat from 2005-2011, says:

"Member states say they are moving faster because they have direct access to high political influence. In theory, this is true. But in principle, there is bureaucracy and member states are known to move slowly. There are competing interests locally and regionally and while it is great to have a singular focus only on health, we must take into account these other competing interests that heads of state and their cabinets need to and do consider when they are making health and nutrition decisions for their countries and the region. Health does intersect with and fit with other interests and for public health interventions to be successful - coherence is key."

The Secretariat of the ECSA-HC is trying to fulfill that role.





STRENGTHS

Allie Kibwika says that the ECSA Health Community has been critical to the region.

“When ECSA members came together in the 1970s, we recognized that countries in the region had a lot of commonalities and as such we needed to act together in a focused way. Our borders are fluid and what happens in one country almost always influences and requires a responsive action in another.”

Kibwika insists that this is exactly why the region has needed the ECSA-HC. The organization has rallied for collective action over isolated responses, in order to create benefits and opportunities for the entire region rather than just one country here or another country there. According to Kibwika, the ECSA-HC has been a catalyst for national activities and a collective voice for the region.

In nutrition, and in food fortification specifically, the ECSA-HC has made enormous strides. In 1979, the ECSA-HC became the first organization to establish a nutrition program. Despite SADC (the Southern African Development Community) being a larger organization in the region, it still does not have a nutrition department or food fortification or nutrition programs, according to ECSA Secretariat staff. In 2004, the ECSA-HC became the first organization to introduce food fortification as a public health intervention in its member states. Moses Mukuna, USAID Regional HIV&AIDS and Nutrition Advisor states, “The ECSA-HC’s mandate is straight from the governments themselves; a mandate from the highest level provides a direct link to the policy makers and the actual implementers.” His ex-colleague, Victor Masbayi, the USAID East Africa Maternal and Child Health Advisor from 2004-2010, believes that ECSA-HC’s existence is extraordinary. “All the decision-makers meet in one room and they engage in discussions until there is agreement. It gives countries the opportunity to be heard and to adapt their initiatives across the region with consensus.”

The ECSA-HC as an organization has other strengths, according to Carol Tom:

“The ECSA-HC helps catalyze action for those countries that need support. It promotes action at the highest national level. If there is a problem with starting programs in a particular area of health, the ECSA-HC Secretariat can lobby partners for financial or technical resources to help provide support for an individual country.”

In addition, the ECSA-HC provides regional guidelines that involve dialogue between countries and experts so that the needs of the region are addressed appropriately. The ECSA-HC is positioned to benefit international partners looking for a central organization with a wide network of health officials and access to the topmost decision-makers, as well as countries with access to the technical and financial resources of these partner and donor agencies. Tom says, “Countries can tap into the regional expertise available through the ECSA-HC’s networks and resources to develop and strengthen guidelines, structures, and systems relevant to health, nutrition, or food fortification efforts in their country.”

III. KEY IMPLEMENTERS OF THE REGIONAL INITIATIVE ON FOOD FORTIFICATION

The Director General of the ECSA Health Community Secretariat, **Dr. Josephine Kibaru-Mbae**, feels that the regional efforts in food fortification have provided impetus for visible change in most ECSA member states.

“When the program started I was not part of the Secretariat, [but] I know that the situation in the countries was different then. Coming from the Ministry of Health of an ECSA member state, I am aware that countries did not know how to design and plan a fortification program. There were many gaps then, but with the support of the ECSA Secretariat, most countries have the capacity to design their national programs and are able to implement actions that lead to having fortified foods on the shelves. It has been a very useful program that we wish to see countries, with support from partners, move forward and continue to scale up for the benefit of the 200 million plus population in the ECSA region.”

Dr. Kibaru-Mbae continues: “One of the technical programmes at the ECSA-HC’s Secretariat is the Food Security and Nutrition Program, whose mandate is to support member states to initiate and institutionalize programs that contribute to the nutritional status of the populations. Food Fortification is one of the interventions used to prevent and control micronutrient deficiencies. The ECSA region recognized the need for this intervention and together with partners initiated a regional fortification program in 2004, which has been coordinated within the Food Security and Nutrition Program. Under this program, implementation tools to facilitate the uptake of fortification in countries such as the food fortification standards have been produced. We wish to see member states adapting or adopting [these] to facilitate trade in the region and use them to engage with the private sector.”

“For as long as development aid builds dams but doesn’t look at irrigation systems so that people starve...For as long as a woman in the village cannot say at the end of the day: ‘I have participated and from my contribution today I am building something for my children’...for as long as we work on community health and forget that we are talking about people...we will remain micro and donor dependent. Competing interests will always be there, but we must manage our differences and address our issues diplomatically so that the ECSA Health Community can be part of the solution and [present] at the conclusion. That will empower the region to achieve quality results in health and nutrition in the region.”

Ernest Manyawu, Director of Operations and Institutional Development, ECSA HC Secretariat

Ernest Manyawu, current Director of Operations and Institutional Development at ECSA-HC’s Secretariat, states that, “The ECSA-HC has a niche in health.” He sees the ECSA-HC’s existence and work as critical because it is the only specialized regional body that deals solely with health related issues.

“All other regional bodies have multiple portfolios and, as a result, competing priorities. In this region, with the unique challenges we are confronting in the health arena, such as reproductive health, HIV and AIDS, TB, malaria, and other infectious diseases, proper health delivery systems, food security, and nutrition, the need for a regional organization that focuses on this and this alone is relevant and necessary.”





Manyawu sets the achievements of the ECSA-HC against a backdrop of a consistently strained micro-economic environment that produces brain-drain of specialists and generalists in health and nutrition who are without incentives to stay and practice in the region. The loss of talent to emigration is one of the greatest challenges cited by those working in food fortification, nutrition, and health in the region. “We are still working on this, but the ECSA Health Community is about protecting human resources for health and nutrition and finding strategic ways to retain them,” Manyawu explains. For him and his colleagues, the ECSA-HC is about building and managing a collaborative and effective network among the Ministers of Health, Finance, and Agriculture in order to:

- discuss the local challenges, achievements, and processes in health and nutrition and how these overlap with food fortification and food security;
- learn from one another best practices and how to translate these into local solutions; and
- gain access to and lobby at the cabinet level for policies and practice that will create positive changes in the public health arena.

Mofota Griffiths-Shomari, the ECSA-HC Manager of Food Security and Nutrition until 2010, describes the reputation ECSA-HC has as not just a mark of achievement in the region but also on the continent. The requests for information and training from countries outside of ECSA-HC’s member states validate the degree of credibility and authority the ECSA-HC enjoys throughout Africa.

“The ECSA Health Community is the only organization in the East, Central, and Southern Africa region which deals exclusively with health related issues not only in the ECSA region but in Africa south of the Sahara [as well as] countries as far northwest as the Gambia, and northeast as far as Somalia. Each of these countries has participated in some ECSA health activities,” describes Mofota Griffiths-Shomari.

“In addition, the ECSA-HC’s integrity helped to establish good working partnerships and networking with other organizations. The ECSA-HC was a key partner of the African Union (AU) Nutrition Department and worked closely with the AU to produce the AU African Nutrition Strategy. The ECSA Health Community pioneered strategic food fortification activities in the member states in partnership with USAID support,” says Mofota Griffiths-Shomari.

Dorothy Namuchimba, the current ECSA-HC Manager of the Food Security and Nutrition program, reaffirms the role of fortification in fighting micronutrient malnutrition in the ECSA region. “We have seen tremendous progress made in reduction of this form of malnutrition in countries which have consistently implemented national fortification programs and I see this happening in our region too.” She notes that when the Health Ministers’ Resolution was passed, no country except for Zambia even had a national program:

“The [other] countries have now started some initiatives and though they are at different levels, they are doing something. They are all interested. Activities within food fortification are not conducted in isolation. They are within [a] bigger program. This regional program has facilitated the bringing of



professionals together to exchange ideas and experiences, created networks, and enhanced communication and collaboration among professionals in specific fields. Public-private partnerships have also improved. Private sector has been brought on board and [is] now sensitized on issues to do with not only fortification but nutrition in general.”

Victor Masbayi, the USAID-East Africa Maternal and Child Health Advisor from 2004-2010, points out that USAID-EA responded enthusiastically to the ECSA-HC request for technical assistance in food fortification because it was visualized that capacity to improve nutrition and food quality and safety would be strengthened through this process. Masbayi recalls that all the decision-makers met in one room and they engaged in discussions until there was agreement. This community collaboration gave “countries the opportunity to be heard and to adapt their initiatives across the region with consensus,” states Masbayi.

Omar Dary, the Food Fortification Specialist of both the USAID/MOST and USAID/A2Z projects, expresses his satisfaction to have contributed to the advancement of public health and nutrition in the ECSA region in supporting food fortification activities:

“When we got the letter from USAID-REDSO (now USAID-EA) about how to support regional activities in food fortification that could be transferred into specific countries’ actions but without direct involvement in the local and national projects, we accepted immediately the challenge. We already had similar experiences in the Central American region, and we conceptualized a plan aimed to improve the public sector capabilities in many areas: for assessment of the need and identification of proper solutions for program design; for enactment of logical food standards based on regional agreements; for improvement of the food laboratory capabilities to make them ready to check for the compliance of the standards in samples collected at factories, importation sites, retail stores, and homes; for creation of simple and practical but still reliable inspection procedures; and for strengthening of the monitoring and evaluation actions combining together the different nutritional interventions. Our goal was to work with the public sector of the ECSA region (ministries of health, bureaus of standards, food laboratories, manufacturers and industry, food inspection units, bureaus of statistics, universities and research centers, and others) to prepare the environment to interact with the private sector. We knew that if the private sector was involved, but if the public sector was not ready, that this would create discouragement, conflict, and mutual recrimination. I think that the strategy has worked well, and the ECSA colleagues feel now that the programs are theirs and they understand why they are important and not the product of outside impositions. This strategy may seem slow, but this is the only manner to promote local ownership and improve the sustainability of the programs.”



Phillip Makhumula, a former Food Fortification Associate of MOST and now a consultant for the USAID/A2Z project, UNICEF, and other institutions, has been closely associated with the work developed through the ECSA-HC initiative on food fortification. Makhumula, who has trained and supervised personnel from food laboratories to food inspectors and helped in the preparation of manuals and reports, says:

“Messaging on food fortification tends to go straight to remote rural areas when it is managed from outside the region. For example, local officials are informed of a national vitamin A campaign and then at the end of the day the campaign is concentrated out in the rural areas and the urban areas are overlooked. Reports from the recent Malawi Demographic and Health [Survey] indicate that people in rural areas are more knowledgeable about public health measures than those in town. When local officials and stakeholders see advocacy as something critical to food fortification and own it, messages will target everyone and not only the so-called “more vulnerable”. We need to believe in our countries; what is good for people in rural settings is also necessary for the urban population.”

Carol Tom, the Food Fortification Advisor of the USAID/A2Z project assigned to the ECSA-HC, has worked directly with the ECSA-HC Secretariat in Arusha since 2006. She is now considered part of the ECSA-HC team. Tom proudly expresses her opinion about this project:

“I am privileged to have been part of the history of this program and hope to share in the achievements of the program. When the ECSA Secretariat invited countries to the first planning meeting in 2004, I was nominated by my organization (then Kenya Bureau of Standards) to be part of the Kenyan delegation to the meeting in Lusaka, Zambia. At that point, I was in charge of development of national standards on fortified foods and my organization had received numerous requests from the food industry for standards on fortified foods. This [meeting in Lusaka] was therefore a good opportunity for me to meet standards officers from other countries and learn what standards are out there. In Lusaka, I was nominated as the coordinator of the Regulations, Standards and Food Control Technical Working Group and that’s how I began my journey into fortification with ECSA. From there, I joined the A2Z project where I was based at the ECSA Secretariat. So much has changed since then. In 2004, few partners were supporting the program. Now, there are many partners at the regional and country level who have come on-board and are supporting the program. ECSA has been instrumental in laying a strong foundation upon which countries can build and partners can invest. Standards are in place, food control manuals have been developed, testing capacity is available and the industry is motivated to fortify voluntarily. Senior government officials are more aware of fortification now and are willing to allocate resources and commit to supporting the program in various ways.”

Tom says that each country in the region now has a national program and has started multiple initiatives in food fortification. Having worked with the countries for seven years, she says she has witnessed that some countries have used innovative approaches to designing fortification programs. “Each country has a story to tell. The ECSA Secretariat should continue to provide [a] forum for countries to share these experiences and the lessons learned and to continue to facilitate networking among professionals in [these] countries.”



IV. THE ECSA-HC FOOD FORTIFICATION PLATFORM

The person who runs alone always imagines that he is the fastest.

Kenyan Proverb

The ECSA-HC Secretariat has built collaboration and capacity in matters of food fortification in the region in order to strengthen food fortification programs. States Carol Tom:

“The ECSA Health Community provides a platform for countries to compare their food fortification efforts with each other. If one country is implementing an activity and finding success, other countries can rate themselves in relation to that country. This is good peer competition among countries and helps them motivate each other and move those who for a variety of reasons may be falling behind in their implementation efforts. Where some countries are not as effective in implementation as others, instead of feeling discouraged, the support and exchange of information, experiences and resources with other countries through the ECSA Secretariat has provided them with the motivation to perform better.”

In 2004, the Secretariat of the ECSA-HC’s members passed a resolution to promote food fortification in the member countries by holding regional meetings to plan, review advances, and take decisions with representatives of all the member countries and through the organization of regional working groups to accomplish specific tasks.



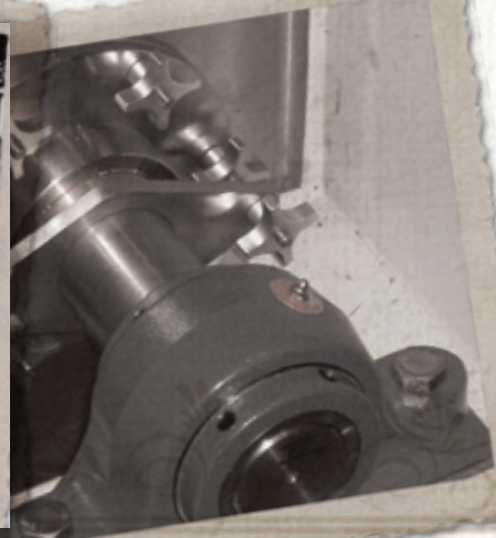
The goals of the ECSA Food Fortification Initiative have been to contribute to the reduction of micronutrient malnutrition among the people of the ECSA region by:

- working with international partners and the private sector to increase accessibility of fortified foods by low-income and at-risk populations in the ECSA region;
- promoting identification of needs and appropriate solutions as part of the programmatic design of the interventions; and,
- establishing comprehensive monitoring and evaluation systems to assess the results and impacts of food fortification and other nutritional interventions.

In addition, the ECSA Food Fortification Initiative has sought to enhance implementation and coordination of food fortification interventions both at the regional and at the national levels by:

- defining regional opportunities to support public and private sector implementation of national food fortification programs;
- establishing formal consensus on regionally harmonized fortification guidelines and standards;
- providing food inspection procedures that are simple and low cost, but still reliable to enforce compliance of the standards;
- facilitating establishment of a regional network of national laboratories for analysis of fortified foods linked through agreed upon areas of specialization and cooperation; and,
- producing and disseminating information, education and communication materials to improve regional awareness of the nutritional benefits of fortified foods as well as their limitations and scope, including developing a website devoted to food fortification activities in the region (<http://www.ecsa.or.tz/rffn/>).

The ECSA member states resolved to undertake the fortification of five key staple foods: salt, edible oil, sugar, maize meal, and wheat flour. Salt is fortified with iodine, edible oil and sugar with vitamin A, while maize meal and wheat flour are fortified with iron, zinc, vitamin A, and vitamins of the B complex (B-1, B-2, niacin, B-6, folate, and B-12).



REGIONAL MEETINGS AND COORDINATION

The ECSA Health Community in collaboration with partners including USAID, UNICEF, ICCIDD, MRC-South Africa, MI, and DSM, with financial and technical support from USAID/REDSO/ESA and UNICEF ESARO, convened regional workshops on food fortification activities in Lusaka (2004) and Johannesburg (2004). A regional workshop was held in Kampala (2005) with additional support provided by GAIN. A fourth regional meeting was carried out in Nairobi (2009) with contribution by UNICEF, WHO, and USAID/A2Z. At the first meeting in Lusaka, four working groups were created:

- Advocacy, Coordination and Resource Mobilization – led by the ECSA-HC Secretariat and supported by UNICEF;
- Trade and Technical Support – led by Zambia with technical and financial support from MI;
- Regulations, Standards, and Food Control – coordinated by Kenya with technical support from USAID/MOST (and subsequently USAID/A2Z); and
- Food Laboratories – coordinated at first by South Africa and later by Uganda with technical support from USAID/MOST (and subsequently USAID/A2Z).

At the meeting in Johannesburg, each group created a plan of action following the established guidelines. Advances made by the technical working groups were presented at the meeting in Kampala. Engagement with the private sector started at this meeting.

In November 2007, ECSA-HC called a meeting in Dar es Salaam to encourage industry participation and support for food fortification. An outcome of this meeting was the expression of interest from the World Bank, GAIN, IMMPaCt/CDC, and the Flour Fortification Initiative in providing further support to food fortification efforts in the region.

At the fourth regional meeting of ECSA-HC, a fifth working group was officially established:

- Monitoring and Evaluation Regional Technical Working Group – coordinated by the Uganda National Bureau of Statistics and supported by USAID/A2Z.

The ECSA-HC Secretariat and its member states have focused on building and strengthening partnerships in the region as a way to coordinate activities and maximize the sharing of experiences and resources to benefit each country's knowledge. Philip Makhumula notes that with the goal of maintaining regional standards based on regional data, "ECSA has helped to maintain consistency in the region and is able to help individual country programs and keep everyone on track as they manage donors coming in." He explains:

"Individual countries have bilateral donors, such as USAID, GTZ or Irish Aid, to only name a few that support fortification. Of course, the danger is that these donors may want to go their own way and try to introduce country specific regulations and standards.... But efforts to coordinate donors even working in one country go a long way to ensure that when donors move on, the rules don't change."



THE REGIONAL WORKING GROUPS

At the core of the ECSA-HC food fortification efforts are the five working groups, comprised of representatives of most of the member states. Each working group identifies the regional needs and gaps around the specific themes of the working group and prepares and implements plans of action. Participation in these working groups has contributed to the exchange of information, the establishment of networks among colleagues in the region, and the creation of teams of regional experts. Through these efforts, the ECSA-HC, has made visible a cadre of highly specialized experts in food fortification standards, laboratory analysis, food inspection, and programmatic implementation of food fortification initiatives.

Specific achievements of the five working groups are described below.

1. ADVOCACY, COORDINATION, AND RESOURCE MOBILIZATION

An area of focus for the ECSA Secretariat is advocacy for the fortification of food. In 2005, the ECSA Secretariat, with financial and technical support from USAID/MOST and MI, developed advocacy materials for the region that included an explanation of food fortification in Africa and the opportunities this strategy affords to fueling economic growth and tackling public health concerns. A specific overview of sugar and oil fortification with vitamin A was provided that traces the global fortification history of these vehicles as well as a simple explanation of the fortification process. Similar overviews were provided for wheat flour and maize fortification. A damage assessment report on vitamin and mineral deficiencies in the countries of East, Central, and Southern Africa was provided with facts about these deficiencies and how they are manifested in children, as well as in women of reproductive age. While these key advocacy and messaging products were developed for use throughout the region and employed to influence policy makers to accelerate the fortification agenda in their respective countries, many feel that more needs to be done to convince parliamentarians and policy-makers. These decision-makers possess a wide range of educational levels and so more tailored materials must be developed to demonstrate the positive results of food fortification and the facts behind it.

Noting that ECSA Health Community member states are not producing 'loud and clear messaging' and disseminating these messages to their communities, Makhumula says:

"The private sector gives messages because they are attached to their product. The inadequate messaging due to the insufficient resources to develop and communicate the advocacy messages locally shows that governments still see fortification as a project being done by others. Where advocacy around fortification has surfaced in the region and found success, it is indicative of that country's achievements in and commitment to fortification as a public health intervention. If you take Uganda for example, you see billboards on the streets, you hear radio messages, there is a logo in place to identify fortified foods, and there are days when fortification is one of the public health messages on the Minister of Health's lips."

Indeed, it takes time for messages to become rooted in action. As a result, ongoing commitment from countries to expand their advocacy and messaging strategies is required. In addition, local stakeholders must be encouraged to develop urban and rural messaging, as well as strategic communication plans that will tackle the myths around fortification costs, the safety of fortification, and food fortification's ability to combat micronutrient deficiencies. "For advocacy to really take off, it has to be more than just at the regional level. Governments need to buy into fortification as something that is part of a holistic public health strategy within their countries," says Tom. Many, like Tom, agree that further steps must be taken to consolidate food fortification initiatives with other public health interventions in the ECSA region. As such, the role of the ECSA-HC Secretariat will continue to be strategic to these advocacy, coordination, and mobilization efforts.

2. TRADE AND TECHNICAL SUPPORT

The role of the food industry in fortification cannot be over-emphasized. The industry has the technology and distribution networks to ensure that an adequately fortified food is produced according to standards and is accessible to the target population. With its advanced marketing and advertising skills, the industry is key to educating the masses and creating market demand for fortified foods. The food industry's close collaboration with the government is a critical partnership to be nurtured.

In describing the roles of public and private sector entities in food fortification interventions, Dr. Omar Dary refers to the traditional fable of the tortoise and the hare:

“On one side, we have the tortoise that, because of its typical nature and role, runs slowly, carefully, and is very cautious toward the intentions of the hare. The hare, on the other hand, wants to reach the end point as quickly as possible but if it does not see the tortoise nearby, may be prone to abandon the contest or to use inappropriate paths. The roles of each are set and do not easily change. It is not a question of bad behavior that each assumes its role to reach the end goal. Indeed, each acts according to its natural responsibilities and skill set. It would appear odd and be counterproductive even if each took on the other's role. In the same regard, in a world where the public sector may identify with the tortoise and the private sector with the hare, it is critical to engage the strengths of each to support both entities winning the race.”

In August 2005, regional discussions included the private sector. In the workshop report foreword, then Executive Secretary for the ECSA Health Community Dr. Steven Shongwe stated that “this tradition of regular consultations with others continues and ECSA has extended its collaboration to the private sector, particularly in the food fortification initiative.”

Industry involvement in food fortification has proved cost-effective and strategic. “Regional industry surveys suggest that in countries where a company has a monopoly or predominant market share, fortification is often implemented voluntarily – because it is the right thing to do,” states the Report of the 3rd ECSA Regional Food Fortification Meeting entitled Creating Good Partnerships to Accelerate Progress. One of the mandates of the trade and technical support working group was to conduct a mapping exercise in the region to assess industry's ability to introduce fortification easily in a particular country, create a market for fortified foods, and possess the coverage and technical capacity for fortification to be sustainable. With support from the Micronutrient Initiative (MI), the working group discovered that sugar is second only to salt as a vehicle to deliver micronutrients because in most countries sugar is centrally processed and consumption is high in all areas. Vegetable oil was also identified as a promising food vehicle, followed by wheat flour and maize meal. Though the latter is the most widely consumed at a decent frequency throughout the year, the manufacture of maize meal is characterized by small millers who are difficult to monitor and possess limited technical capacity to fortify.

Initial assessment of the potential of food fortification vehicles (coverage and intake) in the ECSA region

<i>Food</i>	<i>% Population in different ECSA countries</i>	<i>Usual Intake in different ECSA countries</i>
Sugar	60 – 95 %	10 – 80 g/d
Oil	50 – 80%	4 – 25 mL/d
Wheat Flour	10 – 80 %	25 – 270 g/d
Maize Flour	1 – 70 %	35 – 350 g/d

Progress in building partnerships between the public and private sectors has been made. Industry now is more receptive and prepared to join in food fortification efforts. According to the results of an industry survey of wheat flour and vegetable oil manufacturers conducted by ECSA in 2007 in Dar es Salaam, Tanzania, all the millers and oil producers had the capacity to fortify and would do so once the relevant standards and regulations were made available by government. But even with the standards and regulations made available in these countries, the private sector has not fortified to the degree envisioned and only a few manufacturers are fortifying the proposed food vehicles. It is estimated that of 23 oil manufacturing factories in the ECSA region (and including Rwanda and Ethiopia) only seven are fortifying their oil. Of these seven, only three manufacturers (all in Uganda) were fortifying to full capacity. In addition, private sector progress in fortifying sugar, wheat flour, and maize meal has been slow despite available support from GAIN (in Uganda, Kenya, and Zambia) and the World Bank (in Tanzania).

“It has never been easy for the two sectors to work together,” shares Dary. “But the challenge for technical cooperation in programs of public health and nutrition requires the participation of these two opposing entities. The key is to integrate the values and talents of both players towards the same end goal.”



Location of industries producing fortification vehicles in the ECSA region (MI-sponsored study)

3. REGULATIONS, STANDARDS, AND FOOD CONTROL

Standards should be developed with input from both the private and public sector, whether fortification is voluntary or mandatory in a country. Standards formulations ensure fortification does not provide unsafe levels of nutrients for those already receiving ample intake of vitamins and nutrients and that those levels are high enough to be meaningful for populations with inadequate intakes. Consultation with industry during the development of national fortification standards also ensures that the nutrients chosen are appropriate for the micronutrient deficiencies that have been identified in a specific country. It is important that appropriate mechanisms are put in place to enforce adherence to standards at all times. Failure to adhere to target levels of nutrients added to food vehicles can result in the provision of foods that are of little health benefit to consumers.

“Fortification - as seen by the industry - is initially perceived as an expensive exercise,” states Philip Makhumula. “But if they know that their competitors in neighboring countries are involved in fortification, they are bound to want to get started, as this plays into the dynamics of regional trade. Often, those in Malawi, for example, will say, ‘What about my friends in Tanzania who I also find in the market with such and such a product?’ ECSA helps to bring everyone to the same level – with economics, sharing of products, and policies; and, in a manner that makes us believe we are all moving forward together.” Makhumula goes on to say that fortification is important to countries such as his because of the gravity of the deficiencies reported and their toll on the social and economic development in the country:

"Food fortification reaches people in the best way possible because it is an affordable intervention for people. The problem has been that adoption of food fortification by the food industry has been slow. And in some cases, those fortifying their food products are not following the ECSA-HC guidelines and they are adding nutrients but not to the levels or the type that one would see any health impact. Interventions like these are only cosmetic."

When food fortification efforts began in 2004, it was decided that the same working group preparing standards and regulations should also create the protocols for inspection and supervision. Thus, the working group was named 'Regulations, Standards, and Food Control.' The strategy for combining the two working groups was that those creating the standards and regulations would also be enforcing them. "Once the standards are enacted there is not much more to do – except for some reviews and updating after a certain number of years - and therefore the members of this group would better dedicate their time to doing food control and be responsible for the production of periodical reports. That was our thinking behind linking the two groups – becoming more effective with our practice," states Dary. Guidelines produced for the region are now used in Uganda, Malawi, and Kenya to review and/or develop food fortification standards and regulations.²

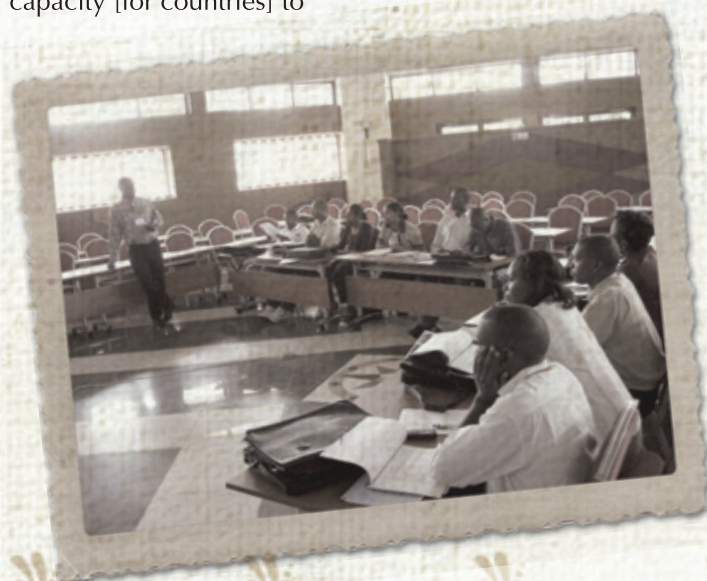
The Regulations, Standards, and Food Control Working Group considers food intake patterns and the different combination of micronutrient interventions being implemented in the region when setting the type and amount of vitamins and minerals to be added to various food vehicles. "This has been the practical focus and mission of the Regulation, Standards, and Food Control Working Group – to define the appropriate nutrient compounds for the addition of substantial amounts of specific [and] desired nutrients required for [a] public health benefit from food fortification as well as build capacity [for countries] to develop such standards," says David Eboku, Principle Standards Officer for the Ugandan National Bureau of Standards. Unfortunately, consumers are not in a position to determine the adequacy of vitamins and nutrients added to foods; they must rely on the vigilance of the inspection authorities in a country. Trainings through this technical working group have ensured, according to Eboku, that

"... [Representatives from ECSA countries] are able to undertake calculations and estimations on nutrient requirements in comparison to feasible fortification levels for the fortified foods consumed."

LOCAL WISDOM ABOUT FOOD FORTIFICATION IN THE ECSA COUNTRIES

"Once local players feel part of a process that affects them and their communities and know how regulations, standards, processes and decisions were arrived at, change will be effective. We don't believe in cut and paste from other places or being told 'do this'. We want to be consulted on the specifications for food fortification in our region. We are open for discussion where there is a give and take. This is my opinion."

***Peter Mutua, Kenya
Kenya Bureau of Standards***



² As shown in a food intake survey implemented in Uganda in 2008: http://www.a2zproject.org/pdf/Uganda_Food_Consumption_Survey_Final.pdf
The ECSA region has taken tremendous steps in designing and formulating fortification standards to be used in countries starting up fortification programs or strengthening existing ones. This has followed a step-by-step process, beginning in Malawi in 2005 with technical guidance from USAID/MOST. During this meeting, a Food Fortification Formulator was introduced as a tool for determining fortification levels and standards in mass fortification. For further information see: Dary, O. and M. Hainsworth, The Food Fortification Formulation: Technical Determination of Fortification Levels and Standards for Mass Fortification, (2008).
<http://a2zproject.org/~a2zorg/pdf/Food-Fortification-Formulator.pdf>. Specific modules for each type of food can be found at: <http://www.a2zproject.org/node/49>
<http://a2zproject.org/~a2zorg/node/74>
<http://www.sica.int/busqueda/Noticias.aspx?IDItem=33164&IDCat=3&IdEnt=29&Idm=1&IdmStyle=1>
Food control representatives from Malawi visited Guatemala through UNICEF support. And Kenyan representatives went to Nigeria to see the sugar fortification process there through USAID/A2Z and UNICEF.

For example, iron EDTA was shown to be the most effective when providing iron through maize meal fortification. Other forms of iron may be used as fortificants for iron as well, but they offer lower bio-available iron to the body. Consumers need to be assured that the maize flour is fortified with iron EDTA at appropriate levels at all times. The mere presence of iron in flour is no longer adequate for combating micronutrient deficiencies, so the type and level of iron used is critical. In countries where both maize meal and wheat flour are fortified, it is important to ensure that the fortificants are not interchanged for any reason and additional levels are adhered to appropriately. This is not always easy when those adding the fortificants do not have the proper equipment or training to follow the regulations in place. In countries that import certain fortified foods, such as salt, wheat flour, and oil, the standards still apply. As such, the products must be examined when crossing borders by inspectors trained in food control testing.

Despite the harmonization of standards, there are challenges to their consistent implementation across the region. According to Ronald Afidra and Dr. William Ssali, Food Fortification Advisors in Uganda, there is an additional twist now that international trade barriers are opening up in the ECSA region. "Oil products that are not fortified in Kenya cross the border into Uganda and appear on the market. We are fortifying 85-90% of the oil on the market in Uganda. What happens to the argument for fortification and the strength of our standards when one country doesn't fortify and another does and both of these products are competing on the market?" asks Ssali.

Successful implementation of standards (i.e., food control) involves a number of players working together in a consistent and systematic process. "Standards alone [do] not start fortification, although without [these] it would be difficult for other efforts to progress," says David Eboku. His colleague in Kenya, Peter Mutua, agrees: "Standards and regulations will only be utilized if there is good political will and strong public-private partnerships. And for regulations and standards to be effective, proper quality infrastructure needs to be in place for both adequate food control and laboratory monitoring." Mutua says that there have been significant changes in relations not just among the countries in the region, but also locally as well. He describes a time before the ECSA-HC began to focus on food fortification standards when the industry, in Kenya specifically, was distrustful of the government and believed Standards Officers were policing the industry:

"Now the private and public sectors are on friendly terms. We as Standards Officers have developed a good rapport and work with them. They know that if we find something and notify them of it, we will work together to take corrective actions. Challenges are something we solve together. We are transparent with each other and it isn't about protecting territory anymore. We are learning and training together."



³ <http://a2zproject.org/~a2zorg/node/74>

⁴ <http://www.sica.int/busqueda/Noticias.aspx?IDItem=33164&IDCat=3&IdEnt=29&Idm=1&IdmStyle=1>

Indeed, developing appropriate standards has been a process that has taken into consideration many factors, not least of which has been the consensus among the concerned parties including government, nutrition experts, industry, and consumers. To this end, a review of food control manuals, prepared through a collaborative process undertaken by USAID/A2Z and the ECSA Health Community, was conducted in a meeting of the Fortification Standards and Food Control group. Further discussions and a review of the manuals were conducted within each country as well with private and public sector representatives. As such, the ECSA Food Control Manuals on Food Fortification were published and cover the various components of food control (quality control and inspection at factories, importation sites, and retail stores) for all food vehicles – salt, oil, sugar, wheat flour, and maize meal.³ The manuals also include specific considerations for small scale production of several fortified foods. The ECSA food fortification manuals have been critical to the strengthening of food control activities in Kenya, Malawi, Uganda, and Zambia. In a remarkable case of the ECSA region having influence beyond its geographical mandate, these documents were translated into Spanish by the Institute of Nutrition of Central America and Panama (INCAP) and disseminated in the Latin American region for adjustment and adaptation.⁴

Food control work involves visiting production centers for auditing, and inspecting retail and importation sites. Policing of national standards is usually the mandate of national bureaus of standards or the responsibility of quality and safety organizations such as the Department of Public Health or the National Drug Authority within a country's Ministry of Health. It is assumed that the bureau of standards within any given country already possesses a mechanism for collecting information on the quality of foods and that food fortification will merely add another component to the existing process. In this context, guidelines for monitoring fortified foods aim to supplement existing procedures by making sure that the nutrient content is verified. But according to Philip Makhumula, the roles and responsibilities of the national bureaus of standards and the ministries of health need to be delineated. The bureaus of standards, in his opinion, should be concerned with the quality of staff and their capacity to monitor imports and food production. While the ministries of health, on the other hand, should monitor and survey the points at which food comes into contact with consumers. Ministries of health should have as their mission an interest in knowing the quality of fortified foods that could affect their populations, as food quality should be controlled by the government.



Experience in many countries, especially within the ECSA region, has shown that information, understanding, and experience on monitoring and evaluating the general quality of food vehicles earmarked for fortification is usually difficult to obtain and retain. The ECSA working group on Food Control's mission is to verify that what is said to be fortified is indeed truly fortified. The procedures and manuals developed through this working group are meant to ensure the quality of fortified foods from production to retail stores. As such, the working group on Food Control has successfully harmonized standards for analysis of food fortificants and developed manuals that provide step-by-step methods for inspectors, auditors, and ports of entry, among others. "The biggest help to food control has been the proficiency testing adopted by ECSA which allows laboratories to test

sampling techniques and then review with a regional lab all together so we can interact and learn from each other," states Margaret Mazhamo, Head of the Food and Drug Control, Ministry of Health, Zambia. Mazhamo explains that food control is a very challenging arena. Food control processes vary extensively in the region and different laboratories have different equipment and personnel capacity. "For standardizations to be harmonized and have an impact on food control, there is a need to evaluate where each country is realistically. The differences between countries show greatest here." That said, Mazhamo believes it is possible though to still harmonize processes for food control as a region:



“The development of manuals for food control and inspection is an achievement. Countries are not ready to use all the manuals for everything, but they can follow a methodology and use an existing manual according to a specific need. For example, Zambia uses the food fortification standards and food control manuals on sugar, salt, wheat flour, and oil. There are other manuals we are not using, but that is because we haven’t the need on these yet.”

Zambia is proud of its contributions to the manual on monitoring fortification of sugar. Under the USAID/MOST project, Mazhamo relates how she was provided access to information from Guatemala and traveled there to observe the sugar fortification process. “We tried to copy their methods, but our sugar crystals are different than theirs. So we modified the method until it worked for us. We then shared this method with the ECSA Health Community and it was adopted as the model for sugar fortification in the region,” Mazhamo shares.⁵

Food control is evolving in the ECSA region. Funding and support has been provided for food inspectors from several countries to gather and exchange experiences and lessons learned on a regular basis. These activities surely are having a direct impact on the progress of food control in the ECSA region, not only as applied to fortified foods but also to many other areas associated with food safety. The ECSA-HC community has provided essential support with tools and resource exchange.

4. FOOD LABORATORIES

The ECSA Health Community has worked to establish a regional network of national laboratories for analysis of micronutrients in fortified foods and a well-defined regional approach that supports public and private sector implementation of national food fortification programs. These efforts to build a regional laboratory network have created greater awareness, knowledge sharing, and communication at the national level between and among local laboratories. The network has increased the exchange of essential information and the sharing of experience among the laboratories of various countries, increased the implementation of reliable analytical methodologies, and upgraded select laboratories in each country.

The ECSA Laboratory Network began in 2005 and had its first training in that same year, facilitated by the USAID/MOST project. “We began with the basics and built upon that foundation,” shares Philip Makhumula.

“We trained people in Kenya, Malawi, Zambia, Uganda, and Tanzania. Then we asked them to go back to their countries and conduct trainings for laboratories in their countries that they believed would capitalize on the training to improve their labs. This was in 2005. After these country trainings, which were funded by USAID under the MOST project, we told each country that we wanted to send in samples and start testing in those laboratories ready to begin real-time testing and analysis of fortified products. We picked labs in each country which had received equipment support through USAID. There was at least one lab in each country that was given such equipment. The other laboratories in a given country needed to obtain the equipment themselves if they wished to participate, but this became a challenge for participation. In 2009, we conducted a laboratory proficiency training in Uganda for relatively new countries to the ECSA Health Community: Burundi, Rwanda, Ethiopia, and Eritrea. The idea was for them to go back and share this training at the country level too. But the local trainings weren’t funded and the labs did not have the equipment necessary for testing. So maybe they could test for iron levels in flour, but certainly not vitamin A in sugar. So, equipment in the laboratories has been a major impediment to expanding what is possible in terms of building capacity in countries.”

The research officer for the Uganda Industrial Research Institute, Vincent Makokha, agrees:

“The greatest challenge within the Laboratory Network is the testing capabilities in some countries. We have trained people and this has preceded fortification in their countries. So the analysts can only practice with our training, but they are not engaging in actual analysis.”

⁵ Food control representatives from Malawi visited Guatemala through UNICEF support. And Kenyan representatives went to Nigeria to see the sugar fortification process there through USAID/A2Z and UNICEF.

Laboratory analysts in the ECSA Health Community are working through and around equipment and capacity challenges to make advances despite policy limitations and inadequate access to state-of-the-art equipment. All of the five pioneer countries (Kenya, Malawi, Uganda, Tanzania, and Zambia), and the four new countries (Burundi, Rwanda, Ethiopia, and Somaliland) are reported to be using the ECSA laboratory manuals in their national labs. All of the laboratory technicians were trained using the same methods, so the implementation is straightforward for each country. "As a result of ECSA's investment in laboratory capacity building, any country is able to test the fortified nutrients we have mentioned, which was a skill and expertise not previously there before," says Makhumula.

"In addition, national units of food control have benefitted tremendously as many of these did not have all of the test formulas and standards and now they do. Where prior to ECSA regional training there was a lack of capacity all too often in the countries for general testing, and the quality of nutrients in foods specifically, this project of the ECSA-HC has made an enormous difference. ECSA methods are in-house methods though they may not be the official bureau of standards methods. But when countries are facing a lack of proper equipment, most countries use the ECSA methods because they are user-friendly and cost-effective no matter the level of sophistication of the equipment."

Both ECSA-HC Secretariat staff and fortification advisors in the region will mention that one of the crowning achievements of the ECSA Food Fortification Initiative has been increased local capacity for testing micronutrients in national laboratories. Even industry is known to have greater confidence in their national laboratories now; instead of sending samples overseas as they had previously done. Before, an absence of in-country capacity was expressed frequently, but now the industry representatives are sending samples to local labs on their own and without pressure from local Ministries of Health or the ECSA Health Community.



A forum for the periodic comparison of testing capabilities has been established through the ECSA-HC Laboratory Proficiency Network. The network consists of analysts from five ECSA countries. Emphasis has been placed on the testing of vitamin A in sugar, oil, and fortified flour, and of iron in fortified flour. Even with that, however, laboratories need to be supported, according to Makhumula and others. Most of the bureaus of standards laboratories don't have the capacity to test using a particular legal standard, so they default to the ECSA Health Community guidelines.

Regardless, Makhumula claims there is better resource sharing and coordination between labs in the region:

"There is still not as much talking or networking between laboratories within a country about fortification which is necessary and which should be encouraged. But there has been more coordination between laboratories in the region. The hard part is that a lab in one country that has expertise in analyzing the fortification of cooking oil cannot transfer that to another if that country is not fortifying their cooking oil yet. Where the labs have moved very quickly, products are left behind because industry and others in the public sector are not moving as quickly as they are to fortify. The challenge for labs is that their capacity is being built, but if they don't use this capacity, it is then wasted."

Makhumula speaks of the advances Malawi has made and hopes it can use its newfound expertise and skills in laboratory work. The university laboratory that ECSA supports in Malawi has been a key laboratory during trials for sugar fortification in Malawi. Instead of sending sugar samples out to laboratories in Zambia, for example, all the industries in the country now keep their sample testing local.

Much of these laboratory efforts have been sponsored by the USAID/A2Z project, with strong coordination by the ECSA-HC Secretariat. With the existence of on-going proficiency networks in the region, it would be worthwhile for the ECSA-HC to propose to its member states to support such a network and expand the networks' capabilities in testing for micronutrients in foods.

5. MONITORING AND EVALUATION

The Monitoring and Evaluation Working Group began in 2009. All participating countries -Kenya, Malawi, Tanzania, Uganda, and Zambia – designed practical methods for evaluating fortification interventions within their countries. Each country analyzed the data available in making decisions on how interventions should be implemented.

Most practitioners in the ECSA countries acknowledge that monitoring and evaluation of nutrition programs is weak and needs to be re-evaluated. Countries face numerous challenges, which include a lack of human resources with the skills and expertise required to conduct household-level monitoring and evaluation. In addition, household-level monitoring is costly and there is little funding allocated for this vital exercise. In the end, most countries rely on outside funding to implement monitoring and evaluation, which then becomes a process dictated by a particular donor's agenda, rather than a particular country's needs. In such cases, multiple data sources are at odds which one another and the data cannot be verified by nutrition experts within the ECSA-HC.

David Eboku from Uganda laments that in the initial stages of the ECSA-HC Food Fortification program:

“It was a challenge to know how much the population actually [needed] due to lack of data on the level of inadequacy. It [was] also a challenge to estimate population intake [of foods] at present or with fortification due to the difficulty in [understanding] how much of a [particular] food vehicle the population consumed on a daily basis. There was limited analytical capacity to providing product data [useable] in standards setting.”

The information collected through monitoring and evaluation can be useful in identifying and prioritizing the nutritional gaps, the type and quantity of what needs to be added to food vehicles, and the identification of constraints that may impact the delivery of nutrients, such as but not limited to safety issues, cost and technological challenges. Most countries in the ECSA region have not collected information on consumption patterns. As such, the data available is only based on rough estimates. Only Uganda, as a result, has completed a dietary survey with support from the USAID/A2Z project that is based on a quality monitoring and evaluation procedure.

Due to this challenge, the first guidelines developed in Uganda were based on estimates. These were reviewed in 2010 after the Monitoring and Evaluation Working Group provided recommendations from an analysis of data derived from a Household Income and Expenditure Survey (HIES), also referred to as the Household Budgetary Survey. This survey provided consumption patterns of the fortifiable foods coupled with data on dietary patterns from Uganda. As such, the HIES have been proposed as a proxy way of obtaining food consumption data. The data provides information on the quantity of the food that is commercially accessible and thus characterized as being more “fortifiable.” The approach in using this survey allows for investigation into the distribution of food purchases from one household to another, showing which households are consuming one or more of a particular food vehicle and the quantities in which that food is consumed. This information is important in approximating the potential impact of fortification on people with micronutrient deficiencies and provides insights into where other micronutrient interventions need to be directed. Almost all the ECSA countries have a systematic way of conducting the HIES. In keeping with this then, the Monitoring and Evaluation Working Group uses data from each country's

HIES to provide estimates on: the populations consuming the proposed food vehicles, the nutrients lacking in the diet and those that should be added to specific foods consumed, and complementary interventions that should be proposed for populations not consuming fortified foods.

The Monitoring and Evaluation Technical Working Group needs ongoing support to remain active. Since nutrition interventions are designed to complement each other, this working group should consider developing an integrated monitoring and evaluation system for use in each country. Furthermore, the working group should play an advisory role in an integrated regional nutrition program.



V. ACHIEVEMENTS AND PERCEPTIONS OF FOOD FORTIFICATION EFFORTS

Advances that the ECSA-HC has made within food fortification and nutrition have been notable. The current ECSA Health Community's Manager of Food Security and Nutrition, Dorothy Namuchimba explains,

“At one time, Zambia was the only country fortifying. This was at the start of our Fortification Initiative. A direct result of the ECSA-HC’s collaboration with partners has been putting the discussion of food fortification on the table as we weren’t concentrating on these discussions before. Through food fortification efforts, cooperation among countries has grown stronger as they work to improve the quality of their laboratories, the skills of their technicians, and the regulations and standards for food control.”

Each ECSA member state (except Mauritius and Seychelles) has started initiatives in food fortification, with countries like Rwanda, Ethiopia, and Mozambique following suit. Carol Tom states:

“When I worked for the Kenyan Bureau of Standards as a Standards Officer, food fortification used to be a big concept, seen as needing elite technology. Through the ECSA-HC, we have worked to demystify the concept and process of food fortification. The fortification efforts in countries are funded in large part by donors with whom the ECSA-HC has networked in the region and then the ECSA Secretariat coordinates with countries to set regional agendas and a review process that is integrated with donor requirements.”



Food fortification initiatives are being implemented by a block of five key countries in the region (Kenya, Malawi, Tanzania, Uganda, and Zambia) which make up the East African Community (EAC). Allie Kibwika, the former ECSA-HC Director of Operations and Institutional Development, says:

“Funding efforts by USAID, especially, have been really good and supported fortification efforts. But at some point, donors who have a mandate to work in only certain countries on certain issues become a liability. The five key countries that have been able to move forward with fortification have done so because of USAID’s ability to fund their programmatic initiatives. While countries like Rwanda or Burundi, just as an example, are not in that same mandate. When countries during ECSA Health Community meetings are reporting out their good practices and successes, it becomes a big, big challenge when others are not part of that. You have ministers who are asking how the ECSA Health Community expects them to adopt best practices when the initiatives haven’t been addressed or tried out in other countries.”

Kibwika admits that moving past this challenge has been an act of diplomacy that needs attention even while celebrating the key achievements which the ECSA Health Community has catalyzed in the region.

Dorothy Namuchimba feels that the placement of a Food Fortification Advisor within the Secretariat has been key to the ECSA-HC’s achievements in this and other health areas. “Having in-house expertise sitting with us, planning with us, advising our broader programs by linking fortification efforts into nutrition interventions across a range of programs, has eased the challenge of the ECSA-HC moving into critical areas of intervention,” she says. “And yet,” says Philip Makhumula:

“There is a great need to inform people on the ground of what the ECSA-HC is doing with regard to food fortification. I’m not sure how this is being done and the regional coordinator for food fortification sitting in the ECSA-HC Secretariat is not really felt so much on the ground. Regional officials may know her, but at the local level, she is not known and so I would recommend higher visibility of the ECSA-HC Secretariat within the countries. Local coordination needs attention and maybe this comes through advocacy and skills sharing. The presence of an in-country food fortification advisor is essential. Look at Uganda. Look at Malawi. We have moved things along because we have these advisors. You need someone in the country whose job is to manage fortification activities and knock on everyone’s door and coordinate with his/her colleagues in other countries and the Secretariat of the ECSA-HC.”

From the start of its food fortification efforts, the ECSA-HC planned the development of generic food fortification guidelines within the region. It was expected that these would encourage participating member states to produce action plans to set and enforce national food fortification standards, regulations, legislation, and policy, enabling cost-effective national implementation of food fortification control. There have been challenges within the ECSA Health Community’s Food Security and Nutrition program. According to Dorothy

Namuchimba, governments and industries are still not fully on board with their action plans as otherwise there would be even greater advances in food fortification. “Industries still are holding back and when questioned they say it’s because there is no word from the government who must take the lead. We need to change this,” states Namuchimba.

“Has fortification made a difference?” asks Allie Kibwika, former ECSA Health Community Director of Operations and Institutional Development. “If Uganda is fortifying 90% of its cooking oil and it’s the oil the population is using, doesn’t this mean something? If Zambia is fortifying its sugar and this is consumed by a large part of the local population, this should tell us something too. When we talk about fortification with regard to ECSA, this is happening in the region and it is something to be proud of.”

In spite of the remaining challenges and limitations, specific accomplishments by the ECSA-HC can be summarized as follows:

- Strengthening advocacy through the provision of basic resources to the Ministers of Health, Finance, and Agriculture so that they keep food fortification high on the agenda when discussing public health and nutrition interventions in the region.
- Building motivation for countries to implement their own fortification programs: UNICEF and USAID are supporting a national program to fortify all locally consumed sugar in Malawi; in Kenya, the largest sugar mill which supplies approximately 60% of the national market is fortifying; in Tanzania and Kenya, the largest oil factories are fortifying and supplying about 50% of the market with fortified oil; in Tanzania, the World Bank is helping the largest mills initiate maize meal and wheat flour fortification (which would cover 70% of the national wheat flour and 30% of the national maize flour production); in Kenya, GAIN is working to introduce fortification in all its wheat flour mills; in Lesotho and Swaziland, measures are being implemented to enforce standards for imported products; in Uganda, fortified oil is being produced and supplied to about 85- 90% of the market with the support of USAID and GAIN; and, in Zambia, all sugar manufactured within the country is fortified.
- Creating inter-country dialogue for agreement on guidelines for fortification formulations and preparation of regional standards and regulations around food fortification.
- Strengthening capacity in food control through training, exchange of experiences, and guidance on monitoring and evaluation. Publication of the ECSA Manuals in Food Fortification constituted a key achievement for the region. Sixteen manuals were produced to cover all the different aspects of food control as applied to fortified salt, oil, sugar, wheat flour, and maize flours. The manuals describe specific procedures for internal (factory) and external (government) control mechanisms. And, in the case of salt and maize flour, for food control of small mill operations. One combined manual was produced that covered inspection of fortified foods at importation sites and for retail stores. Three laboratory manuals were produced as well for salt, oil and sugar, and, wheat and maize flours. These manuals were adapted and are being implemented in Uganda, Kenya, and Malawi. Some of the same manuals were translated into Spanish by INCAP in Guatemala, and are being used in several the Central American countries.
- Supporting a laboratory proficiency network through which training of national personnel has taken place, as well as periodic testing of the reliability of local laboratories for essential assays to determine micronutrient levels in fortified foods. Four exercises within the laboratory network have been completed, with another ongoing. At least two laboratories in Kenya, Malawi, Uganda, Tanzania, and Zambia participate in the laboratory proficiency network. Training was provided to Ethiopia and Rwanda, as well, and it is expected that these two countries will submit results in the current testing exercise. A total of 27 food analysts have received training through this network.
- Promoting the use of data from the HIES as a way to estimate food intake, predict coverage and estimate the potential benefit of food fortification programs. Uganda proposed a modification of its iodine levels in salt based on a critical analysis of its 2006 HIES. In addition, Kenya and Malawi modified the iodine levels in their salt as well. Zambia's analysis of its 2007 HIES helped renew attention to its sugar fortification program and consider introducing fortification of maize meal by large scale manufacturers.

The regional ECSA Food Fortification Initiative has also achieved many unintended positive outcomes that are advancing the policies of food security and nutrition, as well as food safety efforts in the region. Noteworthy examples are:

- ECSA member states now have several local experts in the areas of food fortification program design, food standards, food control, laboratory analysis of micronutrients in fortified foods, and procedures for monitoring and evaluation, whose abilities are similar to international experts and who have the advantage of being familiar with the local context.
- Strong relationships between public and private sector built locally and regionally, which have resulted in the introduction of specific food fortification programs in countries such as Kenya (supported by MI and GAIN), Malawi (supported by USAID and UNICEF), Uganda (supported by GAIN and WFP), and Tanzania (supported by the World Bank).
- A network of lab technicians and analysts has been established within and between countries, whose scope goes beyond the specific area of food fortification. The laboratory analysts, for example, are able to test for micronutrients in foods provided as part of emergency relief efforts. Laboratories within Kenya, Malawi, Uganda, Tanzania, and Zambia were established in 2007; Ethiopia, Lesotho, Rwanda, and Swaziland joined the network in 2010. In addition to a regional network, national laboratory networks are being considered.
- Creditability of ECSA-HC Secretariat has been enhanced, improving its capacity to mobilize resources and increasing its influence in the ECSA region in food security and nutrition, as well as with other African institutions, such as NEPAD, WAHO, and ECOWAS.
- Non-ECSA member states, such as Ethiopia and Rwanda, are requesting assistance from ECSA-HC regarding best practices and resources on food fortification.
- International and regional partners working on linkages between food fortification and nutrition has exponentially increased. The initial sponsors: USAID, UNICEF-ESARO, MI, and ICC-IDD, have been joined and their efforts supplemented by GAIN, WHO, the World Bank, the Flour Fortification Initiative, and IMMPCt/CDC.
- Member states have access to funding resources and the attention of donors as a result of their affiliation with the ECSA Health Community. It is estimated that around \$10 million (USD) has been invested in the member countries by the different partners to support food fortification activities since 2007.





VI. CONCLUSION



The ECSA-HC Secretariat believes that through national commitment, collaboration, and enforcement, significant changes in the availability and use of fortified foods is possible to combat public health concerns around severe micronutrient deficiencies and malnutrition in the East, Central, and Southern African region. The ECSA Health Community has organized its regional efforts in food fortification around the formulation and harmonization of regulations and standards; development of food control procedures and manuals that address the quality of fortified foods from production to retail; implementation of a laboratory proficiency scheme to improve the analytical capabilities of public food laboratories involved in food fortification locally; and advocacy to high-level government officials and food manufacturers.

Despite the challenges which are candidly acknowledged, the strengths and opportunities for the ECSA-HC are numerous. The ECSA-HC Secretariat and its member states, working together, have made significant advances in food fortification in the last seven years by creating a programmatic focus area on nutrition and food fortification and building regional support for nutrition. Consequently, food fortification, as a necessary and critical priority within public health has an important place in ECSA countries today. In a world that fluctuates between seeing nutrition as a priority or not within strategic public health interventions, for nutrition to be a programmatic focus alone is a real achievement.

The ECSA Health Community's future is bright. Member states have shown that with very little available funding and resources, it is possible to make even small investments stretch a long way. The secret to this has and will continue to be strategic design, local motivation, and collaborative dedication. Local solutions to micronutrient deficiencies and malnutrition supported by a regional organization committed and focused on public health interventions will improve food security and socio-economic development for the region. Food fortification strategies and other nutritional interventions should continue to expand locally and regionally, with public-private sector support and contribution.

Partners should see their contributions to the region as the metaphorical fortificants that add value to something already being produced. As Allie Kibwika so eloquently states, "Partnerships are built. They don't just happen. Both partners must take the initiative to nurse that [relationship] and make it grow." For the ECSA Health Community, these partnerships between countries, within countries, and with regional and international donors will either make or break the vision of a region that no longer should suffer from micronutrient deficiencies and other public health problems.



VII. RECOMMENDATIONS



REGIONAL STAKEHOLDERS

- The African Union should encourage all African countries to implement the Africa Strategic Plan in food security and nutrition, and ensure that part of the 15% of the agreed national budgets committed to health is given to nutrition activities and interventions such as, but not limited to, food fortification;
- Governments and partners should invest in local practitioners, recruit and retain local human resources, train these resources, provide incentives, and build absorption capacity within the region;
- The ECSA Health Community Secretariat should become a center of technical expertise so that best practices can be accessed and shared in a functional and effective manner;
- Incentives for industries, such as equipment and training support, but not fortificant premixes, should continue to be provided for start-up programs;
- Food control systems need to be strengthened, specifically in the areas of sampling, testing, and reporting so as to ensure accuracy, relevance, and utility of data for monitoring of programs;
- One to two regional laboratories of the ECSA region should be accredited and positioned to provide testing and skills training to local labs since not all countries will have sufficient funds to have their laboratories accredited in accordance with the required standards; and
- Fortification is science based and the public needs to see the data that can answer accessibility (i.e., affordability + availability) and coverage issues. So that impact can be gauged to inform the design of programs and the extent of consumption patterns in the region measured, specific questions to provide this data need to be integrated into frequently conducted surveys such as the household income and expenditure surveys

ECSCA MEMBER STATES

- Governments should make external funding from donors conditional on agreed upon terms of engagement that respect tried and true local solutions to local problems and incorporate them into country plans and agreements;
- Governments need to strengthen and implement a strategic plan for nutrition and food fortification that defines a vision and sets reachable goals for a specific period of time. Strategic plans should provide strong monitoring and evaluation tools for establishing criteria and benchmarks;
- Ministries of Health, Bureaus of Standards, and Ministries of Industry and Agriculture should share information with each other as well as with the national teams in food fortification to support informed decision-making and the improvement of fortification programming;
- National Working Groups on Food Fortification need to be functional, active, and engaged in each country. The roles and responsibilities of each individual member should be clearly specified for coordination and accountability;
- Governments should be encouraged to create technical expert committees by programmatic area so that ECSCA-HC strategies can draw expertise from particular technical working groups;
- Governments should ensure a mechanism for the in-depth scrutiny of marketing claims on products and pricing of fortified foods on the market;
- ECSCA member states should agree on regional and standardized indicators so that every country is monitoring, testing, evaluating, and analyzing according to the same standards and against a common baseline yielding performance records that are comparable within the region;
- Relevant government authorities should be responsible for ensuring that there is basic and adequate laboratory equipment and human resource capacity in place within their countries that does not require outside assistance to finance or manage;
- Governments should ensure that at least one of the existing laboratories supported through ECSCA-HC activities develops into a reference laboratory with adequate equipment, general laboratory management credentials, approved methodologies, additional training, and regional networking support providing a vibrant monitoring system;
- Governments should develop national food control systems that are incorporated into structured government regulatory activities appropriate for each particular country context which promote a local cultures of inspection and monitoring and enforce agreed-upon standards;
- Governments should create legislation 'with teeth' so that violators of food fortification standards can be charged according to the laws of the country and penalized for their actions;
- Governments should strengthen the food and nutrition departments within their Ministry of Health. In order to lead the nutrient efforts and their monitoring and evaluation, these departments should have their own budget lines and staffs and work in close coordination with local universities and research centers;
- Market demand for fortified foods should be promoted continually in order to bring more industries on board and educate the general population on the critical importance of micronutrients; and
- Public and private sectors should work together on messaging strategies tailored for the whole population so that anyone, regardless of education or topical expertise, can understand the rationale for food fortification as a nutrition intervention to combat a public health crisis with severe social and economic consequences. It is important to avoid exaggerations and misleading consumer, thus if private sector sponsors provide and disseminate the messaging, each government should vet and approve appropriate messages for its particular country.

PARTNERS

- Implementation of food fortification aimed for the region should be coordinated through the ECSA Health Community Secretariat to ensure regional harmonization.
- Partners should be informed and knowledgeable of ECSA-HC Secretariat and the member states' priorities and be equally transparent and clear about their donor agendas;
- Partners should work through the ECSA-HC Secretariat and not impose solutions or re-create the wheel on what is being done already in the region. Partners should engage in open dialogue and in a collaborative design and implementation process that does not impose outside strategies and concepts that may not be appropriate to the epidemiological and political realities of the region;
- Partners should not give funds for solving a problem if they are not going to invest technical capacity to work alongside local stakeholders in overcoming the problem in a collaborative manner. Programs need to plan for technical skills transfer as part of the agreement to work with the ECSA-HC Secretariat and member states, and help build technical expertise within ECSA as well as in member states;
- Partners should collaborate and coordinate among one another in areas of commonality (i.e., food fortification). Lack of communication among partners brings unwanted confusion, duplication of efforts and redundancy to the region that can result in wasted resources, hinder progress, and jeopardize national achievements;
- Partners should leverage resources and experiences among each other and in coordination with local expertise and resources; and
- Partners should include all countries of the ECSA region in regional initiatives and leverage resources to ensure the region advances as a whole.



ACRONYMS

A2Z	USAID Micronutrient and Child Blindness Project
AIDS	Acquired Immune Deficiency Syndrome
AU	African Union
CDC	Centers for Disease Control and Prevention
DSM	De Nederlandse Staatsmijnen (Dutch State Mines), now a chemical company dedicated to produce medicines, nutrients, and performance materials
EAC	East African Community
ECOWAS	Economic Community of West African States
ECSA	East, Central and Southern Africa
ECSA-HC	East, Central and Southern African Health Community
EDTA	Ethylenediaminetetraacetic Acid
ESA	Eastern and Southern Africa (USAID)
ESARO	Eastern & Southern Africa Region (UNICEF)
GAIN	Global Alliance for Improved Nutrition
GTZ	Gesellschaft für Technische Zusammenarbeit (Society for Technical Cooperation)
HIES	Household Income and Expenditure Surveys
HIV	Human Immunodeficiency Virus
ICCIDD	International Council for the Control of Iodine Deficiency Disorders
IEC	Information, education, communication
IMMPACT	International Micronutrient Malnutrition Prevention and Control (CDC)
INCAP	Institute of Nutrition of Central America and Panama
M&E	Monitoring and Evaluation
MI	Micronutrient Initiative
MOST	Micronutrient Operational Strategies and Technologies, a USAID-Micronutrient Project, 1999-2005
MRC-South Africa	Medical Research Council of South Africa
NEPAD	New Partnership for Africa's Development
REDSO	Regional Economic Development Services Office (USAID)
SADC	Southern African Development Community
TB	Tuberculosis
UN	United Nations
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
USAID-EA	USAID-East Africa
WAHO	West African Health Organization
WHO	World Health Organization





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Document prepared by: Amy West, Omar Dary, and Carol Tom