



















establishing the Action Plan for Food Security and Nutrition as central to all sectoral strategies working to end poverty.

SETSAN also coordinates closely with the **MISAU** in support of **PAMRDC**, 2011–2015 (2020 ongoing). The PAMRDC targets adolescents, women of reproductive age, and children under age two. Objectives and targets focus on:

- Reduction of anemia among all target groups.
- Reduction of low birth weight.
- Reduction of chronic malnutrition.
- Increase in exclusive breastfeeding 0–6 months of age.
- Increase in the frequency of feeding to at least 3 times per day.
- Increase in women with appropriate weight gain during pregnancy.
- Reduction of iodine deficiency among pregnant women.
- Increase in coverage of postpartum vitamin A supplementation.

The PAMRDC complemented the **Strategic Health Plan** (2014–2019) and aimed to increase access to health and nutrition services; increase micronutrient supplementation and access to deworming medication; increase nutrition awareness and education; improve water, sanitation, and hygiene (WASH) behaviors; and prevent early pregnancies. The Strategic Health Plan also called for increased dissemination of nutrition education materials to formally trained health professionals and community agents. A **Communication Strategy for Social and Behavioral Change for the Prevention of Malnutrition in Mozambique** (2015–2019) was developed to harmonize nutrition education messages among the many partners working to prevent malnutrition. A recent nutrition education initiative from the **Office of the First Lady of the Republic of Mozambique** aims to raise awareness and mobilize society to prevent malnutrition among pregnant women, mothers, and caregivers in rural areas.

MISAU's **National Strategy for Infant and Young Child Feeding** (2019–2029) promotes optimal: 1) breastfeeding practices (including introduction within one hour of birth, the importance of colostrum, exclusive breastfeeding 0–6 months of age, breastfeeding guidance for mothers who are living with HIV, and continued supplementary breastfeeding until at least 12–15 months); 2) complementary feeding (including introduction of semi-solids at 6–8 months of age and a minimum adequate diet with adequate frequency and diversity of foods as appropriate among children 6–23 months); and 3) WASH practices. The strategy mentions the integration of responsive care and early learning with nutrition services but does not elaborate on it.

Many common childhood illnesses that undercut a child's nutritional status and result in poor nutrient absorption are due to fecal-oral transmission due to contamination of food and water. Under the **Ministry of Public Works, Housing and Water Resources**, significant efforts have gone to improve potable water and sanitation in large urban and rural areas, with support from multi-lateral and

bilateral funders. Additional focus is now going to the small towns that are home to 15 percent of Mozambique's people. USAID has also targeted assistance to ensuring that primary-level HF's have access to safe water, adequate sanitation, and practice good hygiene. The **National Strategy for Water and Urban Sanitation 2011–2025** supports better coverage of safe water and sanitation. It also calls for improved WASH practices at the household and community levels.

MADER had a range of strategies to increase food security and diversify agricultural production through the overarching **Strategic Development Plan for the Agrarian Sector (2011–2020)**.

The **Food Fortification Initiative**, which began in 2016, is housed under the Ministry of Industry and Commerce/Trade, co-chaired by MISAU, coordinated by the National Food Fortification Committee of Mozambique, and implemented by the Technical Unit for Fortification, is of particular relevance as the GRM recognizes that micronutrient deficiencies, along with chronic malnutrition, are a major public health problem. One prong of the approach to solve micronutrient deficiency is the National Food Fortification Program, which aims to fill daily diet gaps in iron, folic acid, zinc, iodine, vitamin A, and vitamin B12. The program's main objectives are to:

- Shape the vision and strategies for fortification of staple foods to reduce micronutrient deficiencies.
- Increase the supply of high-quality fortified products at accessible prices.
- Reduce morbidity and mortality among the population, particularly women of reproductive age and children, by raising awareness about and promoting consumption of fortified products.

The program is a public-private partnership with strong involvement of industries processing food used for fortification, such as salt (iodine), maize and wheat flour (iron, zinc, folic acid, and vitamin B12), and sugar and oil (vitamin A).

Following the endorsement of the Nurturing Care Framework (WHO, UNICEF, and the World Bank, 2018) for promoting optimal ECD outcomes by the World Health Assembly 2018, the World Health Organization issued global evidence-based guidelines for improving ECD. One of the four recommendations is for countries to promote integration of interventions focused on responsive care and early learning, into nutritional programming (WHO, 2020). Promotion of holistic nurturing care is gaining momentum in Mozambique, with efforts at the national and provincial levels to integrate responsive care, early learning, and monitoring children's development into health and nutrition programs.

With PATH and UNICEF's support, the GRM/MISAU has integrated 'light touch' responsive care and early learning messaging into the community-based PIN and training package. At the facility level, nurturing care and child development have been integrated into the well- and sick-child consultation registers and the infant and young child feeding (IYCF) strategy. In addition, MISAU is integrating child development into well-child and at-risk child consultation guidelines, the national MCHN supervision guide, and the IYCF package. IYCF package revisions started in 2022, with proposals to incorporate selected content from the *Responsive Care and Early Learning Addendum for IYCF* developed by USAID Advancing Nutrition (2022), specifically on responsive feeding and overcoming feeding difficulties, particularly among children with disabilities. An ECD technical working group led by MISAU has been

finalizing an action plan for the health sector, and there are policy documents in other sectors related to early childhood education, including a law establishing pre-school education (Law 18/2018). However, Mozambique has no multi-sectoral ECD strategy.

Other government entities such as the National Basic Social Security Strategy (2016–2024) and the National School Feeding Program support household nutrition, while the National Action Plan for Children II, 2013–2019, supported a comprehensive strategy coordinated among multiple institutions that promote child survival, development, protection, and rights.

## Global Nutrition Partners Active in Nampula Province

Nampula, with 6.3 million people in Northern Mozambique, is the country's most densely populated province and has a rate of chronic malnutrition (46.7percent) well above the national average (38 percent) (UNICEF, 2021). Almost 70 percent of children ages 6–59 months are anemic, above the national prevalence of 63 percent (MISAU, INE, and ICFI, 2015). As of 2017 national census, adequate access to safe water is 56 percent and only 39 percent have improved sanitation (UNICEF, 2021). The infant mortality is estimated by the 2017 Census to be 94 per 1,000 live births (INE, 2019). A 2017 cost-of-the-diet study conducted by the World Food Programme for its Fill the Nutrient Gap report (2018) found that the highest concentration of households that could not afford a nutritious diet were in in the northern provinces of Cabo Delgado and Nampula.

A recent analysis of the 2018 National Malaria Indicator Survey found that children living in Nampula, Cabo Delgado, Zambezia, and Sofala have excess risk of anemia as compared to the national average of 68.9 percent (Mahajarine et al. 2021). A 2017 study in Malema District in Nampula (and Gurue District in Zambezia) found 19 percent of children were born with low birth weight and 30 percent lacked child growth monitoring cards. Over 90 percent of women in Malema attended prenatal care, but only 70 percent received nutrition education during pregnancy and 51 percent post-pregnancy. Only 28 percent of women reported adding oil or groundnut powder to maize flour porridge, the basic food used for complementary feeding (Ganhão et al., 2017).

JSI Research and Training Institute, Inc. (JSI) is the prime for USAID Advancing Nutrition. In Mozambique, USAID Advancing Nutrition's efforts (2019–2023) are led by Save the Children and implemented at the national level and in Nampula Province. The program has been collaborating with the USAID-funded program Transform Nutrition in Mozambique since 2019 to improve nutrition outcomes in Nampula and assist government and community stakeholders to plan and manage multi-sectoral nutrition, sanitation, and hygiene programming.

The USAID Advancing Nutrition program aims to:

- Strengthen the government's capacity to plan, manage and deliver nutrition services.
- Strengthen the government's systems for multi-sectoral nutrition coordination.

- Support partner capacity to deliver high-quality multi-sectoral nutrition programming, including integration of ECD actions.
- Support USAID Mozambique’s nutrition team and portfolio.

At the HF level, nutrition services are delivered through pre- and postnatal care, well-and sick-child visits, general pediatric services, and general medicine clinics for adults, among others. Ideally, a nutritionist helps plan, manage, and oversee nutrition services at the central, provincial, and district levels, while nutrition technicians, MCHN nurses, and other cadres deliver services at lower-level facilities. However, the reality falls far short of these staffing levels. MISAU has identified many gaps in human resource capacity to plan, manage, and deliver nutrition services at every level, from national to community.<sup>3</sup> USAID Advancing Nutrition focuses on strengthening human resources capacity at national and sub-national levels.

**Transform Nutrition (2019–2024)**—implemented by ADDP<sup>4</sup> Mozambique, **Global Alliance for Improved Nutrition (GAIN)**, University of Lurio, Association h2n, and Viamo—operates in 12 districts in Nampula and uses innovative behavior change strategies at the community level coupled with small-scale agricultural interventions to improve the dietary diversity of pregnant and lactating women, adolescent girls, and children under age two. Activities include community-based nutrition groups and girls’ clubs; creating home vegetable gardens; leveraging food supply chain programs to increase access to and affordability of nutritious foods; and training and mobilizing community champions to advocate for improved nutrition and hygiene.

Transform Nutrition focuses on basic sanitation and aims to increase soap use, water treatment, and the number of open defecation-free (ODF) communities in support of previous efforts. The African Development Bank and other partners have provided financing to the National Rural Water Supply and Sanitation Program in Nampula and Zambezia Provinces, with an ultimate goal to certify communities as ODF through the community-led total sanitation approach.

To date, **USAID Advancing Nutrition** has Strengthened the technical capacity of MISAU health care providers through training during joint supervisions in support of the nutrition program. Follow-up reports show community health worker and health care provider improvement in monitoring malnourished children, especially the latter’s ability to manage well- and sick-child visits. In addition the activity has provided technical assistance to Transform Nutrition and began phasing out activities per the exit strategy. Coached the Transform Nutrition chief of party and helped the team develop tools for training and monitoring WASH and ECD activities and a manual for adapted nutrition-sensitive agriculture activities within programming; and oversaw data quality assessment and collaborating, learning, and adapting activities.

The **Achieving Quality Health Services for Women and Children (Alcançar Project 2019–2024)** is led by FHI 360 and consortium partners HOPEM (Men for Change) Network, EHALE, Associação de

<sup>3</sup> The DPS estimated that there are 120 nutrition technicians to cover the 230 health facilities in Nampula. Ideally, there should be two nutrition technicians per HF (or one nutritionist and one nutrition technician); one person for the sick-child consultation; and one person for the well-child consultation. The MCH nurses help fill gaps but are overloaded. There used to be 100 percent absorption of recent graduates; this has diminished in recent years. (USAID Advancing Nutrition Mozambique FY23 Workplan.)

<sup>4</sup> *Ajuda de Desenvolvimento de Povo para Povo.*

Jovens de Nacala, Dimagi, and Viamo in Nampula Province. Its objective is to strengthen the provision of evidence-based maternal, newborn, and child health (MNCH) care through technical support that increases the capacity of the health management system, and linkages between communities and health services. Alcançar has developed a gender and social inclusion approach that prioritizes female empowerment and male engagement at all ages to rectify unequal social and gender norms underlying many MNCH challenges.

USAID Advancing Nutrition's efforts have included an objective focused on improving ECD through the integration of responsive care, early learning, and monitoring of child development into Transform Nutrition and Alcançar program activities. USAID Advancing Nutrition has completed a baseline study and cascade trainings of responsive care and early learning with nutrition group volunteers, APEs and other Transform Nutrition staff who convey this information throughout communities. Alcançar staff and health workers will be trained on responsive care, early learning and monitoring child development by USAID Advancing Nutrition and government in 2023.

PATH, with funding from USAID and the Hilton Foundation (2018–2023), has led efforts to train government and partner staff to use tools to improve ECD in the health sector, including in parts of Nampula, and developed other tools including a playbox intervention containing homemade toys for use by caregivers with their children in health facility waiting rooms (PATH, 2017) and videos and radio spots in local languages. In early 2020, MISAU created an inter-sectoral technical working group to define the agenda for promoting optimal ECD outcomes, including through nutrition programming. Finally, PATH, UNICEF, and other organizations piloted an intervention in Monapo District of Nampula to test the integration of nurturing care activities at the health facility and community levels. While an end of project evaluation was planned for this pilot, it was not able to be completed fully due to the COVID-19 pandemic. A qualitative evaluation highlighted the positive reception of the pilot from government, service providers and caregivers (Jeong et al., 2022); in particular they highlighted the important role of supervision in strengthening program quality alongside constraints including limited resources for service delivery and households as well as disconnects and long distances between health facilities and communities.

The **World Food Programme** provides supplementary foods in support of the National Nutrition Rehabilitation Program established by the GRM in 2010. It focuses on treating moderate acute malnutrition, preventing mother-to-child transmission of HIV, and supporting orphans and vulnerable children and people living with HIV.

**UNICEF** partners with the GRM to adopt evidence-based nutrition-related policies and strategies, strengthen institutional capacities, and support service providers and communities in optimal infant and young child nutrition practices. Key initiatives include community-based nutrition counselling; deworming; micronutrient supplementation, including provision of multi-micronutrient powders, vitamin A, and iron and folic acid; and food fortification for all children. UNICEF supports a renewed push for universal salt iodization and continues to support the treatment of acute malnutrition with ready-to-use therapeutic food. UNICEF piloted an integrated approach to establish the PAMRDC in three districts and notes that Transform Nutrition is expanding a similar approach to 12 districts.

GAIN (GAIN, 2022) builds and works through “alliances to provide technical, financial, and policy support to key participants in food systems such as governments, the private sector, and consumers to develop and transform the national nutritional food system in an integrated manner linking agriculture, transport, trade, processing, packaging, markets and consumption” aligned with GRM strategies. Areas of focus include:

- Food safety and quality.
- Fortification (large scale fortification and biofortification).
- Micro, small, and medium enterprises.
- Urban nutrition.
- Better diets for young children and women.
- Workforce initiatives.
- Adolescent nutrition.
- Coordinating the SUN Business Network.

GAIN has implemented the Nourishing Heroines adolescent nutrition project in Nampula Province. Principles of human-centered design were applied to develop a ready-to-test package of culturally and contextually appropriate interventions to improve dietary habits of very low-income girls, leading to two interventions—the Heroines Games and Cooking Academy—as part of the *Rapariga Biz* program funded by the Government of Canada. Goals for adolescent girls are to increase decision-making power, improve knowledge of good nutrition practices, and increase exposure to new foods and ways of cooking (including biofortified foods).

**Feed the Future Integrated Nutrition and Agriculture Resilience Activity in Mozambique (2022–2027)** works in Nampula and Zambezia Provinces on diversified and climate-smart agriculture production, increased access to clean water through multi-use systems, and improved nutrition outcomes for women and children under age two. The overarching goal is to strengthen the resilience of communities and systems to survive frequent shocks and stressors by increasing farm productivity and diversification of household income, through facilitating linkage with the private sector to avail market and employment opportunities to vulnerable households. It also aims to incorporate youth and women into improved food systems and business development strategies, while integrating food security, water, and nutrition interventions for adolescents girls and children.

DAI, in partnership with the International Food Policy Research Institute, implemented the **Innovation for Agriculture I, II, and III** (InovAgro, 2010–2021) with funding from the Swiss Agency for Development and Cooperation. The program worked to transform critical market systems from a value chain perspective, with a focus on markets for the poor to improve nutrition.

Through the Japan Trust Fund for SUN, an array of partners<sup>5</sup> are supporting **NSmartAg** throughout Mozambique. NSmartAg aims to simultaneously improve agriculture incomes and nutrition outcomes

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<sup>5</sup> Bioversity, CIAT, FAO, GAIN, Government of Japan, IFAD, IFC, IFPRI, IICA, JICA, The World Bank, and WFP.

through agriculture interventions. It focuses on the policies, regulation, financing, and infrastructure for primary production and agri-food processing and distribution, and is based on agro-ecologic zone.

The **International Fund for Agricultural Development (IFAD)** is funding the Small-scale Aquaculture Development Project (2019–2026) to develop the aquaculture value chain with commercial and smallholder producers to reduce poverty and improve food security and nutrition starting with 23 districts in Nampula, Cabo Delgado, Zambezia, Niassa, Tete, Manica, and Sofala Provinces. IFAD supports the Inclusive Agri-Food Value Chain Development Programme (2019–2030) for inclusive agri-food value chain development in 75 districts in 10 provinces (including Nampula), and the Rural Enterprise Finance Project (2018–2024) for smallholders that want to expand and intensify activities in underserved poor rural communities throughout Mozambique.

Between 2006 and 2009, HarvestPlus conducted seminal research in Mozambique through the **Reaching End User program** that demonstrated the nutritional benefits of consuming biofortified (vitamin A) sweet potato (IFPRI, 2015).

In 2017, the **Food and Nutrition Technical Assistance** project helped MISAU develop national protocols, training materials, and job aids for the National Nutrition Rehabilitation Program for the treatment of acute malnutrition. In conjunction with this, training materials and job aids were developed for the Nutrition Assessment Counseling and Support approach to prevent all types of malnutrition, with a particular focus on the needs of those living with HIV or TB.

## Other Organizations Active in Nampula Province

In the past 10 years, partner-implemented programs have focused on community-based nutrition support, strengthening the capacity of health personnel in nutrition, promoting priority WASH actions, and integrating agriculture and nutrition. Those that have worked in Nampula are show in Table I, which is followed by highlights of their work.

**Table I. Completed Nutrition Programs Focused in Nampula Province**

Implementing organization	Program	Target area	Years	Primary sectors
Save the Children with Africare and Cooperative League of the USA (CLUSA)	Multi-Year Assistance Program (SANA)	14 districts in Nampula	2008–2013	Health, nutrition, agriculture, WASH
Save the Children	Health Services Delivery Project/ Community-Based Nutrition	14 districts in Nampula	2014–2016	Health, nutrition

Implementing organization	Program	Target area	Years	Primary sectors
International Potato Center	Viable Sweet potato Technologies in Africa	Nampula and Zambezia Provinces	2014–2017	Agriculture
Jhpiego with Save the Children, ICF International, Results for Development, Population Services International, PATH, CORE Group, Broad Branch Associates, Communications Initiative, and Avenir Health	MCSP Mozambique	34 of 154 districts in Nampula and Sofala Provinces	2015–2019	Health, nutrition, WASH

SANA worked in 14 districts of Nampula to:

- Increase adoption of market-driven agricultural production and sales practices and services.
- Improve capacity of communities and districts to mitigate, prepare for, and respond to shocks.
- Increase adoption of key MCHN practices and use of services.

The MYAP was also implemented simultaneously in Zambezia by World Vision and in Cabo Delgado by Food for the Hungry. An external final evaluation said that SANA stood out among other multi-year assistance programs in scope and impact, particularly with the integration of agriculture and nutrition components. The program itself considered much of its success to be due to a strong monitoring component. Achievements included:

- Increased household support to reduce mother’s work during pregnancy.
- Giving colostrum immediately at birth.
- Preparing porridge with four food groups for children starting at 6 months of age.
- Improved household WASH practices.
- Increased demand for and access to family planning methods.

MISAU, with funding from the World Bank for the Health Service Delivery Program, contracted Save the Children to implement **Community-Based Nutrition** (NBC) activities in close partnership with the Nampula provincial health directorate.<sup>6</sup> Areas of implementation included mobilization for social and

<sup>6</sup> NBC was also implemented in Cabo Delgado by the Aga Khan Foundation and in Niassa by ADPP.



behavior change communication and community-based nutrition service delivery. Specific activities included monthly growth monitoring and promotion with referral; weekly nutrition and health session for pregnant and lactating women; and monthly education sessions with adolescent girls to promote improved health and nutrition, reproductive health, and prevention of early pregnancy and HIV and other sexually transmitted infections. The NBC supported various nutrition campaigns at the national level and strengthened capacity for implementation and training, monitoring and evaluation, and knowledge generation.

NBC program (World Bank, 2018) achievements included:

- 8,000 community nutrition volunteers and 6,700 community leaders trained and operational.
- 578,803 adolescent girls received iron-folic acid supplements.
- 514,797 pregnant and lactating women received iron-folic acid supplements.
- 582,825 children age 6–24 months received micronutrient powders.
- 649,999 children 6–59 months received vitamin A.
- 778,990 children 12–59 months received deworming medication.
- 68% of children participating in Growth Monitoring and Promotion within the previous 3 months.
- 71% of mothers exclusively breastfeeding children 0–6 months of age (43% national DHS 2011).
- 67% of children meeting minimum meal frequency for age (41% national DHS 2011).
- 57% of children meeting minimum dietary diversity of 4 or more food groups (30% national DHS 2011).

The Viable Sweet potato Technologies in Africa—

- worked with provincial and district economic activities directorates and farmers to disseminate improved orange-flesh sweet potato (OFSP) varieties
- reached 74,000 households directly and over 161,000 households indirectly through farmer-to-farmer diffusion of OFSP
- promoted vitamin A intake through consumption and marketing of OFSP, with over 94,000 children under age 5 benefiting
- helped provincial and district health directorates and partners improve nutrition and household hygiene practice by implementing education and behavioral change sessions for principal caregivers (women and men).

The MCSP—

- strengthened MISAU nutrition program leadership and management capacity, including by contributing to the Department of Nutrition’s annual economic and social planning at the national, provincial, and district levels
- worked with provincial and district health directorates and their partners to improve nutrition activities coordination through technical working groups
- improved the capacity of health workers to provide evidence-based, high-impact nutrition interventions through supportive supervision, mentoring, and tailored on-the-job training in accordance with the PAMRDC.

Among MCSP’s many accomplishments, however, perhaps the greatest was improved coverage and quality of reproductive, maternal, newborn, child, and adolescent health interventions, which helped reduce the maternal mortality ratio at 86 health facilities from 204 at baseline in 2014 to 120 in 2018.

Table 2 has information about ongoing nutrition programs, including integrated approaches to support ECD. Details follow.

**Table 2. Ongoing Nutrition Programs**

<b>Implementing organization</b>	<b>Program</b>	<b>Provinces</b>	<b>Years</b>	<b>Primary sectors</b>
PIRCOM	Integrated Social and Behavioral Change Communication	Nampula, Sofala, Zambezia, and Cabo Delgado	2019–2024	Health, nutrition, WASH
Episcopal Relief and Development in partnership with faith leaders	Moments that Matter	Nampula (recent), Niassa, and Lebombo	2022–2025	Health
PATH	Integrated Nurturing Care for ECD	Nampula, Maputo	2011-2023	Health, nutrition
World Vision	Together Educating the Child	Nampula	Ongoing	Education (nutrition education at schools through the National School Feeding Program)

PIRCOM, a faith-based nonprofit organization composed of leaders from different religions, disseminates key health messages using sermons, community radio, and other interpersonal communication strategies

to promote positive behaviors related to nutrition, malaria, maternal and child health, family planning, and HIV.

Moments that Matter is based on a program implemented in Kenya and Zambia to help caregivers and communities support young children's development. It leverages the strengths and reach of the Episcopal and Anglican churches nationally (and locally in Nampula) and connects them with a network of local leaders and ECD volunteers who focus on young children's cognitive, psychosocial, and physical development.

Together Educating the Child focuses on nutrition education at schools and supports frequent community-based cooking demonstrations to promote nutritious foods.

## **Strengths and Gaps in the Implementation of Nutrition Policies, Strategies, and Programs**

One of the greatest strengths of Mozambique's approach to nutrition is that "through the global SUN movement, the GRM has committed to improving nutrition programs by aligning multiple partners, advancing policies and legislation, and rapidly scaling up effective interventions" (UNICEF Mozambique, 2022). In the past five years, chronic malnutrition has dropped from 43 percent to 38 percent. However, provinces like Nampula still have unacceptably high rates.

APEs (community health workers) are key to supporting the PIN. The 2022 Annual Report on Implementation of the PIN (MISAU, 2022) notes that to date, 2,587 of the 2,984 APEs who have been trained through PIN are active at the national level, and the number of active volunteers supporting APEs was well below the target (7,914 vs. 25,306). The report ranks Nampula among the top three provinces for the number of trained and active APEs, and notes that the Transform Nutrition project provided additional support in 12 districts. It also notes that expansion of the PIN among all districts has, at 62 percent, been slower than anticipated. Nampula, however, is reported to be implementing PIN in 80 percent of districts. The annual report does not include an intervention implementation quality assessment.

USAID Advancing Nutrition activities have included:

- Supporting the MISAU to develop a first-of-its-kind comprehensive supervision tool for nutrition services.
- Integrating responsive care and early learning into existing nutrition programming to improve ECD outcomes.
- Advocacy and capacity strengthening efforts with key partners in Nampula to increase and prioritize human resources, training, and monitoring to improve nutrition service delivery.

Information from KIIs suggests that formalizing a legal nutrition policy for IYCF would support the need for leaders and government officials at all levels to establish realistic objectives and assign the resources necessary to reduce malnutrition. They identified the need to train more health professionals on nutrition and conduct routine assessments to improve the nutrition-related supply chain, including

deworming medication. Insufficient infrastructure continues to thwart people's access to health and nutrition services. Additionally, the monitoring system needs strengthening to ensure generation of high-quality and timely data.

It seems that not all private sector and civil society partners are sufficiently aware of their rights and duties to protect IYCF as indicated in the National IYCF Strategy. The KIIs indicated that poor institutional memory and frequent staff movement have resulted in a loss of continuity and valuable strategic and programmatic information. Additionally, the duration of many projects is not enough to sustain achievements, and there is a lack of reporting and action plan follow up. One suggestion is to increase funding for smaller national organizations because they understand local contexts. Several interviewees said that national university involvement in research would facilitate change.

Most interviewees noted the lack of sufficient resources. SETSAN representatives, in particular, noted a lack of coordination with some programs. Coordination at the provincial and district levels needs strengthening, with emphasis shifting to a bottom-up focus and “de-concentration” (as a clearer perception of what “decentralization” should be) of human, material, and financial resources. Surveys of which entities are conducting which actions to have clearer mapping could support coordination. However, not all partners understand the overall long-term strategic vision which is a further barrier to coordination towards that vision.

Several interviewees mentioned a need to focus on adolescent girls to break the cycle of malnutrition. Some noted the importance of involving boys, too.

The KIIs noted that the PIN is a good strategy but needs to be expanded. They noted both the importance of district-level multi-sectoral coordination and its implementation difficulties because communities continue with the same type of rain-fed cultivation. One suggestion was to increase focus on food storage and preservation. Lack of water was frequently mentioned as a key constraint to food security and improved hygiene.

An International Policy Center for Inclusive Growth (IPC-IG, 2019) evaluation of the National Food Fortification Program found that households in Mozambique had a high consumption of the (food) vehicles chosen for fortification (with wheat flour being the fortifiable exception); and availability and accessibility coverage was high across all vulnerable groups, with a moderate decrease from the low- to high-vulnerability groups. However, 73 percent of fortifiable maize is ground at community mills, which are not covered by the program's domains (urban and peri-urban) leaving the vast majority of this staple crop consumed without fortification.

Program contribution to the daily recommended nutrient intake (RNI), measured as the proportion of households that have at least 50 percent of RNI for vitamin A, was found to be 45 percent in urban areas and 25 percent in rural areas. The percentages for iron were 24 percent and 20 percent, respectively. Contributions to daily RNI for vitamin A decreased from 45 percent in low vulnerability urban areas to 24 percent in high vulnerability rural areas. For iron there was less variation, from 25 percent to 18 percent. Storage of fortified foods was not found to be a key reason for these low values.

Recommendations from the evaluation of the National Food Fortification Program are below; steps have taken to implement them.

- Implement a continuous monitoring and evaluation system.
- Implement a surveillance system for the production of fortified foods.
- Elaborate on a mass communication program about the importance of fortified foods and their proper storage.

KIIs about the National Food Fortification Program noted that there still is a lack of sufficient engagement with the private sector and a need to identify local fortification mechanisms, particularly in rural areas. Food safety assurance is still a challenge and national campaigns to promote awareness of and appreciation for fortified foods are needed.

Lastly, there has been great progress on linking nutrition and caregiving interventions to improve ECD. However, more effort is needed to institutionalize these approaches at sub-national levels including greater focus on improving quality and scale-up those which have been formally endorsed by the Government.

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## Annex I. Policies and Strategies Reviewed

Document	Organization	Information source
Government's Five-Year Program	Government of Mozambique	<a href="http://www.ts.gov.mz/images/POG_2020.2024_Versao_AR_02042020-min.pdf">http://www.ts.gov.mz/images/POG_2020.2024_Versao_AR_02042020-min.pdf</a>
Multi-sectoral Action Plan to Reduce Chronic Malnutrition (PAMRDC)	SECRETARIADO TÉCNICO DE SEGURANÇA ALIMENTAR E NUTRICIONAL / MINISTÉRIO DE SAÚDE (SETSAN/MISAU)	<a href="https://www.setsan.gov.mz/wp-content/uploads/2016/09/PAMRDC_Portugues_2011-2015.pdf">https://www.setsan.gov.mz/wp-content/uploads/2016/09/PAMRDC_Portugues_2011-2015.pdf</a>
Strategic Health Plan (2014–2019)	MISAU	<a href="https://www.misau.gov.mz/index.php/planos-e-strategicos?download=132:plano-estrategico-do-sector-da-sade-2014-2019">https://www.misau.gov.mz/index.php/planos-e-strategicos?download=132:plano-estrategico-do-sector-da-sade-2014-2019</a>
National Strategy for Water and Urban Sanitation	MINISTÉRIO DAS HOBRAS PÚBLICAS E HABITAÇÃO - MOPHRH	<a href="https://www.aura.org.mz/pdf/Estrat%C3%A9gia%20%C3%81gua%20e%20Saneamento%20Urbano_2011%20-%202025.pdf">https://www.aura.org.mz/pdf/Estrat%C3%A9gia%20%C3%81gua%20e%20Saneamento%20Urbano_2011%20-%202025.pdf</a>
National School Feeding Program	MINISTÉRIO DE EDUCAÇÃO E DESENVOLVIMENTO HUMANO – MINEDH	Workshop of School Feeding National Strategy
National Basic Social Security Strategy	MINISTÉRIO DE GÉNERO, CRIANÇA E ACÇÃO SOCIAL - MGCAS	<a href="https://www.unicef.org/mozambique/sites/unicef.org.mozambique/files/2019-04/Estrategia-Nacional-de-Seguranca-Basica.pdf">https://www.unicef.org/mozambique/sites/unicef.org.mozambique/files/2019-04/Estrategia-Nacional-de-Seguranca-Basica.pdf</a>
Food Security and Nutrition Strategy (ESAN II)	SETSAN	<a href="https://www.setsan.gov.mz/wp-content/uploads/2016/09/esan_ii_e_pasan_portuges.pdf">https://www.setsan.gov.mz/wp-content/uploads/2016/09/esan_ii_e_pasan_portuges.pdf</a>
Communication Strategy for Social and Behavioral Change for the Prevention of Malnutrition in Mozambique	MISAU	<a href="https://www.fantaproject.org/sites/default/files/resources/Estrategia-Comunicacao-Dec2015.pdf">https://www.fantaproject.org/sites/default/files/resources/Estrategia-Comunicacao-Dec2015.pdf</a>
National Strategy for Infant and Young Child Feeding	MISAU	ENAI
Action Plan for Food Security and Nutrition	SETSAN	<a href="#">ESAN II e PASAN (setsan.gov.mz)</a>
National Plan of Action for Children II	MGCAS	PNAC II
Strategy for the Integrated Development of Pre-school-age Children	MGCAS	DECIPE
Food Fortification National Strategy	MINISTÉRIO INDÚSTRIA E COMÉRCIO	<a href="#">Mozambique — Food Fortification Initiative (ffinetwork.org)</a>



Strategic Development Plan for the Agrarian Sector	MADER	<a href="https://www.open.ac.uk/technology/mozambique/sites/www.open.ac.uk.technology.mozambique/files/pics/d130876.pdf">https://www.open.ac.uk/technology/mozambique/sites/www.open.ac.uk.technology.mozambique/files/pics/d130876.pdf</a>
ESAN III	SETSAN/MISAU	Proposta da ESAN III

## Annex II. Programs/Projects Reviewed

Document	Organization	Information source
USAID Advancing Nutrition in Mozambique	JSI is the prime with Save the Children leading implementation in Mozambique	Internal annual reports
Transform Nutrition	ADDP Mozambique, GAIN, University of Lurio, Association h2n, and Viamo	Internal program documents
Nurturing Care for ECD	PATH and partners	<a href="#">Nurturing Care for ECD Materials   Primary Health Care   PATH</a>
Alcançar Project	FHI 360 and consortium partners HOPEM (Men for Change) Network, EHALE, AJN, Dimagi and Viamo	<a href="#">Alcançar: Achieving Quality Health Services for Women and Children   FHI 360</a>
Nourishing Heroínas adolescent nutrition project	GAIN	GAIN Working Paper No. 19 (2021). Nourishing Heroínas in Mozambique: Understanding, designing with, and tailoring nutritional interventions to adolescent girls.
Feed the Future Mozambique Resiliencia Integrada na Nutricao e Agricultura	ACDI/VOCA and partners	Fact sheet
InovAgro	DAI and partners	<a href="#">Mozambique—Innovation for Agribusiness (InovAgro I, II, III) · DAI: International Development</a>
Nutrition Smart Agriculture (NSmartAg)	NSmartAg (and other partners)	<a href="#">Nutrition Smart Agriculture in Mozambique</a>
Small-scale Aquaculture Development Project	National Development Institute of Fisheries and Aquaculture	<a href="#">Supervision Report - October 2021</a>
Reaching End Users	World Vision International, Helen Keller International, HarvestPlus (Washington, D.C.)	Hotz, Christine, Cornelia Loechl, Alan de Brauw, Patrick Eozenou, Daniel Gilligan, Mourad Moursi, Bernardino Munhaua, Paul van Jaarsveld, Alicia Carriquiry, and J. V. Meenakshi. "A large-scale

		intervention to introduce orange sweet potato in rural Mozambique increases vitamin A intakes among children and women." <i>British journal of nutrition</i> 108, no. 1 (2012): 163-176.
Multi-year assistance programs (OCLUVELA [WV]; OSANZAYA [ADRA]; SANA [Africare, CLUSA, Save]; FH)	World Vision, Save the Children, ADRA, FH, Africare, CLUSA	MYAP final report
Health Service Delivery Program - NBC	Save the Children	The Health Service Delivery program - Community Based Nutrition Report (A World Bank Funded Nutrition Program in Nampula Province)
VISTA	International Potato Center	<u>VISTA MOZAMBIQUE launches in Nampula, Mozambique (cipotato.org)</u>
MCSP Mozambique Preventing Maternal and Child Deaths	Jhpiego in collaboration with JSI; Save the Children; ICF International; Results for Development; Population Services International; PATH; CORE Group; Institute of International Programs/Johns Hopkins University; Broad Branch Associates Communications Initiative; Avenir Health	MCSP Mozambique EOP Report 2019-07-01; MCSP report USAID-MZ-Nutrition-Brief
Integrated Social Behavior Change Communication	PIRCOM	<u>Program PIRCOM Fact Sheet Jan 2022</u>
Moments that Matter	Episcopal Relief and Development and faith partners	<u>Early Childhood Development - Episcopal Relief &amp; Development</u>
Home-based ECD parent education and support program impact evaluation	MGCAS através do	<u>Short Report</u> October 2016
Avaliação qualitativa do piloto "Cuidados de nutrição para o ECD	Instituto Nacional de Ação Social, PATH, and UNICEF	Jeong, Joshua, Lilia Bliznashka, Marilyn N. Ahun, Svetlana Karuskina-Drivdale, Melanie Picolo, Tanya Lalwani, Judite Pinto et al. "A pilot to promote early child development within health systems in Mozambique: a qualitative evaluation." <i>Annals</i>

		of the New York Academy of Sciences 1509, no. 1 (2022): 161-183.
Nutrition Interventions Package	MISAU	Report
Small Scale Aquaculture Promotion Project	IFAD	Design report
NBC	Save The Children	Survey report

## Annex III. Key Informant Interviewees

Name	Position	Organization	Location
Marla Amaro	Head of Department	Ministry of Health	Maputo
Estela Consula	Health and Nutrition Provincial Manager Project “Together educating the Child Phase 3”	World Vision	Nampula
Sofia Costa	Director of the Center for Health Studies and Services	UNILURIO	Maputo
Geofrey Ezepue	Chief of Party	FHI 360 – Alcançar project	Nampula
Michelle Wallace	Community Development Manager and ADPP Leadership and Executive Director	ADPP	Nampula
Berta Guambe	Transform Nutrition Manager	GAIN	Nampula
Baisamo Juaia	Head of Nampula Office	UNICEF	Nampula
Aboobakar Covela	Chief of party	Transform Nutrition	Nampula
Caludia Lopes	Policy and Plan Director	SETSAN	Maputo
Eduarda Mungoi	Ministry Adviser	Ministry of Industry and Commerce	Maputo
Ines Boboleta	Head of Department DCIP department	MGCAS	Maputo
Amilcar Pereira	Directorate of Planning	MADER	Maputo
Malverico Sueleque	Provincial Supervisor for the Nutrition Program	Servico Provincial de Saude	Nampula



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