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Free of Poverty

## STRATEGIC IMPACT EVALUATION FUND (SIEF)

### IMPACT EVALUATION CLUSTER NOTE:

#### EARLY CHILDHOOD NUTRITION, HEALTH AND DEVELOPMENT

##### I. Background.

The early childhood period is a time of rapid growth and development across four domains: physical, cognitive, linguistic, and socio-emotional. To achieve their full potential and ensure their future productivity, children must be healthy, well-nourished, form strong attachments to, and interact with, caregivers, and develop language and other cognitive skills.

Known preventable risk factors for healthy child development in the first years of life include stunting, iron and iodine deficiencies and lack of stimulation. New evidence also identifies intrauterine growth restriction, malaria, HIV infection, lead exposure, maternal depression, institutionalization, and exposure to violence as risks (The LANCET Child Development Series, 2011). When children experience multiple, cumulative risks during critical sensitive periods such as the first 1,000 days (from conception to two years of age), the negative impacts later in life include poor school performance, lower earning capacity, and ultimately the intergenerational transmission of poverty. And when these impacts are aggregated from the individual to the national context, the loss of child developmental potential translates into lower national levels of productivity and gross national income (WB, WDR, 2008). Addressing early child nutrition, health and development is the foundation of human capital formation, at the individual and national level. The achievement of at least four of the Millennium Development Goals (MDGs) requires significant progress on reducing undernutrition. Yet, as 2015 approaches, only 58 of the 118 countries are on track for the hunger target and 20 have made no progress.

The LANCET Maternal and Child Nutrition Series (2008) showed that stunting could be reduced by 36% and child mortality by about 25% through implementation of evidence-based *nutrition specific* interventions such as support for breastfeeding and vitamin A supplementation. To address the remaining burden of stunting, nutrition specific interventions must be supplemented by actions to address the underlying determinants of undernutrition, such as poverty, poor education, clean water and sanitation and gender inequity.

This recognition has resulted in a resurgence of interest in, and support for, operationalizing a multi-sectoral approach to improved nutrition outcomes for vulnerable populations, and specifically pregnant women and young children. This means incorporating *nutrition sensitive* interventions into other sectors and crafting appropriate multi-sectoral approaches to secure the proper foundation for development in



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a child's first 1,000 days – in short, applying a nutrition lens to program design across a range of sectors to deliver improved nutritional outcomes and ultimately improved health and productivity.

The LANCET Child Development Series (2007, 2011) showed that while chronic undernutrition leading to stunting (poor linear growth) remains one of the key risks for poor development, a lack of stimulation and early learning opportunities is an equally important risk for delayed development. A win-win combination is created when health and nutrition programs are combined with parenting interventions that promote parent-child interactions and provide opportunities to play and learn such as home visits and community groups.

A new initiative at The World Bank, the SecureNutrition Knowledge Platform, aims to raise the awareness of Bank staff regarding the potential for improved nutrition outcomes through investments in the agriculture sector as well as the possibilities for funding through SIEF for innovation around nutrition sensitive actions delivered through agriculture and other programs, including cash transfers. It will provide an important dissemination channel for the results of impact evaluations and new research on multisectoral approaches to improved maternal and young child nutrition. It will also bring multiple stakeholders together in a community of practice aimed at enhancing and expanding efforts to identify and address major knowledge gaps in linking food security programs with improved nutrition outcomes.

### II. Description of cluster and ongoing research.

The cluster is conceived of as an integrated team, bridging the multiple sectors that contribute to the outcome of the healthy growth and development of young children (*in utero* through two years of age). The cluster may draw from a range of sectors and issues including agriculture, health, food security, social protection and gender, among others.

In recent years, a solid body of evidence from research in developed and developing countries has documented the large returns of investing in early childhood. These returns are both to individuals—who benefit from increased schooling, labor participation, wages, and general economic and socio-emotional well-being— as well as to societies that benefit from higher productivity leading to economic growth, lower inequality, and a more participatory citizenry (Heckman and others, Walker and others, 2007 and 2011). The research also convincingly shows that early childhood investments are both efficient and equity-enhancing, because the benefits are even greater among the poorest and most vulnerable (Alderman and others, 2010; Walker and others, 2011).



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Despite of the efforts of producing evidence from rigorous evaluations, there are two areas where the evidence is weak. First, how to **deliver integrated early childhood interventions** (nutrition in combination with health and/or stimulation) in cost effective ways in low income settings – particularly in the first 1,000 days of a child’s life -- while insuring that quality and impact are delivered at scale. Second, how to **effectively tackle the underlying causes of undernutrition**, through incorporation of nutrition-sensitive actions and approaches in a range of sectors for impact in the critical 1,000 day window. Experience with interventions to improve nutrition during pregnancy and before conception is especially lacking.

The cluster is focused on innovative impact evaluations to (i) expand the knowledge base on the relative effectiveness (and cost-effectiveness) of various intervention to improve maternal, child nutrition and child development outcomes in low-income<sup>1</sup> settings; (ii) provide new evidence on how to achieve quality service delivery at scale, and (iii) build a community of best practice in the field of nutrition and early child development (ECD).

### III. Outline for research agenda.

The ongoing evaluations financed by the first SIEF, to which DFID contributed, focused only on early childhood development interventions, ranging from home visits (Nicaragua), to community-based child care centers (Mozambique and Cambodia) to group parenting programs (Chile). Service delivery and the scale ranges from NGO-run small pilots (Nicaragua, Mozambique) to government-run programs (Cambodia and Chile). The cluster will build on the knowledge from these existing ongoing evaluations and draw from the flow of knowledge generated in academic circles and by partner institutions on the topic.

However, the body of evidence is still not sufficient to provide solid advice on the design of cost-effective interventions in low income and fragile state contexts. More is needed to expand the scope of interventions with a special focus on the youngest children (0-2) and pregnant women, given the increased risk of poor child development outcomes due to maternal undernutrition. There are some important knowledge gaps that have been highlighted by the LANCET 2008 on child malnutrition that are still very relevant. There are even more important gaps in the synergies between nutrition and early stimulation that have been highlighted in the LANCET 2007/2011. We need to increase our global public

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<sup>1</sup> On a case-by-case basis, research in MICs will be considered for funding if results will be directly applicable to LICs; specific country focus (e.g., fragile states, other) is being addressed in the larger call for proposals



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knowledge about what types of interventions are most cost-effective to achieve the growth potential in low-income settings, and in the process, improve our understanding of the determinants of early nutrition and childhood development.

There some key research priorities going forward:

- **Adopt a holistic approach to improved linear growth (i.e., reduction of stunting) and child development in the first 1,000 days of life (conception to 24 mo)**, looking at physical, cognitive, socio-emotional and language development. Interdisciplinary collaboration— drawing from economics, agriculture, environmental health, poverty alleviation, child developmental psychology, nutrition, sociology, and neuroscience – to test and evaluate nutrition sensitive approaches, among others, should be rewarded.
- **Improve our understanding of the effectiveness and sustainability of at-scale programs**, with a focus on quality and on the key supply-side design features that matter for impact (modes of service delivery, incentives for endline providers). At the same time, experimentation with small-scale interventions should be prioritized on **cost-effective and scalable pilots**.
- Tailor the interventions to the 0-2 age group and their mothers, and to those most disadvantaged.

#### IV. Research questions and outcomes.

The main questions to be addressed within this cluster are:

- What is the optimal design of integrated programs that maximize growth and development for children in the first 1,000 days in low-income countries?
- How and which nutrition-specific interventions can be scaled up rapidly and at low cost to achieve universal coverage? In which type(s) of settings?
- What are innovative multi-sectoral delivery strategies and program approaches for activities supporting improved early childhood nutrition and development through related sectors such as agriculture/food security, environmental health, and social protection?
- What is the impact and cost effectiveness of programs in agriculture, social protection and environmental health on nutrition outcomes of pregnant women and young children? On child development measures?
- What is the value added of early stimulation interventions to direct nutrition interventions? Do integrated early childhood development programs result in decreased stunting prevalence rates and increased child development outcomes? Does the integration need to be delivered within the same program and by the same providers?



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- What are the best ways to operationalize a multi-sectoral approach – integrated programs or coordination at the point of use or using the same providers? Do particular modes of transfer (e.g., conditional or unconditional transfers) or operational design features have the greatest impact on the nutritional status of pregnant women and children?
- Do early childhood interventions ameliorate or reverse adverse effects associated with risk factors such as low birthweight, severe malnutrition and HIV infection?
- What possibilities exist for increasing use of media such as television, radio and mobile phones for improving parenting and child health, nutrition and development outcomes?

For the purpose of this cluster, the main outcomes of interest are classified in three groups: nutrition, child development, and nutrition pathway outcomes. All evaluations should measure a subset of these outcome indicators in order to be eligible for funding.

- Measures of nutrition impact: (i) low birth weight, stunting, wasting, and underweight, (ii) maternal and child micronutrient deficiencies, and (iii) BMI in women of reproductive age.
- Measures of child development: (i) cognitive development of young children, (ii) socio-emotional development of young children, and (iii) linguistic development.
- Measures of nutrition pathway outcomes (illustrative, for use with nutrition sensitive research): (i) household and individual dietary diversity scores, and (ii) household hunger scale.



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