Guidelines for Designing Evaluations of Community-Based Nutrition Promotion Programs *

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1. Introduction

Malnutrition, the lack of basic nutrients that are necessary for human health, is a largely silent but prevalent problem in several parts of the developing world. Around one third of the children in developing countries are either stunted or underweight and a similar proportion exhibits micronutrient (vitamin and mineral) deficiencies (World Bank, 2006). It is often argued that poverty is the principal cause of malnutrition and, thus, the promotion of economic growth and a more equitable income distribution are the proper channels to reduce it. Although giving poor people more resources and granting their food security can help, these are not only long-run policies to tackle malnutrition but also partial ways to solve the problem. Indeed, even children in food-secure households are at risk of being malnourished. Therefore, attention has to be paid to other alternatives that can curb malnutrition in the short term such as improving the access to health and sanitation services and educating people at better infant feeding, disease diagnosis and care practices.

Community-based growth and monitoring programs is one of the short-route responses to reduce the prevalence of malnutrition. As it will be described below, the approach seeks to develop awareness of current and potential problems threatening children’s health and nutritional status as well as the actions to take at the community-level. This report aims to provide updated guidelines for evaluating the planning, technical and operational implementation and impact of these interventions and is intended to help nutrition specialists, evaluators, program officers and other people carrying out such assessments.

2. Background on Community Nutrition Programs

2.1 Characteristics and Program Experience

In general, community nutrition programs (CNP, from now on) develop and support activities and remedial actions to enable low-income communities to succeed in strengthening the nutritional and health status of their children. Most of these activities involve a high degree of local participation and focus on children at ages of greatest risk from growth faltering and weight loss, namely those below three or two years of age. Although there are a wide variety of strategies/services used to implement these programs, all of them seek to introduce behavioral changes in feeding and child-caring practices through nutrition education, and to increase the demand for preventive health and nutrition services.

The central component of community-level nutrition programs is the promotion of regular child-growth monitoring sessions in community centers. In order to detect cases of malnutrition and associated illnesses, monthly measurements of children’s weight growth are recorded and compared to previous records and plotted on a chart against an
Together with these growth checks, the status of ill children under five is examined by following up their health condition, and personalized assistance and advice are given to their mothers. This local counseling includes instruction on how to care for sick children, exclusive breastfeeding and complementary feeding practices, hygiene and also preventive guidance regarding prenatal care, birth spacing, growth and health monitoring routines within the household, as well as the use of basic health services. All this information is basically generated, examined and administered by nutrition workers, who are community members previously trained by the program and are well acquainted with the existing resources and constraints of the local context.

In addition to this emphasis on monitoring, CNP’s can also target growth promotion by supporting some complementary actions to prevent the effects of inadequate diets. Such interventions include the distribution of micronutrient and food supplements (e.g. vitamins, milk) and fortified foods (e.g. iodized salt, micronutrient sprinkles added to food just before feeding) to children and pregnant women from low-income households. The objective of providing these supplements is essentially to decrease the high rates of iron (anemia) and vitamin A deficiency that are prevalent among this group of people.

Approaches relying on community administration and service delivering are becoming popular worldwide. Among other reasons, their low cost weighed against other type of interventions (e.g. food and cash transfers) and stress on removing inadequate infant feeding and health care practices have shown so far that they can be workable solutions to tackle malnutrition. Indeed, growth monitoring and promotion programs making use of local capacity have been established in several countries such as those interventions put in place in Madagascar, Senegal, Zimbabwe, India, Bangladesh, Indonesia, Thailand, Honduras and Nicaragua, among others (World Bank, 2006).

One of them, the Expanded School and Community Food and Nutrition Surveillance and Education Program (Seecaline) is a large scale community-based nutrition initiative started in 1999 in Madagascar. Most of the activities are targeted towards children from 0 to 3 years and pregnant and lactating women. The intervention includes monthly growth monitoring and counseling, twice yearly deworming (for children 1-3 years old), micronutrient supplementation (for children 6-36 months old), food supplementation, regular training sessions to provide education in good nutrition and hygiene, community meetings to discuss nutritional problems and possible solutions, and referral to local health care and immunization services. The program encourages an intersectoral approach to deal with malnutrition problems by promoting the participation of community members, schools, health centers and NGO’s. Evaluations of the program using longitudinal data from treated and matched control communities indicate that the intervention has been successful in reducing short- and long-run indicators of malnutrition in beneficiary areas. Furthermore, given the emphasis of the program on disseminating information without creating new infrastructure, the positive impacts of the

1 In some cases weight measures can be complemented with children’s measures of mid-upper arm circumference. This measure is particularly relevant for children that are one year old or younger, period in which this indicator is more sensitive to growth retardation.
program have been achieved at a relative low cost, with benefit-cost ratios ranging between 3 and 5 (Galasso, 2007). Although with some variations in the mechanisms and services provided, their probably effectiveness and financial sustainability seem to be the main characteristics of many other similar ongoing programs in other countries (World Bank, 2006).

2.2 Strengths and Advantages

CNP’s seek to attack malnutrition at three of its main immediate causes: lack of information, inappropriate prenatal, infant feeding and health care practices, and micronutrients deficiencies. The especial emphasis given on exploiting and developing local capacity together with the focus on promoting short routes to improving nutrition has the following strengths and advantages over other programs:

- They target pregnant women and children during their critical age of 0 to 36 months, period in which the most important and often irreversible harmful impacts of malnutrition occur, i.e. detrimental effects on cognitive, motor and social development, school attainment and future productivity. Evidence suggests that projects targeting other populations not only have a lower chance of having a real and lasting impact but are also more costly ways to ameliorate malnutrition.

- The focal point of most programs is around the prevention of nutritional vulnerability and treating of diseases at their initial stage. Therefore, these actions are not only cheaper but more likely to alleviate malnutrition and its negative effects than acting on ex-post conditions.

- As mentioned above, food security is a necessary but not sufficient condition for improving nutrition. Instead, several components of these interventions promote behavioral change at the household and community levels in other aspects that appear to be strong determinants of malnutrition such as education in sound prenatal care, exclusive breastfeeding for the first six months of life for infants, the transition to complementary feeding, growth monitoring, hygiene, other care and feeding practices and use of nutrition and health services.

- Similarly, nutrition education and counseling can lead more easily to behavioral changes of inappropriate preferences for food allocation schemes within the household.

- Most of the activities rely on institutional arrangements and implementation procedures undertaken by the communities, a mechanism that ensures the level of local participation needed to initiate and generate their own solutions to the problems of malnutrition. This approach also facilitates the development of long-term physical and human community capacity (e.g. knowledge, skills and support facilities) by consolidating and using the existing health and educational resources.
• Although investing in nutrition is a very good economic alternative, CNP’s – including large scale interventions– do not require large public spending in infrastructure and other forms of physical/human capital to provide their services. In contrast, they take advantage of many locally available resources. For instance, nutrition centers are often hosted in community centers and nutrition workers are always members of participating communities.

• In terms of financial sustainability, and as a result of the latter, the cost per beneficiary appears to be relatively low.

• The available evidence seems to indicate that these programs help in improving children nutrition within a shorter time frame (between two and three years) compared to the longer horizon of other interventions such as income, food and fertility policies (World Bank, 2006).

2.3 Challenges

The nature of these interventions, mainly the mechanisms used to deliver services engenders some challenges for their well-functioning and effectiveness:

• A primary obstacle is the latent high variability in the treatment offered. The core of the program stems from the activities around growth monitoring and education, which are run by nursing personnel from local communities, i.e. nutrition and health workers. The wide variety of knowledge and skills acquired by nutrition workers together with other factors such as the quality of their education and their motivation and experience (hard to observe and standardize) can be strong determinants of programs’ implementation and success.

• Programs need an effective system of incentives to support and motivate all participants, from community workers to mothers, parents and other caregivers. The design of a unique system is a complex task because perhaps it is highly conditioned by the characteristics of the selected participant communities.

• Targeting communities may be less effective than targeting families. Better off families even within poor communities may be more likely to benefit from the intervention. For instance, they can have more access to information provided by the program, higher take-up rates, interpret the information received in a sound manner (e.g. higher literacy) and have better contacts with key actors within the community.

• The inter-sectoral approach between state and district level officers, NGO’s, clinics and health centers, community leaders and families that is necessary to implement the program entails a complex organizational and management coordination between all these members. For instance, evidence from the Seecaline program in Madagascar suggests that outcomes that were directly connected to services offered by local health
centers (e.g. immunization and prenatal care) did not show positive impacts as opposed to those carried out by community leaders and workers.

- While programs that place an emphasis on growth monitoring and two-way counseling are relatively cheap, the costs per participant per year of interventions that offer food and micronutrient supplementation and fortification are significantly higher. For instance, the World Bank (2006) estimates that the cost of CNP’s without food supplements varies between $1.00 and $1.60 per participant and; if food is added the cost increases to $11-$18. Therefore, the low-cost appeal of these programs really seems to depend highly on the nutritional aid packet offered by intervention.

3. Elements of the Programs and Evaluation Types

All the strategies behind the design, targeting, implementation and monitoring of community-based nutrition interventions demand great levels of financial, managerial and assessment capacity. In addition, they require the participation of a wide variety of actors such as public officers from the national and local level, NGO’s, schools, health centers and, for the most part, members of the participant communities. This structure implies the existence of a number of steps in the delivery channel needed to provide the services of the programs. This section reviews some of these issues in the context of the relevant type of assessment that is suitable to undertake as well as mentions some of the impact measures employed to capture program effects.

3.1 Process Evaluation

A key question for any program is to know whether the intervention is being implemented as intended. Furthermore, the identification of operational barriers preventing a good performance and strategies to overcome them are necessary inputs to re-design the mechanisms of action. In terms of the subject of interest here, the following are some aspects and indicators that can be incorporated in evaluations aimed to track the actual implementation (process evaluations) of CNP’s:

- Take-up rates of families within participant communities and, if possible, socioeconomic and geographic correlates of these take-up rates.

- Coverage of the program as a proportion of the total number of children in vulnerable ages (0-36 months) that belong to high-risk environments (e.g. low-income regions, hazard-prone areas) in a district or in the whole country.

- Measures of targeting performance (e.g. correlation between the probability of having a participant community and poverty measures/initial levels of malnutrition).
• Documenting the number and characteristics of the people from the communities that join the program (e.g. gender, literacy, education, economic activities and other socio-demographic characteristics).

• Provide and analyze information suitable to describe the main characteristics of partner NGO’s, other agencies and supervisors in charge of supporting the activities of the program sites (size, personnel, systems to collect monitoring data, previous experience in nutrition interventions and experience within the country).

• Measures of intermediate inputs and outputs that play a central role in the implementation process (e.g. number of home visits by community workers, growth-monitoring and counseling meetings, nutrition and demonstration sessions, community participation, distribution of supplemental food and micronutrients) to assess whether or not the intervention is being delivered in the stipulated order, intensity and quality, and if the objectives are being met.

• Indicators to assess the number and quality of health centers that serve treated communities. Variability in the provision of these services is particularly relevant because the programs support remedial actions through health care facilities when cases of children with growth faltering and/or ill children are detected.

• An assessment of people's perception and satisfaction with the main features of the intervention within their communities.

• Examine the actions that are being undertaken to guarantee the collection of comparable and consistent baseline and subsequent evaluation data.

In general, the data requirements that are desirable to examine the elements noted above and the potential use of such data to monitor the implementation and performance of a program are discussed in detail in Section 4.

A recent process evaluation of a CNP in Nicaragua, called “Programa Comunitario de Salud y Nutricion” (Procosan) is a useful reference for future efforts aimed at conducting this type of assessment. The analysis by Flores, et al.(2007), still at a preliminary stage while preparing this document, presents the methods and topics used to describe how the program was being implemented, what services were delivered, to whom and how they were provided, and also identifies the adjustments to make the program operate as originally intended.

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2 Procosan is a preventive health and nutrition program of the government of Nicaragua started in 2001. The intervention combines community-led child growth and care promotion activities for children under 2 years of age with illness assessment, referral, early childhood stimulation and knowledge of nutritional and health practices for families with children 5 years old and below.
The study collected quantitative and qualitative information from 90 communities covered by three different modalities of the intervention. This includes interviews with community nutrition workers (i.e. *brigadistas*), mothers in families in enrolled in the program, community leaders and health workers in health care centers. The questions cover a wide range of topics such as program coverage, operational aspects of health facilities (e.g. selection of *brigadistas*, training, follow up of referral) and nutrition workers (attendance to community sessions, level of satisfaction, commitment, incentives), mother’s assistance to monthly nutrition monitoring sessions as well as their understanding and perception of the program (e.g. functioning, quality of services, usefulness, effectiveness), reasons to drop out of the program, local adaptations in the type of intervention and level and quality of interactions between the government, health centers, NGO’s and international organizations in the operation of the program. The study also arrives to some important conclusions regarding the actual implementation of the program and sketches some strategies to scale up the program while retaining its expected effects on the nutritional and health status of children and pregnant women.

### 3.2 Impact Evaluation

The next step in a large-scale study aimed at assessing the performance a social program is to draw credible conclusions about its causal effects on a target population (e.g. participant communities, households, individuals). Consequently, this document now turns the attention to describing the outcomes that are regularly examined within the context of community-led nutrition interventions—regardless of their specific components—in order to ascertain their impacts. Obviously, some of them are identical to those examined in the impact evaluation of other nutritional interventions and other programs of social assistance. The most important of such outcomes are as follows:

- Anthropometric measures to assess the nutritional status of children such as height and weight. More specifically, child’s growth can be analyzed by identifying differential changes in standardized sex- and age-specific international population reference measures such as height-for-age Z-scores (HAZ), weight-for-height Z-scores (WFH) and weight-for-age Z-scores (WAZ). In addition, the mid-arm circumference (MAC) can also be measured to monitor changes over time in the body composition of children.

- Rates of young child morbidity such as the prevalence of diarrhea and respiratory diseases among children aged 0-4.

- Rates of under-one and under-five mortality rates (per 1000 live births).

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3 The program has been implemented in different stages and, therefore, communities are receiving either a type 1 (growth promotion), type 2 (growth promotion and early stimulation) or type 3 intervention (growth promotion, early stimulation and illness assessment).

4 See Annex 1 with a comprehensive list of impact indicators used in the evaluation of nutrition programs, taken from Habicht, Jean-Pierre, G. Pelto and J. Lapp, “Methodologies to Evaluate the Impact of Large scale Nutrition Programs”, mimeo, June, 2006, pp. 40.
• Measures of anemia prevalence among children and pregnant women. Often baseline and follow surveys take blood samples of children to determine the level of hemoglobin and identify cases of iron and folic acid deficiency.

• Additional biochemical indicators to identify other micronutrient deficits (e.g. urine samples to test urinary iodine) or tests for cases of parasitic infection.

• Indicators of low birthweight

• Measures of health care utilization (e.g. proportion of pregnant women receiving prenatal care, immunization rates, use of health services conditional on cases of young child diseases and referral).

• Indicators to track changes in practices aim at improving nutrition that are emphasized in the behavioral component of the programs. For instance, prevalence of exclusive breastfeeding (for children under 6 months of age) and complementary breastfeeding (for children between 6 and 12 months of age) among participants and non-participants. Other measurable changes in feeding behavior include the frequency of child feeding during the time of complementary breastfeeding, cooking routines and sanitation practices.

• Measures of better knowledge regarding, for instance, safe water and the value of iodized salt

• Mother’s perceptions on child’s growth (do mothers correctly identify cases of low birthweight or growth-retardation?)

• Some CNP’s weigh pregnant women and also provide counseling on prenatal practices and food/micronutrient supplements to them (e.g. the Bangladesh Integrated Nutrition Project, BINP). An anthropometric indicator of weight gain such as the body mass index of pregnant-women (maybe) and/or records of birth weight can be employed to explore the impact of these activities.

• Nutritional status of women in post-partum periods (e.g. anthropometrics, micronutrient deficiencies)

• Comparisons by place of delivery (e.g. proportion of births delivered through a clinic, hospital, birth center, home).

• Indicators that describe patterns of fertility behavior (e.g. number of live births, birth intervals, age at first birth) to explore their relationship with activities of fertility counseling that are promoted by some CNP’s.

• Measures that document the type and quality of the remedial actions taken by parents when growth faltering and young child diseases are detected.
• Indicators of dietary intake to assess the promotion of particular categories of foods (e.g. measures of food intake of specific foods from recall or food frequency questionnaires).

• Although it may be more challenging to identify causal effects in the long-run, some potential long-term outcomes to investigate are, for example, motor, behavioral and cognitive development, school attendance and progress, employment status, wages, fertility decisions, health condition, nutritional status of the next generation.

Finally, to shed some light on the existence of differential impacts by socio-demographic characteristics or subgroups, the analysis of these indicators can be broken down by sex, age, level of education or expenditures, ethnic or racial group, etc. Furthermore, variations in several dimensions of the services offered can be assessed by comparing treated units as well. This includes the identification of the marginal impact of the type of provider (e.g. institutional vs. non-institutional), duration (e.g. an additional year of participation), intensity (e.g. the marginal effect of additional services such as deworming) or delivery mechanism (e.g. effectiveness of sprinkles vs. other methods of food and micronutrient supplementation like in the Honduras Community Based Integrated Child Care Program, AIN-C).

3.3 A Cost-Benefit Analysis

Although there have been important advances in conducting thorough evaluations to estimate the impacts of nutrition programs, overall fewer efforts have been devoted to the study of their cost efficacy. CNP’s are often argued as relatively low cost projects to attack malnutrition vis-à-vis other interventions. Yet, there is little rigorous evidence to support this apparent comparative cost advantage. Hence, it is critical to incorporate strong and meaningful cost information into the evaluation analysis, which in turn allows for comparisons between interventions, informs policy makers about the financial feasibility of scaling up these programs and ensure continued funding.

Obviously, the range of costs of these interventions fluctuates considerably, depending on the location, timing, program components, scale, program delivery, intensity and existing resources (e.g. labor, health infrastructure). Even though such high degree of variation in the type of interventions makes generalizations difficult, this section attempts to develop a comprehensive list of key aspects that may guide the identification and estimation of the costs (or savings) and benefits within the context of evaluations of CNP’s.

3.3.1 Identification of Costs

Precise and reliable information on costs seems to be the main constraint for this analysis. Administrative and monitoring data is often the major source of data to calculate the amount of money that has been used up to put the program in place and deliver their
services. However, these interventions are always cross-sectoral initiatives and as such it is not simple to put together standardized data on costs. Still, efforts can be made to combine the information systems of agencies running the program and construct measures of actual costs. Other complementary sources of information include documents with a description of the project, relevant literature examining similar programs and personal interviews. In addition, national or local surveys may be also used to calculate the monetary value of both the opportunities forgone and the expected benefits of the resources invested in the program.

In regard to the specific costs of these interventions, the following list describes the most important items that should be taken into account in the costing exercise, including not only the financial costs disbursed by the program but also the opportunities costs that arise from the nature of some of their activities.

- **Direct Costs:** all the expenditures associated with the development and implementation of the interventions and their pilot programs. First, this includes the salaries of the personnel involved in planning, running and monitoring the program such as the payments to public officers –at the national and local level, staff of NGO involved in administering the program, technical staff, program delivery staff, supervisors of community centers and, in some programs, the monetary value of incentives offered to nutrition workers. Second, the direct expenditures of providing the goods and services of the intervention (e.g. food and micronutrient supplements, fortified food, teaching materials, growth charts, immunizations) and equipment needed to conduct growth monitoring, health check-ups and child-care costs (e.g. standardized and accurate weighing scales, measuring tapes, diagnostic products, medication). Third, the costs of training nutrition and health workers. Fourth, the costs related to the advertising campaigns of the program’s activities (e.g. local radio, newspapers). Fifth, the amount paid for office space, office supplies and information systems (e.g. computers). And finally, the cost of local and international loans if funded through capital markets.

- **Indirect costs:** these include mostly opportunity costs such as the value of time spent by community nutrition workers in terms of training, growth monitoring sessions and home visits. There is also an implicit opportunity cost in the time allocated by parents and children to the nutrition and health prevention activities of the program. Additionally, the value of the best alternative use of resources that are inputs of the program (e.g. food supplements, office space, utilities, maintenance) and are received as donations have to be added to these costs.

- **Other costs:** travel expenses for program staff and costs of organizing meetings and conferences. Other additional costs, slightly more technical to account, are the efficiency costs from levying distortionary taxes to finance the project and the costs produced by the existence, if any, of negative externalities.
3.3.2 Identification of Benefits

The benefits of CNP’s are usually defined as the monetary value of positive outcomes and savings that result from the actions of the intervention. However, benefits in general are definitely more complex to measure for several reasons. First, it is difficult from both the underlying nutritional theory perspective (e.g. the biological processes that are in principle influenced by the program) and the quantitative analysis side to convincingly identify the impacts of the programs, particularly those that focus on health outcomes. Second, even if the effects are credibly disentangled, they need to be translated into monetary benefits. Third, the present value of benefits that are materialized in the future (e.g. gains from larger economic productivity in adulthood) is particularly sensitive to the value of the discount rate. Fourth, programs frequently have positive externalities over other groups of people and the valuation of these benefits is highly technical and challenging.

The actions of the programs to strengthen the nutritional status of pregnant women prior conception are intended for the most part to reduce the prevalence of low birthweight. In turn, gains in weight at the time of birth together with other interventions are strongly correlated for instance with subsequent stature, cognitive development and human capital accumulation (Ashworth, Morris and Lira, 1997; Hoddinott and Kinsey, 2001; Behrman and Rosenzweig, 2001). After birth, other actions such as the promotion of exclusive breastfeeding (for children below 6 months), complementary feeding (for children 6-24 months old), other changes in feeding and caring practices, child-growth controls, check-ups and micronutrient supplementation also seek to protect the nutritional and health condition of children. Overall, the direct impacts of these interventions are often linked to a reduction in infant mortality and morbidity rates, as well as to better cognitive development, school attainment, labor productivity and, more generally, quality of life. Other secondary positive effects of the programs may also accrue to participants, non-participants, or the entire population.

Despite the little existing evidence, in what follows it is discussed in more detail different types of plausible benefits of community-led nutrition interventions5:

- Overall, the first step in the causality channel is a reduction in infant mortality. For instance, it is estimated for the U.S. that an additional pound at birth is connected to a fall of nearly 14% in mortality rates (Conley, Strully and Bennet, 2003, cited by Behrman, et al. 2004). Similar associations between birthweight and mortality but larger in magnitude have also been found in data from other countries studies (Ashworth, 1998; Unicef, 2004). Furthermore, reductions in malnutrition in early childhood are also associated with reductions in infant mortality (Unicef, 2000; WHO, 2002). There are numerous benefits from living in an environment with lower mortality. We can mention a few here. First, obviously, the number of lives saved. The valuation of changes in mortality has been examined through the tradeoffs between income and fatality risks, a concept that is frequently known as the “Value of a Statistical Life” (VSL). An evaluator has to consider

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5 This part draws heavily from the micro evidence on the impacts of improved nutrition compiled and discussed by Behrman, Alderman and Hoddinott (2004).
that the valuation of these benefits depend to a large extent on the context of the area under study (e.g. country, life expectancy of participants, degree of risk aversion). The work by Viscusi and Aldy (2003) offers an useful review of the literature, including estimates of the VSL in some parts of the world and several policy applications. Second, lower mortality reduces the burden on the use of resources devoted to health care services. Third, a reduction in the death of infants may have positive effects on fertility behavior by lowering the need for replacement births and improving birth spacing, which reinforce the impacts on child survival and future productivity.

- Since the reduction of malnutrition and risk of illnesses among participant children is the focal point of these interventions, they are expected to reduce morbidity and increase school attendance. The former strengthens the latter and also creates savings in the health care system (e.g. less hospital treatments). There exist some numbers in the literature that give an idea of the dimension of these savings, but all of them have been calculated for developed countries (Lightwood, Phibbs and Glanz, 1999, quoted by Behrman, et al., 2004). While these savings are probably much lower in developing countries, they may still be very significant not only through lower mortality rates but also as a proportion of the public budget allocated to the health sector. An additional benefit is the reduction in health care expenses financed within the household such as medications and, more importantly, the time spent by parents and other caregivers while children are sick.

- The next logical benefit of a CNP –and of its reinforcing previous impacts on infant mortality and morbidity– is related with the process of human capital accumulation. These benefits are transmitted through several channels. First, healthier children are more likely to attend school on a regular basis and, thus, decrease grade repetition and increase school progress. These effects are translated into lower education expenditures and higher school attainment. Second, malnutrition can delay entry to school. Hence, a drop in late enrollment rates produces an additional benefit by reducing the opportunity cost of school attendance –assuming the returns to schooling are positively related to age as it is often the case. The third channel is via the positive effects of better nutrition and health on the capacity to develop motor and learning abilities. There is an extensive literature that provides evidence of the latter association (Grantham-McGregor, et al., 2007). More generally, there are not many studies that provide credibly estimates of the causal pathways between nutrition and health during childhood and subsequent schooling accumulation. However, Behrman, et al. (2004) presents a review of four articles that represent the best efforts to disentangle the causal effects on school performance. An important point for the purpose of this document is that these studies provide useful identification strategies and methods that can be adopted in future evaluations of CNP’s aimed to estimate such impacts (Glewwe, Jacoby and King, 2001; Alderman, Hoddinott and Kinsey, 2003; Alderman, Behrman, Lavy and Menon, 2001 and Behrman, et al., 2003).

- The following link in the chain of positive effects has to due with an increase in physical productivity and incomes. Inadequately nourished children may be more likely to have inferior productivity in adulthood (e.g. higher morbidity and work absenteeism) and, consequently, lower earnings, creating a harmful vicious of poor calorie intake and
low incomes. It is very straightforward to intuitively bridge the gains in nutrition and schooling with a better performance in the labor market. Yet, it is difficult to produce reliable estimates of these associations. In spite of this, there is a body of evidence supporting this story. In a very influential paper, Thomas and Strauss (1997) used Brazilian data to show that an increase in height of 1% led to a 2.4% increase in earnings. Other results reported in the literature are in the same range of magnitude (e.g. Foster and Rosenzweig, 1993; Glick and Sahn, 1997; Strauss and Thomas, 1998; Behrman, et al., 2003). There is also a large line of research exploring the impact of early childhood development and school attainment on labor market outcomes, which complements the substantial effects of nutrition on earnings that are also accumulated through higher human capital accumulation (e.g. Behrman, et al., 2003; Heckman and Carneiro, 2003).

- Finally, there are some indirect benefits such as positive spillovers of the intervention on non-participant families. For instance, there is some partial evidence from the BINP and another community-based nutrition program in Senegal (Community Nutrition Project) showing that control families also benefited from some of the counseling offered in treated areas through social networks (Karim, et al. 2002). More generally, there are non-negligible aggregate effects of better nutrition, health and schooling on economic growth, the society in general and the welfare of subsequent generations.

### 3.3.3 Evidence on Costs and Benefits of Nutrition Interventions

In 2001/2002 the government of Colombia began a welfare program entitled “Familias en Accion” (FA) with the support of the World Bank and the Inter-American Development Bank. The initiative is a cash-conditioned transfer program very similar to the Mexican intervention called “Oportunidades” (known before as “Progresas”) with three main components: education, nutrition and health. In regard to the two latter components, the program consists of child growth and child care promotion activities jointly with monetary transfers and vaccination follow-ups for children below 6 years of age. Besides, mothers in these families are requested to attend community-led seminars where they obtain valuable information on nutrition, health care, contraception and hygiene. The program has being implemented in approximately 70% of the municipalities (mainly rural ones) of the country following some specific targeting parameters.

A quasi-experimental evaluation of the program started in 2002, including survey questionnaires at baseline and two follow-up rounds of households (previously interviewed) from treated communities and matched control communities. Overall, the evaluation has found positive effects in nutrition (birthweight and anthropometrics), in morbidity (reduction of prevalence of diarrhea and acute respiratory infection), education (higher attendance) and consumption, including food consumption.

The assessment contains a very careful benefit-cost analysis of the program, with an emphasis on its educational and nutritional components (Institute for Fiscal Studies, Econometria and SEI, 2006). Focusing on the latter, the exercise provides helpful
guidelines to construct plausible measures of the benefits and costs of actions often integrated in the packages offered by CNP’s.

Drawing from the study by Behrman, et al. (2004), the evaluators first identify six main potential benefits: (1) savings from fewer resources devoted to neonatal care, (2) savings from fewer resources devoted to the treatment of illnesses related to low birthweight, (3) a reduction in infant mortality, (4) reduction in the costs associated to lower morbidity among young children, (5) an increase in productivity via an increase in height, (6) gains in productivity as a result of better cognitive and motor skills. Next, these benefits are measured with the specific impacts of the program and translated into monetary values by using some plausible assumptions\(^6\) and a discount rate of 10% (which seems to reflect the opportunity cost of public funds in Colombia). Hence, the study shows that the present discounted value (PDV) of the total benefits is $111.8. As for the costs, the analysis included most of the direct and indirect (private and public) costs associated with the program listed in the previous sections and finds that their PDV account for a total $67.3. Thus, the benefit-cost ratio arising exclusively from the nutrition component of FA is 1.66.

4. Assessing Data for Evaluation

This section now discusses the type of data that can be used to conduct process and impact evaluations of CNP’s. As noted below, these data requirements are very similar to those employed in evaluations of other nutritional programs. However, an especial emphasis is given to those topics and variables that are more appropriate to assess the specific features of community-centered projects.

4.1 Existing Data

Before undertaking any new data collection, the first step for a team of analysts is to make an inventory of available data sources that are relevant for use in the evaluation. This includes reviewing administrative data, population censuses, data from the own program (e.g. monitoring system), national and local-level public finance data, national accounts, surveys (household, community, health facility), satisfaction surveys and qualitative data (e.g. case studies).

The quantitative part of process evaluations is most of the time based on information from administrative data, monitoring data and satisfaction surveys. For instance, administrative data can provide information on poverty, malnutrition and disease prevalence among children, national and local institutional capacity strictly related to the implementation of community-based programs, infrastructure, resources of decentralized units in charge of social projects, and coverage and targeting of other nutritional

\[^6\] The study assumes that a gain of 400 grams at birth and a improvement of 0.25 standard deviations in the indicator of age-for-height may be associated with an increase of 5% of 2% in future earnings, respectively.
programs that are already in place. In turn, monitoring data and satisfaction surveys usually contain information on the proportion of communities/families targeted by the program that actually participate, the socioeconomic background of these families, characteristics of those who dropped out, coordination of services within the community treatment network, differences in the treatment offered (e.g. set up of nutrition workshops and growth monitoring sessions) and intensity (e.g. number of home visits), evaluation data collection and, access and quality of services. Accordingly, the compilation of new data to undertake process evaluations does not appear to be highly essential except for the case of satisfaction surveys if they have not been previously conducted by the program itself.

Administrative data, population censuses, public finance data, national accounts and previous surveys can also provide valuable information for the design and completion of the intervention. For example, nationally representative anthropometric surveys were used to identify and target participant areas as part of the implementation of the Seecaline program in Madagascar. Similar targeting approaches have been used for other CNP’s (e.g. the program Atención Integral a la Niñez en la Comunidad, AIN-C, in Honduras). In the same way, these existing sources of information can also be used to build a background on welfare components for impact evaluation purposes. For instance, a better knowledge of the relevant socio-economic aspects of participant communities and the nutritional and health problems of their children before implementation can allow researchers to improve the evaluation design (including data needs) without undermining its objectives.

In spite of that, impact evaluations of poverty reduction programs often entail new data collection, particularly household-level information. The main reason for this is that basically these assessments attempt to estimate the difference between outcomes for the same unit of analysis (e.g. the nutritional status of children in participant communities) with the program and without it. Normally, the construction of this counterfactual can be hardly achieved with the existing sources of data. Still, evaluators are always encouraged to determine whether the collection of this program-specific data can piggyback on planned collecting efforts of other related surveys. In what follows, this document focuses on the main characteristics of adequate and reliable data to address the impact evaluation needs of CNP’s.

4.2 Evaluation Approach and Data Requirements

The evaluation methods employed to construct the comparison group determines to a large extent the type of suitable data. The most reliable methods require at least two rounds of data, one of them before the intervention and the other after its implementation. Therefore, in order to ensure that adequate information is available, i.e. baseline data, it is crucial that analysts think about the evaluation design well before the program begins.

An important aspect of CNP is that although their programs are finally delivered to pregnant women, children and their parents, communities are the main units of
intervention. Whether the selection of beneficiaries by the program follows a fully randomized setting or not does not change the counterfactual of interest: what would have happened with the nutritional indicators of children (or pregnant women) from participant communities in the absence of the CNP. Hence, the data has to recover the missing counterfactual through inference from proper control communities. Given the different identification strategies that can be implemented, the following are the main data requirements to construct good comparison communities:

Experimental designs: if communities are randomly assigned into treatment and control groups and the parameters of interest are the average causal effects (the average treatment effect on the treated, ATT and/or the intent-to-treat, ITT), the ideal data should have baseline and follow-up surveys on participant and non-participant communities. The identification idea here is to exploit the longitudinal nature of the data to perform a difference analysis that can get rid of common time trends and other sources of bias that can arise as a result of a random allocation of services (i.e. randomization bias). An alternative is to calculate a “single-difference” using a single post-program cross-section of data on participants and non-participants. However, this only allows identifying a more restrictive estimator of the impact of CNP.

Regarding the structure of the data, this analysis can be in principle carried out with either a pool of cross-sections or longitudinal data covering the time period under study. Nevertheless, there is a particular reason why panel data is preferred. All CNP’s have components that are demand driven. In the event of randomization, this probably would take place at the community level. But the decision to participate within the community is still determined at the family or individual level. This can produce a selection bias in the estimation of the ATT, which arises from the fact that families that decide to participate in growth monitoring and nutrition workshops may differ from families in non-participant communities for other reasons than their participation status per se. For this reason, two or more rounds of panel data can be used to get rid of unobserved time-invariant effects and reduce the scope for omitted variables bias.

Successive rounds of data on randomly-assigned treated communities can also be used to identify the differential impacts of variations in the delivery system (e.g. sprinkles vs. other forms of food fortification to address vitamin and mineral deficiencies), in treatment dose (e.g. 6 months vs. 1 year of participation, assuming the timing of program entry is random or dealing with its potential selection bias) and treatment intensity (e.g. growth monitoring vs. growth monitoring and micronutrient supplementation).

Fully randomized experiments together with proper data are the best design for establishing causality because, in principle, any selection bias is zero on average. In fact, randomized experiments are becoming increasingly common in the assessment of social

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7 A clean randomization of communities implies that the definition of treatment status should be orthogonal to group-specific effects.
8 An additional threat for the internal validity of the evaluation is the potential for selective non-compliance among treated communities.
programs. However, it is worth mentioning that despite its strong internal validity, they are not free from complications. For instance, government authorities can find unethical and unfair to restrict some communities/individuals from the intervention. Similarly, there may be political constraints to avoid allocating the intervention randomly. And even if the randomization was done properly, people may not comply with the assignment in a non-random fashion. This is particularly important in the context of the CNP’s, were random allocation takes place at the community level, but participation is determined at the household or individual level (e.g. single headed households). Therefore, evaluators planning on undertaking fully randomized trials are advised to collect proper evaluation data to deal with these issues of selection into participation (e.g. by modeling or instrumenting participation or by estimating intent-to-treat parameters).

**Non-experimental designs:** although probably less robust, non-experimental strategies can also be employed to assess the effects of CNP. The construction of the comparison group, for instance using propensity score matching (PSM), can be attained with one or more rounds of data that include relevant information from participant and non-participant communities. Post-program existing survey data with a large representation of the population of interest in the sample (e.g. children in small rural villages) may be suitable for these purposes. However, if possible, project-specific community and household surveys with two points in time to control for time trends in the nutrition outcomes (e.g. economic growth, varying food production, national programs to improve food security, economic or natural shocks) – and unobservable individual fixed effects if collecting panels – are more desirable. Hence, these observations over time can be used to estimate the impacts by difference-in-difference (DD) and PSM-DD. Furthermore, if the set of variables to match is not large, the evaluator can also use exact cell matching.

Alternatively, variables that affect community or individual participation in the program but not nutritional or health outcomes conditional on participation can also help in identifying the effect of CNP’s (i.e. instrumental variable methods). For instance, a randomization process at the government or program administration level to select treated areas can be used to predict actual voluntary community and individual participation. Likewise, the evaluator can think of some geographic characteristics or other variables that may also be exploited as instruments of participation. In general, this method should be based on rich household and community cross-sectional or longitudinal data that is representative of the participant and non-participant population as well as suitable information to model the first stage of participation. For the estimation of the differential impacts on the treated, an option is to use only subsequent rounds of data on participant communities and exploit phase-in rules that are thought to be exogenous to identify such effects.

Finally, reflexive comparisons – another type of non-experimental design – have lower data requirements but do not seem to be a reliable approach for the goals of evaluations of CNP’s. First, this method is not able to distinguish between program

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9 Obviously, the validity of any instrument that is exploited in the design cannot be tested and, thus, will be always questioned.
effects and external contemporaneous events. Second, a major drawback is that the counterfactual is obtained by using pre-intervention data from children in participant communities. Although this may fit well into the evaluation of interventions implemented at the national level, often CNP’s are designed to target communities from specific areas of the country.

4.3 Indicators to Track Impacts

The next relevant question is to ask which indicators should be included in the evaluation data in order to monitor the impacts of CNP’s in relation to a baseline situation. Given the type of activities promoted by these interventions, the following is a list of intermediate or short-term nutrition-related impact indicators –compatible with the timing of a CNP– and the outcome variables from which they are drawn up:

*Anthropometric indicators*

- **Percentage of newborns with low birthweight.** Uses data on weight records at birth from maternal recall or clinic cards to identify children with a birthweight of 2,500 grams or less. This indicator can also be standardized to provide an alternative interpretation but is necessary to have information from a general reference group.

- **Index of height-for-age.** It is used to measure stunting and it is constructed from both anthropometric measures of recumbent length and height from young children (0-36 months old), detailed information on birth data, i.e. exact age in months –and sex for z-scores.

- **Index of weight-for-age.** It measures prevalence of underweight among young children and is constructed from anthropometric data on weights, exact age in months –and sex for z-scores.

- **Index of weight-for-height.** It measures wasting or thinness and is constructed from anthropometric data on weights, length or height –and sex and exact age in months for z-scores.

- **Percentage of pregnant women with low weight gain.** It requires data on pregnant women’s anthropometrics and detailed information on the evolution of pregnancy (e.g. gestational time).

*Mortality*

- **Infant and under-five mortality rates.** They are constructed from the number of deaths of children in the relevant age (using household questionnaires) in a specified period of time after the program was in place.
Illness prevalence

- **Percentage of children with diarrhea and acute respiratory infections.** These indicators need to be calculated from information—often included in health modules—asking mothers about the incidence of these infectious diseases among their children, including also questions to establish their severity and duration.

Micronutrients Deficiency

- **Percentage of children and pregnant women with Vitamin A and iron deficiency.** It is necessary to collect blood samples among surveyed children and pregnant women to measure the level of Serum Rutinol (for vitamin A), and Hemoglobin and Serum Ferritin (for iron).

- **Percentage of children with iodine deficiency.** It is determined from urine samples of children in the sample to measure their levels of goiter rates and urinary iodine.

Nutritional knowledge and practices

- **Average duration of exclusive breastfeeding.** It is calculated from information about the time of exclusive breastfeeding among participant and non-participant children that were 0-6 months after the program began (age at which child started/stopped breast feeding).

- **Average age of transition to and length of complementary feeding.** These indicators are obtained from data on infant feeding practices regarding the age of transition at which complementary foods were added to the diet of children and the length of complementary feeding (ideally for children who are 6 to 24 months old).

- **Diet energy supply and diversification.** These indicators are based on measures of dietary intake collected from household surveys. There are several methods for obtaining this information: 24 hour recall, food frequency surveys, dietary history or direct observation. Often, variables that measure food frequencies of specific categories of foods (e.g. iron-rich foods) that are being promoted by the intervention are used to assess diet diversification (e.g. in the evaluation of the Uganda Nutrition and Early Child Development Project, NECDP).

- **Percentage of households consuming adequately iodized salt.** Obtained from the dietary intake questionnaires of household surveys.

- **Indicators of attitudes and practices.** Based on information at the household level that, for instance, asks for the methods of food preparation, the percentage of caregivers

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10 See Habicht, et al. (2006) for a more detailed discussion of these techniques.
preparing children’s meals who wash their hands or the use of oral re-hydration in young children with diarrhea.

*Health Seeking Behavior*

- **Percentage of preschool children caregivers taking remedial actions.** Constructed from qualitative data at the household level regarding knowledge of signs requiring immediate referral to health centers (e.g. fever, inability to drink or eat, rapid breathing, etc.).

- **Prenatal care utilization.** Based on data from household questionnaires on the number of prenatal visits during pregnancy

- **Percentage of births attended by skilled health personnel.** From household questionnaires.

  The few past or current evaluations of CNP’s are fully focused on short-run indicators like the ones listed above. However, there are other outcomes that can be explored by evaluations seeking to assess middle- and long-run impacts such as schooling (e.g. attendance, progress, and attainment), fertility behavior (fertility rates, birth spacing, age of mothers at first birth), labor performance (e.g. employment), productivity (e.g. wages) and quality of life (e.g. expenditures, poverty, health status).

### 4.4 Relevant Covariates

Given the complex underlying causality channel that involves the intervention jointly with other determinants of nutrition and health, a credible assessment of the impact of CNP’s needs to reduce at least the scope for misspecification errors and control for potential confounding factors through statistical methods. Therefore, in addition to having rich information on a set of impact indicators, the evaluation also requires complete, detailed and accurate data on a set of relevant covariates. In order to simplify the presentation, there is an annex at the end of this document (Annex 2) with a sample of data collection instruments to help guide future survey work. In general, these control variables may include information on the following subjects:

*Household-level questionnaires*

- Socio-demographics (e.g. age, sex, household kinship, marital status)
- Education (e.g. attendance, attainment)
- Health status (e.g. immunization, illness prevalence, health seeking behavior) and practices
- Mortality
- Fertility
Labor market participation and other activities (e.g. employment status, wages, occupation, farming, family business)

Use of time

Income/expenditures, food consumption

Assets

Dwelling characteristics

Shocks (e.g. economic downturns, natural disasters, weather shocks)

Nutritional information (e.g. anthropometrics of parents or all members in the household)

CNP participation (e.g. participation, period of participation –by service)

Access and participation in other programs of social assistance (e.g. health/nutrition interventions) and/or village organizations (e.g. cooperatives, lending groups)

Migration

Ethnicity, religion

Community-level questionnaires

Localization (e.g. GPS coordinates, geographic characteristics, remoteness)

Population

Socioeconomic characteristics (e.g. economic activities, school/health facilities, water and sanitation, other basic infrastructure)

Natural resources

Organizational structures in the village

Community worker-level questionnaires

Socio-economic background

Training

Knowledge of growth promotion and child caring practices

4.5 Sample Size and Timing of Surveys

As it is the case in any other type of evaluation, the sample collected has to be representative of the population under analysis, more specifically of individuals in participant communities and their correspondent comparison group. Obviously, large samples are more reliable to quantify the impacts of the intervention, particularly when statistically meaningful differences in key outcomes such as the height and weight of young children affected by the program might not be easy to infer from small sample
sizes with high sampling variability. However, large samples for evaluation purposes are very costly because they entail the collection of long and detailed household surveys, adaptation of survey instruments to different languages and local customs and, more importantly, the logistics of revisiting households for longitudinal surveys.

Then, how many households have to be interviewed to ensure that the population targeted by a CNP is properly represented? The answer to this question is, in general, influenced by the size of the population, the risk of collecting a non-representative sample, the responsiveness of the impact indicators to the duration and intensity of the activities of CNP’s, and the allowable sampling error, i.e. level of precision. In regard to the latter, it is often assumed in past and currently planned evaluations of CNP’s (e.g. AIN-C in Honduras) that sample sizes with a level of precision of 5% and a power (the chance of identifying a significant difference between the two groups, if any) between 80% and 90% are appropriate standards to test the nutritional and socio-economic relevant differences that are expected as a result of the intervention.

The other parameters used in the calculation of sample sizes such as the variance of strata or cluster-based sampling designs, the expected mean change in the treated group (e.g. a reduction of 20% in anemia prevalence among treated children 0-24 months of age after two years of exposure to the program), the standard deviation of this change and the over-sampling to compensate for non-response, attrition and clustering effects are often determined by the evaluators based on country- or region-specific information from previous censuses, surveys, pilot tests or simulations.

In addition to sample size, another important issue to discuss is related to the question of when and how often the evaluation of CNP’s needs to collect the data relative to the implementation of the program. It is clear that, if possible, baseline data of treatment and comparison communities and individuals has to be carried out before project activities have been initiated. In order to accomplish this, evaluators have to take into account the time devoted to pilot testing of survey instruments.

Once baseline information is available, the proper timing of successive surveys depends on the type of project and whether it has reached a steady-state level of coverage and operations. In general, as noted along this document, the focus of most CNP’s is growth monitoring, promotion, and knowledge and behavioral change of nutrition and child care practices. According to the empirical literature reviewed here, the effects of this set of activities and additional actions such as vitamin supplements, food fortification and deworming medicines are expected to influence the nutritional and health status of children roughly after one year of participation in the program. A similar timeframe can be also allowed to see improvements in behavioral outcomes. Therefore, subsequent rounds of evaluation data should be collected preferably between one and two years after the communities begin their participation in the program. Additional resurvey beyond the first follow-up (3-4 years after implementation) can be used to check the robustness of previous findings as well as to explore different issues like the duration and linearity of the effects, potential returns to exposure to the intervention (older vs. younger participant cohorts) and middle and long-run impacts of the program.
5. Identifying the Impact of Community-Based Nutrition Programs

This section presents and discusses in detail three examples of past evaluations of CNP’s in Central America and Africa. The emphasis of this part of the document is to fully review the whole analytical process behind these evaluations, starting with a description of the background of the program (e.g. design, targeting) and its implementation and continuing with a discussion of data structures and quality, identification methods, main findings and costing exercises. Consequently, this section is not intended to overview the main conceptual aspects used in standard program evaluation. Instead, based on experiences of past evaluation work, its main goal is to illustrate the approaches thought to be more likely to perform well in terms of identifying the causal effects of CNP’s. This part is organized as follows. First, I discuss a non-experimental evaluation that faced serious threats to its internal validity and, thus, provide evidence of aspects that are not uncommon in the impact evaluation of nutritional interventions and perhaps need to be addressed in future assessments. Next, the best two pieces of evidence on the impact of CNP’s known to the author are summarized. This includes an evaluation that exploits variation from a fully randomized trial with baseline data and a resurvey in Uganda, and another study employing a quasi-experimental approach to examine differences over time between project sites and matched control areas in Madagascar, as well as an analysis of the impacts of variation in length of exposure.

5.1. The AIN-C Program in Honduras

Program: while growth promotion actions were offered by some health facilities in Honduras since the early 1990’s, the AIN-C program began as a formal large-scale intervention only until the late 1990’s. By 2005 the program covered around 1,800 communities in the 80 poorest municipalities, covering 24 out of 42 health areas in Honduras. The focus of the intervention is on improving the nutritional status of children under age two through community-level activities that include regular growth monitoring sessions, counseling on feeding, child care and fertility behavior, micronutrient supplementation and follow-up on immunization. Additionally, children below five years of age obtain ill assessments and basic care and referral for diarrhea and acute respiratory illness and their mothers receive guidance on proper home-based treatments. Similar to the structure of most CNP’s, the activities of the program are implemented and supervised at the local level by health centers and NGO’s with the support of nutrition volunteers (i.e. monitoras). These volunteers are often chosen among the members of the community to run monthly nutrition and health sessions and supervisory visits.

Data: data collection for the evaluation of AIN-C started in 1998 with a baseline household survey (prior to implementation) and two successive rounds collected data in 2000 and 2002, but only the latter followed equivalent parameters for selection of communities and households to those used in the baseline survey. Therefore, only the baseline and final surveys were used in the evaluation analysis. Their sampling process is
based on a four-stage stratified sample of randomly selected geographic groups and health areas. Within these subgroups, program participant health centers were randomly selected and paired with control communities by distance from the health center and population size. Finally, households of these treatment and comparison groups were randomly selected to be interviewed. The baseline survey obtained information from 1,467 children under two years of age in 100 participant and non-participant communities, while the final round collected data from 1,343 children belonging to the same age group in 92 of the 100 original communities.11

Implementation: Training of health staff and community workers took place between October 1997 and March 1998 in 192 health centers. By April 1998, an initial group of communities started the work of the program. A weather-related shock (Hurricane Mitch) hit some of the communities that had just begun AIN-C in October 1998 and temporarily disrupted their activities. The program was largely expanded to other communities between 2001 and 2004 with the participation of several NGO’s and official institutions. However, renegotiations between financial supporters (mainly the U.S. Agency for International Development, USAID) and the government shifted the location of the intervention over time. During the period 1998-2001 nine health areas received support for AIN implementation. However, due to changes in the terms of international assistance in 2001, four of these areas were dropped out from the intervention and five new areas were added.

Methods and Identification Problems: the original design of the study was aimed at comparing randomly selected treatment communities against matched control communities with the use of baseline, midterm and final household data (Plowman, et al., 2004). Nevertheless, this analytical approach faced several difficulties that are very likely to limit its internal validity. First, as noted above, the midterm dataset is not comparable to the other rounds of data collected and, thus, an initial assessment of the program and the evolution of these effects of the programs could not be undertaken. Second, and more fundamental, the original strategy required that participant and non-participant communities served by same health centers were matched based on population size and distance to the health center. Apparently, a very limited common support (the lack of control communities with similar matching characteristics to treated communities) did not allow such matching and communities were paired based on subjective indicators.12 Even if this matching was possible, it is very plausible to think that treated communities can differ from their constructed counterfactuals in other ways beyond community size and location that can be correlated with the underlying determinants of malnutrition (e.g. socioeconomic conditions, infrastructure, etc.). In fact, the final report of the evaluation shows that intervention and control communities differed in more than a few critical characteristics. A lesson for future evaluators adopting this type of design is to attempt a

11 Four treatment communities did not implement the AIN-C program between 1998 and 2002 and, thus, these communities and their four matches were removed from the analysis.
matching that includes several variables that capture key inputs of the nutrition and health production function and to reduce the dimensionality problem by matching on a propensity score in eligibility or participation. Furthermore, evaluators need to take into account in their design any explicit criteria for the targeting of a program that initially selects the poorest and more disadvantaged communities. For instance, by exploiting variation in phasing-in implementation schedules, instrumental variables or collecting very rich and detailed household and community surveys.

An additional problem was that children in control communities were not as clean as evaluators thought at baseline. Since the services of AIN-C are delivered both at the facility- and community-level (sharing materials and messages), a large proportion of children from control communities (25%) were enrolled in facility-based growth promotion activities. Just to cite some evidence of this, the final survey revealed that 48% of all respondent in comparison communities recognized the communication materials used by AIN-C (Plowman, et al., 2004). Additional implementation problems of AIN-C may have affected the identification strategy of its evaluation as well. For instance, as mentioned before, eight communities were (not randomly) removed from the sample due mainly to operational issues of AIN-C and, for one of them, due to the destruction generated by Hurricane Mitch. Besides, some health areas in project sites were unattended (again, not randomly) by AIN-C for more than one year when the final evaluation survey was carried out.

Finally, the analysis did not address another potential source of bias arising from the selection into participation at the individual level. Recognizing this and other problems, a final decision of the evaluators was to use only the final round of data and conduct a cross-sectional comparison of AIN-C participant and “non-participant” children. Clearly, the assumptions needed to credibly estimate the impact of the program through this type of design are even more restrictive and implausible. Additionally, the study exploited variation in program exposure as an alternative approach but ignored that length of participation is probably determined in a non-random fashion.

**Impacts:** the evaluation of AIN-C found mixed results. For example, on one hand, anthropometric outcomes, rates of immunization and parent’s knowledge of signs associated with infectious diseases are more favorable for children in communities served by AIN-C. On the other hand, the prevalence of ill children and the likelihood of being taken to a health care provider are similar between AIN-C enrollees and non-participants. Likewise, while breastfeeding and weaning practices seem to be more appropriate for children enrolled in the program, other questions on caregivers’ knowledge about the symptoms of growth faltering and corrective actions suggest they do not differ by participation status. Therefore, is hard to conclude whether or not the program have had positive impacts on beneficiaries based on this assessment.

**Costs:** a very careful study undertaken by Fiedler (2003) provides the most comprehensive estimates of the cost of implementing the AIN-C program and finds an annual average cost per child participating in the program of approximately $5.91.
5.2. The NECDP Program in Uganda

Program: the project started initially with 25 districts in 1998, but was later expanded to 34 districts, which were selected based on rates of infant mortality, prevalence of malnutrition and primary school enrollment. The intervention has three main components at different implementation levels: (a) community capacity building and NGO service delivery training at the national level, (b) child health workshops—held at the parish level—to inform mothers and other caregivers on skills and changes in behavior needed to strengthen early childhood development and nutrition, and also advice on income and savings generation, and (c) community growth monitoring/promotion activities as well as community-based grants and incentives for food security projects and early childcare and education interventions organized by the communities. Two volunteers per community were trained by the program in relevant childcare monitoring and nutrition counseling. In addition to this, a randomly chosen sub-group of participant counties received a deworming medicine (albendazole).

Data: the longitudinal information used in the analysis was concentrated on the Eastern region of the country due mainly to two reasons. First, in terms of logistics, the evaluation project needed to reduce the number of local languages for cognitive testing. Second, the research strategy exploited variation in region-centered program services instead of relying on nationwide activities. As a part of the evaluation, three groups were defined: (a) Group A, receiving all program services plus deworming, (b) Group B, receiving only project services, and (c) Group C, comprised of control villages randomly selected from adjacent participant sub-counties. Accordingly, a three strata cluster-based sampling was used to interview a total of 2,250 household (750 per stratum) as part of the baseline survey, conducted between January and March 2000. Almost all the households with children under six were revisited during the same season in 2003. Surveys collected data on household socio-demographics, child anthropometry, assets, food security and knowledge and practices in regard to child care and health care utilization.

Implementation: the intervention only began until late 2001 and early 2002 for several reasons (e.g. NGO training was longer than planned). Therefore, the actual duration of the program at the time of the second round was roughly one year, less than the two years that evaluators had predicted at baseline. Furthermore, deworming sessions were not held as regularly as intended.

Methods: the analytic strategy of Alderman (2007) to estimate the average treatment effect of the program is based on a double difference approach (D-D) of randomized treatment and control communities, using longitudinal data at the household level.

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13 While weights were recorded for all children under six, heights were only measured for children two to six years of age so as to avoid the use of inaccurate records of recumbent length.
14 The surveys did not record information on household incomes and expenditures. However, the evaluation conducted by Alderman (2007) employed regression coefficients from expenditure equations on rural data for the Eastern Region from the 1999/2000 Uganda Integrated Household Survey.
between 2000 and 2003. The identification of the impact of deworming follows an identical approach but exploits experimental variation in service delivery within treatment communities. As expected due to the randomization in the construction of the treatment and comparison groups, pre-program descriptive analysis showed no significant difference in outcome variables—and other relevant variables—by strata.

**Impacts:** The program appeared to have a positive impact of nearly 0.5 standard deviations on the weight-for-age z-score indicator (waz) of treated children under one year of age—the age cohort expected to be the most responsive to the interventions of CNP’s. Treated children who were surveyed in the two rounds exhibited a larger weight gain (0.5 kilograms). In addition, there were significant improvements in breast feeding, complementary feeding and dietary diversification practices in project sites. In related work using additional data, Alderman, Konde-Lule, Sebuliba and Bundy (2006) also found a positive impact of deworming, i.e. provision of albendazole, on the nutritional status among children of participant communities.

**Costs:** The cost of the services offered by the NECDP Program ranges from $1 to $1.33 per child covered (World Bank, 2004).

### 5.3. The Seecaline Program in Madagascar

**Program:** The Seecaline program, as mentioned at the beginning of this document, is a large scale CNP phased in since 1999 in Madagascar. The intervention started in four provinces but was extended one year later to all the six provinces of the country. At the end of its expansion, in early 2002, the intervention involved around 3,600 project sites that reached communities in over 50% of all districts in Madagascar (56 out of 111). Overall, the program seeks to improve the nutritional status of young children (0-36 months) and pregnant and lactating women through community mobilization. The model of actions of the program includes child growth monitoring and promotion sessions, regular communal workshops to improve nutrition, hygiene, child care and cooking practices, food and micronutrient supplementation, direct counseling to pregnant and lactating women, and distribution of deworming medicines. The services are managed, delivered and supervised by local NGO’s jointly with local nutrition workers trained by the program, who are generally women from the participant community.

**Data:** Several data sources have been used for the impact analyses of the Seecaline program. The estimation of the average intent-to-treat parameter employed two different datasets. Initially, the baseline situation of treated and matched control communities was constructed out of a nationally representative anthropometric survey collected in 1997/1998. This information was complemented with a large scale follow-up survey of nearly 11,000 households in both areas targeted by the project and other communities from the 111 districts of the country. In addition, and also for evaluation purposes, there is a second round of data (longitudinal at the individual level with respect to the first wave conducted in 2004) planned on being collected in 2007. In regard to the second type of evaluation, the examination of the impact of length of exposure, the analysis has used
three sources of data: (a) monthly detailed information at the site level (3,600 sites) of all participant communities produced by monitoring systems of the program, (b) commune census data that collected detailed socio-economic and demographic information of all communes in the country in 2001, and (c) consumption-based measures of poverty from poverty maps at the commune level with information collected in 1993.

**Implementation:** the activities of the program started in 1999 in 56 targeted districts. Both the selection of these districts and the phase-in of the program were not random. Based on information from the 1997/1998 anthropometric survey noted above, areas with malnutrition rates above the national average level were selected for the intervention. Likewise, road accessibility to the community was defined as an additional condition for eligibility. Hence, the first treated communities in the program were more isolated and had higher malnutrition rates, less infrastructure and relatively good geographic/transport accessibility. Furthermore, 10 out of the 56 targeted areas were regions hit by natural disasters (drought and cyclones) in 2000. In terms of coverage, the goals were set to open sites and reach 10% of all children below three years of age in each of the first two years of operation and an additional 15% each subsequent year up to 50% at the end of the fourth year.

**Methods:** a randomized evaluation of the Seecaline program was not possible. Instead, the identification strategy of Galasso (2007) follows a quasi-experimental approach by comparing the nutritional status of children and intermediate behavioral outcomes between treated communities and matched control communities in two points of time (1997/1998 and 2004). A second exercise by Galasso and Yau (2006), the investigation of the marginal effects of increasing duration to the intervention, employs non-parametric methods (propensity-score matching) to exploit variation in program exposure among participant communities. Since the timing of participation between communities is not randomly determined, the evaluation uses baseline characteristics of these communities to model their selection into different durations.

**Impacts:** both evaluations find positive impacts of Seecaline. The impact evaluation finds that, for instance, children 0-36 months old in project sites for two or three years exhibit improvements in their measures of short and long term nutrition such as the weight-for-age and height-for-age. More specifically, the prevalence of wasting and stunting fell by 7.5 percentage points (nearly 18%) and 3.1 percentage points (around 7%) with respect to the change in the nutritional status of children in comparison areas. These results are even bigger for the younger children and poorer families in the sample. In addition, this analysis also finds positive changes of some intermediate outcomes like exclusive breastfeeding, weaning, the frequency of feeding, knowledge of other nutritional practices, treatment for diarrhea, and health seeking behavior. With regard to the differential returns to program duration, the authors show that communities with longer program exposure (one or two years) have malnutrition rates that are lower by 7-9 percentages points, particularly for the group of children 0-6 months old.

**Costs:** estimates from the World Bank (2007) seem to suggest that the program has benefit-cost ratios ranging between 3 and 5.
References


Annex 1 – Impact Indicators of Nutrition Programs

Table 1. Impact Indicators of Nutrition Programs by Type of Outcome

<table>
<thead>
<tr>
<th>Health Outcomes</th>
<th>Biochemical and Clinical Outcomes, continued</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pregnancy outcomes</td>
<td>Conjunctival Xerosis</td>
</tr>
<tr>
<td>Pre-term</td>
<td>Xerophthalmia</td>
</tr>
<tr>
<td>Low birth weight</td>
<td>Corneal lesions</td>
</tr>
<tr>
<td>Premature</td>
<td>Serum/plasma</td>
</tr>
<tr>
<td>Intra-uterine growth retardation</td>
<td>Other Vitamins</td>
</tr>
<tr>
<td>Miscarriage</td>
<td>B vitamins levels in blood</td>
</tr>
<tr>
<td>Morbidity Indicators</td>
<td>Urinary B vitamins excretion</td>
</tr>
<tr>
<td>Self-reported</td>
<td>Iron</td>
</tr>
<tr>
<td>Clinic Records</td>
<td>Unspecified &quot;anemia&quot; assessment</td>
</tr>
<tr>
<td>Other</td>
<td>Hemoglobin (Hb)</td>
</tr>
<tr>
<td>Cognitive/Behavioral and Developmental</td>
<td>Hematocrit (Hct)</td>
</tr>
<tr>
<td>Mortality Rates</td>
<td>Serum iron (SFe)</td>
</tr>
<tr>
<td>Growth and Body Composition</td>
<td>TIBC</td>
</tr>
<tr>
<td>Weight/Age</td>
<td>Transferrin saturation</td>
</tr>
<tr>
<td>Height/Age</td>
<td>Serum ferritin</td>
</tr>
<tr>
<td>Weight/Height (BMI)</td>
<td>Erythrocyte Protoporphyrin</td>
</tr>
<tr>
<td>Knee height</td>
<td>Red cell indices (MCV,MCH,MCHC)</td>
</tr>
<tr>
<td>Head circumference</td>
<td>Zinc</td>
</tr>
<tr>
<td>Middle upper arm circumference</td>
<td>Serum/plasma zinc concentration</td>
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<tr>
<td>Middle upper arm muscular area</td>
<td>Erythrocyte zinc</td>
</tr>
<tr>
<td>Skinfold thickness</td>
<td>Leukocyte and Neutrophil zinc</td>
</tr>
<tr>
<td>Somatic and visceral protein status</td>
<td>Urinary zinc</td>
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<tr>
<td>Physical Strength</td>
<td>Hair zinc</td>
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<tr>
<td>Work capacity</td>
<td>Salivary zinc</td>
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<td><strong>Biochemical and Clinical Outcomes</strong></td>
<td>Iodine</td>
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<td>Vitamin A</td>
<td>Urinary Iodine</td>
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<td>Serum/plasma Iodine</td>
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<tr>
<td>Serum carotenoids (SC)</td>
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<td>Serum Retinyl Ester (SRE)</td>
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<td>Protein</td>
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<tr>
<td>Modified Relative Dose Response (MRDR)</td>
<td>Indices of somatic protein status</td>
</tr>
<tr>
<td>Rapid dark adaptation (RDA)</td>
<td>Indices of Visceral Protean status</td>
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<td>Breastmilk retinol</td>
<td>Metabolic changes</td>
</tr>
<tr>
<td>Night blindness</td>
<td>Immunological function</td>
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<tr>
<td>Bitot’s spots</td>
<td></td>
</tr>
</tbody>
</table>

Source: taken from Habicht, Pelto and Lapp (2006)
Annex 2 – Sample Survey Questionnaires

Section 4 of this document described and discussed in detail the type of data, subjects and indicators that should be part of a quantitative analysis aimed at assessing the impact of CNP’s. In order to complement this, Annex 2 contains survey questionnaires of the Seecaline program in Madagascar that can be utilized as a guide for the elaboration of survey instruments in future evaluations of similar nutritional programs. The reader should be aware that the topics included in these questionnaires overlap with several areas surveyed in the empirical analysis of other social programs and issues. Still, in what follows, the most relevant sections/questions needed to address specific aspects of CNP’s are highlighted. All the original survey questionnaires are enclosed as objects at the end of each section (by double-clicking on the attachment the reader can have access to the PDF files).

Review of Sections

- **Village Questionnaire**: localization (urban, rural, GPS location), population, socio-economic characteristics (roads, means of transport, main economic activities, infrastructure (health and education), social networks, sources of water and electricity, food security (principal products cultivated by the villagers, places to obtain food), environmental problems, land availability and titling problems.

15 The original questionnaires used to survey households, communities and project sites of the Seecaline were written in French.
• Individual Questionnaire (community workers):

  o Site identification. Name, location.

  o Demographic characteristics of nutrition workers. Place of origin, schooling, religion, ethnicity, marital status, position within the household, husband support in nutrition activities, number of children under supervision.

  o Characteristics of project site. Type of institution running the project site, number of villages served, distance from the main town to project site, physical characteristics of the facilities (walls, floor, toilet, water), calendar of activities of the site last month.

  o Occupation. Length of time working at the project site, other jobs, principal activity before joining Seecaline, changes in community worker’s standard of living after joining Seecaline.

  o Support from other people. Do other members of the community support your activities, which type of activities?

  o Number of enrollees. When did the last census take place? Number of children monitored in the site, number of children by age groups in months, number of mothers, number of mothers that were not surveyed by the census, are there mothers who children enrolled who never attend? Why they do not attend?

  o Weighing (groups of weighing? number of children in each group, does nutrition worker receive support from mothers during the sessions? periods in which is more difficult to encourage mothers to attend weighing sessions, knowledge of recumbent and standing height, person in charge of the health card and program registration card, time spent and problems filling out these cards, does nutrition worker give advice while weighing, proportion of children who attend weighing meetings increased/decreased compared to the same month last year?, if so, reasons

  o Interaction with the organizer (ONG, local institution). Did the NGO attend the last session? Purpose of visit, time spent by them, does the organizer help with technical questions? Most important activity in which nutritional worker receive help, are there any problems with the community?

  o Training. Amount of time spent on training, did the community worker attend all training sessions? Number of sessions she/he attended, did community worker receive enough training, groups participating in the training.

  o Food distribution. Does the project site provide supplementary food? Is this food given to children and pregnant women? Any problems with the
food? Which ones? Does the provision of food motivate mothers to go the sessions? Are there other incentives

- **Referral to health center.** Is there any health center near the project site? Distance to health center, does nutrition worker give mothers advice to take their children to the health center? If so, why are the reasons? Does nutrition workers gives counseling to pregnant women and referral to health centers? If so, why are the reasons? Were there children of the project site who were hospitalized (during the last 3 months)? If so, number of children hospitalized, how does nutrition worker judge her/his collaborative work with health care centers?

- **Individual Questionnaire (mothers):** birth history (number of births, number alive, number dead, sex composition), children living in the household, children living away, access and type of prenatal care (month of pregnancy at the time of first prenatal medical care, food and micronutrients taken while pregnant, immunization), prevention/treatment of diseases of pregnant women, childbirth (size at birth, place of delivery, type of assistance, examinations after birth, mother’s vitamin A intake in the first two months after giving birth), breastfeeding practices (nursing? if so, length of nursing, methods of exclusive breastfeeding, neonatal care? Mother’s food intake while nursing), health of children (micronutrients intake, vaccination), morbidity and treatment of ill children (fever, diarrhea, respiratory disease, did mother ask for assistance? If so, place and type of treatment), infant and young child feeding (food intake,
frequency of feeding, liquids, does mother receive food counseling from the program?), access to medical services, standard of living, knowledge about the program (activities).

• **Individual Questionnaire** (mothers participating in the program):

  o **Participation in nutritional program.** Participation, when did mother enter the program? Reasons for not participation, would you like to participate in the program in the future? Participation in a different community nutrition program, attendance to Seecaline during the last 3 months, reason of last visit, did mother miss one of the regular visits during the last 3 months? Distance to project site, how was the community worker selected?

  o **Participation of children in follow-up sessions: weighing.** A section with very detailed information on weighing activities for each child 10 years old and below (see Table Section SB with data on participation in weighing meetings, number of measures recorded during the last 3 months, health records, type of growth chart utilized, mother’s perception about the nutritional status of her children, gains in grams since last time), attendance to the sessions of other members of the family, does mother receive counseling? If so, in which topics?

  o **Food supplementation (for children 3 years old or younger).** Did child receive supplementation? If so, how much and how frequently? Did mother share this food with other children? By receiving this food, did
mother weight your children more often? Did mother received supplements from other organizations? If so, which supplement? Did food supplement improve child’s nutrition status? If not, ask for reasons.

- **Participation of pregnant women.** If pregnant, did mother participate in the activities of Seecaline? If so, at which moment of mother’s pregnancy did she start attending? Did mother received food supplements in the last 3 months? If so, how much and how frequently? Did food supplement improve mother’s nutrition status? If not, ask for reasons.

- **Cooking demonstrations.** Participation, activities while participating, how many recipes did mother learn? Did mother use at home at least one of the recipes learnt?

- **Home visits.** Did the community worker visit mother’s household? If so, number of visits in the last three months, principal reason of the last visit, did mother receive counseling during the visit?

- **Referral to health center.** A section with very detailed information on referral to health centers for each child 3 years old and below (see Table Section SE with data on reasons for ill assessment, number of times, type of care/treatment received

- **General perception of the program.** Mother’s opinion about the two most important services provided by the Seecaline site? Did mother’s knowledge about child caring improve after participating in the program?
• **Household Questionnaire.** household roster, amount of time living in current village, marital status, religion, ethnicity, identification of biological mother and biological father, school attendance, school absenteeism, drop outs, school attainment, employment, temporary migration, dwelling characteristics, assets, livestock/cattle, recent shocks.

• **Anthropometric Questionnaire.** For women 15-49 years old: age, sex, weight in kilograms, height in centimeters, weeks of pregnancy (if pregnant), mid-arm circumference in millimeters, result of measurement. For between 6-59 months years old: exact date of birth, age, weight in kilograms, height in centimeters, mid-arm circumference, type of measure (standing and recumbent), result of measure.
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<thead>
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<th>Name</th>
<th>Gender</th>
<th>Age</th>
<th>Occupation</th>
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<tr>
<td>A01</td>
<td>Name (First)</td>
<td>Male</td>
<td>25</td>
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<tr>
<td>A02</td>
<td>Name (Middle)</td>
<td>Female</td>
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<tr>
<td>A03</td>
<td>Name (Last)</td>
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**SECTION A2: SERVICE DETAIL**

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**SECTION A3: CONTACTS**

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**SECTION A4: ADDITIONAL**

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<td>Web Address</td>
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<tr>
<td>Social Media Platforms</td>
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</tr>
</tbody>
</table>

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Annex 3. Practical Considerations for Setting up an Evaluation: Time Frame, Team Composition and Costs

As stated in Section 4.5, evaluations have to be planned well time ahead because most of the time is necessary to collect baseline data of treatment and comparison communities before the intervention begins. Additionally, evaluators need to accommodate time for activities related to pilot testing of household surveys. With two follow up surveys, the evaluation can be expected to last for nearly 3-4 years (baseline before implementation, first follow-up between the first/second years of the program and second round between third/fourth years of the program).

It is essential that well-qualified and experienced people be assigned to the team of evaluators. Based on a review of past and current evaluations, a strong group of evaluators of CNP’s should include:

- **A lead evaluator.** A person holding a PhD in economics, public policy, health, nutrition, statistics or related disciplines in social sciences and with long experience managing other teams that had participated in past evaluations of similar programs.

- **A public health or nutrition specialist.** A person holding a PhD in public health or nutrition with knowledge of impact evaluation and at least 3-4 years of experience in these topics.

- **An economist.** A person holding a PhD in economics with strong skills in econometrics and impact evaluation and at least 3-4 years of experience in these topics.

- **A statistician.** A person holding at least a masters in statistics and 3-4 years of experience in the design and collection of household surveys and data processing.

Furthermore, it is advised that the firm or research center undertaking the evaluation show at least 5-8 years of experience conducting impact evaluations of social programs in the region under study. Likewise, the agency gathering survey data for the evaluation needs to show past experience collecting similar information in projects that had interviewed at least 500-700 households. This includes a team of field interviewers with wide knowledge for properly obtaining young child anthropometric measures.

Based on this team composition and the use of other inputs, the following table (Table 2) presents a summary of cost ranges related to undertaking an impact assessment of CNP’s and the various activities that it may involve. Obviously, these values are only intended to provide some reference but can vary greatly depending on countries, projects and evaluation methods.
Table 2. Illustrative costs of an impact evaluation of community-based growth promotion programs

<table>
<thead>
<tr>
<th>Item</th>
<th>Unit Cost</th>
<th>Total Cost $^d$</th>
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</thead>
<tbody>
<tr>
<td><strong>Initial Phase:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Terms of Reference</td>
<td>$20,000-$30,000</td>
<td>$20,000-$30,000</td>
</tr>
<tr>
<td><strong>Impact Evaluation:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Lead Evaluator $^a$</td>
<td>$25,000 - 35,000/year</td>
<td>$75,000 - $105,000</td>
</tr>
<tr>
<td>- Economist $^a$</td>
<td>$20,000 - 30,000/year</td>
<td>$60,000 - $90,000</td>
</tr>
<tr>
<td>- Health Specialist $^a$</td>
<td>$20,000 - 30,000/year</td>
<td>$60,000 - $90,000</td>
</tr>
<tr>
<td>- Statistician $^b$</td>
<td>$25,000 - 35,000/year</td>
<td>$75,000 - $105,000</td>
</tr>
<tr>
<td>- Household surveys</td>
<td>$75 - 125$/household</td>
<td>$75,000 - $125,000</td>
</tr>
<tr>
<td><strong>Other Inputs:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Local supervisor/consultant $^c$</td>
<td>$35,000 - 45,000/year</td>
<td>$105,000 - $135,000</td>
</tr>
<tr>
<td>Travel expenses</td>
<td>$10,000-$15,000</td>
<td>$10,000-$15,000</td>
</tr>
<tr>
<td>Dissemination of interim and final results</td>
<td>$10,000-$15,000</td>
<td>$10,000-$15,000</td>
</tr>
<tr>
<td><strong>Total Cost of Evaluation</strong></td>
<td></td>
<td><strong>$355,000 - $710,000</strong></td>
</tr>
</tbody>
</table>

Notes: $^a$ estimate based on 30% of time/year, $^b$ estimate based on 50% of time/year, $^c$ estimate based on 100% of time/year, $^d$ total calculated for a three-year long project.
Annex 4 – Practical Considerations for Setting up an Evaluation: Sample Terms of Reference

Two sample terms of reference (TOR’s) of currently planned impact evaluations are enclosed below. Overall, the TOR’s describe the structure and objectives of the assessment and give evaluators a roadmap of the project. They often include general and specific goals, scope, data collection methods, analytic strategies, expected outcomes, stakeholders, roles, responsibilities, constraints, deliverables, quality standards, schedule and financial plans. The final TOR’s of evaluations of CNP’ should include at least the following sections:

- **Background section.** Describes the macro and microeconomic environment of the country/region, the mission and objectives of the program, its main activities/services, population targeted by the program, institutional arrangements and implementation timetable.

- **Impact Evaluation Objectives.** Presents general objectives of the impact assessment as well as enumerates its specific goals (e.g. coverage, estimate changes in health care utilization conditional on health status, knowledge about nutrition and child care practices, breastfeeding and complementary feeding, the prevalence micronutrient deficiency, anthropometric outcomes or the marginal impact of various delivery mechanisms.

- **Indicators and expected outcomes.** Outlines the indicators that should be utilized to estimate the impacts of the program. For instance, in order to establish the effect of the intervention on children’s anthropometrics, the proper indicators are the z-scores of weight-for-height (short term) and height-for-age (middle and long term). Similarly, the team can decide that evaluators will have to collect blood samples to study the changes in the prevalence of anemia between treated and non-treated children. In addition, TOR’s can set out a range of expected outcomes. For example, program designers may argue that after two years of participation in a specific intervention, the rate of malnutrition is estimated to decrease by 20% among beneficiaries.

- **Evaluation methods.** TOR’s establish certain minimum standards for the empirical methods to be employed in the evaluation. More recently, most projects encourage evaluators to use identification strategies based on randomized experiments or clean quasi-experiments. Furthermore, TOR’s also set out the main aspects of the information required to undertake the evaluation, either primary data (sample size, sampling methods, level of precision, power, etc.) or secondary data (censuses, household surveys, etc.) as well as the characteristics required to develop survey instruments in accordance with the goals of the evaluation.

- **Deliverables.** This part specifies the types of analysis (e.g. an impact evaluation, a cost benefit analysis, a set of recommendations and alternative suitable
strategies), the datasets (e.g. type of information, formats) and the number of reports to be delivered both during and at the end of the assessment.

- **Evaluation team.** This section specifies the minimum levels of qualification and expertise required for all members expecting to form external evaluation team

- **Schedule.** Defines dates and deadlines for all the activities to be accomplished by the evaluation.

Sample terms of reference:

**Sample TORs 1 – Consultoría para el diseño de la encuesta de evaluación de impacto – AIN-C Honduras**  
(Prepared by Lynnette M. Neufeld and consulting team of Instituto Nacional de Salud Pública de México, June 2007)

**Evaluación externa de impacto de AIN-C**

I. **Antecedentes**

La Secretaría de Salud (SS) de Honduras conduce la estrategia Atención Integral de la Niñez en la Comunidad (AIN-C). La finalidad de AIN-C es reducir la desnutrición y la mortalidad en menores de 5 años a través de actividades de prevención en los/as niños(as) de las comunidades más pobres del país.

La estrategia esta basada en el monitoreo del crecimiento desde el nacimiento hasta los dos años de edad, monitoreo de enfermedades hasta los cinco años de edad y la consejería individualizada a las madres. Como herramienta básica de la estrategia se evalúa la ganancia de peso mensual de todos los niños en las comunidades para detectar problemas con el crecimiento y problemas de salud, y para la detección y mejoramiento en los cuidados o las prácticas inadecuadas de alimentación que podrían estar relacionados con los mismos. Este monitoreo se lleva a cabo directamente en la comunidad (componente comunidad), ya que el acceso a las clínicas de salud y la cobertura de sus servicios se encuentra muy limitado por la población más vulnerable del país.

La estrategia funciona a través de una red de salud basada en voluntarios de la comunidad llamados “monitores(as)” y opera dentro del contexto de diversos programas en el ámbito nacional. Los monitores a través de visitas al hogar y a la clínica, monitorean el crecimiento y desarrollo de los niños menores de 2 años de edad, detectan de manera oportuna el crecimiento inadecuado, detectan y manejan signos de peligro de las enfermedades prevalentes, dan consejos a las madres sobre el cuidado inmediato del recién nacido y captan a mujeres embarazadas y puérperas. Los monitores(as) también son responsables de la coordinación de acciones y consejería con la madre, el padre o la...
personas responsables del cuidado del niño(a), para garantizar que crezcan adecuadamente, mejorar su estado de salud y evitar la muerte. Más aún, los monitores(as) refieren a niños(as) que presenten problemas de salud que no puedan resolverse en la comunidad y que no crezcan adecuadamente por dos meses consecutivos, conforman grupos de apoyo y participan en reuniones comunitarias.

La capacitación de los monitores(as) incluye educación en el manejo de enfermedades respiratorias y diarreicas (i.e., terapia de rehidratación oral y manejo de antibióticos para neumonía y disentería)16 y en la mayoría de las intervenciones de prevención identificadas como costo-efectivas para la sobrevivencia infantil (i.e., promoción de la lactancia materna exclusiva de 0-5 meses de edad, promoción de la lactancia materna complementaria de 6-11 meses de edad, prácticas de alimentación complementaria y manejo de conceptos básicos de higiene adecuada en condiciones de escasez de agua y sistemas de drenaje).17

La estrategia AIN existe también en los centros de salud (componente institucional). De hecho, los centros de salud resultan ser un punto clave para la estrategia – desde el entrenamiento y supervisión de los monitores(as), el reporte de las mediciones mensuales, hasta el seguimiento de problemas de salud y desnutrición referidos por la comunidad.

Dado que la estrategia ha mostrado ser altamente costo-efectiva y ha sido reconocida mundialmente como tal, el gobierno le ha dado prioridad y pretende expandirla en 80 de los municipios más pobres dentro de 4 de los 6 departamentos más pobres del país (prioritarios dentro de la Estrategia de Reducción de la Pobreza). Se pretende además, consolidar una nueva modalidad en el cuidado de la salud de la niñez, con énfasis en los niños(as) menores de dos años de edad. El primer paso, es aumentar 1,000 localidades en localidades con más de 10 niños, para cubrir 35,000 niños menores de 2 años de edad (90% de los niños menores de 2 años de edad) y un total de 85,000 niños menores de 5 años de edad.

Dentro de este contexto, el Gobierno de Honduras ha decidido incluir una evaluación de impacto que permita mediar los resultados del proyecto en términos de la calidad de vida de la población beneficiaria. A continuación se describe el diseño conceptual de la evaluación de impacto de AIN-C. Este diseño conceptual forma parte de los presentes Términos de Referencia (TdR) para contratar una Firma consultora que ejecute la evaluación de impacto.


II. Objetivos de la evaluación de impacto

El objetivo general de la evaluación externa es medir el impacto de AIN-C en la población beneficiaria.

Los objetivos específicos son:

1. Documentar la cobertura de AIN-C en niños menores de dos años de edad.
2. Demostrar si AIN-C mejora la utilización de servicios de salud en los centros de salud con mayor proporción de consultas por enfermedades consideradas como referibles, incluyendo indicadores de calidad.
3. Demostrar si AIN-C mejora los conocimientos y prácticas sobre los cuidados preventivos de los recién nacidos, sobre la detección y manejo de signos de peligro de las enfermedades infantiles prevalentes, sobre la lactancia y alimentación complementaria y, sobre conceptos de higiene básica en las madres de niños menores de dos años y en los monitores(as) a través de cuestionarios y viñetas.
4. Demostrar si AIN-C mejora las prácticas de lactancia y alimentación complementaria de las madres de niños menores de dos años.
5. Comparar la factibilidad de uso, el uso y aceptabilidad de Sprinkles versus jarabe de micronutrientes según el reporte de las madres de niños menores de dos años y los monitores(as) y la facilidad de manejo y organización dentro de la estrategia (AIN-C) desde la perspectiva de los operadores del programa.
6. Estimar el impacto sobre el crecimiento (disminución de desnutrición crónica) y concentración de hemoglobina en niños menores de dos años de edad:
   - del AIN-C con distribución de micronutrientes (en forma jarabe o Sprinkles) versus el control
   - del AIN-C con Jarabe versus AIN-C con Sprinkles
7. Determinar la conveniencia del uso de Sprinkles versus jarabe en el programa AIN-C con base en su factibilidad, aceptabilidad, impacto y costo.

III. Preguntas principales que responderá la evaluación

Las principales preguntas que contestará la evaluación externa son:

1. ¿Cuál es la cobertura de AIN-C en niños menores de dos años de edad (en términos de participación mensual: % de niños menores de dos años que asisten por lo menos al 90% de sus controles mensuales por caserío)?
2. ¿Ha mejorado la efectividad de las referencias de niños a los centros de salud en cuanto al tipo de caso referido y el seguimiento recibido según el motivo de la referencia?
3. ¿Qué conocimientos sobre cuidados preventivos de los recién nacidos, detección y manejo de signos de peligro de las enfermedades infantiles prevalentes y sobre prácticas adecuadas de lactancia y alimentación complementaria y conceptos de higiene básica adquieren las madres de niños menores de dos años y los monitores(as) como resultado del AIN-C?
4. ¿Han mejorado las prácticas de lactancia y alimentación complementaria de las madres de niños menores de dos años como resultado del AIN-C?
5. ¿Qué tipo de suplemento de micronutrientes (Sprinkles o jarabe) es más fácil de utilizar en el contexto del AIN-C según el reporte de las madres de niños menores de dos años, los monitores(as), y los operadores del programa?
6. ¿Qué tipo de suplemento de micronutrientes (Sprinkles o jarabe) tiene mayor aceptabilidad según el reporte de las madres de niños menores de dos años y de los monitores(as) y mayor uso por la población?
7. ¿Cuál es el impacto del AIN-C con suplementación preventiva en la reducción de la desnutrición crónica y anemia en niños menores de dos años de edad?
8. ¿Cuál de los dos suplementos utilizados (Sprinkles o jarabe) tiene mayor impacto en la reducción de la desnutrición crónica y la anemia de los niños?
9. ¿Cuál es el costo de la adquisición y distribución de Sprinkles y de jarabe?
10. ¿Cuál es el impacto de la intervención (AIN-C y suplementos) en la desnutrición crónica y anemia por grupos demográficos y étnicos (área geográfica, grupos étnicos, grupos de pobreza)?

IV. Indicadores e impactos esperados

Los indicadores mínimos y los impactos que se esperan a los tres años de implementar AIN-C en las nuevas localidades son:

1. Cobertura mayor o igual del 90% en el monitoreo de crecimiento en niños de 0-23 meses de edad de las comunidades objetivo.\(^{18}\)
2. Cambio en el uso de servicios de salud en los centros de salud de niños de 0-23 meses de edad por enfermedades manejables dentro de los caseríos.
3. Aumento en la proporción de las visitas a los centros de salud como referencia por enfermedad que requiere atención en el centro de salud (referencia efectiva).
4. Disminución de 20% en prevalencia de la desnutrición crónica (talla/edad) en niños de 0-23 meses de edad.
5. Disminución del 20% en la prevalencia de anemia en niños de 0-23 meses de edad.\(^{19}\)
6. Disminución del 15% en la prevalencia de diarrea en niños de 0-23 meses de edad.\(^{20}\)


7. Disminución del 30% en la prevalencia de enfermedades respiratorias en niños de 0-23 meses de edad.
8. Aumento de 35% en la iniciación de la lactancia materna en la primera hora (apego precoz).\textsuperscript{21}
9. Aumento de 15% en la duración de la lactancia materna exclusiva en los primeros seis meses.\textsuperscript{22}
10. Aumento en la proporción de niños que reciben alimentación complementaria adecuada a los 6 meses.

V. Estrategias metodológicas

1. Estrategia de evaluación

La Firma consultora puede modificar el diseño propuesto, siempre y cuando se mantenga un diseño experimental con asignación aleatoria a los grupos de intervención y control. Se estimula a las Firmas a que utilicen su creatividad en su propuesta de diseño de evaluación.

La evaluación del AIN-C en Honduras tendrá un diseño experimental en donde existirán 3 grupos: dos grupos que reciban la intervención y un grupo que no la reciba (grupo control). De los grupos que recibirán la intervención, uno recibirá un suplemento de micronutrientes (Sprinkles) y el otro un jarabe, ambos con la misma formulación de micronutrientes. Existen ya 500 caseríos identificados como elegibles para AIN-C en su próxima fase de expansión, los cuales formarán el pool de localidades para la asignación aleatoria al nivel de caserío a uno de los tres grupos (máximo 166 caseríos por grupo). Se estima una población de niños menores de 2 años de edad de 13 por localidad, dando un potencial tamaño de muestra de 2000 niños menores de dos años de edad por grupo. Se iniciarán las gestiones para la implementación de la estrategia en los caseríos de los dos grupos de intervención a partir de Enero de 2008, con implementación completa en Marzo-Abril. La unidad de intervención será el caserío.

La evaluación contará con cuatro mediciones (ver Figura 1). Se deberán realizar todas las mediciones en los tres grupos. La línea basal (Medición 1, MI) se realizará en Enero-Marzo del 2008, la Medición 2 (M2) se realizará entre Abril y Agosto del 2008, la Medición 3 (M3) se realizará en Abril-Mayo del 2009 y la Medición 4 (M4) se realizará en Abril-Mayo del 2010. Para la muestra de evaluación se propone reclutar en la línea basal a niños de 0-23 meses de edad y utilizar un diseño longitudinal (medir los mismos niños en las etapas subsecuentes) para estimar el impacto del programa en los indicadores del estado de nutrición. Para los indicadores de utilización de servicios de salud, se debe medir el impacto del AIN-C en niños del mismo rango de edad, por lo que se utilizar una muestra transversal de niños de 0-23 meses de edad en la medición M3.

\textsuperscript{21}Dyson L, McCormick F, Renfrew MJ. Interventions for promoting the initiation of breastfeeding. Art. No.: CD001688. DOI: 10.1002/14651858.CD001688.pub2.

Se propone utilizar tres estrategias para la evaluación. La M2 se realizará durante los primeros 6 meses de operación de la estrategia en las localidades para documentar la calidad de la implementación y operación de AIN-C y que permita medir la calidad de la implementación. Para este análisis se propone utilizar datos administrativos como mínimo. Durante esta misma etapa se debería realizar una evaluación en las localidades control para determinar la existencia de vigilancia en el crecimiento y sistema de referencias y/o distribución de suplementos de micronutrientes (cross-over). La M3 se realizará a los 12 meses de haber terminado la implementación (Abril-Mayo 2009) para realizar la evaluación cualitativa, que incluye la satisfacción con la estrategia/servicios (incluyendo referencias) y la aceptabilidad de suplementos por parte de las madres, monitores(as) y operadores del programa y su uso por parte de los niños. Esta medición también incluirá una medición de la concentración de hemoglobina de niños de 0-36 meses de edad para determinar el impacto del AIN-C en la prevalencia de anemia. Finalmente, la M4 se realizará 24 meses después de haber terminado la implementación (Abril-Mayo 2010) para realizar la evaluación cuantitativa de impacto en crecimiento y desarrollo de los niños. El análisis de costos se podrá realizar en el tiempo considerado conveniente con el fin de contar con la información para la recomendación final.

2. Estándares mínimos para la definición de la muestra
La muestra de estudio estará determinada por el diseño de evaluación que se utilizará, los indicadores mínimos que se requieren para contestar las preguntas de evaluación y los impactos esperados. Las hipótesis de impacto se probarán con un nivel de significancia del 5% y un poder mínimo del 80%. En el caso de la comparación entre el impacto de Sprinkles y jarabe se debería utilizar un poder mínimo del 90%. La Firma consultora documentará los supuestos y los procedimientos utilizados para el cálculo del tamaño de la muestra. La muestra de evaluación deberá tener el tamaño suficiente para medir los impactos esperados en los indicadores mínimos requeridos (ver sección IV) y contestar todas las preguntas principales de la evaluación (ver sección III). Para cada desenlace se debe tomar en cuenta una estimación de la correlación interconglomerado de esas variables entre niños dentro del mismo caserío.

3. Estándares mínimos para el diseño de instrumentos
Para el componente de investigación cuantitativa, la recolección de datos se realizará con las madres o cuidadora principal de los niños de 0-23 meses de edad en la línea basal y los monitores(as) en las localidades, por lo tanto la Firma consultora presentará dos cuestionarios: uno para la madre/cuidadora del niño(a) y otro para los monitores(as). El cuestionario para la madre/cuidadora contendrá como mínimo las siguientes áreas de datos:

a. Vivienda y características sociodemográficas y etnia de la familia.

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b. Fuentes de agua potable y agua para funciones en el hogar, sistemas para el desecho de aguas negras y grises en el hogar, materiales utilizados para combustible en la cocina, entre otros relacionados.
c. Educación y ocupación de los miembros de la familia, patrones de migración durante el último periodo.
d. Utilización de los servicios (número de controles durante el periodo, uso de suplementos)
e. Conocimientos y prácticas sobre los siguientes temas:
   i. Salud materna e infantil (incluyendo preguntas referentes al control prenatal, morbilidad infantil y cuidados al niño durante los episodios de enfermedad, incluyendo por lo menos enfermedades diarreicas e infecciones respiratorias).
   ii. La identificación de signos de riesgo durante la infancia.
   iii. Lactancia materna y alimentación (incluyendo preguntas referentes a iniciación y tipo de lactancia - exclusiva, predominantes, parcial - alimentación complementaria).
Las preguntas pueden ser de naturaleza cuantitativa y/o cualitativa y deberían tomar en cuenta los conocimientos y prácticas de las madres sobre los temas mencionados. La firma puede proponer otros temas relevantes para su inclusión.
f. Antropometría (peso y longitud, estatura en caso de mayores de 24 meses de edad, como mínimo) de los niños de 0 a 23 meses de edad durante la línea basal.
g. Concentración de hemoglobina en niños de 6 a 23 meses de edad en la línea basal.
h. Otras intervenciones, programas donde la familia participa a nivel individual, de la comunidad y/o municipalidad.
i. Mediciones del desarrollo motor y cognoscitivo del niño, los cuales sean apropiados para la población del estudio y factibles en campo (ej. adquisición de lenguaje y desarrollo de hitos motores gruesos).

Se sugiere que la Firma consultora revise los cuestionarios que se utilizan en las encuestas nacionales de hogares de propósitos múltiples, particularmente los datos de demografía y salud. Todos los instrumentos deben de ser manejables en campo y de costo y complejidad razonable.

La encuesta para los monitores(as) caracterizará sus conocimientos sobre (por lo menos) los mismos temas mencionados anteriormente. Al mismo tiempo, el cuestionario para los monitores(as) deberá incluir las ofertas de salud, nutrición, educación, agua, saneamiento básico y disponibilidad de medicamentos al nivel comunitario donde labora. La Firma consultora propondrá un cuestionario para caracterizar estos servicios.

4. **Uso de datos administrativos**
La Firma consultora evaluará la calidad de la implementación de la estrategia, incluyendo por lo menos en los caseríos de intervención:
- fecha real en que inicio el sistema regular de mediciones mensuales.
• fecha real de la distribución regular de los suplementos.
• número de monitores(as) por caserío.
• periodicidad real de la vigilancia y de la entrega de suplementos.

En los caseríos control debería incluir por lo menos:
• Presencia de monitores(as) y organización a la que pertenecen.
• Presencia en la comunidad de suplementos distribuidos de manera gratuita por cualquier organismo, su contenido y quien lo distribuye.
• Presencia de servicios de salud preventivos implementados por cualquier organización/institución.

Se propone utilizar como mínimo en el caso de caseríos intervención los datos administrativos desglosados por caserío. La Firma consultora presentará un informe de la calidad de estos datos y si apropiado una propuesta de cómo utilizar los mismos en la evaluación.

VI. Actividades mínimas

1. Seleccionar una muestra representativa y válida de familias a entrevistar.
2. Identificar el grupo de control.
3. Diseñar la metodología y los instrumentos de recolección y sistematización de la información.
4. Realizar la prueba piloto.
5. Analizar los resultados de la prueba piloto.
6. Realizar las correcciones necesarias de acuerdo a los resultados de la prueba piloto.
7. Recolectar información con base en los indicadores e impactos esperados.
8. Analizar los datos recopilados.
9. Elaborar informe de Línea Basal (M1).
10. Repetir las actividades de la 4 hasta la 9 para las siguientes 3 mediciones (M2, M3 y M4).
11. Diseñar la metodología y los implementos necesarios para determinar la cobertura y utilización de los servicios de salud de niños menores de dos años.
12. Diseñar la metodología y los implementos necesarios para determinar la calidad de implementación de la estrategia.
13. Diseñar la metodología y los implementos necesarios para determinar el impacto sobre conocimientos y prácticas de las madres y los monitores(as).
14. Diseñar la metodología y los implementos necesarios para determinar el impacto en crecimiento y estado de hierro de niños menores de dos años beneficiarios de AIN-C
15. Diseñar la metodología y los implementos necesarios para determinar el impacto de la suplementación con Sprinkles y con jarabe.

VII. Productos esperados

La Firma consultora presentará los siguientes productos:
1. Plan de Trabajo Final incluyendo objetivos, cronogramas, actividades, recursos, metodología, entre otros.

2. Propuesta detallada de la metodología completa de la evaluación externa de proceso e impacto incluyendo, como mínimo, estrategias de evaluación, instrumentos de recolección de datos, diseño muestral, planificación general de los operativos de campo, anexos técnicos detallando las fórmulas de cálculo y definición de variables.

   Los productos 1 y 2 serán entregados ___ meses después de orden de inicio.

3. Informe de campo y resultados de la línea basal, M1 a realizarse en Enero-marzo 2008 que incluya, como mínimo, la caracterización inicial de la población en los grupos de intervención y control según las principales variables incluidas en la evaluación, las lecciones aprendidas del levantamiento de la encuesta, así como el análisis de esa caracterización basado tanto en la encuesta como en instrumentos y/o fuentes complementarios.

   El producto 3 será entregado ___ meses después de orden de inicio.

4. Informe sobre resultados de la implementación de la estrategia en las localidades, M2 a realizarse en Abril-mayo 2008, que incluya, la entrega de Sprinkles y jarabe en las localidades asignadas y presencia de cualquier intervención de vigilancia del crecimiento, distribución de suplementos y/o sistema de referencias en las localidades control.

   El producto 4 será entregado ___ meses después de orden de inicio.

5.Informe de campo y de impactos sobre conocimientos, prácticas, estado de hierro y aceptabilidad de Sprinkles y jarabe después de un año de implementación, además de la satisfacción con la estrategia/servicios (incluyendo referencias), M3 a realizarse en Abril-mayo 2009.

   El producto 5 será entregado ___ meses después de orden de inicio.

6. Informe de campo y de impactos en el crecimiento y desarrollo de niños después de dos años de implementación, M4 a realizarse en Abril-mayo 2010.

   El producto 6 será entregado ___ meses después de orden de inicio.

7. Informe sobre la recomendación sobre el tipo de suplemento de micronutrientes que la estrategia debe utilizar con base en la factibilidad, aceptabilidad, uso, impacto y costo. Este informe incluye una síntesis de la evaluación de impacto.

   El producto 7 será entregado ___ meses después de orden de inicio.

La Firma entregará a la Secretaría de Salud, Honduras, las bases de datos limpias que deberán ser legibles en cualquier equipo, bajo plataforma Windows. Si fuese necesaria la adquisición de una licencia para acceder a los datos esta se incluirá dentro de la propuesta técnica y económica a presentar.

La Firma entregará también a la Secretaría de Salud, Honduras, los instrumentos de recolección de datos, los manuales de formación de los encuestadores, la documentación sobre el trabajo de campo, la documentación sobre las bases de datos y un diccionario de datos completo para cada base de datos en formato Word y/o Excel.
La Firma consultora deberá presentar dos copias impresas y dos en formato digital por cada documento, estas últimas deberán estar en formato para MS Office (Word/EXCEL/PowerPoint) y en CD.

VIII. Perfil de firma y personal mínimo esperado

La firma ha ejecutado en los últimos 8 años como mínimo 2 contratos sobre evaluaciones de impacto de programas de inversión social en Latinoamérica de similar envergadura a los presentes TdR.

La firma ha ejecutado por lo menos 3 encuestas de hogares con representatividad a nivel municipal, departamental, regional o nacional con un tamaño de muestra mínimo de \( n=500 \) hogares.

Todo el personal propuesto domina el español.

Asocio con entidad radicada en Honduras reconocida por su trabajo de investigación social.

**Líder del equipo** El líder del equipo de evaluación ha dirigido por lo menos una evaluación de impacto de un programa social en un país de Latinoamérica, tiene como mínimo un doctorado académico en las ciencias vinculadas con el sector social (ciencias económicas, de salud, nutrición, educación, antropología, psicología y/o sociología) y 3 años de experiencia en evaluaciones de impacto. Un mínimo del 30% de dedicación de tiempo a esta evaluación.

**Especialista en salud pública/nutrición.** Uno de los miembros del equipo de evaluación tiene un doctorado en las ciencias de la salud pública y/o nutrición con experiencia mínima de 3 años en evaluación de proyectos y/o programas en estas áreas.

**Especialista en economía.** Uno de los miembros del equipo de evaluación tiene un doctorado en economía, con especialización en econometría. Experiencia de 3 años en evaluación de proyectos y/o programas en el sector social.

**Especialista en estadística.** Uno de los miembros del equipo tiene una maestría en estadística (preferible doctorado) y con experiencia de 3 años en diseño e implementación de encuestas representativas de por lo menos un tamaño de muestra de 500 hogares y proceso de datos para estas encuestas.

**Coordinador en campo.** El profesional responsable de la dirección de campo debe tener como mínimo una licenciatura y experiencia mínima de 3 años dirigiendo recolección de datos para encuestas representativas de por lo menos un tamaño de 500 hogares.

IX. Duración y cronograma de la evaluación
La evaluación de impacto durará 3 años, a partir de la orden de inicio del primer contrato. La línea basal se recolectará en Enero-marzo de 2008, la segunda medición (M2) en Abril-mayo de 2008, la tercera medición (M3) en Abril-mayo de 2009 y la medición final (M4) en Abril-mayo 2010.

X. Supervisión, contraparte técnica y usuario interno

La Firma consultora tendrá como contraparte técnica principal al Dr. Carlos Villalobos. El trabajo será supervisado por un equipo formado por _______. La consultoría será administrada por _______.

XI. Lugar de la consultoría

La empresa consultora deberá contar con sus propias oficinas para realizar la evaluación.

El levantamiento de información deberá levantarse en campo, en los caseríos seleccionados para la muestra.
Sample TORs 2 – Consultoría para la evaluación de impacto externa de Red Solidaria en El Salvador
(Prepared by Dirección Ejecutiva Red Solidaria)

“Evaluación de impacto externa de Red Solidaria”

I. Antecedentes

El Gobierno de la República de El Salvador está implementando una red de protección social –la RED SOLIDARIA (RED)– con el objetivo de mejorar en el mediano y largo plazo las condiciones de vida de las familias en situación de extrema pobreza en el sector rural del país.

Los objetivos del Programa son:

- **Objetivo general**: Mejorar en forma integral las condiciones de vida de las familias en situación de extrema pobreza con énfasis en el área rural, ampliando sus oportunidades y proveyendo los recursos necesarios, a través del mejoramiento de la red de servicios básicos, programas de desarrollo productivo y micro crédito, que permitan potenciar sus capacidades para aprovechar estas oportunidades y mejorar la calidad de vida personal, familiar y comunitaria.

- **Objetivos específicos**:  
  - Mejorar los ingresos de las familias en extrema pobreza contribuyendo a erradicar el hambre y vinculándolo a los protocolos de salud y educación básicos;  
  - Mejorar las condiciones de salud y nutrición rural, priorizando las atenciones preventivas materno infantil;  
  - Mejorar las condiciones de las familias rurales –especialmente las madres– en extrema pobreza mediante acciones de capacitación y apoyo;  
  - Mejorar la educación de la población en edad escolar -menor a 15 años-, de parvularia a sexto grado en el área rural;  
  - Potenciar la equidad de género, étnica, etárea, a través de (i) la participación activa de las mujeres y hombres en todos los procesos de la Red y, (ii) la implementación de un protocolo de capacitación con equidad de género en distintos ámbitos para mejorar las condiciones y relaciones familiares y comunitarias;  
  - Fortalecer la oferta de servicios básicos en salud, programas nutricionales, y educación básica;  
  - Mejorar la infraestructura social básica -agua potable y saneamiento, e infraestructura estratégica-, para el acceso de los servicios, mediante acciones integrales y coordinadas con los sectores;  
  - Fortalecer la seguridad jurídica de la población, mediante la legalización de lugar de residencia y la documentación de identidad personal.
• Dotar de herramientas que permita la sostenibilidad económica del hogar, a través de proyectos productivos, capacitación laboral y micro crédito.

La RED contiene tres ejes de intervención: (1) Red Solidaria a la Familia, que son acciones focalizadas a las familias que viven en condiciones de extrema pobreza en municipios priorizados e incluye transferencias monetarias condicionadas (TMC) a la madre del hogar, capacitaciones y corresponsabilidades; (2) Red de Servicios Básicos, que busca fortalecer la oferta de servicios básicos en educación, salud y nutrición, asimismo, incluye un componente fuerte de infraestructura y compromiso de dotar de servicios de alumbrado, agua y saneamiento básico al 100 por ciento de las escuelas y establecimientos de salud (unidades de salud, establecimientos de salud de 1er nivel de atención, hospitales); y (3) Red de Sostenibilidad a la Familia, en el que se ha considerado inicialmente a los proyectos productivos y al microcrédito como herramientas clave para apoyar a los pequeños agricultores a diversificar sus fuentes de ingreso y aumentar la productividad, así como la gestión ambiental.

El Fondo de Inversión Social para el Desarrollo Local (FISDL) de El Salvador es la Institución designada por el Gobierno Central como ejecutor del Eje 1 y Eje 2; y por lo tanto brinda su apoyo técnico en las actividades relacionadas con el programa Red Solidaria.

La Dirección Ejecutiva del Programa Red Solidaria, la cual responde a La Secretaría Técnica de La Presidencia, es la contraparte técnica principal de la consultoría.

La RED está dirigida a los hogares rurales en extrema pobreza. La focalización y selección de beneficiarios se llevará a cabo en dos etapas. En la primera etapa, focalización geográfica, se han seleccionado mediante un mapa de pobreza a los 100 municipios de pobreza extrema, severa y alta en el país. En una segunda etapa, mediante el levantamiento de una ficha de información de los hogares residentes en los caseríos rurales de dichos municipios, se procederá a estimar la prevalencia de pobreza en cada caserío mediante un modelo de variables próximas del ingreso. Con base en el resultado de las estimaciones se procederá a seleccionar a los hogares elegibles de acuerdo a su nivel de pobreza estimado. Esta segunda etapa se implementará en las 68 municipalidades clasificadas como de alta pobreza (ver Gráfico 1).

La RED contempla una mezcla de intervenciones para cerrar la brecha entre la demanda y la oferta de servicios básicos especialmente en educación, salud y nutrición. La demanda de estos servicios será estimulada mediante transferencias monetarias condicionadas (bonos en salud-nutrición y/o educación) a las madres a cambio del cumplimiento de un protocolo de corresponsabilidades por parte de los miembros de la familia. Los bonos o incentivos a la demanda serán acompañadas por inversiones tendientes a fortalecer la calidad y cobertura de la oferta de servicios esenciales de atención primaria de salud materno-infantil, el fortalecimiento de la oferta educativa en preescolar y primaria, la extensión de los servicios básicos de agua y saneamiento, electrificación y conectividad. En una primera etapa, durante el periodo 2005-2009, el Programa apoyará directa o indirectamente a cerca de 100,000 familias en extrema pobreza dando prioridad al sector rural.
El Gobierno de la República de El Salvador desea que la RED esté sujeta a un riguroso proceso de evaluación externa de su impacto en la población objetivo. A continuación se describe el diseño conceptual de la evaluación externa del impacto de la Red Solidaria. Este diseño conceptual forma parte de los presentes Términos de Referencia para contratar una Firma consultora que ejecute la evaluación de impacto.

II. **Objetivos de la evaluación de impacto**

El objetivo general de la evaluación externa es:

Determinar los avances alcanzados en cada uno de los ejes de intervención del Programa Red Solidaria para verificar el cumplimiento de las metas y retroalimentar las acciones del Programa.

Los objetivos específicos de la evaluación externa son:

8. Demostrar la transparencia en el proceso de implementación de la RED.
9. Demostrar si la RED llega a la población objetivo con equidad de género y diversidad cultural.
10. Demostrar si la RED produce mejoras en la salud, nutrición y educación de la población objetivo.
11. Documentar y demostrar el impacto de las transferencias monetarias condicionadas (TMC), las intervenciones de agua y saneamiento básico (SB), electrificación e infraestructura estratégica y su interacción.
12. Demostrar si la RED mejora el acceso a los servicios de salud y educación
13. Medir la sostenibilidad de la RED.
14. Valorar el efecto de la RED sobre la participación ciudadana y social.
15. Socializar los resultados de la evaluación con la Comisión de Evaluación de la Red Solidaria (CERS)\(^{24}\) y el Consejo Directivo y realizar otras presentaciones a nivel técnico.
16. Apoyar en el fortalecimiento de la capacidad de la CERS en monitoreo y evaluación de los programas de desarrollo social.
17. Medir los indicadores de los resultados claves de la extensión de servicios de salud (materno-infantil, calidad de los servicios brindados prevención VIH/sida y dengue).

III. **Preguntas principales que responderá la evaluación**

Las principales preguntas que contestará la evaluación externa son:

1. ¿Cuál es la cobertura de las distintas intervenciones?
2. ¿Qué tan bueno es el algoritmo de focalización que se utilizará a partir del 2007?
3. ¿Cuáles son los impactos de la RED?
4. ¿La combinación de las transferencias monetarias condicionadas (TMC) con la provisión de agua y saneamiento básico (SB) genera los mayores impactos?

\(^{24}\) Comisión coordinada por la Dirección Ejecutiva de Red Solidaria y formada por FISDL, MSPAS-RHessa, MINED, ANDA.
5. ¿El efecto del paquete básico de servicios de salud y nutrición se mantiene sin las TMC?
6. ¿Cuál es la satisfacción de los usuarios de la RED en cuanto al funcionamiento de los servicios de salud, educación, agua y saneamiento básico?
7. ¿Cuál es el efecto de la calidad\textsuperscript{25} de la oferta de servicios en los impactos de la RED?
8. ¿Cuál es el efecto de RED sobre la participación ciudadana y social?
9. ¿Cuál es la sostenibilidad\textsuperscript{26} del bienestar familiar cuando la RED salga de las comunidades?
10. ¿Cuáles son los resultados de los indicadores claves de la extensión de servicios de salud?

IV. **Indicadores mínimos e impactos esperados**

Los indicadores mínimos a incluir en la evaluación y para la determinación de la muestra y los impactos que se esperan a los dos años de implementar la RED son:

<table>
<thead>
<tr>
<th>Número de indicador</th>
<th>Indicador</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Aumento de 5 puntos porcentuales (pp) en el ingreso per cápita.</td>
</tr>
<tr>
<td>2</td>
<td>Aumento de 4 pp en la tasa neta de asistencia de niños de 7-12 años.</td>
</tr>
<tr>
<td>3</td>
<td>Disminución en 2 pp en la tasa de repetencia de niños de primer grado.</td>
</tr>
<tr>
<td>4</td>
<td>Aumento de 7 pp en la cobertura de vacunación con SPR (Sarampión, Papera y Rubéola) en niña(o)s de 12-23 meses.</td>
</tr>
<tr>
<td>5</td>
<td>Aumento de 25 pp en los partos atendidos por personal calificado.</td>
</tr>
<tr>
<td>6</td>
<td>Descenso en 10 pp en la prevalencia de diarrea en niña(o)s menores de 5 años.</td>
</tr>
<tr>
<td>7</td>
<td>Disminución de 3pp en prevalencia de la desnutrición global (peso/edad) en niña(o)s de 0-23 meses de edad.</td>
</tr>
<tr>
<td>8</td>
<td>Aumento de 25pp en la cobertura de inscripción en el menor de un año en control de crecimiento y desarrollo.</td>
</tr>
<tr>
<td>9</td>
<td>Aumento de 25 pp en la cobertura de inscripción prenatal.</td>
</tr>
</tbody>
</table>

\textsuperscript{25} La calidad debe ser definida de acuerdo a los estándares nacionales para cada servicio.

\textsuperscript{26} La sostenibilidad en el marco del Programa se refiere que al terminar los subsidios a la demanda exista una continuidad con el fortalecimiento de los servicios de salud y educación, agua y saneamiento básico asegurando así un mayor bienestar a las familias.
La Firma consultora deberá considerar en la evaluación de impacto los indicadores que aparecen en la matriz ampliada del marco lógico de la RED (ver apéndice 1, sección XII).

V. **Estrategias metodológicas**

1. **Estrategia de evaluación**

Las intervenciones de la RED son: Transferencias Monetarias Condicionadas (TMC), Provisión de Agua y Saneamiento Básico (SB), Servicios Básicos de Salud y Nutrición, Servicios Educativos, Infra-estructura estratégica, Electrificación, Conectividad y Registro Civil de Ciudadanos. De acuerdo a la pregunta 4 de evaluación (III.4) se desea evaluar los impactos de las TMC y Provisión de Agua y Saneamiento Básico en arreglo factorial, el diseño de evaluación deberá controlar las otras intervenciones. El arreglo factorial se resume en:

<table>
<thead>
<tr>
<th>TMC</th>
<th>Agua y SB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sí</td>
<td>Sí</td>
</tr>
<tr>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Se evaluarán los impactos de las intervenciones de infraestructura estratégica y electrificación.

Para la medición de los impactos se sugiere utilizar un diseño casi-experimental de grupo control no equivalente (grupo de comparación). El grupo de intervención se conformará de la cohorte de 17 municipios que ingresarán al Programa durante el 2006 (ver Gráfico 1). La unidad de intervención será el Cantón. El grupo de comparación se conformará de la cohorte de 68 municipios que ingresarán al Programa en el 2007. Se tomarán los municipios más cercanos al punto de corte utilizado con el Índice Integrado de Marginalidad Municipal (IIMM) que se uso para separar a los 17 municipios de pobreza extrema severa que conformarán el grupo de intervención. El objetivo aquí es encontrar municipios que sean lo más similar posible a los de intervención en: IIMM, población e inicio de los programas de Salud y Educación en los municipios. Dentro de cada municipio se aparejarán los cantones (si los datos lo permiten). El aparejamiento de las familias se hará ex-post.

La Firma consultora puede proponer un diseño diferente al sugerido y se estimula a las Firmas a que utilicen su creatividad en su propuesta de diseño de evaluación.

La RED ya está implementando los 3 ejes en los 15 primeros municipios de pobreza extrema severa en El Salvador (ver Gráfico 1). Estos municipios no se incluirán en la evaluación de impacto. En los 17 municipios de pobreza extrema severa que ingresarán a la RED en el 2006, la RED levantará el censo de población en estos municipios durante el tercer trimestre del 2006. Los municipios que sean seleccionados de los 68 municipios para la muestra de comparación serán objeto de mediciones a partir del levantamiento de la línea basal, sin embargo, no se realizará ningún censo por parte de la RED sino hasta Enero del 2007 en 32 de estos 68 municipios. La línea de base se realizará antes de intervenir en los 17 municipios de pobreza extrema severa. Al mismo tiempo se harán las mediciones en los municipios de comparación en el grupo de alta pobreza (ver Gráfico 1).
La línea de base (Medición 1, M1, en el Gráfico 1) se iniciará a los dos meses de inicio de la consultoría \(^{27}\) del 2006 (M06) y la Medición 2 (M2) en el mismo mes del 2007 (M07) \(^{28}\). Durante la Medición 1 se evaluará la eficiencia del algoritmo de la focalización. La medición 3 (M3) se realizará en el mismo mes del 2008 (M08). Para evaluar la sostenibilidad se hará una cuarta medición (M4) en el mismo mes 2010 (M10).

La Firma hará una propuesta de cómo evaluará la eficiencia del algoritmo de focalización que se utilizará en los 68 municipios en pobreza extrema alta a partir del 2007.

Para contestar las preguntas de evaluación 6, 7 y 8 se espera que la Firma consultora haga una propuesta metodológica apropiada y que al mismo tiempo esta propuesta apoye la triangularización de los resultados con el diseño casi-experimental. En el área de satisfacción de usuarios se debe considerar el funcionamiento del programa, el enfoque de género y la pertinencia cultural en la prestación de servicios.

2. **Estándares mínimos para la definición de la muestra**

La muestra de estudio estará determinada por el diseño de evaluación que se utilizará, los indicadores mínimos que se requieren para contestar las preguntas de evaluación y los impactos esperados. Las hipótesis de impacto se probarán con un nivel de significancia del 5% y un poder mínimo del 80%. La Firma consultora documentará los supuestos y los procedimientos utilizados para el cálculo del tamaño de la muestra. La muestra de evaluación deberá tener el tamaño suficiente para medir los impactos esperados en los indicadores mínimos requeridos (ver sección IV) y contestar todas las preguntas principales de la evaluación (ver sección III).

3. **Estándares mínimos para el diseño de instrumentos**

La recolección de datos se realizará a nivel familiar e individual (dentro de la familia) y a nivel de cantón, por lo tanto la Firma consultora presentará dos boletas: la familiar y la cantonal. La boleta familiar contendrá como mínimo las siguientes áreas de datos:

a. Vivienda y características sociodemográficas de la familia.

b. Educación de los miembros de la familia.

c. Salud materna e infantil (incluyendo preguntas referentes a la mortalidad infantil y materna, lactancia exclusiva, alimentación complementaria, conocimiento de las madres sobre el estado nutricional de los menores, controles prenatales, participación en otros programas de salud y nutrición y de entrega de alimentos, entre otros).

d. Consumo

e. Ingresos (monetarios y no monetarios – incluyendo las remesas)

f. Antropometría de los niños menores de 5 años (incluyendo las distintas medidas antropométricas).

g. Uso del tiempo.

\(^{27}\) Se establece la entrega del informe de la medición de línea basal a los cinco meses a partir de la fecha de orden de inicio.

\(^{28}\) Ejemplo ilustrativo: si la medición 1 se realiza en el mes de julio del 2006, la medición 2, 3 y 4 se realizarán en el mes de julio de los años correspondientes, a los que para efectos prácticos se denomina M06, M07, M08 y M10.
h. Posesión y acumulación de activos (incluyendo activos financieros y de ahorro).
  i. Choques adversos durante el pasado año.
  j. Otras intervenciones donde la familia participa a nivel del cantón y/o municipalidad.

Estas áreas de datos deben incluir todos los indicadores que aparecen en el apéndice 1 (ver sección XI). Se sugiere que la Firma consultora revise las boletas que se utilizan en las encuestas nacionales de hogares de propósitos múltiples, ingresos y gastos, demografía y salud, etc.

La encuesta a nivel de cantón caracterizará las ofertas de salud, nutrición, educación, agua y saneamiento básico. La Firma consultora propondrá una boleta para caracterizar estos servicios. Dentro de este se recolectará datos sobre la calidad de los servicios de salud brindados en establecimientos de salud o a través de la modalidad de terceros, que ejecuta la estrategia de extensión de servicios de salud en el área rural.

4. **Uso de datos administrativos**
La Firma consultora evaluará la calidad de los datos administrativos nacionales relacionados con la prestación de servicios y si la calidad de estos datos es adecuada, estos datos también se utilizarán para evaluar el impacto en forma complementaria. La Firma consultora presentará un informe de la calidad de estos datos y si apropiado una propuesta de cómo utilizar los mismos en la evaluación.

VI. **Actividades Mínimas**

16. Selección de una muestra representativa y válida de familias a entrevistar.
17. Identificar el grupo de control.
18. Diseñar la metodología y los instrumentos de recolección y sistematización de la información, sobre la base de los indicadores del Marco Lógico del Programa Red solidaria.
20. Analizar los resultados de la prueba piloto.
21. Realizar las correcciones necesarias de acuerdo a los resultados de la prueba piloto.
22. Recolectar información en base a indicadores del Marco Lógico del Programa.
23. Analizar los datos recopilados.
25. Repetir las actividades de la 4 hasta la 9 para los siguientes 4 evaluaciones.
26. Diseñar la metodología y los implementos necesarios para determinar la satisfacción de los beneficiarios de la RED.
27. Diseñar la metodología y los implementos necesarios para determinar la eficiencia de la focalización.
28. Diseñar la metodología y los implementos necesarios para determinar el efecto de la calidad de la oferta en los impactos.
29. Diseñar la metodología y los implementos necesarios para realizar el informe de impactos a los dos años de operación
30. Diseñar la metodología y los implementos necesarios para determinar la sostenibilidad del Programa.
31. Diseñar y realizar capacitaciones para fortalecer a la CERS o al personal que ésta designe, sobre monitoreo y evaluación de los programas de desarrollo social.

VII. Productos esperados

La Firma consultora presentará los siguientes productos:

8. Plan de Trabajo Final: incluyendo cronogramas, actividades, recursos, metodología entre otros.
9. Informe Final recogiendo la metodología completa de la evaluación de impacto externa de la Red Solidaria incluyendo, como mínimo, estrategias de evaluación, instrumentos de recolección de datos, diseño muestral, planificación general de los operativos de campo, anexos técnicos detallando las fórmulas de cálculo y definición de variables.

Los productos 1 y 2 serán entregados un mes después de orden de inicio.

10. Informe de calidad de datos administrativos según lo solicitado en la sección V-4.

El producto 3 será entregado dos meses después de orden de inicio.

11. Informe de la línea basal, M1 a realizarse en M06 que incluya, como mínimo, la caracterización inicial de la población en los grupos de intervención y de comparación según las principales variables incluidas en la evaluación, las lecciones aprendidas del levantamiento de la encuesta, así como el análisis de esa caracterización basado tanto en la encuesta como en instrumentos y/o fuentes complementarios.

El producto 4 será entregado cinco meses después de orden de inicio.

12. Informe de la eficiencia de la focalización que incluya, como mínimo, la metodología, los implementos necesarios y el análisis para determinar la eficiencia de la focalización.

13. Informe de impactos al año de implementación, M2 a realizarse en M07 que incluya, como mínimo, la metodología, los instrumentos necesarios y el análisis para determinar el impacto del programa.

Los productos 5 y 6 serán entregados catorce y quince meses después de orden de inicio, respectivamente.

14. Informe sobre satisfacción de los beneficiarios de la RED que incluya, como mínimo, la metodología, los implementos necesarios y el análisis para determinar la satisfacción de los beneficiarios de la RED.

15. Informe sobre el efecto de la calidad de la oferta en los impactos que incluya, como mínimo, la metodología, los implementos necesarios y el análisis para determinar el efecto de la calidad de la oferta de los impactos

Los productos 7 y 8 serán entregados veinticuatro y veintiséis meses después de orden de inicio, respectivamente.

16. Informe de impactos a los dos años de operación. Este informe incluye una síntesis de la evaluación de impacto y los requerimientos mínimos del producto 6.

El producto 9 será entregado cincuenta meses después de orden de inicio.
17. Informe sobre la sostenibilidad, el cual debe incluir, como mínimo, la metodología usada y los análisis necesarios para la realización del informe.

La Firma entregará a FISDL y DRS las bases de datos limpias que deberán ser legibles en cualquier equipo, bajo plataforma Windows o que puedan ser restauradas en una base de datos SYBASE; si fuese necesaria la adquisición de una licencia para acceder a los datos esta se incluirá dentro de la propuesta técnica y económica a presentar. La Firma entregará también los instrumentos de recolección de datos, los manuales de formación de los encuestadores, la documentación sobre el trabajo de campo, ficheros documentados de análisis con DRS, la documentación sobre las bases de datos, un diccionario de datos completo para cada base de datos; en formato Word y/o Excel.

La empresa consultora deberá presentar dos copias impresas y dos en formato digital por cada documento, estas últimas deberán estar en formato para MS Office (Word/EXCEL/PowerPoint) y en CD.

VIII. Perfil de firma y personal clave mínimo requerido.

La firma ha ejecutado en los últimos 8 años como mínimo 2 contratos sobre evaluaciones de impacto de programas de inversión social en Latinoamérica de similar envergadura a los presentes TDR.

La firma ha ejecutado encuestas de hogares con representatividad a nivel municipal y/o departamental y/o regional y/o nacional y con un tamaño de muestra mínimo de n=500 hogares, utilizando un diseño muestral por conglomerados.

Todo el personal propuesto domina el español.

Líder del equipo El líder del equipo de evaluación ha dirigido evaluaciones de impacto de programas sociales en un país de Latinoamérica, posee doctorado académico en las ciencias vinculadas con el sector social (ciencias económicas y/o de salud y/o nutrición y/o educación y/o antropología y/o psicología y/o sociología) y 3 años de experiencia en evaluaciones de impacto. El líder del equipo deberá dedicar un mínimo del 33% de su tiempo laboral.

Especialista en salud pública. Uno de los miembros del equipo de evaluación tiene un doctorado en las ciencias de la salud pública y/o nutrición con experiencia de 3 años en evaluación de proyectos y/o programas en estas áreas.

Especialista en educación. Uno de los miembros del equipo de evaluación tiene un doctorado en las ciencias de educación con experiencia de 3 años en evaluación de proyectos y/o programas en estas áreas.

Especialista en economía. Uno de los miembros del equipo de evaluación tiene un doctorado en economía, con especialización en econometría. Experiencia de 3 años en evaluación de proyectos y/o programas en el sector social.
Especialista en estadística. Uno de los miembros del equipo tiene una maestría en estadística (preferible doctorado) y con experiencia de 3 años en diseño e implementación de encuestas representativas de por lo menos un tamaño de muestra de 500 hogares y proceso de datos para estas encuestas.

Coordinador en campo. El profesional responsable de la dirección de campo debe tener un nivel de licenciatura o ingeniería y experiencia de 3 años dirigiendo recolección de datos para encuestas representativas de por lo menos un tamaño de 500 hogares.

IX. Duración y cronograma de la evaluación

La evaluación de impacto durará 55 meses, a partir de la orden de inicio del primer contrato (ver Gráfico 1). La línea de base se recolectará en M06 29, la segunda medición en M07, la tercera medición en M08 y la cuarta medición o final en M10.

Gráfico 1 Cronograma de evaluación

X. Supervisión, contraparte técnica y usuario interno

La consultora tendrá como contraparte técnica principal a la Dirección Ejecutiva de Red Solidaria. El trabajo será supervisado por un equipo formado por la Dirección Ejecutiva de la RED. La consultoría será administrada por FISDL.

XI. Lugar de la Consultoría

La empresa consultora deberá contar con sus propias oficinas para realizar la evaluación.

El levantamiento de información deberá levantarse en campo en los municipios seleccionados para la muestra.

29 Ejemplo ilustrativo: si la medición 1 se realizó en el mes de julio del 2006, la medición 2, 3 y 4 se realizarán en el mes de julio de los años correspondientes, a los que para efectos prácticos se denomina M06, M07, M08 y M10.