

MADAGASCAR NUTRITION INVESTMENT CASE EXECUTIVE SUMMARY

2017



FOREWORD



**The Prime Minister,
Head of Government**

Olivier MAHAFALY Solonandrasana

The fight against malnutrition, especially chronic malnutrition is a long process which has barely started in Madagascar. Though long neglected, it is a major development challenge since chronic malnutrition has heavy negative impacts. Its consequences are irreversible on the physical and cognitive abilities of an individual, especially when it occurs during the first 1000 days of life - between conception and the age of two. The priority targets to improve the nutritional status of a population are therefore pregnant and lactating women and children under two years of age.

In Madagascar, the situation is sad, overwhelming and unacceptable as chronic malnutrition contributes, on the one hand, to 45% of deaths among children under five; malnutrition can, on the other hand, be costly for a country like Madagascar where almost half (47.3%) of the children under five suffer from chronic malnutrition (*National Survey on Monitoring the MDGs 2012-2013*).

The fight against malnutrition affects many sectors of intervention. This multisectoral approach is a major challenge for the Government, technical and financial partners, development operators and for the country.

Malnutrition is also closely linked to poverty and its related food insecurity of which it is both the cause and the consequence.

Accurately assessing the main determinants of malnutrition taking into account regional and socio-cultural specificities to deduce projects allowing to fight effectively against this plague is a complex exercise. But the Malagasy Government was keen to conduct an investment case study on Nutrition. It therefore requested UNICEF to support this initiative. Referring to the National Development Plan and in particular its fourth axis, this business case provides the Government of Madagascar and the international donor community, a justification and a future perspective that would encourage each other to invest in a national program to improve the nutrition of the population as a whole.

This study, which complements the one on the cost of hunger in Madagascar, allowed: to identify the damage that the current national nutritional status causes on the human capital. An Essential Nutrition Portfolio composed of fourteen different interventions based on scientific evidence is established and should reduce this burden of more than a third in the

next five years. The eradication of hunger and malnutrition is not an unattainable utopia. It is possible, provided that this objective is accompanied by a strong political will expressed at the highest level accompanied by a synergy of actions and a review of the government's expenditures on nutrition.

On behalf of His Excellency the President of the Republic of Madagascar **Hery RAJAONARIMAMPINANINA**, of the government and the Malagasy people and on my behalf, I extend my sincere thanks to all who participated in the survey works, exchange of views and information sharing that allowed the development of this document, which, hopefully, will be a reference document: the technical and financial partners especially UNICEF, the international consultant, members of the Prime Minister's Cabinet, the technicians of the various ministries of Public Health, Trade and Consumption, National Education, the National Office of Nutrition, INSTAT and all the people from the civil society that are involved in the nutrition sector.



FOREWORD – MADAGASCAR NUTRITION INVESTMENT CASE

Madagascar is the country with the fifth highest chronic malnutrition rate in the world: an astounding 47% - one out of two - children - are chronically malnourished. Chronic malnutrition - also referred to as stunting - is the outcome of chronic deficiencies in nutrition during the first 1000 days of a child's life – from conception, through pregnancy, to the age of two. The damage it causes to a child's development is irreversible. A stunted five-year old is inches shorter than he or she could have been. But this is not simply an issue of height. Chronic malnutrition makes that child more vulnerable to disease. A stunted child is as much as five times more likely to die from diarrhea than a non-stunted child. And, most important: a stunted child will never reach his or her full cognitive capacity, never be able to learn as much nor earn as much throughout life. The stunting-associated deficits in brain development translate to a loss of between two to three years of learning. Later in life, when stunted children enter the work force, their diminished physical and cognitive development can reduce their earning capacity by as much as 22%. Just as the human costs of stunting are high, so too are the economic costs. The World Bank estimates that countries blighted by chronic malnutrition lose at least two to three per cent of their gross domestic product as well as billions of dollars in salaried employment and avoidable health care. Chronic malnutrition is a devastating yet entirely preventable condition – and at relatively little cost.

There is ample global evidence that stunting prevention is relatively simple and inexpensive, as proven cost effective solutions are available: micronutrients such as vitamin A, zinc, iron supplement and iodized salt, as well as community nutrition programmes, like breast-feeding and good child feeding practices. What is needed is the necessary investment to implement these solutions.

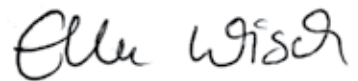
The Madagascar Nutrition Investment Case, jointly developed by the Government of Madagascar and UNICEF in consultation with nutrition partners, addresses three main questions in the Madagascar context:

- 1) What is the preventable economic loss due to malnutrition?
- 2) What is the most realistic high-impact, low-cost package of interventions to tackle malnutrition, and what is the associated investment required?
- 3) What is the economic return if such an investment is made?

The package proposed in this Investment Case focuses on proven nutrition-specific interventions, drawing on global scientific evidence, while recognizing the importance of multi-sectoral nutrition-sensitive actions in health,

agriculture, water and sanitation, education and social protection to maximize impact.

With 47% chronic malnutrition, Madagascar is among the countries with the highest stunting rates globally. The fact that this situation has remained unchanged over the past 25 years suggests that this silent development crisis has remained under-prioritised and under-resourced. Combatting stunting is one of the most cost-effective investments Madagascar can make in its development. The science is clear and the returns are high. It is time to recognize nutritional status not only as a marker of progress in development but moreover as a key to more sustainable development and essential to meeting the Sustainable Development Goals. Madagascar must invest now in programmes to prevent stunting or risk diminishing the impact of other investments in health, education, and the economy. It is time to take concerted action to tackle malnutrition for a better future for Madagascar and its children.



Elke Wisch
Representative, UNICEF Madagascar





WHAT IS THE COST OF MALNUTRITION FOR MADAGASCAR?

The high prevalence of malnutrition (documented in the National Survey for the Monitoring of SDG Indicators), caused by lack of micro-nutrients and other factors including food insecurity, poor water/sanitation/hygiene, and poverty, represents a significant barrier to survival and health of the children of Madagascar, as well as to social and economic development of the country. Chronic malnutrition has affected roughly one half of the population for the past quarter century. A Malnutrition Damage Assessment Report (UNICEF 2015) projected the annual incremental future cost burden at more than US\$740 million or roughly 7 per cent of GDP annually, mainly associated with malnutrition among pregnant women, newborns and children under five years of age.

WHAT ARE THE CONSEQUENCES OF MALNUTRITION FOR MADAGASCAR?

A consensus of scientific literature, including reports from The Lancet, World Health Organization and Cochrane Database of Systematic Reviews, the current prevalence for 12 individual indicators of malnutrition is associated with:

- **One third of all child mortality. 18 thousand annual deaths** are linked to a mother's nutrition status, breastfeeding behavior, low birthweight, or vitamin/mineral deficiencies.
- **More than half of children with less than normal height or weight**, or having anemia or iodine deficiencies, suffer deficits in mental and physical development, perform less well in school and will be less productive as adults, depressing GDP by \$425 million per year.
- **1.6 million annual cases of diarrhea and respiratory infection among infants attributed to poor breastfeeding practices and zinc deficiencies** result in costs exceeding \$30 million to the national health care system and families.
- **Nearly 3 million working adults with anemia experience chronic weakness and fatigue**, reducing their economic output by an estimated \$128 million annually.

WHAT IS MALNUTRITION?

A status resulting from a lack of nutrients in the diet, exacerbated by other factors such as food insecurity; poor health; poor water, sanitation, hygiene; and poverty.

CHRONIC:



47%

CHILDREN UNDER-5
AFFECTED NATIONWIDE.

ACUTE:



9%

CHILDREN UNDER-5
AFFECTED NATIONWIDE,
PERCENTAGE OFTEN HIGHER IN
THE SOUTH OF MADAGASCAR



Photo: These boys were born on the same day in June 2011. The one on the left is affected by chronic malnutrition.

WHAT ARE THE POSSIBLE SOLUTIONS?

Evidence shows that this \$740 million annual burden is largely preventable via effective low-cost interventions. UNICEF's Business Case for Investment in Nutrition proposes an Essential Nutrition Portfolio (ENP) including 14 coordinated interventions. Strategically focused on a child's first 1,000 days (from conception until age two), the cost of malnutrition could be reduced by more than one third within five years.

The proposed portfolio includes three packages:

- **Package 1** targets the general population and includes universal **salt iodization** and large scale fortification of commonly consumed foods such as wheat flour and vegetable oil
- **Package 2** targets **pregnant women** and includes package 1 plus vitamin/mineral supplements; de-worming; anti-malarial medicine; nutrition education; and protein-energy food supplements for the in the most vulnerable areas.
- **Package 3** targets **children**. It includes package 1 and 2 plus the treatment of acute malnutrition, the promotion of optimal breastfeeding and complementary feeding practices, home-based fortification of complementary food with micronutrient powder and enhanced diarrhea treatment

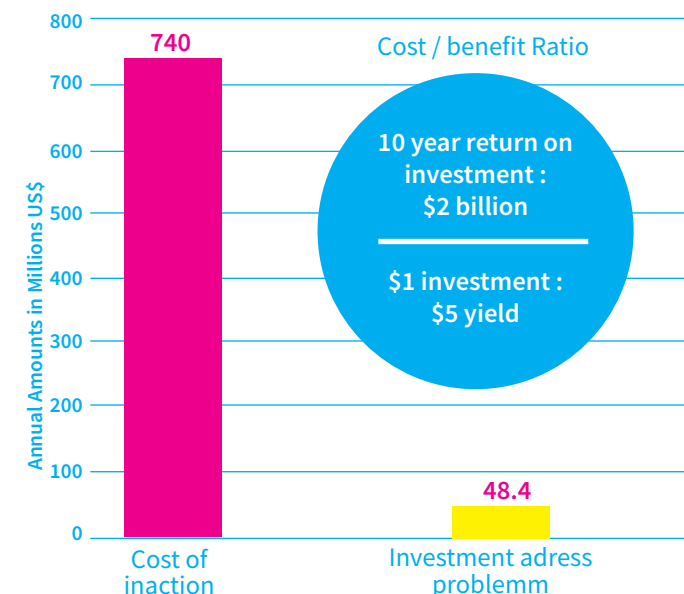
The proposed ENP integrates capacities of national community nutrition programs with Ministry of Health commune-level health facilities together with private sector food producers via the following three-channel delivery structure:

- **Facilities-based delivery:** Integrate products and services targeting pregnant women and children up to six months into existing antenatal, post-natal and community outreach activities of health facilities.
- **Community-based delivery:** Build on national community-based networks to expand growth monitoring, nutrition counseling and breastfeeding promotion, and create demand for health facility-based services and delivery of appropriate products.
- **Market-based delivery:** The market supplied by large-scale producers may be enough to cover 80-90 per cent of the population with iodized salt and possibly reach 20-40 per cent with fortified wheat flour and cooking oil.



WHAT IS THE PROJECTED COST OF THE PROPOSED SOLUTIONS?

- The estimated **10-year cost for this ENP would be \$398 million**, including a four-year start-up and expansion phase followed by six years of operation at scale.
- **Annual cost at scale is estimated at \$48.4 million**, including an estimated \$5 million "in-kind" contribution by the Ministry of Health.
- **Investment of \$398 million in ENP is projected to reduce the national cost of malnutrition by about one third, returning over \$2 billion** in benefits over 10 years.



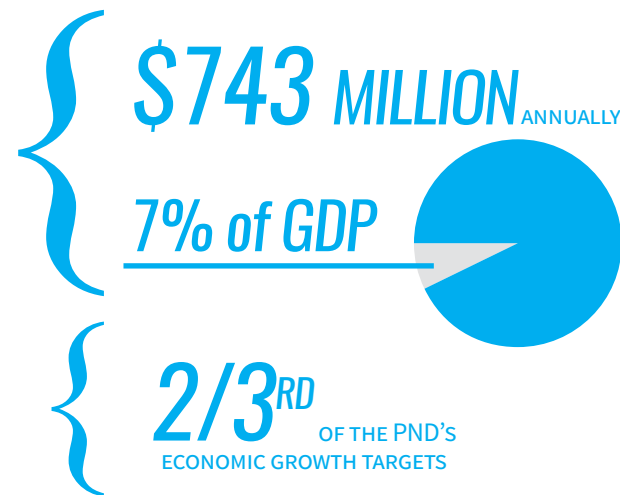
MALNUTRITION: A THREAT TO NATIONAL ECONOMIC DEVELOPMENT

Madagascar's National Development Plan (PND) sets ambitious objectives for human, social and environmental progress as well as national economic growth. The PND economic growth target of 10% per annum focuses on agriculture, fishing, mining, construction, tourism and other labor-intensive sectors that will require "human capital is adequately developed."¹ However, The World Bank reports, "a majority of the work force is not qualified."² The quality of Madagascar's human capital is poor.

In addition to the ethical and human imperative to address malnutrition, the overwhelming consensus of global scientific evidence indicates that lowering rates of malnutrition will be an indispensable component of any successful program to raise the quality of human resources and the value of human capital. Poverty and malnutrition are locked in a vicious cycle of increased mortality, poor health, retarded cognitive development, slow physical growth, diminished learning capacity, inferior performance, and ultimately lower adult work performance, productivity and earnings. The negative impacts ripple Madagascar's economy, eroding the foundation of economic growth: peoples' strength and energy, creative and analytical capacity, initiative and entrepreneurial drive.

Based on current national data finding that malnutrition affects more than half the national population, this Business Case for Investment in Nutrition estimates that malnutrition represents an economic burden of \$743 million annually, 7% of GDP and >2/3rd of the PND's economic growth targets. Investment in a comprehensive national nutrition program delivered by MOH primary health care clinics (CSB), national nutrition program's community nutrition program (PNND) and private sector food companies could lower the burden by \$255 annually. At full scale, covering 90% of the population, the proposed package of interventions, Essential Nutrition Services, is estimated to cost \$48 million.

MALNUTRITION REPRESENTS
AN ECONOMIC BURDEN OF



¹ Paritra Malagasy zary Ohabolana, April 2015 "capital humain est développé pour adéquat au processus de développement"

² IBID



THE ECONOMIC IMPACT OF MALNUTRITION IN MADAGASCAR

The recent national Enquete National Sur Le Suivi des Indicateurs des OMD (ENSOMD 2012) and other national surveys, indicate malnutrition affects possibly half the national population.^{3,4} For each of the nutrition indicators listed in the table below, the scientific literature has developed substantial evidence defining higher risks for mortality, morbidity and/or deficits in physical and mental development; school performance; physical strength and endurance; and on-the-job productivity.



³ Enquete National Sur Le Suivi des Objectives du Millenaire Pour le Developpement a Madagascar, 2012-2013

⁴ Indicators were selected based on availability of substantial evidence and consensus of measureable and quantifiable functional impact from the global literature as well as recent national prevalence data.

NUTRITION INDICATORS AND ESTIMATED CASES BY RISK GROUPS			
POPULATION GROUP	INDICATOR	PREVALENCE	ESTIMATED CASES
PREGNANT WOMEN	Low Body Mass Index	16% ⁵	134,840
	Low Height	35% ⁶	295,300
	Anemia	38% ⁷	324,069
CHILD 0-6M, 6-24M	Suboptimal Breastfeeding	14%/58% ⁸	423,489
	CHILD < 5YRS	Underweight & Wasting	33%/8% ⁹
Stunting		47% ¹⁰	2,119,562
ADULTS	Vitamin A Deficiency	42% ¹¹	1,781,109
	Iodine Deficiency	20% ¹²	1,396,119
	Zinc Deficiency	35% ¹³	4,230,663
	Anemia	51% ¹⁴	4,230,663
		34%35%	4,612,254

⁵ Comprehensive Food Security and Vulnerability Analysis, 2011

⁶ Comprehensive Food Security and Vulnerability Analysis, 2011

⁷ Enquête Démographique et de Santé Madagascar 2008-2009, Institut National de la Statistique Ministère de l'Économie et de l'Industrie Antananarivo, Madagascar ICF Macro Calverton, Maryland, USA Avril 2010

⁸ Enquete National Sur Le Suivi des Objectives du Millenaire Pour le Developpement a Madagascar, 2012-2013

⁹ Ibid

¹⁰ Ibid

¹¹ Global prevalence of vitamin A deficiency in populations at risk 1995-2005. WHO Global Database on Vitamin A Deficiency. 2009.

¹² Estimate based on IDD Survey, UNICEF 2015

¹³ Personal Communication Christopher Golden, Survey analysis in process, Harvard University,

¹⁴ Enquête sur les Indicateurs du Paludisme, 2013



Based on the global evidence along with national health, demographic and economic data, the impact of current national prevalence for each nutrition indicator is projected across 4 pathways:

- **Higher Mortality Risk:** 18 thousand annual deaths are linked to mother’s nutrition status, breastfeeding behavior, child underweight or vitamin mineral deficiencies, about >1/3rd of all child mortality.
- **Depressed Development of Children:** More than half of children with less than normal height or weight, or suffering anemia or iodine deficiency experience deficits in mental and physical development, perform less well in

school and will be less productive as adults, depressing GDP by \$425 million per year.

- **Higher Rates of Infection:** 1.6 million annual cases of diarrhea and respiratory infection among infants attributed to poor breastfeeding practices and zinc deficiencies result in excess costs to the health care system and individual families reaching more than \$30 million annually.
- **On-the-Job Productivity:** Nearly 3 million working adults with anemia experience chronic weakness and fatigue depressing their work performance by \$128 million annually.

Losses to the national economy linked to current rates of malnutrition in Madagascar total \$743 million annually, about 7% of GDP. This represents a substantial drag on PND’s 10% annual objectives for national economic growth. PND’s objectives for increased agricultural productivity will be difficult to achieve on the backs of a workforce that is weak and easily fatigued by widespread anemia. Investments to improve education are undermined when children enter school with retarded cognitive development and are unable to concentrate or perform to their full potential.

SUMMARY ECONOMIC CONSEQUENCES FOR ALL INDICATORS ACROSS 4 PATHWAYS (ADJUSTED FOR MULTIPLE RISKS)

	MORTALITY & LOST WORKFORCE	LOST FUTURE PRODUCTIVITY	LOST CURRENT PRODUCTIVITY	HEALTH CARE COSTS	TOTAL	PROPORTION OF TOTAL BURDEN
	000,000/y	000,000/y	000,000/y	000,000/y	000,000/y	%
MATERNAL NUTRITION	\$38.1	\$0.42			\$38.5	5.2%
SUBOPTIMAL BREASTFEEDING	\$27.8			\$14.9	\$42.7	5.7%
STUNTING (HAZ)		\$268.3			\$268.3	36.1%
UNDERWEIGHT & WASTING	\$66.0				\$66.1	8.9%
IODINE DEFICIENCY DISORDER		\$86.7			\$86.7	11.7%
ZINC DEFICIENCY	\$6.4			\$16.2	\$22.6	3.0%
VITAMIN A DEFICIENCY	\$19.6				\$19.6	2.6%
CHILDHOOD ANEMIA		\$70.6			\$70.6	9.5%
ADULT ANEMIA			\$127.9		\$127.9	17.2%
MATERNAL MORTALITY	\$0.50				\$0.49	0.1%
ANNUAL TOTAL	\$158.4	\$425.96	\$127.9	\$31.1	\$743.42	

PROPOSING AN ESSENTIAL NUTRITION PORTFOLIO (ENP)

The scientific literature as well as program experience suggests that a portfolio of feasible and affordable interventions can significantly lower the burden of malnutrition. Recently, the Second Lancet Maternal and

Child Undernutrition Series (2013) reviewed evidence for a range of interventions, concluding that at 90% coverage prevalence for a range of indicators would fall dramatically, as outlined in the table below.

INDICATOR	INTERVENTION	IMPACT @ 90% COVERAGE
MATERNAL NUTRITION	Iron Folic Acid Supplements, Nutrition Education, Salt Iodization, Nutrition Education; Food Supplement for High Risk	Childhood Death: 17%-50%
SUBOPTIMAL BREASTFEEDING	Breastfeeding Promotion and Education	Mortality/Morbidity: 27%-81%
ZINC DEFICIENCY	Multiple Micronutrient Powder + Zinc Treatment	Mortality/Morbidity: 12%-35%
VITAMIN A DEFICIENCY	Vitamin A Capsules	Mortality: 24%
CHILDHOOD ANEMIA	Multiple Micronutrient Powder, Flour Fortification, Nutrition Education, Food Supplement for High Risk	Prevalence: 31%
IODINE DEFICIENCY	Salt Iodization	Prevalence: 90%
ANEMIA IN ADULTS	Flour Fortification	Prevalence: 15-50%
STUNTING	Full Package	Prevalence: 20.3%
UNDERWEIGHT & WASTING		Mortality: 29-61%

Based on consensus evidence from the Lancet and other sources, an Essential Nutrition Portfolio (ENP) is proposed to provide Malagasy women and children with access to a comprehensive portfolio of nutrition education, products and other services to ensure optimal health and growth for the next generation. ENP package of 14 preventative and clinical nutrition interventions, addresses the major components of the national burden of malnutrition via three coordinated intervention packages:

- **5 Component Antenatal Package:** Builds on the current antenatal services to reach pregnant women with vitamin and mineral supplements, deworming and antimalarials along with nutrition education, promotion of antenatal care services and protein energy food supplements for the highest risk groups in the most vulnerable areas.
- **7 Component Child Package:** Builds on ongoing efforts to identify and treat SAM with a range of preventative approaches including targeting children <5 years old with vitamin and mineral supplements, breastfeeding promotion, home fortification of complementary foods, enhanced diarrhea treatment, and complementary feeding promotion as well as food supplements for the highest risk.
- **2 Component Population-Wide Food Fortification Package:** Universal Salt Iodization and flour fortification with at least iron and folic acid to improve population micronutrient status as well as ensure women enter pregnancy with good iron and iodine status.

ENP IMPLEMENTATION FRAMEWORK

ENP builds on existing capacity to deliver public nutrition services – mainly the existing network of MOH primary health care centers (CSB) and the PNNC community nutrition infrastructure (ANC). ENP integrates the remaining capacities of PNNC ANC with MOH CSB and along with private sector food producers in the following 3-channel delivery structure.

Facilities-based delivery: ENP integrates nutrition products and services targeting pregnant women and children up to 6 months into current antenatal, post-natal and community outreach activities of MOH CSBs. While steep barriers to accessing these commune level facilities remain, almost 90% of pregnant women seek out CSB services at least once and 80-90% of infants receive initial vaccinations at the CSB.¹⁵

Community based delivery: ENP proposes to sustain ANC child nutrition monitoring and counseling as well as adds a sharpened focus on breast-feeding promotion and infant/child feeding best-practices; counseling and monitoring high risk mothers; creating demand for CSB antenatal services; and deliver appropriate products. More than 1/3rd of fokotanis currently have active paid ACNs and ONN reports PNNC sites in 71% of communes.

Market-based delivery: The market supplied by large and medium scale salt producers may be large enough to cover 80-90% of the population with iodized salt. Current food industry environment might possibly reach 20-40% of the population with fortified wheat flour and cooking MOH and ONN face both supply and demand challenges. First, while financing for most staff has been preserved, MOH and ONN lack resources and supplies to deliver effective nutrition interventions. ENP addresses this supply side challenge by capitalizing on the existing networks, improving existing capacity and “filling the pipeline” with affordable and cost-effective nutrition products and services. ENP will have to address declining access and quality of service – along with citizen perceptions about the availability of appropriate professional staff, products and services.¹⁶ On the demand side, ENP proposes education not only to create awareness of key health and nutrition risks, but also to improve client perceptions of benefits available from health services - raise demand for nutrition specific services.

¹⁵ Enquete National Sur le Suivi des Objectives du Millenaire Pour le Development a Madagascar, 2012-2013

¹⁶ ENSOMD, 2012

SUMMARY ENG COMPONENTS & DELIVERY STRATEGY

INTERVENTION COMPONENT	Targeting Strategy	Delivery Mechanism
ANTENATAL PACKAGE		
IFA TABLET	Universal	CSB
DEWORMING	Universal	CSB
ANTI-MALARIAL	High Risk (60%)	CSB
FOOD (LNS) SUPPLEMENT	High Risk (18%)	CSB/ANC
EDUCATION & PROMOTION	Universal	CBS/ANC
CHILD PACKAGE		
BF PROMOTION	Universal	CSB/ANC
ZINC TREATMENT DIARRHEA	Cases at PHC (44%)	CSB
SAM MANAGEMENT	Referred Cases (2.6%)	CSB
VAC/DEWORMING	Universal	ANC
ZINC (MMP)	Universal	ANC
COMP FEEDING PROMO	Universal	ANC
FOOD (LNS) SUPPLEMENT	High Risk (18%)	ANC/CSB
INTERGENERATIONAL		
FLOUR FORTIFICATION	Market: (~33%)	Market
SALT IODIZATION	Market: (~85%)	Market

FINANCING REQUIREMENTS

Projected 10-year ENP financing for start-up and scale-up to reach 90% of the population totals \$398 million. This includes a 4-year start-up phase and 6 years of operation at-scale. Annual costs at program scale are estimated at \$48.4 million, including \$5 million per year “in-kind” contributions of Ministry of Health CSB and staff. The predominant annual cost, \$31, is the recurring cost of pharmaceuticals, vitamins and mineral capsules, communication materials and food supplements. Presuming Government of Madagascar shoulders 5% of recurring costs by Year 4 with an expanding share rising to 50% by Year 10, ENP requires donor inputs of \$277.2 million over 10 years as follows:

- \$10.3 million for start-up of 8,800 PNNC sites, fortification and CSB training.
- \$57.9 million for PNNC running costs of fokotani sites (15,300 at scale).
- \$195 million for procurement of supplies and materials.
- \$14.0 million for management, monitoring and coordination.

The proposed 10 Year domestic cost share totals \$120 and includes:

- \$69 million in new Government expenditures (Cash).
- \$40.4 million as the in-kind value of CSB and other government workers.
- \$10.9 million in market or consumer financing for salt iodization and flour fortification.

10 YEAR BUDGET FOR START-UP AND OPERATION OF ESSENTIAL PORTFOLIO OF NUTRITION SERVICES											
	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	10 y Total
SCALE OF COVERAGE	30%	60%	80%	90%	100%	100%	100%	100%	100%	100%	
PNNC											
START-UP	\$2.10	\$2.10	\$1.40	\$0.70	\$0.70	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$6.99
RUNNING COSTS	\$1.39	\$3.72	\$5.92	\$7.49	\$8.78	\$9.25	\$9.25	\$9.25	\$9.25	\$9.25	\$73.52
SUBTOTAL	\$3.48	\$5.81	\$7.31	\$8.19	\$9.48	\$9.25	\$9.25	\$9.25	\$9.25	\$9.25	\$80.51
MOH/CSB											
START-UP	\$0.37	\$0.37	\$0.25	\$0.12	\$0.12						\$1.23
RUNNING COSTS	\$0.76	\$2.04	\$3.25	\$4.11	\$4.82	\$5.08	\$5.08	\$5.08	\$5.08	\$5.08	\$40.36
SUBTOTAL	\$1.13	\$2.41	\$3.49	\$4.23	\$4.94	\$5.08	\$5.08	\$5.08	\$5.08	\$5.08	\$41.59
SUPPLIES											
SUBTOTAL	\$4.67	\$12.5	\$19.9	\$25.2	\$29.6	\$31.1	\$31.1	\$31.1	\$31.1	\$31.1	\$247.4
FORTIFICATION											
SALT IODIZATION	\$0.25	\$0.50	\$1.00	\$1.00	\$1.00	\$1.00	\$1.00	\$1.00	\$1.00	\$1.00	\$8.76
FLOUR FORTIFICATION	\$0.10	\$0.50	\$0.40	\$0.40	\$0.40	\$0.40	\$0.40	\$0.40	\$0.40	\$0.40	\$3.80
SUBTOTAL	\$0.35	\$1.00	\$1.40	\$1.40	\$1.40	\$1.40	\$1.40	\$1.40	\$1.40	\$1.40	\$12.56
M&E	\$1.50	\$1.50	\$1.50	\$1.50	\$1.50	\$1.50	\$1.50	\$1.50	\$1.50	\$1.50	\$15.00
TOTAL	\$11.1	\$23.2	\$33.7	\$40.6	\$46.9	\$48.4	\$48.4	\$48.4	\$48.4	\$48.4	\$397.6

THE TIME IS RIGHT TO ACT NOW

During the 1990's, Madagascar implemented a large-scale, internationally recognized and thoroughly evaluated National Community Nutrition Program (PNNC) delivered by trained and motivated Community Nutrition Agents (ANC). Global reviews found that PNNC "has proven very effective in reducing rates of acute malnutrition"¹⁷ and that PNNC "is considered a global good practice in delivering crucial nutrition services to pregnant/lactating women and children."¹⁸ The 2009-2013 crisis reversed a decade of significant progress: prevalence of chronic malnutrition among children under five is the 4th highest rate in the world.

The presidential and parliamentary elections of 2013 ended 5 years of devastating political crisis. Today, the successful drafting of the National Development Plan by the duly elected Government of Madagascar presents an opportunity to revitalize public nutrition programs. By issuing the National Nutrition Action Plan II (2012-2015) and by joining the Scaling Up Nutrition (SUN) movement, the Government has officially renewed its commitment to addressing undernutrition. The upcoming National Nutrition Plan 2016-2020 (NNP) provides a timely platform to revitalize national public nutrition services - grounded in the recognized and successful strategies of PNNC, incorporating most recent evidence of effective nutrition interventions, and evolving from a major focus on clinical cases of malnutrition to encompass more comprehensive and preventative nutrition strategies that address the full burden of malnutrition on national development.

¹⁷ Lessons for a Review of Interventions to Reduce Child Malnutrition in Developing Countries/The International Bank for Reconstruction and Development/The World Bank 2010

¹⁸ The World Bank Group, Madagascar Systematic Country Diagnostic, August 25, 2015

While the crisis has ended, the health system remains weak and is marked by inadequate financing, poor governance, dysfunctional procurement, and low quality of human resources. Access to health centers is limited, quality of service is inadequate and large segments of the population believe appropriate services are not available at health centers.¹⁹ Despite these challenges, vestiges of the PNNC structure remains in-place, technical capacity persists and institutional memory continues. However, without timely action by government and the donor community, the remaining vestiges of a once well-functioning community nutrition platform may well disappear.

The ENP provides a framework for government and donors to jointly invest in revitalize nutrition services in Madagascar with: incentives and training; a pipeline of evidence-based products and services; and strengthened coordination of the commune based health facilities with fokotani PNNC sites. A recent consultation of national and international partners affirmed that the time is right to consider a coordinated national planning and resource mobilization effort to develop the proposed ENP.²⁰ They believe that in the right environment, with coordinated planning, selected reform, and sufficient resources, ENP can achieve 90% quality coverage within 4-5 years and significantly reduce the human and economic burden of malnutrition.

¹⁹ DHS

²⁰ Partner Consultation, UNICEF October, 2015



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