# Guidance on Integrating Nutrition into AfDB Investments



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# Acronyms and Abbreviations

ADF African Development Fund
AfDB African Development Bank
ALN African Leaders for Nutrition

BW Body Weight

CCT Conditional Cash Transfers

CMAM Community-based Management of Acute Malnutrition

CPI Custom Project Indicator
CSI Core Sector Indicators
CSO Civil Society Organisation

CSO Civil Society Organisations
CSP Country Strategy Papers
DALY Disability Adjusted Life Year

DHS Demographic and Health Surveys

EBF Exclusive Breastfeeding

EPI Expanded Programme on Immunisation
GAIN Global Alliance for Improved Nutrition

GDP Gross Domestic Product

GMP Growth Monitoring and Promotion

HEST Higher Education, Science and Technology

IFA Iron-Folic Acid

IMAM Integrated Management of Acute Malnutrition
IMCI Integrated Management of Common Illnesses

IYCF Infant and Young Child Feeding
JMP Joint Monitoring Programme

KABP Knowledge, Attitude, Behaviour and Practice

M&E Monitoring and Evaluation
MAD Minimum Acceptable Diet
MAM Moderate Acute Malnutrition
MDD Minimum Dietary Diversity

MDD-W Minimum Dietary Diversity for Women

MFF Minimum Meal Frequency

MICS Multiple Indicator Cluster Surveys

MIYCN Maternal Infant and Young Child Nutrition

MLFM Movement for the Fight against Hunger in the World

MNAP Multi-sectoral Nutrition Action Plan
MNCH Maternal, Newborn and Child Health

MNP Multiple Micronutrient Powders

NFP Nutrition Focal Person

NGO Nongovernmental Organisations
ODA Official Development Assistance

ORS Oral Rehydration Salts
PAR Project Appraisal Report

PCIREP Post Cyclone Idai and Kenneth Emergency Recovery and Resilience Programme

PCN Project Concept Note

RISP Regional Integration Strategy Papers

RMC Regional Member Country

RMF Results Measurement Framework
RUTF Ready-to-use Therapeutic Foods

RWSSI Rural Water Supply and Sanitation Initiative

SAM Severe Acute Malnutrition

SBCC Social Behaviour Change Communication

SDG Sustainable Development Goals

SGA Small for Gestational Age

SGBA Sex- and Gender-Based Analysis

STH Soil Transmitted Helminth

UCT Unconditional Cash Transfers
VAS Vitamin A Supplementation

WASH Water, Sanitation and Hygiene

WEAI Women's Empowerment in Agriculture Index

WHA World Health Assembly
WHO World Health Organization
WRA Women of Reproductive Age

YWEP Youth and Women Empowerment Project

## 1: Introduction

Guidance on Integrating Nutrition into AfDB Investments is a comprehensive guide for the African Development Bank (AfDB) Nutrition team, task managers and project teams on integrating nutrition into projects. It outlines the overarching framework for AfDB multi-sectoral nutrition investments, quality assurance processes for integrating nutrition in projects and the key entry points where nutrition can be effectively integrated into the AfDB project cycle phases. Furthermore, this document describes the various integrated impact pathways for achieving improved nutrition outcomes through the implementation of project interventions across five priority sectors and presents examples of high impact and cost-effective nutrition interventions, as well as core sector and project level nutrition indicators. Lastly, this document includes a brief report on the baseline data analysis and introduces the nutrition marker system and project checklist.

The section on **impact pathways** describes the conceptual and operational frameworks for addressing nutrition in AfDB projects to guide project design, implementation and evaluation. Nutrition causal impact pathways are explicitly planned detailed processes for improving nutritional outcomes along with other goals that can be achieved through nutrition smart project interventions in the five AfDB nutrition-related priority sectors—Agriculture, Education, Health, Social Protection and Water, Sanitation and Hygiene (WASH).

The sections on **nutrition interventions and indicators** provide technical guidance and a menu of options on recommended high impact nutrition interventions and recommended nutrition indicators for consideration when developing Country Strategic Papers (CSP) and designing nutrition smart projects. It also describes how to collect and report on nutrition indicators.

The **nutrition marker system** highlights key features for integrating nutrition into Bank projects and serves as a project checklist. This tool aims to assist AfDB project managers and decision-makers in designing and categorising AfDB projects as nutrition smart projects in view of their potential contribution to accelerating stunting reduction in Africa.

The brief report on the analysis of nutrition-related data from project appraisal reports describes the methodology and variables used in conducting the analysis. It also presents the baseline results of nutrition smart investments derived from the analysis of AfDB approved projects from 2015 to 2018.

This guidance document complements the AfDB nutrition operational toolkit comprising the five sector briefs (i.e. Agriculture & Nutrition, Health & Nutrition, Higher Education & Nutrition, Social Protection & Nutrition, and WASH & Nutrition) and briefs on integrating nutrition into AfDB project cycle and Country Strategy Papers (CSPs). The purpose is to develop an overall guidance document that highlights the key features for integrating nutrition smart actions into projects, relevant pillars of CSPs and Regional Integration Strategy Papers (RISPs) in order to catalyse nutrition smart investments to support a 40% stunting reduction in Africa by 2025.

## 2: Context

Nutrition smart investments can be catalytic for realising the Bank's equitable growth agenda. The AfDB's 10-year strategy places the Bank at the centre of Africa's transformation by ensuring that growth is shared by all African citizens and countries, and that it is economically empowering and environmentally sustainable. Both objectives of the 10-year strategy provide opportunities for making nutrition smart investments:

- Inclusive growth: equitable growth means more quality job opportunities and higher incomes for vulnerable groups, which are often over-burdened with undernutrition, and especially for women, who play a pivotal role in household and child health outcomes. The increased industrialisation and trade also sought by this objective can increase access to safe, diversified and nutritious foods.
- Green growth: sustainability is at the heart of a food- and nutrition-secure continent. A transition to green growth will protect livelihoods, improve water and energy security, provide sustainable infrastructure, promote the sustainable use of natural resources, and spur innovation, job creation and economic development.

**Nutrition is inextricably linked to the Bank's High 5 priorities** and nutrition smart investments in each of the five priorities can contribute to better nutrition outcomes and results for each High 5. Table 1 below provides the nutrition-related context and outlines examples of nutrition interventions in each of the Bank's High 5 priorities.

#### Table 1

African Development Bank High 5 Priorities



## Feed Africa

Although stunting rates are falling across Africa, the actual number of stunted children is increasing, and 260 million Africans are hungry or malnourished. Mainstreaming nutrition into *Feed Africa* leverages investments in support of African agricultural transformation with a clear double objective of improving human nutritional status while achieving the farming or agri-business level objective of increasing productivity, income and profits.

Priority sets of nutrition smart investments providing the vitamins, proteins and fats required in diets and targeting the poorest households include:

The development of a child's brain provides the fundamental basis for the cognitive, emotional and social capacities that enable the child to fully function as a person. A large proportion of children across Africa suffer impaired brain development because of three key factors: undernutrition, insufficient social stimulation from caregivers, and experiencing or witnessing violence. AfDB's investments in health,

- Biofortification
- Diversified production of nutrient-dense crops
- Rearing of livestock and fisheries



## Improve quality of life for the people of Africa

Priority sets of nutrition smart investments include:

- Strengthening health system platforms to deliver nutrition interventions, which will maximise synergies to achieve common goals of reduced morbidity and mortality, and improved nutritional status
- Improving access to clean water, hygienic sanitation facilities, and behaviour change programming addressing inappropriate feeding and care practices
- Increased quality employment opportunities and incomes for youth and women

WASH, education and social protection are instrumental to improving the quality of life.

 Increased knowledge about nutrition and behaviour change programming addressing the key behavioural determinants for the target population



## Industrialize Africa

Africa has an enormous potential to enhance agricultural production, especially because it is home to more than 60% of the reserves of arable land in the world. Much of this land—representing 25% of the fertile land in the world—is largely untapped. However, the continent's agriculture sector faces significant challenges making the most of this tremendous resource, including low agricultural productivity, high post-harvest losses and poor infrastructure, especially in rural areas.

Priority sets of nutrition smart investments include:

- Mobilising additional resources and leveraging Bank investments in agropoles, agroprocessing zones and integrated agro-industrial parks
- Scaling up processing and availability of safe, diverse and nutritious foods thereby promoting
  employment, reducing food costs and supply uncertainties, and improving the diet of Africans
   The AfDB is leveraging its regional focus to provide opportunities to address challenges that affect

nutrition such as barriers and incentives for production, regulation and trade of safe and nutritious foods.



## Integrate Africa

Priority sets of nutrition smart interventions include:

- Harmonisation of quality assurance standards for food processing and fortification
- Standardization of food labelling and advertisement regulations
- Elimination of trade tariffs across regional member countries

These efforts could contribute to the growth of micro, small and medium size enterprises in the agriculture and agro-industry sector that deliver nutrition impact and greater social and economic returns on investment.

It is estimated that 95% of African households rely on biomass fuels (wood, crop residues and animal



## Light up & power Africa

dung) as their primary source of energy. Environmental factors such as indoor biomass fuel use constitute the second leading risk category for stunting in sub-Saharan Africa.

Priority set of nutrition smart interventions include:

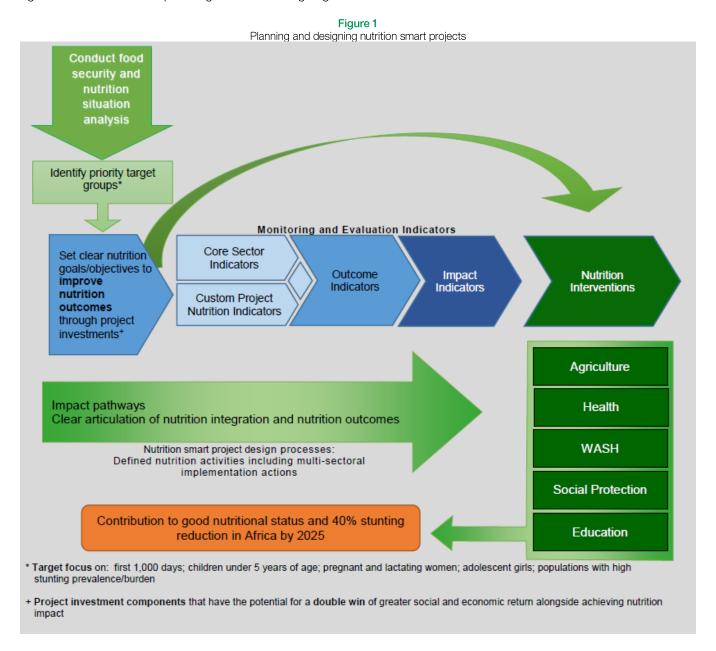
• Climate-smart investments in advancing universal access to affordable, safe and sustainable

sources of clean energy including clean cookstoves and other productive technologies to dramatically reduce fuel consumption and exposure to harmful cookstove smoke

This approach can result in a **double win** of achieving green growth and improving health and nutrition outcomes.

# 3: Planning and Designing Nutrition Smart Investments

Figure 1 below outlines a planning model for designing nutrition smart investments.



## Making the Next Generation of AfDB Strategies Nutrition Smart

African countries are losing 11% of their annual GDP to costs related to malnutrition. This loss is not spread evenly among households and nutrition data should inform CSP objectives of reducing inequality and inequitable access to basic services, which are underlying drivers of malnutrition. Nutrition should be integrated into CSPs and RISPs under the following conditions:

- When national, regional or sectoral strategies prioritise nutrition
- When national stakeholders prioritise nutrition
- If the CSP provides entry points for integrating nutrition
- If malnutrition is identified as a barrier to development
- If the pipeline includes one or more projects in the five priority sectors relevant to nutrition

For more information, please refer to the Integrating Nutrition into AfDB Country Strategy Papers (CSPs) and Integrating Nutrition into AfDB Project Cycle briefs available at <a href="mailto:nutrition@afdb.org">nutrition@afdb.org</a>.

## 4: AfDB Multi-sectoral Nutrition Impact Pathways

A relatively small window of opportunity exists in human development; it is within this window that most of the damage from malnutrition occurs—damage that is mostly irreversible and detrimental throughout a person's life. This golden window is referred to as the first 1,000 days, and it takes place from conception to a child's second birthday. To prevent irreversible developmental damage, good nutrition is critical for prospective mothers well before pregnancy and conception.

Nutrition causal impact pathways are explicitly planned detailed processes for improving nutritional outcomes along with other goals that can be measured through nutrition smart interventions in the five AfDB nutritionrelated priority sectors—Agriculture, Education, Health, Social Protection and WASH. These causal impact pathways can serve as foundational steps for developing conceptual and operational frameworks that address nutrition in AfDB projects and inform project design and evaluation. Explicit nutrition goals/objectives are set at the commencement of the project's planning process. Thereafter, it is essential to identify the different pathways through which project interventions can have positive impact on nutrition outcomes.

The adoption of pathways must be specific to the project and/or country context. The existing conditions such as the burden of malnutrition, underlying causes of malnutrition, gender norms and quality of water sources could influence the adoption of specific pathways. These pathways must be thoroughly planned and discussed with the host country government and relevant implementing partners-and stakeholders must consider possible implications.

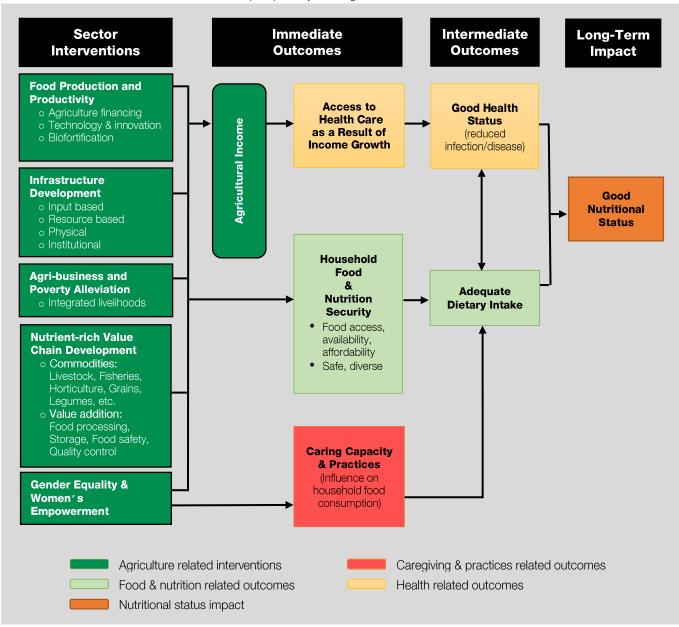
It is also very important to clearly describe how the target population will benefit from a particular Bank project through the adopted impact pathways. Nutrition smart projects should prioritise activities that target the most nutritionally vulnerable populations—in particular, children under two years of age, pregnant and lactating women, adolescent girls and school-aged children. During project implementation, the Bank should track and measure intermediate results to validate and continually refine the impact pathways.

## Pathway 1: From Agriculture to Nutrition

Several pathways have been identified showing how agricultural livelihoods and food systems may more effectively contribute to household food security and improved nutritional status. Agriculture can improve the quantity and quality of diets in households for subsistence farmers; reduce income poverty through produce sales and agricultural labour; empower women as income-earners, decision-makers, and primary childcare providers; decrease food price volatility; and increase government revenues that can be used to finance health care, education, and nutrition interventions. Interventions must address the relevant underlying and basic causes of malnutrition and should be designed considering pathways most relevant to the value chain. Evidence shows that by putting more focus on nutrition outcomes i.e. by including nutrition objectives at the outset, agricultural interventions can improve the capacity, productivity, and prospects of agricultural workers – and also contribute to reducing undernutrition.<sup>1</sup>

<sup>&</sup>lt;sup>1</sup> The World Bank, 2007. From Agriculture to Nutrition: Pathways, Synergies and Outcomes, 40196-GLB.

Figure 2 Impact pathways from agriculture to nutrition



**Source**: Created for AfDB Nutrition Smart Agriculture Projects (Nutrition International, 2019)

## A: Food Production and Productivity

Household food production is important for improving the quantity and quality of diets in households of smallholder farmers. In general, however, it is not the primary objective of an agricultural livelihood to produce all the food a family needs; most poor rural families are net purchasers of food. However, for those with access to arable land, it is a combination of food produced for consumption, income, and local food availability and prices that determines the family's food security. Food production, including kitchen and home gardens, can affect the type, quantity and seasonality of food available in the household for consumption. At the same time, production may also influence the availability and prices of diverse food in local markets.

The decisions farmers make about crop and livestock production are affected by many factors, including potential market prices, relative costs and risks associated with each product, the assets and endowments of land the household possesses, and family needs and preferences. If preferred foods or varieties are not consistently available, affordable or conveniently accessible in markets, the most efficient way to obtain them may be to raise or grow them on the farm. Substituting a more nutritious variety of a crop already grown for consumption through biofortification (e.g. substituting yellow, vitamin A fortified maize for white maize or orange cassava for regular cassava) may be an easy way to improve nutrition as part of the overall set of livelihood decisions. Nutrition knowledge and social behaviour change

communication (SBCC) are therefore essential to informing the range of decisions that farmers make about what they grow to consume, what they grow to sell, and what they decide to purchase with their income.

Processing and storage can affect the shelf life, safety and nutrient content of foods in positive or negative ways for nutrition and health. These actions may also have a positive or negative effect on incomeearning potential (through value addition) based on the food market environment. For example, storage conditions can affect the level of mycotoxin contamination in maize and grains, and drying meats, fruits, vegetables, or fish or producing cheese can reduce losses and make nutritious foods available out of season for both home consumption and for sale in local markets.

## B: Infrastructure Development

Agricultural infrastructure primarily includes the wide range of public services that facilitate production, procurement, processing, preservation and trade. Agricultural infrastructure can be grouped under the following broad categories:

- Input-based infrastructure: Seed, fertiliser, pesticides, farm equipment and machinery, etc.
- Resource-based infrastructure: Water/irrigation, farm power/energy
- Physical infrastructure: Road connectivity, transport, storage, processing, preservation, etc.
- Institutional infrastructure: Agricultural research, extension and education technology, information and communication services, financial services, marketing, etc.

Challenges arising from infrastructural development for smallholder farmers is not limited to on-farm infrastructure. Lack of access to facilities such as post-harvest, storage and processing facilities constitute barriers to entry into agricultural market. Off-farm infrastructure, such as roads, also serve as barriers facing smallholder farmers in terms of distribution and market access. Africa must therefore increase investments and improve resource mobilisation from both the public and private sectors to advance agricultural infrastructure, facilitate trade corridors and market access.<sup>2</sup> The development of infrastructure and energy for agricultural growth and distribution of agricultural products where they are needed is another pathway to income growth and access to foods.

## C: Agri-business and Poverty Alleviation

Integrated livelihoods or increases in household income can improve food security, consumption and individual food intake.<sup>3</sup> Agricultural workers can be either landowners, farmers, fishermen, herders or landless labourers/rural wage workers, and income for their households can be generated either through the sale of crops produced or wages earned by working in agriculture-oriented businesses. The keys to reducing poverty in rural areas are establishing and maintaining successful small farming businesses that ensure livelihoods. The improved year-round income and cash flow can then be used for immediate or future household needs, including food and non-food purchases to support a healthy diet and life.

The agricultural income pathway assumes that nutritious, diverse foods are available and affordable in local markets. Appropriate inputs to grow these diverse foods must also be available so that local production can meet demand. Additionally, market and transportation systems must enable year-round and/or seasonal supplies based on consumer preferences and purchasing power. Local supply and demand may also be influenced not only by market prices but also by SBCC, nutrition knowledge, and social marketing, which may help drive consumer preferences. At the same time, household investments in health, including potable water sources and toilets, preventive care and other necessities are crucial to supporting good nutrition, especially for women and young children. All rural farm households must balance their spending decisions between farm production and marketing investments and the immediate purchases of food, health and care necessities.

<sup>&</sup>lt;sup>2</sup> Financing Africa's Infrastructure and Agriculture development: Inclusive growth for economic transformation. Report of the Expert group meeting. October 2017- UN HQ New York.

<sup>&</sup>lt;sup>3</sup> From Agriculture to Nutrition: Pathways, Synergies and Outcomes. The International Bank for Reconstruction and Development / The World Bank, 2007. Accessed at: http://siteresources.worldbank.org/INTARD/825826-1111134598204/21608903/January2008Final.pdf

## D: Promoting Gender Equality and Women's Empowerment

Women's empowerment incorporates multiple aspects, including the decision-making power related to income, time, labour, assets, and knowledge or preferences of female community members. Studies have found that women's discretionary income has a greater impact on child nutrition and food security than that of men. When women have more control over household resources, families are healthier, better educated and have increased access to more nutritious foods.<sup>4</sup> Often, the best way for women to influence how household income is spent is by earning their own income. For women in rural areas, an agriculture-related livelihood is the most common way a family makes a living. Women's decision-making also affects what is produced on the farm, and women's control of income and assets can affect productivity based on their spending decisions and on the social networks and cultural norms that influence those decisions. Training female and male farmers in farm management and business skills can optimise the income earned with the available time, labour, assets and capital.

Agricultural development interventions can strongly affect women's use of time as well as their labour burden. Women are typically responsible for a wide range of household and agricultural tasks, including child and infant care and feeding, as well as their own self-care. Activities that influence the amount of time or labour women spend on agriculture-related tasks can affect their own health and energy expenditure, and in turn, their capacity to feed and care for infants, young children and themselves. When a woman's work-related energy expenditure (i.e. workload) exceeds their nutrient intake, their nutritional status is compromised. Therefore, to improve nutrition in households supported by agricultural livelihoods, it is vital that farming business decisions consider how women are involved in agriculture activities. For example, if agriculture development activities strive to promote the production of various nutritious foods with high market value to help increase women's income, they must be designed and monitored to also ensure they are not contributing to women's time and labour burdens.

## E: Nutrient-rich Value Chain Development

A commodity is defined as nutrient-rich if it meets any of the following criteria: (a) is biofortified; (b) is a legume, nut, or specific seeds (such as sesame, sunflower, pumpkin seeds, wheat germ, or sprouted legume seeds); (c) is an animal-sourced food, including dairy products (milk, yogurt, cheese), fish, eggs, organ meats, meat, flesh foods, etc.; (d) is a dark yellow or orange-fleshed root or tuber; or (e) is a fruit or vegetable that meets the threshold for being a "high source" of one or more micronutrients on a per 100 calorie and per 100 gram basis.

In addition to having a potential to improve nutrition outcomes, greater agricultural productivity and value chain **development**<sup>5</sup> lead to additional activities and jobs, and increases income leading to economic growth. In more prosperous transforming and urbanised countries, the industries and services linked to agricultural value chains often account for over 30% of gross domestic product (GDP).6 Economic returns in target value chains can be increased through improved quality; reduced costs and post-harvest loss; and increased output, sales and profits along the value chain, leading to improved income and employment along the entire value chain.

The issue of poor storage leading to higher occurrence of aflatoxins will need to be addressed by improving processing, storage and preservation of food along the value chain development. Poor storage can contribute to higher occurrence of aflatoxins including in more temperate regions.<sup>7</sup> Dietary aflatoxin exposure has been linked with impaired growth in young children.8 National estimates of dietary exposure to aflatoxins indicate differences between developed and developing countries. In developed countries, mean aflatoxin dietary exposures are generally less than 1 ng/kg body weight (bw) per day, whereas estimates for some sub-Saharan African countries exceed 100 ng/kg bw per day.

<sup>&</sup>lt;sup>4</sup> Committee on World Food Security (CWFS), 2011, Policy Roundtable: Gender, Food Security and Nutrition, 37th Session, Rome, Italy,

<sup>&</sup>lt;sup>5</sup> A value chain in agriculture identifies the set of actors and activities that bring a basic agricultural product from production in the field to final consumption, where at each stage value is added to the product. A value chain can be a vertical linking or a network between various independent business organisations and can involve processing, packaging, storage, transport and distribution.

<sup>&</sup>lt;sup>6</sup> Gender and Rural Employment Policy Brief #4, 2010: Agricultural value chain development: Threat or opportunity for women's employment?

World Health Organization. Food Safety Digest. Department of Food Safety and Zoonoses. February 2018. REF. No.: WHO/NHM/FOS/RAM/18.1

<sup>&</sup>lt;sup>8</sup> Gong et. al. Dietary aflatoxin exposure and impaired growth in young children from Benin and Togo: cross sectional study. British Medical Journal. BMJ Vol. 325; 6 July 2002

## Pathway 2: From Health to Nutrition

Integrating nutrition with public health initiatives maximises impact and supports life-long health. This is achieved through four principal approaches outlined below:

## A: Direct Nutrition Interventions

Breastfeeding and complementary feeding practices include early initiation of breastfeeding within the first hour of life, exclusive breastfeeding for the first six months of life (without giving the infant water), and the introduction of ageappropriate complementary foods and feeding practices for children 6-24 months of age along with continued breastfeeding. Interventions that promote, protect and support early and exclusive breastfeeding (EBF) are among the most effective interventions for preventing child deaths worldwide, saving the lives of 1.4 million children under the age of five every year globally. Similarly, intensive efforts to improve complementary feeding behaviours at the household level and other supportive strategies at scale could reduce stunting by 17% in countries with the highest burden of undernutrition.<sup>10</sup>

## Preventative health sector interventions delivered through the public health system and integrating good nutrition counselling within existing health services, namely:

- Training antenatal care providers, skilled birth attendants, and infant and young child healthcare providers on how to counsel pregnant women on adequate weight gain, rest, intention to breastfeed, their own nutrition and that of their infant, and optimal infant and young child feeding (IYCF) practices.
- Ensuring availability of the appropriate set of job aids and monitoring tools, effective monitoring systems, and guidelines for the certification of baby-friendly hospitals.
- Support for improved and effective growth monitoring services and efforts to increase demand from the community for quality growth monitoring and promotion (GMP) until the child reaches the age of two. This provides the opportunity for child-centred nutrition counselling for the caregiver relative to the child's progress on the growth chart.
- Collaborating with reproductive health and family planning services, which play a role in improving optimal birth intervals. Pregnancy intervals of two years or less have been associated with neonatal, infant, and under-five mortality and low birthweight. In addition, short pregnancy intervals have negative impact on the ability of the mother to exclusively breastfeed her child to six months of age and continue to breastfeed to two years.
- Training skilled birth attendants on delayed cord clamping, which has been shown to reduce the risk of anaemia after birth by 80%, and by 47% at 2-4 months. 11

Preventative community-based nutrition interventions are delivered through relevant delivery platforms, including health centres, schools, community-based platforms, open market or social marketing. Micronutrient interventions through the health system delivery platforms that reach specific target groups provide an opportunity to ensure at-risk populations have access to micronutrient supplements and micronutrient-rich foods that are critical to growth and development, including:

- Delivery of micronutrient supplements through antenatal care services: Delivery of micronutrient supplements can reduce maternal deaths and improve birth outcomes. For example, iron-folate or multiple micronutrient supplementation during pregnancy reduces anaemia and low birthweight. Calcium supplementation in pregnancy can prevent gestational hypertensive disorders like pre-eclampsia, a leading cause of maternal death. 12
- Monthly GMP, Expanded Programme on Immunisation (EPI) days, or nutritional screening for children under five: Any routine, preventative health service that requires caregivers to bring their child(ren) to the facility offers an opportunity for nutrition counselling, and ensures the child is up-to-date with their twice-yearly vitamin A supplementation and/or deworming. It can also be used to distribute multiple micronutrient powders (MNP) to caregivers of children 6-23 months of age for home-based food fortification. Directly adding MNPs, which are encapsulated micronutrients in powder form, to food consumed by the child 6-23 months helps boost their vitamin and mineral intake.
- Child Health Days and other community outreach: Outreach, organised by the health facility and carried out by Community Health Workers or volunteers, optimally packages essential health and nutrition interventions together, to be delivered to children under five, with a focus on children under two, either directly at the household or in the community. This is another opportunity to reach children with deworming, vitamin A supplementation (VAS), MNPs. and in some targeted cases, fortified foods for the household.

<sup>9</sup> United Nations Children's Fund. Improving Exclusive Breast Feeding Practices by using Communication for Development in Infant and young Child Feeding Programs. United Nations Children's Fund; 2010

<sup>&</sup>lt;sup>10</sup> The 2008 Lancet Series on Maternal and Child Undernutrition

<sup>&</sup>lt;sup>11</sup> World Bank, 2012: Accelerating progress in reducing maternal and child undernutrition in Nepal.

<sup>&</sup>lt;sup>12</sup> WHO, 2011b: Recommendations for the prevention and treatment of pre-eclampsia and eclampsia, Geneva, Switzerland

- Community-based platforms: Platforms like mother-to-mother support groups play a crucial role in supporting caregivers in adopting healthy behaviour, as well as caring and feeding practices for infants and young children. These can be a good platform for delivering standardised messages and social and behaviour change communication.
- Integrated nutrition intervention in school health initiatives: These could include WASH, agriculture (school gardens) involving the use of grey water in water scarce situations, school feeding (to focus on health and nutritious meals, and where possible, including fortified foods) and nutrition surveillance and monitoring in schools. This could also be an opportunity for AfDB nutrition smart investments to address malnutrition in humanitarian emergencies. An AfDB project—Post Cyclone Idai and Kenneth Emergency Recovery and Resilience Programme (PCIREP, 2019) adopted a multi-sectoral intervention approach including nutrition education through selected school clubs.
- Supplementary food for at-risk pregnant women and young children: In food-insecure areas, providing pregnant women with supplementary food comprising a balanced mix of energy and protein has been shown to produce modest increases in maternal weight gain and in mean birthweight, reducing the risk for small for gestational age (SGA) births. These programmes provide an excellent opportunity to include fortified foods, and/or MNP.

## Management of acute malnutrition:

- Integrated management of acute malnutrition (IMAM): Provides caregivers with an opportunity for counselling and support on infant and young child nutrition. Examples include on-going community screenings to help identify children suffering from severe acute malnutrition (SAM) without medical complications early enough, and enables treatment from home, which includes ready-to-use therapeutic foods (RUTF). IMAM also includes establishing a small number of in-patient units to accommodate children with severe wasting and medical complications.
- Community-based management of acute malnutrition (CMAM): Provides care to the majority of children in the community with uncomplicated SAM as outpatients to address the limitations inherent in facility-based care including low access, low coverage and high costs associated with in-patient management of SAM.<sup>13</sup> Although the Bank's action plan focuses on stunting, the Bank can also support CMAM if there is a clear need and link with the overall project objective (e.g. reducing under-five child mortality).
- Management of moderate acute malnutrition (MAM): Can be provided in either health facilities or at community level. Nutrition counselling is an integral part of the management of MAM.

## B: Disease Control and Prevention

- Presumptive treatment for malaria and bed net use for pregnant women and children under two leads to improved maternal and infant protection from malaria. This results in higher birthweights, decreased risk of low birthweight and a reduction in maternal anaemia.
- Deworming in pregnant women and children under five years is recommended for regions with high prevalence of helminthic infestation. Deworming interventions have shown improved haemoglobin status, reductions in anaemia in children, and increases in foetal growth and maternal weight gain during pregnancy. Interventions such as deworming, and vitamin A supplementation have important linkages with community-based programmes (e.g. Child Health Days/Weeks).
- Zinc and Oral Rehydration Salts (ORS) for treatment and management of diarrhoea is effective to reduce the duration of diarrhoea and reoccurrence of subsequent episodes as a component of integrated management of common illnesses (IMCI). IMCI in public health facilities includes improving the case management skills of health staff through the development and promotion of locally adapted IMCI guidelines, building the capacity of the health system to support effective management of childhood illness, and addressing family and community practices.

## C: Improved Hygiene and Sanitation Environment

WASH programmes that incorporate proper handwashing practices help protect a child's nutritional status by reducing the number of faecal-oral pathogens that are ingested and cause infections (see AfDB sector brief on WASH and Nutrition). Proper handwashing with soap at critical times, and especially before preparing food and feeding a child, is one of the most effective and cost-efficient ways to prevent pneumonia and diarrhoea. In addition, education regarding food safety (storage, preparation and feeding practices) as well as behaviour change communication to reinforce the necessity for keeping animal faeces away from child play areas and sensitisation on zero open defaecation promotes good health and nutrition.

<sup>&</sup>lt;sup>13</sup> Community based Therapeutic Care. A field manual first edition. Valid International. Oxford: UK; 2006

## D: Integrated Nutrition Outcomes within the Planning, Monitoring and Reporting System of Ministry of Health

## The Ministry of Health should lead initiatives to integrate nutrition in public health programmes such as:

- Incorporate nutrition indicators in health programmes along the continuum of care (e.g., antenatal care, postnatal care, family planning, immunization, etc.).
- Design robust monitoring systems on nutrition interventions from the beginning of each programme. Integrate key nutrition indicators in health management information systems.

## Regional and district health offices should align nutrition outcomes with those of Ministry of Health and the Ministry responsible for water supply in order to:

- Strengthen public health programmes and infrastructure for water and sanitation systems and regulate water providers to meet quality and equity standards.
- Train and build capacity among health staff at the district, sub-district, and regional levels in delivering nutrition messages and services, including maternal nutrition, IYCF counselling in difficult circumstances, such as HIV and during emergencies.
- Integrate promotion of childcare practices, including proper hygiene, breastfeeding, complementary feeding, and deworming practices into the health promotion activities carried out in primary, secondary and tertiary healthcare systems.
- Strengthen supply chains to ensure access to supplements and nutritional products to treat and prevent micronutrient deficiencies and SAM are integrated into the essential medicines supply chain for other health supplies.

## Public health policy- and decision-makers can take immediate action to address undernutrition and improve public health outcomes by:

- Make optimal nutrition a public health goal. Integrate nutrition smart activities into health programmes, national strategies, planning documents, and WASH programmes, ensuring multi-sectoral inputs.
- Integrate nutrition into WASH programmes. WASH programmes should highlight the importance of washing hands before preparing food and feeding a child. Handwashing messages with soap at critical times need to be linked with illnesses, such as pneumonia and diarrhoea, which contribute to undernutrition.
- Enhance public health staff training: Integrate public health nutrition in medical and nursing curricula. Expand coverage to rural and marginalized areas with high levels of undernutrition.
- Support collaboration across agencies: Planning should include explicit roles and responsibilities for departments with reciprocal resources so that nutrition is addressed along the continuum of care and across different platforms (health facilities, outreach services, and community care). Work with other sectors, like agriculture, food security, and social welfare, to develop an effective multi-sectoral plan to address undernutrition. Better coordination and strengthening multi-sectoral nutrition actions is an effort to jointly make the case for more resources in the context of enhanced value for money.

**Immediate** Intermediate Long-Term **Sector Interventions Outcomes Outcomes Impact** Adequate access to safe, diverse and nutritious food **Adequate Direct Nutrition** Dietary Intake Interventions Adequate care Planning, monitoring & reporting system of Ministry of Health \* and feeding breastfeeding & practices complementary feeding Good o Preventative health Nutritional **Prevention and Status** o Preventative communitytreatment of micronutrient o Management of acute deficiencies malnutrition **Treatment of** acute malnutrition **Disease Control and Good Health Prevention Status**  Treatment of infections & (reduced infection / diseases: malaria, disease) **Prevention and** pneumonia, diarrhoea, treatment of diseases that o Integrated management cause of common illnesses malnutrition (diarrhea, malaria, measles, etc.) Improved Hygiene and **Sanitation Environment** o Incorporate proper WASH practices \* Integrate nutrition interventions, indicators & outcomes in public health programmes Health related interventions Caregiving & practices related outcomes Food & nutrition related outcomes Health related outcomes Nutritional status impact

Figure 3 Impact pathways from health programmes to nutrition

Source: Created for AfDB Nutrition Smart Health Systems Projects (Nutrition International, 2019) (Adapted from the UNICEF Conceptual Framework of Child Malnutrition, 1997)

## Pathway 3: From Higher Education to Nutrition

The AfDB Higher Education, Science and Technology (HEST) strategy was designed to assist regional member countries in three major areas:

- 1. Strengthening national and regional centres of excellence in the following selected priority areas: agriculture and livestock, health sciences and health delivery support services, engineering, business enterprises, energy, and training of teachers and educational managers.
- 2. Building and/or rehabilitating the existing science and technology infrastructure, including tertiary education institutions.
- 3. Strengthening links with the labour market so trained students can use their knowledge and skills productively. The HEST strategy recognizes the need for a multi-sectoral approach to effectively link graduates (in this case, food and nutrition graduates) to employment opportunities, which will lead to income opportunities as well as foster a holistic approach of tackling malnutrition by ensuring specialists are deployed to different sectors. These are areas of opportunity for AfDB nutrition smart investments in the five priority sectors to influence good nutritional outcomes.

The impact pathways from various higher education interventions to nutrition are illustrated in figure 4 below:

Long-Term Sector Intermediate **Immediate Outcomes** Interventions **Outcomes Impact Industry** Businesses (especially food industry) adopt nutrition smart strategies Agriculture Nutrition smart agricultural strategies implemented by public and private actors **Social Protection** Services target the most **Adequate** vulnerable population groups and are delivered **Dietary Support** Intake to maximise their **National and** Strengthened nutrition impact Regional capacities of **Centres** graduates to of Excellence Households promote Acquire knowledge and Good nutrition skills to adopt in their **Nutritional** healthy nutrition practices Support profession / **Status** Infrastructure field of **Development** expertise **Education** and Training Teachers at all levels of Good the educational system Health are equipped to **Status** disseminate up-to-date (reduced nutrition information infection / disease) Health Professionals and systems provide good nutrition services and support **Increased** nutrition-WASH Strengthen related job WASH programmes Labour opportunities are implemented with a Market in relevant nutrition smart approach Linkages public and private sectors **Income Growth** Education related interventions Health related outcomes Food & nutrition related outcomes Potential resources (e.g. human or economic) Nutritional status impact

Figure 4 Impact pathways from higher education to nutrition

Source: Created for AfDB Nutrition Smart Higher education Projects (Nutrition International, 2019) (Adapted from the UNICEF Conceptual Framework of Child Malnutrition, 1997)

## A: Support National and Regional Centres of Excellence

The AfDB aims to reinforce networks of higher education, science and technology institutions by harmonising and linking training programmes in different African countries so national institutions can benefit from the staff and curriculum of excellent tertiary education institutions and vocational training centres. This provides an opportunity for the Bank to strengthen networks of institutions that have remarkable records of training on human nutrition and dietetics, food science and technology, and home economics among other nutrition-related courses.

## B: Support Infrastructural Development and Training

The Bank supports the construction, upgrade and rehabilitation of selected higher education institutions—in particular, research schools and centres—and provides resources for laboratories. This is also crucial for increasing food and nutrition expertise in Africa. It is important to advocate for support of the incorporation of food and nutrition as a university programme at different levels (i.e. undergraduate, masters, PhD) in more African universities, and to support employment of the required nutrition expertise to meet this need. Scholarship opportunities can be another avenue to support student enrolment in food and nutrition programmes. Furthermore, food and nutrition research work needs strengthening by establishing well-equipped research centres and increased publication and dissemination of research information to inform decision-making. This is a critical link that must be strengthened.

## C: Strengthen Labour Market Linkages

Africa is estimated to have had 226 million youth in 2015, a figure projected to increase by 42% to 321 million by 2030. In 2016, youth unemployment in North Africa was more than three times higher than adult unemployment. The lack of job growth has slowed poverty reduction efforts. Slow job growth has primarily affected women and youth (between the ages of 15-24). In this regard, the Bank is committed to strengthening the links of the graduates to the labour market.

One of the key entry points is working with the private sector to spur economic and social growth. This will include creating opportunities in sectors that can contribute to significant reduction in stunting in Africa, including agriculture (i.e. the entire nutrition smart agricultural value chain), industrialisation and manufacturing, social protection, health, etc. Strengthening links to employment for graduates with nutrition-related expertise in these sectors will go a long way in improving nutrition outcomes as well as tackling malnutrition from multiple directions. Furthermore, there is need to promote and support measures to increase women's participation in science and technology-related training and research activities in all institutions, as well as to facilitate improved linkages of young women to employment opportunities.

Infrastructure and energy are required for education to take place in most instances. Governments must commit more resources to the construction of learning facilities; not just classrooms, but other components like sanitation facilities, research centres, libraries, play areas, and feeding facilities among others. There is a clear need for clean energy for lighting, cooking, learning processes in schools and other learning institutions.

## Pathway 4: From Social Protection to Nutrition

A variety of social protection instruments can be made nutrition smart in order to achieve nutritionrelated impact in addition to their primary objectives. The various impact pathways of these social protection instruments to nutrition are illustrated below in Figure 5:

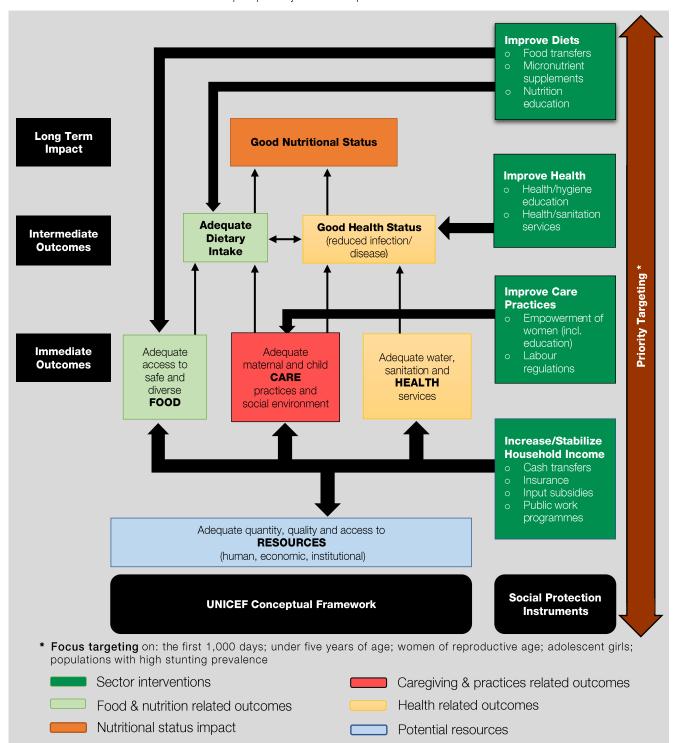


Figure 5 Impact pathways from social protection to nutrition

Source: Created for AfDB Nutrition Smart Social Protection Projects (Nutrition International, 2019) (Adapted from Technical Paper on Nutrition and Social Protection, FAO, 2015)

## Pathway 5: From WASH to Nutrition

The Rural Water Supply and Sanitation Initiative (RWSSI) is an African-wide initiative hosted by the AfDB as a focused regional response to Africa's rural water supply and sanitation crisis. RWSSI was launched in 2003 as a framework for resource mobilisation, investment, and development of rural water supply, improved sanitation, and hygiene behaviour change across Africa. Reducing poverty by accelerating access to improved rural water supply and sanitation facilities from a baseline of 47% and 44% respectively in 2000, to 100% by 2025 is the overarching objective of RWSSI.

Access to safe drinking water and improved sanitation is improving but remains very low in Africa despite increasing official development assistance (ODA) for the sector.<sup>14</sup> Access to safe drinking water in Africa is generally low by global standards and characterised by wide disparities between and within countries. Overall, access is higher in North Africa compared to the rest of the continent. In 2015, the proportion of people with access to safely managed sources of drinking water in Africa excluding North Africa, was 23.7%; barely one third of the global average of 71%. Coverage varies widely between countries: thus, access ranges from 100% in Mauritius to 19% in Eritrea. Access is uneven within countries too and rural-urban disparities persist in most parts of Africa. Thus, in 2015, approximately 82% of the urban population of Africa excluding North Africa had access to basic drinking water services, compared to only 43% of the rural population.

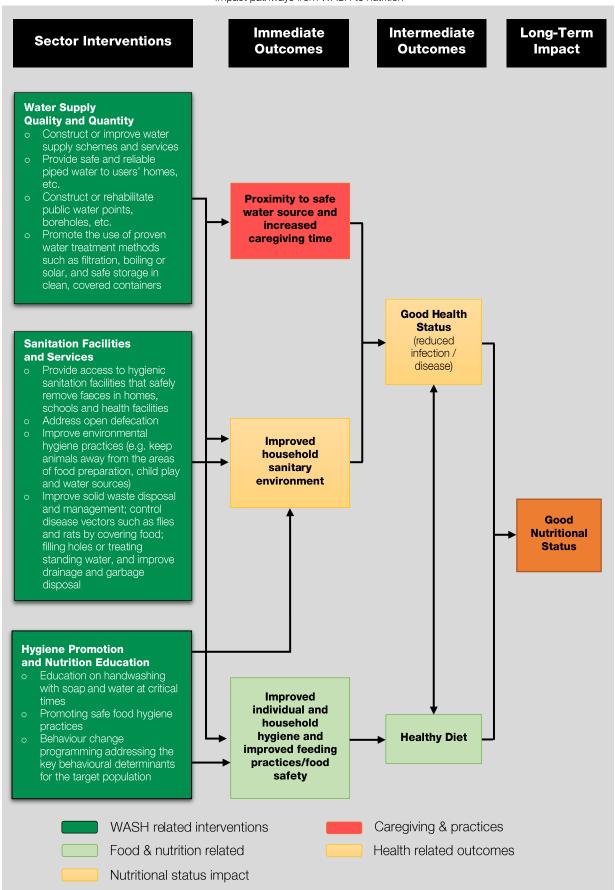
Where sanitation is concerned, access to safely managed services is improving but remains low in Africa and at the global level in general. At the global level, only 39% of the population—in other words, fewer than 4 out of 10 individuals—have access to safely managed sanitation services. Precise data for this indicator are lacking for most of Africa, but in North Africa, for which data are available, the proportion of people with access to safely managed sanitation services was 25.1% in 2015, up from 18.1% in 2005. These trends notwithstanding, Africa excluding North Africa receives the largest amount of ODA for water supply and sanitation. Funding for this purpose has been rising in all regions except in Eastern Asia and, for Africa, doubled between 2000 and 2015.

Figure 6 outlines the impact pathways from WASH to nutrition based on the analysis of WASHrelated interventions in AfDB projects that are linked to improved health and nutrition outcomes.

Three main pathways have been identified namely: (i) water supply quality and quantity, (ii) sanitation facilities and services, and (iii) hygiene promotion and education.

<sup>&</sup>lt;sup>14</sup> Key findings of the 2018 Africa Sustainable Development Goals (SDG) Report

Figure 6 Impact pathways from WASH to nutrition



Source: Created for AfDB Nutrition Smart WASH Projects (Nutrition International, 2019) (Adapted from the UNICEF Conceptual Framework of Child Malnutrition, 1997)

## 5: Nutrition Interventions

Stunting undermines economic productivity, in turn limiting the development of low- and middleincome countries. Stunting is caused by multiple factors, such as not having enough vitamins, proteins and fats in the diet, which is compounded by poor hygiene and sanitation causing diseases that cause the body to lose nutrients. While nutrition specific services run by the health sector (such as providing supplements for pregnant mothers) are a necessary part of reducing stunting, they are not sufficient. Effective action needs other sectors such as agriculture, WASH, social protection, and education to become nutrition smart; they must redesign their projects for maximum nutritional impact. Interventions to reduce stunting can be highly cost-effective, save lives, and boost per-capita GDP by up to 11%.

Nutrition interventions are consistently identified as among the most cost-effective development actions, and the costs of scaling up interventions are comparatively modest. 15 The Copenhagen Consensus Report (2012) rated nutrition as a global "best buy" for investment in development because of its low cost and potential for high impact. 16 Stunting is the most prevalent form of child malnutrition, affecting an estimated 21.9% or 149 million children under the age of five globally in 2018.<sup>17</sup> The 2013 Lancet series on maternal and child nutrition highlighted that malnutrition is responsible for 45% of all under-five child deaths, representing more than 3 million deaths each year. 18 In addition, foetal growth restriction and sub-optimal breastfeeding together are responsible for more than 1.3 million deaths, or 19.4% of all under-five child deaths, representing 43.5% of all nutrition-related deaths. 19

The AfDB is committed to generating long-term economic growth across Africa by unlocking the nutrition potential of its investment portfolio. This will be achieved by a three-part approach involving:

- Mainstreaming nutrition into the Bank's portfolio and pipeline, including regional and country strategies, lending programmes, non-lending programmes, and other activities.
- Working to increase the production and consumption of safe and nutritious foods, through partnerships with regional member countries and regional and private sector partners.
- Encouraging regional member countries to prioritise nutrition smart lending requests and investments that deliver greater social and economic return alongside achieving nutrition impact, representing a double win.

Nutrition specific interventions<sup>20, 21</sup> are those that address the immediate and direct determinants of maternal and child nutrition, such as adequate food and nutrition intake, feeding and caregiving/parenting practices, and treating infectious disease. The 2013 Lancet series highlights 10 high-impact nutrition specific interventions around the life cycle (the 1,000-day period from conception to a child's second birthday) that if implemented as a package and scaled up to reach 90% coverage of the population at risk in 34 countries, could save an additional 900,000 lives and reduce stunting by 20%.<sup>22</sup> Nutrition specific interventions can be defined as those listed in the 2013 Lancet series:23

- 1. Iron folic acid supplementation or fortification
- Maternal multiple micronutrient supplementation 2.
- 3. Maternal balanced energy and protein supplementation
- 4. Maternal calcium supplementation
- Promotion of breastfeeding 5.
- Complementary feeding 6.
- Vitamin A supplementation 7.

<sup>15</sup>Hoddinott, John, Alderman, Harold, Berhrman, Jere R., Haddad, Lawrence, and Susan Horton. 2014. 'The Economic Rationale for Investing in Stunting Reduction." Maternal & Child Nutrition 9 Suppl 2 (September 2013) 69-82. Doi:10.1111/mcn.12080.

<sup>17</sup> UNICEF/WHO/World Bank Group Joint Child Malnutrition Estimates. Key findings of the 2019 edition

http://www.nutritionintl.org/content/user\_files/2016/11/WB\_Incentivizing\_Nutrition-final-web.pdf.

<sup>&</sup>lt;sup>16</sup>Copenhagen Consensus Center. Copenhagen Consensus 2012 - Outcomes. Denmark: Copenhagen Business School. Accessed July 24, 2012 and available at http://www.copenhagenconsensus.com.

<sup>18</sup> Bhutta, Z.A., Das, J.K., Rizvi, A., Gaffey, M.F., Walker, N., Horton, S., Maternal and Child Nutrition Study Group. 2013. 'Evidence-based Interventions for Improvement of Maternal and Child Nutrition: What Can Be Done and at What Cost? Lancet, 382 (9890), 452-77.

<sup>&</sup>lt;sup>19</sup>Black, Robert E, Harold Alderman, Zulfigar A Bhutta, Stuart Gillespie, Lawrence Haddad, Susan Horton, Anna Lartey, et al. "Maternal and Child Nutrition: Building Momentum for Impact." The Lancet 382, no. 9890 (August 2013): 372–75. doi:10.1016/S0140-6736(13)60988-5.

<sup>&</sup>lt;sup>20</sup> Shekar, Meera. "Zambia Nutrition Policy: Policy Recommendations for Scaling Up September 2015." Washington, D.C.: The World Bank, September

<sup>&</sup>lt;sup>21</sup>Laviotte Luc, Sudararajan Gopalan, Leslie Elder, and Olivier Wouters. "Incentivizing Nutrition: Incentive Mechanisms to Accelerate Improved Nutrition Outcomes." Washington, D.C.: World Bank Group, 2016.

<sup>&</sup>lt;sup>22</sup> Bhutta, Z.A., Das, J.K., Rizvi, A., Gaffey, M.F., Walker, N., Horton, S., ... Maternal and Child Nutrition Study Group (2013) Evidence-based Interventions for Improvement of Maternal and Child Nutrition: What Can Be Done and at What Cost? Lancet, 382 (9890), 452-477.

<sup>&</sup>lt;sup>23</sup>Black, Robert E, Prof Cesar G Victora MD, Prof Susan P Walker PhD, Prof Zulfigar A Bhutta PhD, Prof Parul Christian DrPH, Mercedes de Onis MD, Prof Majid Ezzati PhD, et al. "Maternal and Child Undernutrition and Overweight in Low-Income and Middle-Income Countries." Lancet, June 2013, 1-25.

- Preventative zinc supplementation
- Management of severe acute malnutrition
- 10. Management of moderate acute malnutrition

These activities are principally implemented by the health sector but components are also implemented by other sectors.

Nutrition smart interventions are those that address the underlying determinants of maternal and child **nutrition**, such as diversification of agricultural production and food security programmes, biofortification of food crops, water and sanitation infrastructure improvements, conditional cash transfers, early childhood development programmes and women's empowerment programmes. It involves redesigning programmes and projects in sectors such as agriculture, WASH, social protection, health and education so that they deliver a greater social and economic return alongside achieving nutrition impact, representing a double win.

The economic benefits of investing in scaling up nutrition interventions are enormous. A set of costeffective nutrition specific interventions has proven highly successful in improving nutrition outcomes.<sup>24</sup> Evidence demonstrates that preventive interventions are estimated to be more cost-effective than curative (treatment) interventions.<sup>25</sup> The costs and benefits of the targeted interventions are weighed by unit cost (US\$ per beneficiary per year) and the cost of implementing each option, then determining its expected benefits in terms of Disability Adjusted Life Years (DALY) for children under five years of age. When considering DALY averted, the most cost-effective intervention is the support and promotion of exclusive breastfeeding (\$23 per DALY averted), followed by complementary feeding education (\$31 per DALY averted), the control and prevention of diarrhoeal and parasitic diseases (\$57 per DALY averted), and VAS for children (\$95 per DALY averted).

**Note:** The analysis of cost-effectiveness in terms of DALYs averted is most easily done for nutrition specific interventions, which tend to address individuals, especially in the field of public health. This type of analysis is more difficult to do for interventions that address systemic change (such as agricultural and food systems interventions) but does not mean that these interventions are not cost-effective. Furthermore, the cost of interventions can vary significantly according to the context (e.g., an individual health intervention is more cost-effective if the overall health system runs effectively and it is easy to access health facilities). As well, the effectiveness of individual interventions in terms of improving nutrition outcomes is higher if they are integrated as part of a multi-sectoral approach.

<sup>&</sup>lt;sup>24</sup> Z.A. Bhutta et al. 2013. Evidence-based interventions for improvement of maternal and child nutrition: what can be done and at what cost? The Lancet Maternal and Child Nutrition Series 382: 452-77

<sup>&</sup>lt;sup>25</sup> Walters, Dylan David, Julia Dayton Eberwein, Linda Brooke Schultz, Jakub Jan Kakietek, Habibullah Ahmadzai, Piyali Mustaphi, Khwaja Mir Ahad Saeed, Mohammad Yonus Zawoli, and Meera Shekar. "An Investment Framework for Nutrition in Afghanistan: Estimating the Costs, Impacts, and Cost-Effectiveness of Expanding High-Impact Nutrition Interventions to Reduce Stunting and Invest in the Early Years." The World Bank, April 1, 2018. http://documents.worldbank.org/curated/en/785471534270746882/An-

#### Table 2 Examples of Cost-Effective Nutrition Interventions

Interventions (in alphabetical order, not order of importance)	Unit Cost (US\$ per beneficiary per year)	DALYs Averted Cost / DALY Saved (Global)	Targeted Population	Delivery Platform
Biofortification <sup>26</sup> (with Vitamin A for Maize)	N/A		General population	Market-Based Delivery System
Complementary Feeding Education		\$31 per DALY averted	Children 6-23 months	Health Facilities Community & Support Groups
Deworming: with Anthelmintic Drugs (for Children) <sup>27 28</sup>	\$0.44	Control and prevention of diarrhoeal and parasitic diseases - \$57 per DALY averted	Children 12-59 months	Maternal and Nutrition Child Health (MNCH), Community Child Health Weeks/Days
Deworming: School-Based Deworming	\$0.08	\$28.19-\$70.48/DALY for schistosomiasis treatment \$82.54/DALY for Soil Transmitted Helminth treatment <sup>29</sup>	Children 12-59 months	School-based Deworming
Food Fortification: Iron Fortification of Staple Foods <sup>30</sup>	\$0.20		General population	Market-Based Delivery System
Food Fortification: Salt lodization for General Population <sup>31</sup>			General population	Market-Based Delivery System
Iron-Folic Acid Supplementation (IFA) for Pregnant Women <sup>32</sup>	\$1.79 (MNCH weeks) \$2.00 (community nutrition programmes) per pregnancy		All pregnant adolescents and adult women	All Settings 40% via MNCH Weeks 60% via Community Nutrition Programmes
Promotion of Good Hygiene (School-Based)	\$2.00			School Hygiene Education Campaign
Promotion/Support of Exclusive Breastfeeding		\$23 per DALY adverted	Women of Reproductive Age (WRA) & Pregnant and Lactating Women	Health Facilities Community & Support Groups
Vitamin A Supplementation for Children*33,34	\$0.44	\$95 per DALY averted	Children 6-59 months	MNCH, Community Child Health Weeks/Days
Therapeutic Zinc Supplementation with Oral Rehydration Salts (ORS) for Children	\$0.86		Children 6-59 months	MNCH, Community Child Health Weeks/Days
Universal Salt lodization	\$0.20		Children 12-59 months & General population	Market-Based Delivery System

<sup>&</sup>lt;sup>26</sup> Biofortification of maize with vitamin A. Good evidence that biofortification is effective at reducing vitamin A deficiency. Weak evidence however linking vitamin A status and stunting.

<sup>&</sup>lt;sup>27</sup> Shekar, Meera, Christine McDonald, Ali Subandoro, Julia Dayton Eberwein, Max Mattern, and Jonathan Kweku Akuoko. "Costed Plan for Scaling up Nutrition: Nigeria." Discussion Paper. The World Bank, September 2014.

https://openknowledge.worldbank.org/bitstream/handle/10986/21808/95674Revd.pdf?sequence=5&isAllowed=y.

<sup>&</sup>lt;sup>28</sup> Deworming for children has strong evidence that there is no effect on stunting and early child development.

<sup>&</sup>lt;sup>29</sup> https://www.givewell.org/international/technical/programs/deworming/cost-effectiveness#A\_model\_for\_the\_costeffectiveness\_of\_deworming\_interventions

<sup>30</sup> Shekar, Meera, Christine McDonald, Ali Subandoro, Julia Dayton Eberwein, Max Mattern, and Jonathan Kweku Akuoko. "Costed Plan for Scaling up Nutrition: Nigeria." Discussion Paper. The World Bank, September 2014.

https://openknowledge.worldbank.org/bitstream/handle/10986/21808/95674Revd.pdf?sequence=5&isAllowed=y.

<sup>&</sup>lt;sup>31</sup> unit cost based on global estimates.

<sup>32</sup> Shekar, Meera, Christine McDonald, Ali Subandoro, Julia Dayton Eberwein, Max Mattern, and Jonathan Kweku Akuoko. "Costed Plan for Scaling up Nutrition: Nigeria." Discussion Paper. The World Bank, September 2014. https://openknowledge.worldbank.org/bitstream/handle/10986/21808/95674Revd.pdf?sequence=5&isAllowed=y.

<sup>33</sup> Shekar, Meera, Christine McDonald, Ali Subandoro, Julia Dayton Eberwein, Max Mattern, and Jonathan Kweku Akuoko. "Costed Plan for Scaling up Nutrition: Nigeria." Discussion Paper. The World Bank, September 2014.

https://openknowledge.worldbank.org/bitstream/handle/10986/21808/95674Revd.pdf?sequence=5&isAllowed=y.

<sup>34</sup> Vitamin A supplementation has strong evidence of a reduction in infant mortality. Absence of evidence relating to stunting. Observed increases in head circumference and weight are negated supplemented alongside DPT/BCG vaccinations

Examples of nutrition smart interventions that can be incorporated into Bank's projects include:



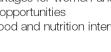
- · Large scale food fortification
- · Diversifying production into fruits, vegetables, fish, meat, eggs, and dairy
- · Substituting micronutrient-poor staple food crops with biofortified nutrient-rich crops
- · Homestead food production and home with behaviour gardening change communication
- · Animal rearing—livestock and fisheries
- · Biofortification such as high-iron beans, orange flesh sweet potato, yellow cassava, quality protein maize, rice fortified with zinc,
- · Irrigation and water management
- · Climate smart agriculture, natural resource management, forestry, soil rehabilitation
- · Extension research and support to farmer training centres/field schools
- Agriculture infrastructural development mechanisation, access roads, water reservoirs,
- · Agro-processing zone projects to improve processing, storage and distribution
- Establishment of trade corridors and marketing of safe, diverse and nutritious foods
- Agri-business and poverty alleviation
- · Integrated livelihoods, financial inclusion and income generating activities
- · Promoting gender equality and women's empowerment by integrating gender issues into agricultural programmes
- · Nutrient-rich value chain development



- · Promotion of exclusive breastfeeding (EBF), continued breastfeeding, and complementary feeding practices
- · Micronutrient supplements through antenatal care services
- Iron and Folic Acid (IFA) supplementation for pregnant women
- Vitamin A Supplementation (VAS)
- Zinc supplementation for the management of diarrhoea
- Home-based food fortification with multiple micronutrient powders (MNP)
- Control and prevention of diarrhoeal & parasitic diseases
- Deworming in pregnant women and children under five years
- Management of severe acute malnutrition (SAM)
- Management of moderate acute malnutrition
- Integrated management of common illnesses
- Community-based nutrition screening and referral, nutrition & dietary counselling, education on WASH practices
- Nutritional anthropometric, assessment: biochemical, clinical and dietary assessment
- Supplementary feeding, delivery of micronutrient supplements, community referrals, vaccination, perinatal care
- Integration of nutrition counselling in routine health services, dietary advice, and maternal, infant & young child feeding sessions
- · Clinical management and treatment of acute and chronic infections & non-communicable diseases
- · Integrated nutrition intervention in school health initiatives such as school gardens, school feeding, education on WASH practices
- · Social and behaviour change communication (SBCC)
- Integration of nutrition outcomes in the planning, monitoring and reporting systems of Ministries of
- · Support health facilities in regional member countries to provide a standard package of nutrition services
- Support roll-out of the 10 steps of the Baby Friendly Hospital Initiative



- Support national and regional centres of excellence in delivering food and nutrition capacity development programmes
- · Support construction, upgrading and rehabilitation of higher education institutions
- · Support the incorporation of food and nutrition as a university programme at different levels (i.e. undergraduate, masters, PhD)
- · Provide gender-balanced scholarship opportunities for food and nutrition programmes
- Strengthen food and nutrition research networks
- · Support the capacity building of food and nutrition
- · Strengthen links to employment for graduates with nutrition-related expertise
- · Promote and support measures to increase women's participation in science and technology-related training and research activities
- · Create better linkages for women and adolescent girls to employment opportunities
- · School-based food and nutrition interventions



#### Water

- · Support to water safety planning, constructing or improving water supply systems and services
- Provide safe and reliable piped water to users' homes,
- · Construct and/or rehabilitate public water points, boreholes, protected dug wells, etc.
- · Promote the use of proven water treatment methods, such as filtration, boiling or solar and piped distribution and safe storage in clean, covered containers
- · Access to clean drinking water, treatment and storage

## Sanitation

- · Access to hygienic sanitation facilities that safely remove and treat faeces
- · Support to clean and improved environmental hygiene practices e.g. keeping animals away from the areas where food is prepared, child play areas and water
- · Improve solid waste disposal and management, and control disease vectors such as flies, mosquitos, cockroaches and rats by covering food, improving drainage and safely disposing of garbage and nonreusable materials into a waste receptacle or protected

#### **Hygiene Promotion and Education**

- Behaviour change communications strategies to address open defaecation and the safe disposal of infant and animal faeces
- · Nutrition education and behaviour change strategies on handwashing, food safety and hygiene such as promoting handwashing at critical times (e.g. after defaecation and disposal of child faeces, prior to preparing and handling food, before eating, and-in health care facilities—before and after examining patients and conducting medical procedures) will have impact on health and nutrition outcomes.



- · Designing food transfers, micronutrient supplements, health and nutrition education classes into social protection programmes
- · Improving health and care practices through health and hygiene education, sanitation services, skills training and asset transfers
- · Social assistance: Conditional cash transfers (CCT), Unconditional cash transfers (UCT), input subsidies, public work programmes, in-kind transfers
- Empowerment of women (including nutrition education and care practices)
- Labour regulation
- · Nutrition education and promotion of behaviour change communication, health and nutrition caregiving and health seeking behaviours
- Growth monitoring and promotion

#### **Cross-cutting**

- Integration and consideration of gender equality and women's empowerment issues
- · Capacity building of support groups and associations such as smallholder farmers, peer support groups, motherto-mother support groups, women's groups, etc.
- · Policy support such as integration of nutrition into national development plans, agricultural plans, social protection policies and programmes, etc.

# 6: Results Framework for AfDB Multi-sectoral Nutrition Investments

The objective of the Results Framework (RMF) for AfDB multi-sectoral nutrition investments is to illustrate how the four levels of the RMF can contribute to good nutrition outcomes. This framework can be used by AfDB technical persons (including task managers) who will support regional member countries in preparing and implementing investments geared towards accelerated stunting reduction. The approach adapted for developing this framework on multi-sectoral nutrition integration is similar to the approach utilised for mainstreaming gender and climate change into AfDB projects. Figures 7 and 8 illustrate the framework for AfDB multi-sectoral nutrition investments as well as the four levels the RMF uses to assess effectiveness of AfDB development initiatives.

Figure 7

Framework for AfDB multi-sectoral nutrition investments SUSTAINABLE GOALS Improve Global Quality of Life for the People Feed Africa Cutting 10 Development Year Progress of Africa Strategy How the Bank is contributing to stunting reduction in Africa Promote nutrition Promote nutrition Level 2 Promote nutrition Promote specific smart social nutrition AfDB Targets smart agricultural protection interventions smart production and (including health & consumption WASH education) health sector Knowledge management/Data analysis Workplace Nutrition Level 3 Nutrition HMIS for nutrition nutrition Operational Indicators for nutrition integration in education & Performance Bank projects development Reporting for results against programmes Priorities Business Staffing / Institutional Structures Processes / Human Compliance ■ Task force for Nutrition (TFN) Resources Mechanisms Nutrition Team/Nutrition Focal Resource Readiness Reviews ■ Nutrition Persons Mobilisation Internal Toolkits and Team Regional Development, Organisational quidelines Nutrition Focal Integration and Business Efficiency Accountability for Persons Delivery Hubs results

Core Sector Indicators

Figure 8 The RMF uses four levels to assess the Bank's development effectiveness



## Level 1: Tracking Development Progress across Africa

In terms of nutrition smart investments, this level focuses on the AfDB's 10-year strategy, High 5 priorities and the Sustainable Development Goal (SDG 2) and identifies where these contribute to nutrition outcomes.

Nutrition is inextricably linked to the Bank's High 5 priorities and nutrition smart investments in each one can yield results for each High 5 while contributing to better nutrition outcomes. Below are brief descriptions of how the High 5s can contribute to nutrition outcomes:

- Feed Africa: Focus on the provision of safe, adequate and nutritious food for Africa and contribute to eradication of hunger and malnutrition.
- Improve Quality of Life for Africans: Improved access to basic services including WASH, and the creation of social and economic opportunities are key for improved nutrition outcomes.
- Industrialize Africa: Support to African industries to add value and increase transformation of raw agricultural foods into nutritious food products.
- Integrate Africa: Regional trade affects what people can buy (including food), as well as the variety and quality of what is available in the market.
- Light Up and Power Africa: Access to affordable energy will have positive impact in reducing women's workload (for example, linked to fetching water and firewood) therefore freeing up more time for caregiving activities at household levels.

SDG 2: Zero Hunger. SDG 2 aims to end hunger, achieve food security and improved nutrition and promote sustainable agriculture by 2030. To achieve this goal, Africa must to address malnutrition in all its forms, including stunting. The Bank's RMF and Multi-sectoral Nutrition Action Plan (MNAP), which ends in 2025—well before the 2030 SDG nutrition agenda—provide opportunities (and concerted efforts) for the AfDB multi-sectoral nutrition investments to contribute to malnutrition reduction, including stunting reduction in Africa.

AfDB 10-year Strategy: The 10-year Strategy is designed to bring about economic growth that is not just environmentally sustainable, but also economically empowering. The Strategy has two objectives to improve the quality of Africa's economic growth:

- Inclusive growth: Equitable growth means more quality job opportunities and higher incomes for vulnerable groups who are often over-burdened with undernutrition, and, especially for women, who play a pivotal role in household and child health outcomes. The increased industrialisation and trade also sought by this objective can increase access to safe, diversified and nutritious foods.
- Green growth: Sustainability is at the heart of a food- and nutrition-secure continent. A transition to green growth will protect livelihoods, improve water and energy security, provide sustainable infrastructure, promote the sustainable use of natural resources and spur innovation, job creation and economic development.

Monitoring progress in Level 1: There are specific indicators for tracking progress against the performance targets of the Bank's High 5 priorities, 10-year strategy and SDG 2. In order to measure how each of these are contributing to stunting reduction, the African Union and AfDB's African Leaders for Nutrition (ALN) Continental Nutrition Accountability Scorecard can be used for tracking the progress of all regional member countries.

## Level 2: Measuring the AfDB's Contribution towards Development in all its Operations

Through the Banking on Nutrition initiative, the AfDB is committed to unlocking the nutrition potential of its investment portfolio in order to generate long-term economic growth across Africa. The Bank's Multi-sectoral Nutrition Action Plan 2018-2025 aims to harness "grey matter infrastructure" to unlock the human and economic potential of Africa by catalysing nutrition smart investments to support a 40% stunting reduction in Africa by 2025. This level measures the Bank's contribution to stunting reduction through its nutrition smart investments in five priority sectors— Agriculture, Education, Health, Social Protection and WASH-including:

- Promotion of nutrient-dense and diverse agricultural production and consumption
- Promotion of health systems interventions
- Improved access to safe water and sanitation facilities
- Design and implementation of nutrition smart social protection interventions
- Strengthening of higher education systems

Monitoring progress in Level 2: As the Bank scales up its nutrition smart investments in the five priority sectors with the aim of contributing to a 40% stunting reduction in Africa by 2025, it is important to monitor progress against the Core Sector Indicators (CSI)—specifically the output and outcome indicators. The available AfDB projects baseline dataset for 2015-2018 can be used for tracking progress of the bank's operations in implementing more nutrition smart investments.

## Level 3: Assessing the Quality of the Bank's Operations

Through its 2018-2025 Multi-sectoral Nutrition Action Plan, the AfDB is committed to scaling up the proportion of investments that are nutrition smart, especially in the five sectors that account for over 30% of government spending in Africa and serve as underlying drivers of nutrition. Projects with goals, objectives, outcomes, outputs and activities that are specifically targeted towards stunting reduction or improved nutrition must be designed, implemented and tracked. Nutrition capacity development interventions are required to equip and support task managers and project teams with the relevant resources and operational toolkits required for nutrition integration. The AfDB Nutrition Marker System and Project Checklist will guide project managers and decision-makers in the design and effective implementation of nutrition smart projects. This level assesses the quality of the Bank's operations. In terms of nutrition smart investments, it focuses on the effectiveness of nutrition integration into the Bank's projects and pipelines; availability of adequate nutrition capacity amongst Bank staff; and knowledge management and tracking of nutrition smart investments based on standard indicators.

Monitoring progress in Level 3: Technical capacity for effective nutrition integration can be increased through the identification of Nutrition Focal Persons and strengthening of their skills to support the design, implementation and tracking of nutrition smart programmes. It might also be necessary to recruit additional Nutritional Technical Specialists and Monitoring and Evaluation (M&E) staff.

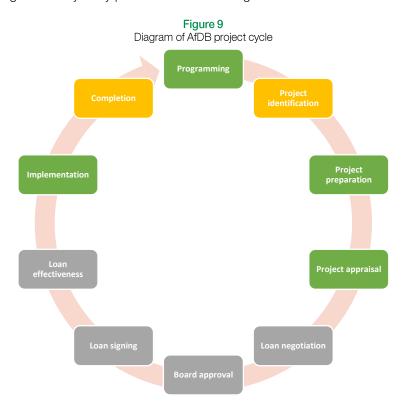
## Level 4: Monitoring the Bank's Efficiency as an Organisation

The AfDB has a large number of staff located in different regional member countries and priority sectors. In order to promote the institution's commitment to nutrition, the Bank needs to attract and retain highly qualified nutrition staff and technical specialists through proper human resource management. This level will track AfDB's progress, especially in terms of human and financial resources required to facilitate the integration of nutrition into its operations.

Monitoring progress in Level 4: Progress in this level will be monitored through financial tracking of nutrition smart projects and the number of technical experts available to support the design, implementation and tracking of nutrition smart investments at the Bank.

# 7: Integrating Nutrition into the AfDB Project Cycle

The various stages from country programming to project completion and post evaluation are known collectively as AfDB Group's project cycle. Given the number of poor countries, AfDB Group's project cycle activities are generally very active and painstaking, starting from the African Development Fund (ADF) replenishment cycles every three years with notably country resource allocations and core operational mandates for the replenishment cycle. The project cycle activities are often carried out expeditiously with the strictest professionalism on the part of the Bank staff. Actual project investment cycle activities are expedited in active participatory approach with all sections of the project beneficiaries. Figure 9 below outlines the various stages of the AfDB project cycle that guides the development of new projects and highlights the key entry points for nutrition integration.



Note: Stages coloured in green have the greatest potential for nutrition integration; those coloured in yellow have some potential for nutrition integration, and those in grey have low potential for nutrition integration.

## Stage 1: Programming

The objective of the programming stage is to critically analyse the prevailing situation at national, subnational and sectoral levels to identify constraints and opportunities that development cooperation can address including nutrition-related issues. This stage involves a review of political, economic, social, environmental and economic indicators as well as strategic national priorities and development plans. RISPs and CSPs are the main programming instruments for regional and country operations.<sup>35</sup> For details and guidance on nutrition integration during this stage, please refer to the following briefs: "Integrating Nutrition into AfDB Project Cycle", "Integrating Nutrition into AfDB CSPs", "A Snapshot of Food Security and Nutrition in Africa", and "Nutrition Smart Investments at the African Development Bank".

## Stage 2: Project Identification

The purpose of this stage is to assist Regional Member Countries (RMC) and the Bank Group in identifying suitable proposals for projects and other development operations, and screen them for further study and possible financing or co-financing. This involves consultations with the intended beneficiaries of each operation, an analysis of the problems they face and the identification of options to address these problems. A decision is then made on the relevance of each project idea (both to the intended beneficiaries and to the programming framework of the RMC and the Bank Group), and on which ideas should be further studied during the

<sup>35</sup> To date, four RISPs have been prepared, one each for: northern Africa (covering the AMU countries), western Africa (covering the ECOWAS countries), central Africa (covering the ECCAS countries), and eastern and southern Africa (covering the COMESA, SADC and EAC countries).

formulation/preparation phase. During this phase, landscape analysis and social impact assessments are commissioned to inform decision-making. For details and guidance on nutrition integration during this stage, please refer to the following briefs: "Integrating Nutrition into AfDB Project Cycle", "Integrating Nutrition into AfDB CSPs", "A Snapshot of Food Security and Nutrition in Africa", and "Nutrition Smart Investments at the African Development Bank".

## Stage 3: Project Preparation

During this stage, the technical, financial and economic viability—as well as environmental and social sustainability—of identified operations are ascertained before the Bank can proceed with appraisal and ultimately Board approval. The preparation process involves detailed studies, consultations with the Borrower, stakeholders and beneficiaries, on-site investigations and close interaction with other development partners, civil society organisations (CSOs), non-governmental organisations (NGOs), and other stakeholders including private sector organisations. Most important is the assessment of the economic viability and environmental and social sustainability of the proposed project. This is the stage during which a project is first conceptualized and the Project Concept Note (PCN) is developed. It is imperative that nutrition is integrated at this stage before the PCN is finalized. Nutrition-focused technical assistance is required to identify:

- Key nutrition information sources, including where to obtain country-level nutrition data and context
- Key nutrition stakeholders to be engaged at the country level
- Relevant evidence-based and cost-effective nutrition interventions
- Relevant core sector indicators (CSI) and project level indicators to include in the project log frame

For more details and guidance on nutrition integration during this stage, please refer to the five sector briefs (Agriculture & Nutrition, Health & Nutrition, Higher Education & Nutrition, Social Protection & Nutrition, and WASH & Nutrition), as well as The AfDB Nutrition Marker System and Project Checklist, Integrating Nutrition into AfDB Project Cycle, Integrating Nutrition into AfDB CSPs, A Snapshot of Food Security and Nutrition in Africa and Nutrition Smart Investments at the African Development Bank.

## Stage 4: Project Appraisal

The project appraisal stage involves a comprehensive and systematic review of all aspects of the project. This review is carried out by Bank staff in close collaboration with the Borrower with a view to preparing a report with appropriate recommendations upon which the Boards of Directors will base their decision to approve financial assistance for a given project. Project appraisal may only take place when a project has been properly identified and prepared to the satisfaction of Bank management, and a formal request for financing has been received from the country. The project will have already been shown to be compatible with the country's development objectives, priorities, policies and strategies as well as with Bank Group's lending policies and programmes. By the time the project is approved, the financing plan is secured. The Project Appraisal Report (PAR) includes the elements such as the final log frame, discussion on cross-cutting themes, design and implementation arrangements and modalities for stakeholder participation. During this stage, technical assistance on nutrition is required to:

- Integrate appropriate nutrition interventions into the project activities and outputs
- Ensure relevant CSIs and custom project level indicators are included
- Assess potential risks on nutrition outcomes and develop mitigation measures
- Develop any relevant technical annexes with guidance on nutrition M&E

The analysis of the baseline data (approved projects from 2015-2018) has generated some recommendations for the effective integration of nutrition into PARs. For details and guidance on nutrition integration during this stage, please refer to the five sector briefs (Agriculture & Nutrition, Health & Nutrition, Higher Education & Nutrition, Social Protection & Nutrition, and WASH & Nutrition), as well as The AfDB Nutrition Marker System and Project Checklist, Integrating Nutrition into AfDB Project Cycle, Integrating Nutrition into AfDB CSPs, A Snapshot of Food Security and Nutrition in Africa and Nutrition Smart Investments at the African Development Bank.

## Stage 5: Loan Negotiation

This stage involves the loan negotiations and discussions that are held between the Bank and the Borrower with the aim of reaching an agreement on the terms and conditions of the project loan prior to Board presentation and approval. There is an opportunity for nutrition integration in this stage through the process of project review and approval. After Board approval, the project loan is signed and becomes effective after the fulfilment of the conditions. The AfDB Nutrition Marker System and Project Checklist will be a practical tool to support peer reviewers and to guide the categorisation of nutrition smart AfDB projects.

## Stage 6: Project Implementation

This stage begins the moment the loan is declared effective. Bank Group-funded projects/operations are implemented by the Borrower/Executing Agency in accordance with the agreed schedule and relevant guidelines and procedures. Regular supervision of project implementation is carried out by the Bank to ensure that the physical implementation of the project is progressing smoothly in accordance with stated objectives and to take corrective measures if necessary, in close collaboration with the Borrower. It is recommended that a Nutrition Specialist/Focal Person should join the biannual supervisory visits to projects with nutrition interventions in order to ensure that the project is being implemented correctly and that it is achieving nutrition results. The project should also undergo a mid-term review, which provides another opportunity for nutrition integration. However, it should be noted that in many cases, there would be only 1.5 years remaining for project implementation and the likely impact from integrated nutrition interventions would potentially be low. In addition, it has been widely reported that retrofitting nutrition into ongoing projects presents numerous challenges compared to nutrition integration at the early stages of project design. The AfDB Nutrition Marker System and Project Checklist highlights the key features for integrating nutrition into a project and is a relevant and recommended tool for this stage of the project cycle.

## Stage 7: Project Completion

This stage corresponds to the period during which Bank Group and the Borrower prepare a Project Completion Report that assesses the completed project. The purpose of this exercise is to identify what has been achieved, what lessons can be learned from the project, and what measures have been put in place to ensure that the project achievements are sustainable. Findings and recommendations from the completion exercise are used for designing future projects or programmes, and to improve the implementation of on-going projects. The AfDB Nutrition Marker System and Project Checklist—which highlights the key features for integrating nutrition into a project—is a relevant and recommended tool for this stage of the project cycle.

## Consideration of Gender Equality During the AfDB Project Cycle

Gender equality: Good nutrition and gender equality are mutually reinforcing; improving gender equality leads to improved nutrition. Adapted from the programme gender strategy at Nutrition International (NI), the following entry points have been identified for considering gender equality in order to improve nutrition integration at the different stages of the AfDB project cycle.<sup>36</sup> The overarching aim is to transform the lives of vulnerable people, especially women, adolescent girls and children by considering and promoting gender equality in all aspects of project planning and implementation. The guidance and engagement of AfDB gender experts on sex- and gender-based analysis (SGBA) is required and should be key for the identified entry points:

- Nutrition situation analysis: This analysis provides an opportunity to gather context-specific understanding of how health status or access to services differ by sex and/or gender. Understanding barriers to gender equality can lead to the design of more sensitive and responsive programmes and projects that are more likely to be effective in improving nutrition outcomes for those with greatest needs.
- **Country strategy review:** The analysis of the national strategies with a gender lens can provide an opportunity for AfDB CSPs to address vulnerability, as well as social and gender inequalities in nutrition.
- Project design and implementation: The stages of project design and implementation should consider the following: gender inequalities in health and nutrition situation, access to adequate health and nutrition/food services, engagement and participation in the project planning, implementation and nutrition interventions beneficiaries.
- Monitoring and reporting: Sex disaggregated data should be collected and analysed to understand which programmes are reaching whom and whether projects are leading to greater gender equality goals.

<sup>&</sup>lt;sup>36</sup>Nutrition International - Programme gender equality strategy: Gender Equality and Nutrition: https://www.nutritionintl.org/about/gender-equalitynutrition/

# 8: Nutrition Indicators for AfDB Nutrition Smart Investments

The recommended multi-sectoral Nutrition CSI and Custom Project Indicators (CPI) for AfDB nutrition smart investments are consistent with the internal AfDB's CSI guidance; on the continent, with the ALN Initiative<sup>37</sup> and globally, with the World Health Assembly (WHA) targets.38

## **Core Sector Indicators (CSIs)**

CSIs are the set of recommended indicators used to focus reporting on the Bank nutrition smart investments. They are standard indicators that measure key outputs and certain outcomes in priority and nutrition-related sectors of the Bank. The CSIs are integrated into the Result-Based Logical Framework at the relevant result level in order to ensure appropriate progress monitoring, consolidation and reporting. In alignment with AfDB's other CSIs, monitoring these high-level impact/outcome indicators will help to track AfDB's progress towards integrating nutrition into its sectoral portfolios.

## **Custom Project Indicators (CPIs)**

CPIs are the set of standard indicators that Task Managers can select from across sectors in order to help monitor project outputs and outcomes. It is widely recognized that a minimum set of indicators is needed for global reporting. The data collected through global reporting in each country is critical for the purposes of monitoring global progress, maintaining programming support, and advocating for resources and continued funding. To this end, these indicators are aligned with global normative sources (WHO, UNICEF, demographic health surveys, etc.) and international donors and organisations.

The AfDB Multi-sectoral Nutrition Action Plan aims to catalyse nutrition smart investments to support a 40% stunting reduction in Africa by 2025. Contribution to child stunting reduction is an overall impact indicator that should ideally be tracked through all nutrition smart AfDB projects. However, this will require a baseline survey at the launch of a project to understand the prevailing stunting level in the target geographic area. Child wasting can be an optional outcome indicator and/or recommended for any integrated management of acute malnutrition project component. The other core indicators for nutrition smart investments in the five priority sectors in AfBD are presented in Table 3 below.

38 WHO | Global Targets 2025: https://www.who.int/nutrition/global-target-2025/en/

<sup>37</sup> The Continental Nutrition Accountability Scorecard: A Call for Better Advocacy and Accountability for Nutrition Investments in Africa

## Nutrition-related Indictors that can be Included in Projects

The AfDB has compiled a suite of indicators to be incorporated into nutrition smart projects. These include 11 CSIs and an additional set of CPIs. More details on indicators can be found in the AfDB Project Indicators resource document available from nutrition@afdb.org.

## Table 3

CSIs and CPIs for AfDB projects						
Core Se	ector Indicators (CSIs)	Custom Project Indicators (CPIs)				
The standard indicators that can be integrated at the relevant level in the Result-Based Logical Framework include:		Examples of additional output and outcome indicators for projects in priority sectors include:				
Stunting prevalence: Po 59 months.	ercentage (%) of stunted children aged 0-ercentage (%) of wasted children aged 0-ercentage (%) of wasted children aged 0-	Agriculture	<b>Biofortification:</b> Proportion of staple crop production that is biofortified.			
Minimum dietary diversity women, 15-49 years of defined food groups in the Minimum dietary diversity of the children, 6-23 months of four food groups the present the second state of the children of the chil	ersity for children: Percentage (%) of fage, who consume food from at least 4	Health WASH	Deworming: Proportion of children 12-59 months who received deworming medication in the previous six months.  WASH facilities:  Number (#) of WASH facilities constructed and/or rehabilitated.  Number (#) of households with			
Sector specific (outp	ut and outcome indicators): Access to clean drinking water: Percentage (%) of the population that has access to and uses improved drinking water sources.  Access to improved sanitation facilities: Percentage (%) of the population that has access to and uses improved sanitation facilities.	Education (P)	handwashing stations.  Enrolment: Percentage (%) increase in enrolment of males and females into higher education institutions for nutrition-related courses and programmes.  Coverage: Number (#) of beneficiaries who received cash			
Health	Exclusive breastfeeding: Proportion of infants 0-5 months of age who are fed exclusively with breastmilk during the previous day, with no other solids or liquids, including water.	Social Protection	transfers for achieving nutrition- related conditionalities.			
Agriculture	Food production: Percentage (%) increase in production of (selected) nutrient rich foods					
Social Protection	Social protection mechanism: Percentage (%) of population covered by at least one nutrition smart social protection mechanism					
Education	Access to higher education: Percentage (%) of population with increased and equitable access to higher education food and nutrition courses, programmes and curricula with improved content.					

#### Overall Impact Indicator

Stunting: Stunting, or being too short for one's age, is defined as a height that is more than two standard deviations below the World Health Organization (WHO) child growth standards median.<sup>39</sup> Stunting, also known as chronic undernutrition, is one of the most significant impediments to human development, globally affecting 149 million children under the age of five -58.8 million of these vulnerable children live in Africa. 40 Stunting is a largely irreversible outcome of inadequate maternal and early childhood nutrition and repeated bouts of illness during the first 1,000 days of lifefrom conception to the age of two. It also reflects the cumulative effects of intergenerational poverty. Stunting has longterm effects on individuals and societies, including diminished cognitive and physical development, reduced productive capacity and poor health, and an increased risk of degenerative disease.<sup>41</sup>

Collection and reporting of stunting data: At the national level, stunting is a nutrition indicator derived from anthropometric data collected through National Demographic and Health Surveys (DHS). DHS are nationally representative household surveys that provide data for a wide range of monitoring and impact evaluation indicators in the areas of population, health and nutrition.<sup>42</sup> On average, most countries undertake DHS every five years, and many countries disaggregate their data down to sub-national levels to allow for comparison of sub-national regions. In some cases, countries may independently decide to carry out regional/sub-regional surveys that include anthropometric measurements from which stunting data can be derived. In order for AfDB projects to demonstrate their contribution towards stunting reduction, it is important for the projects to be as specific as possible, especially in terms of the regions where projects are being implemented so comparisons can be drawn from the relative DHS data of those specific regions over time. The projects would need to use the previous DHS as the baseline with the one undertaken after project closure serving as the endline. It is crucial for nutrition smart investments to clearly define the pathway of their interventions and how the projects are contributing to improved nutrition outcomes.

#### Optional Impact Indicator

Wasting: Wasting, or being too thin for one's age, is defined as a weight that is more than two standard deviations below the WHO child growth median.<sup>43</sup> It is usually the result of acute significant food shortage and/or disease. Wasting is a major public health problem because of the heightened risk of disease and death for children who lose too much of their body weight.<sup>44</sup> It therefore requires urgent attention from policy-makers and programme implementers alike, especially in countries with acute malnutrition hot spots. In addition, child survival rates cannot improve without increasing the proportion of wasted children receiving timely and appropriate life-saving treatment, alongside reductions in the number of children becoming wasted in the first place (prevention).

Collection and reporting of wasting data: At the national level, wasting is a nutrition indicator derived from anthropometric data that collected through National DHS. Many countries disaggregate their data down to sub-national levels to allow for comparison of sub-national regions. Due to the increased risk of death associated with wasting, countries independently carry out regional/sub-regional surveys that include anthropometric measurements from which wasting data can be derived. This includes cases of emergency (for example in food insecure regions), where nutrition surveillance is normally carried out and child wasting rates are provided to inform immediate action.

If AfDB projects specifically address wasting (especially in emergency situations), it will be important for either baselines to be undertaken as soon as possible or to utilise data available from very recent surveys because this will inform the classification of the emergency situation in the region. It is essential that projects implemented in this context produce monitoring data for the target population, for example:

Number of children under five years with SAM or MAM

Number of children under five years receiving SAM and MAM treatment

Number of children under five years discharged from treatment programmes

Number of households with children under five years who have been discharged from treatment programmes that have been linked to social protection initiatives

<sup>42</sup> https://dhsprogram.com/what-we-do/survey-Types/dHs.cfm. Accessed on 20 May 2019.

<sup>39</sup> WHO child growth standards and the identification of severe acute malnutrition in infants and children. A joint statement. Geneva: World Health Organization; 2009 (http://apps.who.int/iris/bitstream/10665/44129/1/9789241598163\_eng.pdf)

<sup>&</sup>lt;sup>40</sup> UNICEF/WHO/World Bank Group Levels and Trends in Child Malnutrition: Joint Child Malnutrition Estimates 2019 Edition Nutrition Targets 2025: Stunting Policy Brief." Health Organization 2014. World https://apps.who.int/iris/bitstream/handle/10665/149019/WHO\_NMH\_NHD\_14.3\_eng.pdf?ua=1.

<sup>&</sup>lt;sup>43</sup> WHO child growth standards and the identification of severe acute malnutrition in infants and children. A joint statement. Geneva: World Health Organization; 2009 (http://apps.who.int/iris/bitstream/10665/44129/1/9789241598163\_eng.pdf)

<sup>44</sup> WHO Multicentre Growth Reference Study Group. WHO child growth standards. Length, height for-age, weight-for-age, weight-for-length and body mass index-for age. Methods and development. Geneva: World Health Organization; 2006

#### Sector Specific Indicators

**Exclusive Breastfeeding (EBF):** Exclusive breastfeeding<sup>45</sup> - the practice of giving an infant only breastmilk for the first six months of life (no other food or water)—has the single largest potential impact on child mortality of any preventive intervention.<sup>46</sup> It is part of optimal breastfeeding practices, which also includes initiation within one hour of life and continued breastfeeding for up to two years of age or beyond. EBF is a cornerstone of child survival and child health because it provides essential, irreplaceable nutrition for a child's growth and development. It serves as a child's first immunisation—providing protection from respiratory infections, diarrhoeal disease and other potentially life-threatening ailments.<sup>47</sup> Evidence suggests that EBF also has protective effect against obesity and certain non-communicable diseases later in life.<sup>48</sup>

Collection and reporting of EBF data: At national level, EBF is a nutrition indicator collected through National DHS, which are undertaken every five years on average with many countries disaggregate their data down to sub-national levels to allow for comparison of sub-national regions. However, EBF data can also be collected in specific sub-national surveys including sub-regional specific nutrition surveys (organised by government or partners) and Maternal, Infant and Young Child Nutrition (MIYCN) Knowledge, Attitude, Behaviour and Practice (KABP) surveys, among others. AfDB projects that are aligned towards contributing to improved EBF rates should endeavour to undertake MIYCN KABP surveys in the selected regions at the inception and end of the project. The baseline survey will provide benchmarks against which to measure project performance as well as identify the barriers to appropriate adoption of MIYCN practices. Several global guidelines for the development of MIYCN KABP surveys that can be adapted for AfDB projects are available, including:

- <a href="http://www.fao.org/3/i3545e/i3545e00.htm">http://www.fao.org/3/i3545e/i3545e00.htm</a>, and
- <a href="http://www.spring-nutrition.org/publications/tool-summaries/kap-survey-model-knowledge-attitudes-and-practices">http://www.spring-nutrition.org/publications/tool-summaries/kap-survey-model-knowledge-attitudes-and-practices</a>.

#### Dietary Diversity Indicators

**Dietary diversity** is defined as the number of individual food groups consumed over a given period of time.<sup>49</sup> At the household level, dietary diversity is usually considered as a measure of access to food and serves as a proxy indicator for the household's socio-economic level. At individual level, it reflects dietary quality and micronutrient adequacy.<sup>50,51</sup> Dietary diversity is strongly associated with nutrient adequacy and is widely recognised as being a key dimension of diet quality. Hence it is reflected in food-based dietary guidelines.<sup>52,53,54</sup>

**Minimum dietary diversity for women (MDD-W):** MDD-W is a dichotomous indicator of whether or not women 15–49 years of age have consumed at least five out of 10 defined food groups the previous day or night. The proportion of women 15–49 years of age who reach this minimum in a population can be used as a proxy indicator for higher micronutrient adequacy, one important dimension of diet quality.

<sup>46</sup> Jones, Gareth, Richard W. Steketee, Robert E. Black, Zulfiqar A. Bhutta, Saul S. Morris, and Bellagio Child Survival Study Group. "How Many Child Deaths Can We Prevent This Year?" Lancet (London, England) 362, no. 9377 (July 5, 2003): 65–71. https://doi.org/10.1016/S0140-6736(03)13811-

<sup>48</sup> Horta, Bernardo L., and Cesar G. Victora. "Long-Term Effects of Breastfeeding: A Systematic Review." World Health Organization (WHO), 2013. https://apps.who.int/iris/bitstream/handle/10665/79198/9789241505307\_eng.pdf;sequence=1.

<sup>45 &</sup>quot;Global Nutrition Targets 2025: Breastfeeding Policy Brief." World Health Organization (WHO), 2014. https://apps.who.int/iris/bitstream/handle/10665/149022/WHO\_NMH\_NHD\_14.7\_eng.pdf?ua=1.

<sup>&</sup>lt;sup>47</sup> Horta, Bernardo L., and Cesar G. Victora. "Long-Term Effects of Breastfeeding: A Systematic Review." World Health Organization (WHO), 2013. https://apps.who.int/iris/bitstream/handle/10665/79198/9789241505307\_eng.pdf;sequence=1.

<sup>&</sup>lt;sup>49</sup> Ruel MT. Operationalizing dietary diversity: A review of measurement issues and research priorities. Journal of Nutrition 2003;133:3911S-3926S. Available at: http://jn.nutrition.org/content/133/11/3911S.

<sup>&</sup>lt;sup>50</sup> Food and Agriculture Organization of the United Nations. Guidelines for measuring household and individual dietary diversity. 2011. Available at: http://www.fao.org/docrep/014/i1983e/i1983e00.htm.
<sup>51</sup> World Food Programme (WFP). Comprehensive Food Security & Vulnerability Analysis Guidelines. United Nations World Food Programme, Rome,

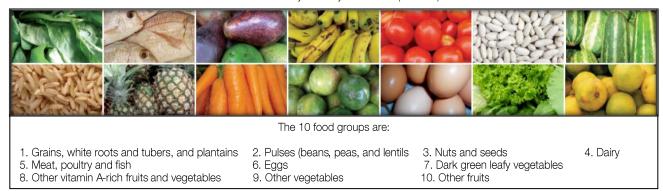
taly, 2009.

<sup>&</sup>lt;sup>52</sup> International Symposium on Food and Nutrition Security: Food-based approaches for improving diets and raising levels of nutrition. Food and Agriculture Organization of the United Nations. 2010. Available at: http://www.fao.org/ag/humannutrition/24259-0306025ae307fac11c643947408a112d.pdf.

<sup>&</sup>lt;sup>53</sup> Chung K. An introduction to nutrition-agriculture linkages. Direcção De Economia, Ministério Da Agricultura, República De Moçambique Research Report 72E. 2012. Available at: http://fsg.afre.msu.edu/mozambique/WP72Chung.pdf.

<sup>&</sup>lt;sup>54</sup> Arimond M, Wiesmann D, Becquey E, et al. Dietary diversity as a measure of the micronutrient adequacy of women's diets in resource-poor areas: Summary of results from five sites. Food and Nutrition Technical Assistance 2. 2011. Available at: http://www.fantaproject.org/sites/default/files/resources/WDDP\_Summary\_Report\_Jul2011.pdf.

Figure 10 Minimum dietary diversity for women (MDD-W)



Source: "Introducing the Minimum Dietary Diversity – Women (MDD-W) Global Dietary Diversity Indicator for Women." Washington, D.C.: Food and Nutrition Technical Assistance Project/FHI 360, July 15, https://www.fantaproject.org/sites/default/files/resources/Introduce-MDD-W-indicator-brief-Sep2014\_0.pdf.

Minimum Acceptable Diet (MAD) for children 6-23 months old: MAD is one of eight core indicators for assessing IYCF practices developed by the WHO. These eight indicators were developed to provide simple, valid and reliable metrics for assessing the many aspects of IYCF that are of interest at the population level. The other seven indicators are: early initiation of breastfeeding; EBF under six months; continued breastfeeding at one year; introduction of solid, semi-solid, or soft foods; minimum dietary diversity; minimum meal frequency; and consumption of iron-rich or iron-fortified foods. The MAD indicator is a composite indicator composed of the Minimum Dietary Diversity (MDD) and Minimum Meal Frequency.

Minimum Dietary Diversity (MDD): Breastfed child consumed foods from five out of eight of the food groups during the previous day.

Minimum Meal Frequency (MFF): Child receives solid, semi-solid, or soft foods (but also includes milk for nonbreastfed children) the minimum number of times or more over the previous day. The minimum number of times are:

- 2 times for breastfed infants 6-8 months
- 3 times for breastfed children 9-23 months
- 4 times for non-breastfed children 6-23 months

To calculate the indicator, information on breastfed and non-breastfed children is combined by adding the following two fractions: Breastfed children 6-23 months of age who had at least the MDD and the minimum meal frequency during the previous day / Breastfed children 6-23 months of age AND Non-breastfed children 6-23 months of age who received at least two milk feedings and had at least the MDD not including milk feeds and the minimum meal frequency during the previous day / Non-breastfed children 6-23 months of age. **Note:** The WHO recommends that this indicator be further disaggregated and reported for the following age groups: 6-11 months, 12-17 months, and 18-23 months of age.

Figure 11 Minimum dietary diversity (MDD) for children 6-23 months of age **Food Groups** 1. Grains, roots, and tubers 2. Legumes and nuts 3. Dairy products
4. Flesh foods 5. Eggs 6. Vitamin A-rich fruits and vegetables 7. Other fruits and vegetables The total number of food groups consumed is summed. Population level indicator is calculated based on the following formula: Children 6-23 months of age who received foods from 4 food groups during the previous day Total number of children 6-23 months of age surveyed

Collection and reporting of dietary data: At the national level, dietary data are sometimes collected through National DHS, conducted every five years by most countries. The most likely indicators that are found in the DHS are the child feeding practices, covering both MMD and MMF. It is highly unlikely for countries to include MDD-W, however, MDD-W can be found in specific nutrition surveys like SMART surveys, as well as national and sub-national nutrition programme monitoring, etc. Moreover, just like EBF, dietary data can also be collected in national and sub-national dietary surveys, KABP surveys, as well as programme baselines.

AfDB projects with objectives that aim to improve dietary diversity should endeavour to undertake dietary surveys in the selected regions at the inception and end of the project. The baseline survey will provide benchmarks against which to measure project performance as well as identify the barriers to improved dietary diversity at individual and household levels. Opportunities exist for working with other local partners to collect adequate data on this indicator. There are specific templates provided for collecting MDD-W and MAD data that AfDB projects can contextualize, including: MDD-W: FAO, FANTA (2016). Measuring Dietary Diversity for Women: A guide to measurement. (http://www.fao.org/3/a-i5486e.pdf), and

MAD: WHO, (2010). "Indicators for assessing infant and young child feeding practices (Part 2 Measurement) (https://apps.who.int/iris/bitstream/handle/10665/44306/9789241599290\_eng.pdf?sequence=1)

Food fortification: Despite increasing agricultural productivity, close to 1 billion people are unable to meet their minimum food energy requirements, and 2 billion suffer from hidden hunger caused by micronutrient deficiencies. This mainly affects children under five years of age, pregnant and lactating women, and the poor, sick and elderly.<sup>55</sup>

Fortification is the practice of deliberately increasing the content of an essential micronutrient, i.e. vitamins and minerals (including trace elements), in a food, to improve the nutritional quality of the food supply and provide a public health benefit with minimal risk to health. 56 Food fortification has been identified by the WHO, the Copenhagen Consensus and the Food and Agriculture Organization as one of the top four strategies for decreasing micronutrient malnutrition at the global level. Food fortification is a strategy that has been used safely and effectively by governments working with industry, international agencies and NGOs to prevent micronutrient deficiencies in high-income countries for more than a century with the resultant effect that many low- and middle-income countries now have staple food fortification programmes to combat micronutrient deficiencies. It is becoming an increasingly attractive investment in countries faced with population-level micronutrient deficiencies primarily due to rapid urbanisation, increasing household purchasing power and increased consumption of processed foods.<sup>57</sup>

Fortification of centrally processed staple foods is a simple, affordable and viable approach to reach large sections of a country's population with iron, folic acid, and other essential micronutrients: Adding micronutrients to common staple foods can significantly improve the nutritional quality of the food supply and improve public health with minimal risk. African countries are at different stages of fortification programmes but the food groups most commonly fortified (either through mandatory or voluntary legislation) are staple foods such as rice, maize flour, wheat flour; edible oils; salt; condiments and sauces; and milk and dairy products. Mandatory fortification simply means that the addition of specific nutrients at predetermined levels to specified foods or food products is legislated by the government, whereas voluntary fortification allows food manufacturers to choose what micronutrients they add to food, as long as there are permissions in the Code.<sup>58</sup> For example, breakfast cereals are allowed to be fortified with a range of vitamins and minerals, but the amounts that can be added are also regulated.

Collection and reporting of food fortification data: National level data on food fortification can be collected through targeted food consumption surveys (either by the integration of fortification components into a general consumption survey or specific surveys on fortified foods). Countries can also decide to combine this with KABP surveys (to understand consumer behaviours around consumption of fortified foods), market surveys, regulatory monitoring and surveillance for quality assurance of fortified foods.

AfDB projects supporting food fortification programmes need to plan and budget for monitoring at different stages of the project. This can include the integration of standard rapid assessment tools, incorporation of KABP surveys as well as market surveillance. Available tools can be adapted to the country context and information is to be collected over three timelines—inception, midline and endline. The tools can be found at: https://fortificationdata.org/.

<sup>57</sup> Keats et al. Improved micronutrient status and health outcomes in low- and middle-income countries following large-scale fortification: evidence from systematic review and meta-analysis. Downloaded from https://academic.oup.com/ajcn/advance-articleabstract/doi/10.1093/ajcn/ngz023/5475063 by guest on 23 May 2019

<sup>&</sup>lt;sup>55</sup> FAO, 2012. Sustainable nutrition security. Restoring the bridge between agriculture and health. Rome, Italy.

<sup>&</sup>lt;sup>56</sup> WHO and FAO, 2006: Guidelines on food fortification with micronutrients.

<sup>58</sup> Zimmerman S, Baldwin R, Codling K, Hindle P, Montgomery S, Panchen H, Maberly G. Mandatory policy: Most successful way to maximize fortification's effect on vitamin and mineral deficiency. Indian J Comm Health.

The development of a food fortification M&E system that can be properly implemented and maintained requires careful planning and resources. The collection of availability or coverage data needs to come from country surveys and ideally, information generated by the M&E system should be regularly reviewed by a Food Fortification Alliance—a multi-sector group of key stakeholders. Some of the key stakeholders involved in food fortification are Ministries of Health, and international partners like Global Alliance for Improved Nutrition (GAIN), Nutrition International, etc.

Diversification of agricultural production to increase the availability of nutrient dense foods is one of the key strategies used to improve accessibility to diversified and nutritious foods for the population and promote diversified diets. Good nutrition largely depends on the ability of the agricultural sector to produce the food groups—cereals, pulses, vegetables, fruit, meat, fish, milk and dairy products-necessary for a balanced diet and one that meets the recommended daily dietary allowances for essential nutrients.

Collection and reporting of agricultural diversification data: It is important for agricultural production programmes to select indicators that will allow for monitoring to track nutrition outcomes and impact. The on-farm availability and diversity of foods is used if the proposed interventions aim to increase the amount, type or quality of foods produced for home consumption.<sup>59</sup> The key indicators proposed include:

- Availability of specific (micronutrient-rich) foods on-farm: This is used to track whether specific foods of interest promoted by a given intervention are available on farm. This indicator can also measure increase or decrease in production volume, across seasons and %, compared to pre-project levels. Therefore, it is critical that the baseline information is collected before the project starts and an endline survey is implemented at the expiration of the project to allow for comparison.
- Diversity of foods produced on-farm: This is used to measure availability of diverse nutritious foods. There is no standard method for measuring this indicator for nutrition purposes. However, three methods referenced include:
  - 1. Simple count of species produced over the last 12 months (including crops, livestock, fisheries, etc.)
  - 2. Shannon Index-biodiversity calculator<sup>60</sup>
  - 3. Simpson Index- biodiversity calculator<sup>61</sup>

Countries that aim to increase the production of nutrient dense rich foods should be encouraged to regularly update their national and sub-national agricultural production statistics. Furthermore, specific funded projects should monitor this information throughout the life of the project.

Improved sanitation: By 2030, the SDG Target 6.2 aims to achieve access to adequate and equitable sanitation and hygiene for all, and to end open defaecation, paying special attention to the needs of women and girls and those in vulnerable situations. Universal access to adequate sanitation is a fundamental need and human right. Securing access for all would go a long way to reduce illness and death, especially among children. Since 2000, an estimated 2.1 billion people have gained access to basic sanitation, such as flush toilets or latrine with a slab that is not shared with other households. In 2017, some 2 billion people still lack a basic sanitation service and among them, almost 673 million people still practised open defaecation. 62 The data reveal pronounced disparities, with the poorest and those living in rural areas least likely to use a basic service. "Safely managed" sanitation services represent a higher service level that considers the final disposal of excreta. In 2015, an estimated 3.4 billion people used a "safely managed" sanitation service, i.e. a basic facility where excreta are disposed in situ or treated off-site. A further 2.2 billion people used a "basic" service, i.e. an improved facility that is not shared with other households. The 627 million who shared improved sanitation facilities with other households count as a "limited" service.

<sup>&</sup>lt;sup>59</sup> FAO, 2017. Compendium of Indicators for nutrition-sensitive agriculture. Rome, Italy.

<sup>60</sup> Shannon Index- biodiversity calculator. Available at: https://www.alyoung.com/labs/biodiversity\_calculator.html (Accessed 21 May 2019)

<sup>61</sup> Simpson index- biodiversity calculator. Available at: https://www.alyoung.com/labs/biodiversity\_calculator.html (Accessed 21 May 2019)

<sup>62</sup> WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (JMP)

Figure 12 Improved sanitation

SERVICE LEVEL	DEFINITION				
SAFELY MANAGED	Use of improved facilities that are not shared with other households and where excreta are safely disposed of in situ or transported and treated offsite.				
BASIC	Use of improved facilities that are not shared with other households.				
LIMITED	Use of improved facilities shared between two or more households.				
UNIMPROVED	Use of pit latrines without a slab or platform, hanging latrines or bucket latrines.				
OPEN DEFAECATION	Disposal of human faeces in fields, forests, bushes, open bodies of water, beaches or other open spaces, or with solid waste.				
Note: Improved facilities include flush/pour flush to piped sewer systems, septic tanks or pit latrines; ventilated improved pit latrines, compositing toilets or pit latrines with slabs.					

Source: Joint Monitoring Program (JMP). "Progress of Drinking Water, Sanitation and Hygiene, 2017." Geneva, Switzerland: World Health Organization (WHO) and the United Nations Children's Fund (UNICEF), 2017. https://washdata.org/.

**Access to safe drinking water:** Drinking water services<sup>63</sup> refer to the accessibility, availability and quality of the main source used by households for drinking, cooking, personal hygiene and other domestic uses. A basic drinking water source is drinking water from an improved source (improved sources of drinking water include piped water, boreholes or tube wells, protected dug wells, protected springs, rainwater, and packaged or delivered water). Although 1.8 billion people have gained access to basic drinking water services since 2000, there are vast inequalities in the accessibility, availability and quality of these services. It is estimated that one in 10 people (785 million) still lack basic services, including the 144 million who drink untreated surface water. An estimated eight in 10 people living in rural areas lack access to these services and in one in four countries with estimates for different wealth groups, coverage of basic services among the richest was at least twice as high as among the poorest.

#### **Key terms:**

Safely managed drinking water and sanitation services: Drinking water from sources located on premises, free from contamination and available when needed, and using hygienic toilets from which wastes are treated and disposed of safely.

Basic services: Having a protected drinking water source that takes less than 30 minutes to collect water from, using an improved toilet or latrine that does not have to be shared with other households, and having handwashing facilities with soap and water in the home.

Collection and reporting of improved sanitation and safe drinking water data: SDG 6 WASH targets are measured using the following indicators:

- Proportion of population using safely managed drinking water services
- Proportion of population using safely managed sanitation services
- Proportion of population with handwashing facilities with soap and water at home

63 Source: Joint Monitoring Program (JMP). "Progress of Drinking Water, Sanitation and Hygiene, 2017." Geneva, Switzerland: World Health Organization (WHO) and the United Nations Children's Fund (UNICEF), 2017. https://washdata.org/.

Figure 13 Improved drinking water sources

SERVICE LEVEL	DEFINITION			
SAFELY MANAGED	Drinking water from an improved water source that is located on premises, available when needed and free from faecal and priority chemical contamination.			
BASIC	Drinking water from an improved source, provided collection time is not more than 30 minutes for a round trip, including queuing.			
LIMITED	Drinking water from an improved source for which collection time exceeds 30 minutes for a round trip, including queuing.			
UNIMPROVED	Drinking water from an unprotected dug well or unprotected spring.			
SURFACE WATER	Drinking water directly from a river, dam, lake, pond, stream, canal or irrigation canal.			
Note: Improved sources include: piped water, boreholes or tube wells, protected dug wells, protected springs, rainwater, and packaged or delivered water.				

Source: Joint Monitoring Program (JMP). "Progress of Drinking Water, Sanitation and Hygiene, 2017." Geneva, Switzerland: World Health Organization (WHO) and the United Nations Children's Fund (UNICEF), 2017. https://washdata.org/.

In addition, the WHO/UNICEF Joint Monitoring Programme (JMP) for water supply, sanitation and hygiene contributes data that can be used for the calculation of indicators in other SDG goals, including:

- Proportion of population living in households with access to basic services
- Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene
- Proportion of schools with access to safe drinking water, single-sex basic sanitation facilities, and basic handwashing facilities

At national level, WASH indicators may in some cases be collected through the National Population and Housing Census, other national and sub-national household surveys, or the integration of WASH questions into other surveys like Multiple Indicator Cluster Surveys (MICS) and SMART surveys. Governments also collaborate with regulatory agencies and service providers in order to access WASH data.

AfDB projects with objectives that aim to improve drinking water, improved sanitation and hygiene outcomes should endeavour to undertake WASH surveys in the selected regions at the inception and end of the project. The baseline survey will provide benchmarks against which to measure project performance as well as identify the barriers to improved WASH at household and community levels. It is important to note that WASH surveys should include KABP components to understand behaviours and attitudes that promote or hinder the adoption of positive WASH practices.

Higher Education: Since the adoption of the Universal Declaration of Human Rights (1948), education has been recognized as a human right. Education offers children a ladder out of poverty and a path to a promising future. For children in emergencies, education offers safety, a sense of normalcy and the knowledge needed to build a more peaceful future. 64 Higher education is critical for development, and science, technology, innovation, vocational training and skills development are particularly important for increasing Africa's competitiveness. The AfDB's HEST strategy was designed to assist member countries to strengthen their educational systems, particularly tertiary education, science, technology, technical and vocational education as well as training.

Collection and reporting of higher education data: Depending on the objective of the project, the indicators to be monitored may vary. Examples of key indicators to be measured include: 65

- The AfDB's expenditure on higher education
- Students' access to loans and scholarships for nutrition programmes
- Students' access to higher education nutrition courses
- Enrolment of males and females into higher education for nutrition related courses
- University learning programmes integrating nutrition into their curricula

<sup>64</sup> https://www.unicef.org/education, Accessed on 16th May 2019.

<sup>&</sup>lt;sup>65</sup> Martin, M., Sauvageot, C. Constructing an indicator system or scorecard for higher education. A practical guide. UNESCO 2011

- Number of universities offering food and nutrition courses
- Enrolment of students into food and nutrition courses
- Employment rates of higher education nutrition graduates

AfDB projects with objectives that aim to improve nutrition-related education outcomes should endeavour to undertake data collection at the inception and end of the project. The baseline survey will provide benchmarks against which to measure project performance as well as identify the barriers to improved access to higher education.

Social Protection: Social protection programmes aim to prevent, reduce and eliminate economic and social vulnerabilities and poverty in order to ensure a minimum standard of well-being with emphasis on the most vulnerable and disadvantaged groups. Social safety net mechanisms include public works, CCTs, UCTs, in-kind transfers, food distribution, grants, school feeding or assistance from emergency response.

Collection and reporting of social protection data: Social protection programmes can vary widely, depending on the safety net mechanism envisaged for the programme. Depending on the objective of the programme, key factors that should be monitored include:

- Tracking the number of registered beneficiaries in all social protection programmes
- Tracking transfers and payments made to programme beneficiaries

AfDB projects with objectives that aim to improve social protection outcomes should endeavour to undertake data collection at the inception and end of the project. The baseline survey will provide benchmarks against which to measure project performance as well as identify the barriers to improved social protection services. For example, Gender Equality and Women's Empowerment in Agriculture Index (WEAI). WEAI measures the empowerment, agency, and inclusion of women in the agriculture sector to find ways to overcome identified obstacles and constraints. It also measures women's control over critical parts of their lives in the household, community and economy. The index is a significant innovation in its field and aims to increase the understanding of the connections between women's empowerment, food security, and agricultural growth. WEAI measures the roles and extent of women's engagement in the agriculture sector in five domains (see Figure 14 below).

Figure 14 Domains of empowerment DOMAINS OF EMPOWERMENT WHAT DOES IT MEAN FOR WOMEN TO BE EMPOWERED IN AGRICULTURE? WORKLOAD DECIDING HOW OWNERSHIP OF I FADING AND DECISIONS **PRODUCTION PARTICIPATING** in paid and unpaid activities MONEY IS SPENT about ag production, with control over income with control over land, in community groups and ability to control one's solely or jointly livestock, tools and credit and organizations

Source: USAID-funded Agrilinks, https://agrilinks.org/sites/default/files/WomensDayInfographic 030717 V4.pdf

More information on how to calculate and score WEAI can be found here: http://ebrary.ifpri.org/utils/getfile/collection/p15738coll2/id/126937/filename/127148.pdf.

## 9: AfDB Nutrition Marker & Project Checklist

The Nutrition Marker System has been developed to assist AfDB project managers and decision-makers design and categorise nutrition smart projects in view of their potential contribution to accelerating stunting reduction in Africa.

#### Purpose

This tool has been designed for the following three purposes:

- 1. As a quick guide for project task teams, highlighting key features that should be integrated into projects to make them nutrition smart.
- 2. As a reference tool for peer reviewers of concept notes, project appraisal documents, and project proposals to be submitted for AfDB Board approval.
- 3. As a benchmark for categorising and tracking nutrition smart projects in line with the performance targets outlined in the Bank's 2018-2025 MNAP.

#### How to use this Tool

- 1. For project design: Use the questions listed to guide the formulation of the project concept note and project appraisal document. You can also refer to other learning resources available from nutrition@afdb.org.
- 2. For project review: When reviewing a project document (concept note or appraisal document), use the checklist (answering "Yes" or "No") to determine if the project is nutrition smart. Where the answer is "No", highlight the relevant section as an area for improvement.
- 3. For categorising the project as being nutrition smart: Refer only to questions 1 to 5. A project is deemed to be nutrition smart if the following three criteria are met:
  - Nutrition is incorporated as part of the project goal and/or outcomes (i.e. the answer to guestions 1 and/or 2 is
  - The logical framework includes a nutrition impact or outcome indicator (i.e. the answer to questions 3 and/or 4 is "Yes")
  - Evidence-based nutrition interventions/activities are included in the project strategy (i.e. the answer to question 5 is "Yes")

Table 4
Snapshot of AfDB Nutrition Marker and Project Checklist

tion	Category	Question Number	Key Questions for AfDB Staff	Description	YES / NO	Marker for Nutrition Smart Assessment
	Project impact	1	Does the project impact (principal goal/objective) directly and explicitly address nutrition outcomes?	The project impact includes the aim of improving nutrition outcomes and/or addressing the <b>immediate</b> causes of malnutrition. It explicitly includes the word "nutrition".	Yes	Project is nutrition smart if the answe to at least one of these two question:
	Project Outcomes	2	Does the project have at least one outcome focused on improving nutrition?	At least one of the project's <b>outcomes</b> is focused on improving nutrition (i.e. includes the word "nutrition") and addresses the <b>immediate</b> or <b>underlying</b> causes of malnutrition.	No	is yes.
	Project indicators	3	Is a nutrition indicator focused on reducing malnutrition (i.e. stunting, wasting, etc.) associated with the project impact?	Nutrition outcome is a high level objective of the project (c.f. question 1) and the project specifically aims to measure improvements in nutritional status in the population. This indicator is SMART and included in the logical framework.		Project is nutrition smart if the answe
	Project indicators	4	Does the project have at least one nutrition or nutrition-related outcome indicator?	The project logical framework includes at least one nutrition outcome indicator. The indicator can be a measurement of <b>underlying</b> causes of malnutrition such as dietary diversity, infant and young child feeding (IYCF) practices, or use of nutrition-related health services (e.g. antenatal care services)	Yes	to at least one of these two questions is yes.
Project interventions/ activities  Does the project have at least one evidence-based intervention/activity focused on improving nutrition and Reference education.		intervention/activity focused on improving nutrition	One or more of the <b>project interventions</b> address the <b>immediate, underlying</b> or <b>basic</b> causes of malnutrition and explicitly mentions the word "nutrition".  Refer to the sectoral briefs on agriculture, WASH, health, education and social protection for examples of <b>evidence-based</b> interventions.	Yes	Project is nutrition smart if the answe to this question is yes.	

	Project budget	6	Does the project budget specifically include money for nutrition focused interventions?	The budget clearly specifies how many resources are dedicated to the implementation of nutrition-relevant activities.	
	Target population/ geography	7		how nutritionally vulnerable populations will benefit from the	
	Gender	8	Does the project contribute to gender equality and women's empowerment (e.g. access to and control over productive resources and income, education, labour reduction, access to essential services, women and/or adolescent girls engagement in interventions, etc.)?	and women's empowerment, which is a fundamental factor for	
nd review	Gender	9	Does the project include gender disaggregated data for at least one nutrition indicator?	At least one of the nutrition indicators used will be <b>gender disaggregated</b> (data for men and women/boys and girls will be presented separately).	
Guidance for project design and review	Project impact pathways	10	Are the impact pathways between the proposed activities and nutrition outcomes clearly articulated?	The project clearly identifies the <b>specific pathway(s)</b> between the proposed activities, outputs and outcomes that are intended to achieve nutrition impact. This impact pathway is clearly described in the project logical framework.	
lance for pro	Multi- sectorality	11	Does the project adopt a multisectoral approach to improving nutrition outcomes?	The project adopts a <b>multisectoral approach</b> , either by including activities involving different sectors or seeking synergies with other interventions in sectors that address other causes of malnutrition.	
Guic	Capacity development	12	Does the project state how it will help develop local capacity to improve nutrition outcomes?	The project specifies whose and which <b>capacities</b> will be strengthened to improve nutrition outcomes in a sustainable manner (e.g. government institutions, civil society, private sector, universities, etc.)	
	Monitoring and evaluation	13	If relevant, does the project plan to conduct a nutrition assessment at the project inception (i.e. baseline) and completion (i.e. endline)?	If secondary data is not available to inform the nutrition indicators in the logical framework, the project activity plan and budget include provision for <b>baseline and endline surveys</b> to report on selected nutrition indicators.	
	Operational arrangements	14		If relevant to provide detailed information on the human resource plan, the <b>human resources</b> required to implement the nutrition components of the project are well defined.	
	Operational arrangements	15	Does the project identify the nutrition partners to be involved in implementing nutrition-related actions?	The project describes the <b>partnerships</b> that will be established and which institutions (or types of institutions) will support the implementation of nutrition activities.	

## 10: AfDB Project Appraisal Reports (2015-2018): Summary Report of Baseline Data Analysis

#### Background

Through its 2018-2025 MNAP, the AfDB has prioritized investments that are nutrition smart, especially in the five sectors that account for over 30% of government spending in Africa and serve as underlying drivers of nutrition-Agriculture, Education, Health, Social Protection and WASH. This is based on a thorough review of evidence that has identified specific interventions in these five sectors that have the greatest impact on nutrition. Nutrition smart investments in these sectors can be leveraged to achieve a double bottom line for every dollar spent and support a 40% stunting reduction in Africa by 2025. As part of the Banking on Nutrition technical assistance package in support of the operationalisation of the Bank's MNAP, a Nutrition Dashboard has been created to monitor how the Bank is delivering on its targets. The dashboard has been populated with baseline datasets of the Bank's investments in nutrition using information from projects approved from 2015 to 2018 across the five priority sectors.

#### Methodology

The main data source was the AfDB's Excel database comprising key information on approved projects from 2015 to 2018. The analysis began with an in-depth desk review of each PAR followed by data entry into an Excel file. Areas of focus in the PAR included the sections on:

- Strategic thrust and rationale for AfDB involvement
- Project description (i.e. project goal and objectives, project components, and project activities)
- Project area and beneficiaries
- Result-based logical framework
- Project cost
- Economic and financial performance
- Social impact
- Gender; and Climate

A total of 211 projects were shortlisted for more detailed analysis involving profile listing and data collection guided by the key variables and definition sheet (see Annex 1).

#### Key Findings

- 1. **Profile and funding of nutrition smart projects in the AfDB:** Utilising the Bank's Nutrition Marker System, only 22 nutrition smart projects were identified, with the agriculture sector having the largest share of 14 projects. The Bank funding/budget of \$303 million on these 22 nutrition smart projects represents 4.1% of the total budget on projects during the reporting period with the greatest budget of \$253.1 million recorded in the agriculture sector. The funding/budget on nutrition smart projects across sectors showed
  - Health sector had 0.5% budget (\$723.23 thousand out of \$132.36 million)
  - WASH sector had 0.9% (\$18.16 million out of \$2.0 billion)
  - Social protection had 6.5% (\$30.0 million out of \$461.6 million)
  - Agriculture sector had 14% (\$253.10 million out of \$1.81 billion)

This finding indicates a generally low proportion of nutrition spending as against the AfDB targets across sectors. The number and type of project investments included in this analysis could have attributed to the results of this data analysis. However, this information should be considered as a benchmark data for further analysis and tracking of nutrition funding in the AfDB projects. A summary of the 22 nutrition smart projects is presented in Table 5 below.

Table 5 List of Nutrition Smart Projects with Budget by Sector

#	Country	Year	Sector	Project Name	Goal / Objective	Nutrition Intervention	Nutrition Indicator	Nutrition smart	Total Budget (USD)
1	Sudan	2018	Social	Improving Health Access and Systems Strengthening Project	Yes	Yes	Yes	Yes	28,553,806.50
2	Cameroon	2018	Social	Cameroun-Aide Humanitaire d'Urgence aux Refugiés de l'extreme Nord	Yes	Yes	Yes	Yes	723,227.91
3	Guinea- Bissau	2018	Agriculture	Projet de Developpement des Chaines de Valeur Riz	Yes	Yes	Yes	Yes	6,002,707.95
4	Nigeria	2018	Agriculture	Flour Mills of Nigeria Plc	Yes	Yes	Yes	Yes	54,242,093.31
5	Togo	2018	Agriculture	Projet de Transformation Agro-Alimentaire au Togo – ZTA Togo	Yes	Yes	Yes	Yes	29,899,609.35
6	Somalia	2018	Multi- Sector	Emergency Humanitarian Relief Assistance to the Victims of the Drought	Yes	Yes	Yes	Yes	723,227.91
7	Tanzania	2018	Agriculture	Tanzania Initiative for Preventing Aflatoxin Contamination	Yes	Yes	Yes	Yes	13,101,996.00
8	Swaziland	2018	WASH	Manzini Region Water Supply and Sanitation Project	Yes	Yes	Yes	Yes	2,951,705.04
9	Ghana	2017	Agriculture	Savannah Zone Agricultural Productivity Improvement Project	Yes	Yes	Yes	Yes	37,459,419.37
10	Namibia	2017	Agriculture	Namibia Agricultural Mechanization and Seed Improvement Project	Yes	Yes	Yes	Yes	3,687,934.37
11	Multinational	2017	Agriculture	Say No To Famine – Short Term Regional Emergency Response Project	Yes	Yes	Yes	Yes	33,608,250.00
12	Kenya	2017	Agriculture	Kenya - Emergency Humanitarian Relief Assistance to the Population affected by Drought and Famine	Yes	Yes	Yes	Yes	723,227.91
13	Somalia	2017	Social	Emergency Humanitarian Relief Assistance to the Victims of Drought	Yes	Yes	Yes	Yes	723,227.91
14	South Sudan	2017	Agriculture	Emergency Humanitarian Assistance to Population Affected by Drought and Famine	Yes	Yes	Yes	Yes	723,227.91
15	Eritrea	2017	Agriculture	Drought Resilience and Sustainable Livelihoods Programme	Yes	Yes	Yes	Yes	7,138,392.30
16	Zambia	2016	Agriculture	Aquaculture Enterprise Development Project	Yes	Yes	Yes	Yes	32,831,270.93
17	Nigeria	2016	Other	Emergency Assistance to Supporting the Fight against Malnutrition	Yes	Yes	Yes	Yes	723,227.91
18	Swaziland	2016	Agriculture	Emergency Humanitarian Relief Assistance for Drought Victims	Yes	Yes	Yes	Yes	723,227.91
19	Malawi	2016	Agriculture	Humanitarian Emergency Assistance to Mitigate Effects of 2015/2016 Drought	Yes	Yes	Yes	Yes	723,227.91
20	Madagascar	2016	Health	Aide Humanitaire d'Urgence à l'Assistance à la Lutte Contre la Malnutrition suite à la Sécheresse Récurente dans le Grand Sud	Yes	Yes	Yes	Yes	723,227.91
21	Malawi	2015	WASH	Nkhata Bay Town Water Supply and Sanitation	Yes	Yes	Yes	Yes	15,212,505.00
22	Senegal	2015	Agriculture	Senegal Programme de Renforcenment de la Resilience à L'Insécurité alimentaire et nutritionnelle au Sahel	Yes	Yes	Yes	Yes	32,236,022.50

- 2. **Project beneficiaries:** Only seven (3.3%) out of the 211 projects reviewed directly targeted women and children as project beneficiaries. Given the unacceptably high burden of malnutrition and increased number of stunted children in Africa, the AfDB projects should prioritise the target on nutritionally at-risk groups such as children under five years of age, pregnant and lactating women and adolescent girls and focus on the first 1,000 days of life. From 2000-2018, the number of stunted children in sub-Saharan Africa increased by 16.8%, reaching 58.8 million. 66 Children suffering from stunting experience a range of serious and costly health problems, from cognitive impairments—such as delayed motor development, impaired brain function and poor school performance—to illness, disease and death. The first 1,000 days—from conception to a child's second birthday is a window of opportunity to prevent irreversible developmental damage throughout a person's life. Good nutrition is critical for prospective mothers well before pregnancy and conception.
- 3. **Profile of nutrition activities and interventions in AfDB projects:** 65 projects incorporated at least one nutrition activity or intervention, representing 30.8% of all AfDB projects analysed during the reporting period. The proportion of projects with the integration of nutrition activities/interventions from 2015 to 2018 as presented in Figure 15 indicates a progressive increase from 12.5% to 47.6% over the past three years.

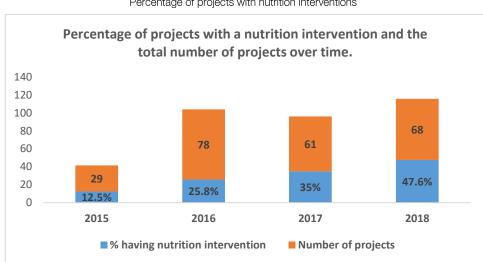


Figure 15
Percentage of projects with nutrition interventions

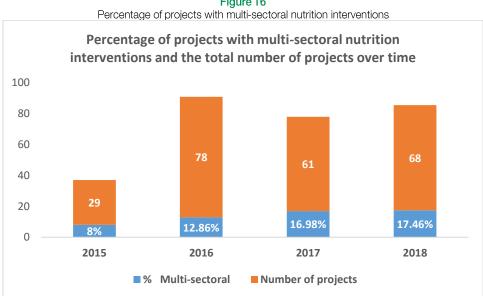
There are various types of nutrition interventions integrated across sectors. Agriculture and WASH sectors had the most proportion of nutrition interventions (see Table 6 below). These nutrition interventions are presented as reported in the PARs and clustered under key subject matters. Notably, the WASH-related interventions already being implemented by AfDB projects involved the three key interventions (water supply, sanitation facilities and hygiene promotion and education). The five AfDB sector briefs will provide guidance to the project team on the options for key nutrition interventions across the sectors.

<sup>&</sup>lt;sup>66</sup> UNICEF/WHO/World Bank Group Joint Child Malnutrition Estimates: Levels and trends in child malnutrition. Key findings of the 2019 edition.

Table 6
List of Nutrition Interventions by Sector

		LIST OF NUTTI	ion interve	ntions by Secti					
	Priority Sectors								
Interventions as reported in Project Appraisal Reports	Agriculture	Education	Health	Institutional Support	Multi- Sector	Public sector management	Social	WASH	Total
Activities- (Social mobilization; Capacity building) to control infection diseases -Zika virus	0	0	1	0	0	0	0	0	1
Capacity building or training on nutrition/health to enhance resilience	2	1	1	0	0	1	3	0	8
Delivery of nutrition services; provision of micronutrients; and treatment of malnourished children	0	0	0	0	1	0	0	0	1
Hygiene education and promotion	0	0	0	0	2	0	0	6	8
Implement gender sensitive WASH clubs in schools	0	0	0	0	0	0	0	1	1
Improve access to safe drinking water supply and sanitation	0	1	0	0	1	1	1	15	19
Improve access to health and nutrition services	0	0	0	1	1	0	0	0	2
Improve household incomes and food production/food security	5	0	0	0	0	0	1	0	6
Improvement of sanitary standards for agriculture and agro-industry products	0	0	0	0	1	0	0	0	1
Food product processing for improving nutrition and food security	3	0	0	0	0	0	0	0	3
Introduce nutrient-dense crop production and value chain development	1	0	0	0	0	0	0	0	1
Nutrition education and promotion	1	0	0	0	0	0	1	0	2
Provision of food supplies for affected people and improve consumption	4	0	0	0	1	0	1	0	6
Improving food and nutrition security for affected people	4	0	0	0	0	0	1	0	5
Provision of food supplies for affected people and improve consumption health and nutrition education	1	0	0	0	0	0	0	0	1
Total	21	2	2	1	7	2	8	22	65

4. Profile of multi-sectoral nutrition interventions in AfDB projects: Multi-sectoral intervention in this analysis involves coordinated planning and programming of project interventions across more than one sector to address the multiple causes of malnutrition. This data analysis indicates that about 15% of the AfDB projects generally work within a multi-sectoral environment with various partnerships including the government line ministerial offices and international NGOs. This suggests that the AfDB could leverage the enormous potential and synergies with relevant partners and stakeholders in implementing integrated impact pathways for nutrition outcomes. According to Figure 16, there is an increase trend on the proportion of projects with multi-sectoral nutrition interventions from the projects approved in 2015 (8%) to 2018 (17.46%). Some examples of these multi-sectoral interventions as reported in the PARs and the names of projects are presented in Annex 1.



#### Key Issues Identified from Baseline Analysis and Recommendations

The key issues identified from the baseline analysis are:

1. Clarity in setting nutrition goals/objectives: Explicit nutrition goals or objectives were absent in a significant proportion of Bank projects approved between 2015 and 2018. When present, the most commonly stated project goals or objectives revolved around food security, developing value chains of specific products or improving nutrition incomes, developing the capacity of institutions or influencing policy and empowering communities.

**Recommendation:** Future Bank projects should incorporate more explicit nutrition goals or objectives such as improving nutrition outcomes and health status, improving diet diversity and promoting adequate food consumption in general or consumption of specific fortified foods.

2. **Defining target groups for nutrition interventions:** Although most of the nutrition smart projects have clearly defined target groups, there are instances where the target groups are vaguely described as "vulnerable population" or the beneficiary population to be reached was not quantified.

Recommendation: Target groups should be defined during stakeholder consultative meetings convened at the planning stage. Essentially, the primary target groups for the Bank's nutrition interventions are children under five years, pregnant and lactating women, adolescent girls, school-aged children and youth.

3. Incorporation of high-impact and cost-effective nutrition interventions into Bank projects: Despite the huge potential of Bank projects in the five priority sectors—agriculture, education, health, social protection and WASH-a low proportion of nutrition smart projects were approved and implemented by the Bank during the reporting period of 2015-2018.

**Recommendation:** The operational toolkits developed as part of the Banking on Nutrition Programme provides the evidence base and knowledge resources on impact pathways, nutrition interventions and indicators to strengthen the Bank's capacity in designing, implementing and tracking more nutrition smart projects. Building on the nutrition capacity development programme conducted for Bank staff drawn from the West and Central Africa regional offices in June 2019 in Abidjan, Côte d'Ivoire, similar training workshops should be conducted for Bank staff in the other regional offices to increase the pool of trained personnel responsible for designing and implementing nutrition smart projects.

4. **Budgeting for nutrition interventions:** Given the context of integrating nutrition smart actions into core project components, only 15.6% (33 out of 211 projects) had dedicated budgets for nutrition activities. In several instances, the budgets were often not detailed by activity but were rather expressed as either project component or expenditure categories. It was also observed that while some projects had no dedicated budget for nutrition, nutrition activities were clearly indicated as part of the project components or sub-components.

**Recommendation:** Dedicated budgets for nutrition should be included in nutrition smart projects with clearly defined project beneficiaries, nutrition activities/interventions to be implemented and the expected results in terms of nutrition outcomes.

### 11: Conclusion

A comprehensive list of learning resources including operational toolkits, briefs, presentations, publications, videos, and user manuals has been developed and hosted on the AfDB's e-Institute Learning Portal to support distance and e-learning for capacity building of Bank staff at headquarters and regional offices. In addition, the learning portal includes additional external nutrition resources, key sources of nutrition data and links to the learning materials from other partners.

Along with this guidance document, the learning resources are meant to equip Bank staff with the appropriate competencies and skills for designing, implementing and tracking nutrition smart investments, and integrating nutrition smart actions and interventions into CSPs and RISPs with the overall aim of supporting a 40% stunting reduction in Africa by 2025.

In addition, the standard terms of reference for Nutrition focal persons is included in Annex 2. The terms of reference outlines roles and responsibilities for Bank staff that will be appointed as nutrition focal points in order to support the operationalisation of the Multi-sectoral Nutrition Action Plan 2018-2025.

# Annex 1: Description of Variables

Variable name	Short description			
Project Name	The shortened name of the project.			
Project Code	The project codes as indicated in the AfDB database on approved investment portfolio.			
Approval Year	The project approval year. This does not represent the actual year the project was launched.			
Country	Name of the country where the project is implemented.			
	For multinational, a column is created to list the names of all countries involved in the multinational project.			
Source of Project Funding	Names of main source of funding e.g. African Development Bank (AfDB), African Development Fund (ADF) and multiple sources of funding			
	Whether the project directly and explicitly addresses nutrition outcome as the principal goal/objective (yes/no).  The proposed actions must intend to improve nutrition outcomes for the most nutritionally vulnerable			
	population groups, especially children under five years of age, pregnant and lactating women, and adolescent girls, or support the prevention of undernutrition.			
Nutrition Goal/Objectives (yes/no)	Some examples as reported in the PARs are:  To transform agricultural value chains for food and nutrition security, job and wealth creation (Ghana, 2017: Savannah Zone Agricultural Productivity Improvement Project)  To improve equitable access to safe and affordable water supply and sanitation, good hygiene practices and environmental protection promoted for all (Gambia, 2018 – Climate Smart Rural WASH Development			
	project)  To increase the demand for health care and improve the supply of health services to reduce the high rates of mortality and morbidity among women and children in four states of Sudan. (Sudan, 2017: Improving Health Access and Systems Strengthening project)			
	Whether there are any evidence-based nutrition interventions in the project (yes/no).			
	Projects are defined as having evidence-based nutrition interventions if they incorporate any direct nutrition activity or indirectly improve nutritional outcomes of individuals and/or households.			
	Some examples as reported in the PARs are:			
	Increase the crop productivity through the use of improved and more nutritious seed varieties (Ghana, 2017: Savannah Zone Agricultural Productivity Improvement Project)			
	Nutrition activities to promote dietary diversity, and increase consumption of vegetables (Ghana, 2017: Savannah Zone Agricultural Productivity Improvement Project)			
Nutrition Interventions (yes/no)	Community sensitization on good nutrition and hygiene practices, and enhanced management of acute malnutrition, and linking small holder farmers with school feeding. Ghana, 2017: Savannah Zone Agricultural Productivity Improvement Project)			
<b>,</b>	Olimate Resilient water supply infrastructure provided in rural and peri-urban areas (Gambia, 2018 - Climate Smart Rural WASH Development project)			
	Provision of sanitation and hygiene facilities in rural and peri-urban areas Installation of waste collection treatment and disposal facilities (Gambia, 2018 – Climate Smart Rural WASH Development project)			
	Training of Community Health Workers (Sudan, 2017: Improving Health Access and Systems Strengthening project)			
	Training of Nutrition Providers (Sudan, 2017: Improving Health Access and Systems Strengthening project)			
	Supply of micronutrients (Sudan, 2017: Improving Health Access and Systems Strengthening project)  Deliver nutrition service; provision of micronutrients; treating malnourished children and monitoring of nutrition response. (Nigeria, 2016: Emergency assistance to support the fight against malnutrition)			

#### Nutrition specific interventions address the immediate determinants of foetal and child nutrition and development-adequate food and nutrient intake, feeding, caregiving and parenting practices, and low burden of infectious diseases. The 2013 Lancet Series on Maternal and Child Nutrition recommended 10 direct interventions to be implemented at scale in countries with high rates of undernutrition. These interventions could reduce stunting by 20.3% if implemented at scale.

#### Examples of nutrition specific interventions are:

#### Adolescent, preconception, and maternal health and nutrition; Maternal dietary or micronutrient supplementation; Promotion of EBF up to six months of age and continued breastfeeding, together with appropriate and nutritious food, up to two years of age; Complementary feeding and responsive feeding practices and stimulation; Dietary supplementation; Diversification and micronutrient supplementation or fortification for children; Treatment of severe acute malnutrition; Disease prevention and management; and Nutrition in emergencies.

Nutrition smart interventions target the underlying determinants of foetal and child nutrition and development—food security; adequate caregiving resources at the maternal, household and community levels; and access to health services and a safe and hygienic environment—and incorporate specific nutrition goals and actions with the aim of achieving a double win.

#### Examples of nutrition smart interventions are:

Biofortification; Animal rearing; Home gardening; Provision of clean drinking water; Provision of improved sanitation facilities; Handwashing education with soap and water; Hygiene promotion and education; Provision of social assistance—asset and food transfers; and Early childhood development/nurturing programmes.

Whether the project has a clearly defined nutrition impact pathway (ves/no).

Impact pathway is defined as a framework connecting project goal/objectives and a set of core activities with defined nutrition outcomes.

For most projects, nutrition impact pathways are not incorporated at the design stage. In such circumstances, impact pathways are implied based on information collected on objectives/goals and indicators. Proposed impact pathways will then fall under one or more of the following categories: Agriculture (Income growth, own food production, availability and access to nutritious food, and women empowerment).

Health (Access to health services, health and nutrition education).

Social protection (Access to income and nutritious food, women empowerment).

Education (Nutrition messages and behaviour change communication, women's empowerment).

WASH (Availability and access to safe drinking water; hygiene practices, environmental sanitation).

#### Some examples based on the PARs are:

#### Social protection:

Malawi, 2016; Humanitarian Emergency assistance to mitigate effects of 2015 flood.

The project impact pathway to improved food consumption among targeted households and improved nutrition status of flood victims is through the distribution of maize to the victims.

Zimbabwe, 2018; Innovative solutions to support livelihood of vulnerable communities.

The project impact pathways are education and training of youth in farming business, management of energy and Information Communication Technology (ICT) solutions, raising awareness and training of refugees and host communities on climate resilient livestock and crop production. These interventions are aligned to the outcome indicator (improve livelihood and income) and the impact indicator (enhanced socio-economic wellbeing of the refugees and host communities).

#### WASH:

Ghana, 2017: Greater Accra sustainable sanitation and livelihood improvement.

The project's impact pathways to sustainable household and school sanitation and hygiene services is through social marketing and behavioural change campaigns, construction of onsite household and school sanitation facilities; promotion, design review and construction of pro poor sewerage connections; establishment of solid waste and institutional Strengthening and Capacity Improvement.

#### Agriculture:

Zimbabwe, 2016: Youth and Women Empowerment Project (YWEP). The targeted impact of improved food security is aligned with core activities of supporting horticulture, mopane worms and honey value chains and enterprise development.

#### Health:

Guinea Bissau, 2016: Emergency assistance to support Guinea Bissau emergency preparedness to fight Zika Virus.

The project impact pathway is through training of health workers, procurement of vector control commodities and infection control supplies readily available in at risk districts; capacity building for planning and implementation of Integrated Vector Management ( IVM) to control disease vectors; development of risk communication, social mobilisation and community engagement plan.

### Integrated Impact Pathway (yes/no)

Types of Nutrition Interventions

	Whether the project has a multi-sectoral nutrition intervention (yes/no).					
	Multi-sectoral intervention is described as involving coordinated planning and programming of project interventions across more than one sector to address the multiple causes of malnutrition.					
	The review considered collecting information on projects reporting planned interventions in more than one sector to address malnutrition and/or projects reporting coordinated planning/engagement of organisations delivering interventions in more than one sector to address malnutrition. The information was captured in the "project implementation strategies" section of the PARs.					
	Some examples from the PAR are:					
Multi-sectoral Interventions (yes/no)	Ghana, 2017: Savanna zone agricultural productivity improvement project: Multi-sectoral project partners, consisting of line ministries- Ministry of Food and Agriculture (MOFA), Ministry of Trade Industry (MOTI), Ministry of Food and Agriculture (MOFA), MLGRD Ministry of Local Government and Rural Development, Ministry of Roads and Highways (MORH) in planning, M&E and implementation of the project; Partners target commodity value chain development, productive enhancement, climate change adaptation and mechanisation for improved nutrition and food security.					
	Rwanda, 2018; Rwanda sustainable water supply and sanitation programme:  Coordinated by development partners and supported by 16 sector working groups (including the Ministry of Infrastructure, the Japan International Cooperation Agency, Swiss Agency for Development and Cooperation, UNICEF, Water For People, WaterAid, Living Water International, Movement for the Fight Against Hunger in the World (MLFM) and other NGOs, involve in planning, implementation and monitoring activities for improved WASH.					
	Number of nutrition indicators included in the project.					
	This information is found in project documents as impact, outcome and output indicators including the log frame of each project.					
	Impact Indicator: Measures the extent to which a project has achieved its objectives and long-term goal.					
Nutrition Indicators	Outcome Indicator: Measures whether the project is achieving the expected effects/changes in the short or intermediate term.					
	Output Indicator: A specific, observable and measurable characteristic or change that will represent achievement of the outcome.					
	Projects usually have one impact indicator, few outcome indicators and multiple output indicators.					
	Whether the project has nutrition impact, outcome and/or output indicators (yes/no).					
	Some examples as reported in the PARs are: Impact:					
	Prevalence and numbers for child stunting (Ghana, 2017: Savannah Zone Agricultural Productivity					
	Improvement Project) Under-five mortality rate, per 1,000 live births (Gambia, 2018 – Climate Smart Rural WASH Development project)					
Impact / Outcome / Output Indicators (yes/no)	Outcome:  Percentage (%) of children 6-23 months consumed more than four food groups (Ghana, 2017: Savannah Zone Agricultural Productivity Improvement Project)  Percentage increase (%) of population with access to safely managed sanitation services including handwashing with soap and water (>50% women) (Gambia, 2018 – Climate Smart Rural WASH Development project)  Increase number of employed youths active in WASH sector (>40% young women) (Gambia, 2018 –					
	Climate Smart Rural WASH Development project)					
	Output: Percentage (%) of households reached with nutrition activities (Ghana, 2017: Savannah Zone Agricultural Productivity Improvement Project) Number of value chain actors trained (Ghana, 2017: Savannah Zone Agricultural Productivity Improvement Project)					
	Number of household sanitation facilities, of which >30% in female headed-households (Gambia, 2018 – Climate Smart Rural WASH Development project)  Number of children receiving supplements M/F (Ghana, 2017: Savannah Zone Agricultural Productivity Improvement Project)					

Beneficiary types	Type of beneficiaries benefiting from the project's interventions: i.e. women, children, communities, people, institutions, etc.			
	If women/females are specifically targeted as part of this project (yes/no).			
Women / Female Beneficiaries	This information should be collated when information on type of beneficiaries is collected.			
(yes/no)	An example from the PAR is given below:			
	Training of women and pregnant mothers on nutrition and health/sanitary conditions (Multinational, 2017: Say No to Famine - Short-Term Regional Emergency Response Project in Somalia and South Sudan)  If children, between the ages of 0-5 years were specifically targeted as part of this project (yes/no).			
Children Beneficiaries (yes/no)	This information is collated once information on type of beneficiaries is known.			
Official Beneficialles (yes/fio)	An example from the PAR is given below:  Deliver nutrition service to 63,000 children (provision of micronutrients; treating malnourished children (Nigeria, 2016: Emergency assistance to support the fight against malnutrition).			
	There are five project categories based on key nutrition markers:			
	Category 1: Project with impact (principal goal/objective) directly and explicitly addressing nutrition outcomes.			
	The project's impact includes the aim of improving nutrition outcomes and/or addressing the immediate causes of malnutrition. It explicitly includes the word "nutrition".			
	Category 2: Projects with at least one outcome focused on improving nutrition.			
	At least one of the project's outcomes is focused on improving nutrition (includes the word "nutrition") and addresses the immediate or underlying causes of malnutrition.			
Project Categorisation	Category 3: Projects with nutrition indicator(s) focusing on malnutrition reduction (i.e. stunting, wasting and overweight) associated with the project impact.			
	Nutrition is a high-level objective of the project and the project specifically aims to measure improvements in nutritional status of the population.			
	Category 4: Projects with at least one nutrition outcome indicator.			
	The project logical framework includes at least one nutrition outcome indicator. Examples from the PARs include:			
	Percentage (%) of women, 15-49 years of age, who consume at least five out of 10 defined food groups in the previous day or night			
	Percentage (%) of the population that has access to and uses improved drinking water sources			
	Category 5: Projects having at least one intervention/activity focused on improving nutrition.			
	One or more of the project interventions addresses the immediate/underlying or basic causes of malnutrition and explicitly mentions "nutrition".			
Nutrition Smart Projects	Projects are categorised as nutrition smart if the following conditions are met:  Nutrition is incorporated as part of the project goal and/or outcomes  The logical framework includes a nutrition impact or outcome indicator  Evidence-based nutrition interventions/activities are included in the project strategy			
Nutrition Smart Funding	The sum of the project budgets as indicated in the PARs for nutrition smart projects divided by the sum of project budgets for all Bank projects.			
Proportion of Nutrition Smart Funding	Proportion of nutrition smart funding is calculated as the nutrition smart funding divided by the total project funding.			

## Annex 2: Nutrition Focal Persons: Roles and Responsibilities

#### Role

Nutrition Focal Persons (NFPs) are members of the Multi-sectoral Technical Task Force for Nutrition, and they are expected to support the operationalisation of the Multi-sectoral Nutrition Action Plan. NFPs are Bank staff primarily employed to undertake specific assignments and who have shown interest and voluntarily agreed to support nutrition integration work within the Bank in addition to their primary assignments. It is recommended that the task of being a NFP should be included in their performance reviews/assessments so that such staff can be duly recognised and incentivised to deliver more for the Bank. To undertake their functions, NFPs will receive support from the Bank's Nutrition Specialists to understand the Multi-sectoral Nutrition Action Plan and leverage emerging opportunities for integrating nutrition into Bank projects. NFPs will also be encouraged to join online platforms of nutrition technical groups to facilitate knowledge exchange with other partners.

#### Key Responsibilities

#### NFPs will:

- Act as nutrition leads within their respective sectors and:
  - Offer guidance to their sectors on the implementation and review of the Multi-sectoral Nutrition Action Plan
  - Promote the integration of nutrition smart actions and interventions into CSPs, project pipelines and projects
- Attend to any nutrition concerns/queries within AfDB projects and operations and provide appropriate advice (with 2. technical support from the Nutrition Specialists)
- Act as a champion to advocate for nutrition smart investments that will contribute to 40% stunting reduction in Africa by 2025
- Participate in meetings and missions 4.
- Facilitate joint nutrition activities (for example, implementation, advocacy, resource mobilisation) with other relevant

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