



## IMPROVING CHILD HEALTH, NUTRITION AND DEVELOPMENT OUTCOMES

### ChildFund's Responsive Parenting Model

This research brief presents key findings on the social return on investment of ChildFund's Responsive Parenting Model. The model improves the health, nutrition and development outcomes of children 0-5 years of age by increasing the skills, knowledge and awareness of primary caregivers. It also links families to public health, child protection and education services.

The research, conducted by NEF Consulting (New Economics Foundation), evaluated the Responsive Parenting Model using a Social Return on Investment approach, which measures the social value created for every dollar invested in implementing the model.

The cost-benefit analysis considered all outcomes across all stakeholders, and compared benefits to the financial and non-financial investments into the project that implements the model. **At a minimum, the model generates double the amount of value that it requires for implementation. In other words, the model doubles the return on investment. When benefits beyond the short term are considered, by forecasting them into the future, the model triples the return on investment. At a maximum, estimates show that for each \$1 invested, the model creates \$3.50 of social value.**

The Responsive Parenting Model creates positive social change for various stakeholders:

- For children, there is considerable positive impact on social and emotional development, and less on physical development.
- For caregivers/parents (mainly mothers), the biggest changes reported are for improvements in agency and participation and in self-esteem.
- For trainers, the biggest amount of positive change is in increased employability, higher self-esteem, and agency and participation.
- For the wider community, with whom participants share knowledge and skills, there is an improvement in the knowledge and skills related to early childhood development

**Of these benefits, 38% accrue to children and an additional 35%, to their parents. The model is effective at reaching its intended beneficiaries, while also producing positive change for the wider community where children live and grow.**

## CHILDFUND'S RESPONSIVE PARENTING MODEL

The cornerstone of the Responsive Parenting Model is parenting education and support, through workshops for groups and individual home visits and monitoring. The parenting education in the Responsive Parenting Model covers all aspects of early childhood development, organized into five units: General Messages; Physical Development; Emotional Development; Social Development; and Intellectual and Creative Development<sup>1</sup>. It engages primary caregivers in participatory workshops delivered by trained community volunteers called Mother Trainers. The model follows six steps of delivery which engage parents, Mother Trainers, and other community members: (1) Participatory Community Diagnosis; (2) Risk Socialization and Dissemination of Results; (3) Community Selection of Mother Trainers; (4) Launch of Training of Trainers; (5) Formation of Participant Groups and Implementation of Workshops; and (6) Monitoring and Follow-Up. These steps link parents (mostly mothers) and Mother Guides into networks which provide parenting

<sup>1</sup> ECD includes evidence-based strategies that cut across health, nutrition, learning, protection such as parenting support, child care, health, nutrition, sanitation and social protection services, good quality pre-school and transition to good quality primary school. Information available <http://www.ecdgroup.com/library/>

support beyond the workshops. The model also complements existing social services provided by the Government of Ecuador, such as health care, early childhood education, and child protection. It empowers caregivers to access services on behalf of their children, stimulate their children’s learning, promote healthy practices, and respond to their nutritional and protective needs<sup>2</sup>.

ChildFund, through its local partners, implements a variation of this model in Ecuador, Bolivia, and Honduras. In Ecuador, the Responsive Parenting model operates in five provinces in the north and central Andes in 500 mostly rural communities<sup>3</sup>. For the purposes of this evaluation, the northern province of Carchi in Ecuador was chosen as a case study. Between 2010 and 2013, the Responsive Parenting model reached around 2,200 low-income and vulnerable families in Carchi.

Carchi has around 150,000 inhabitants across six provinces. Although it is not the poorest province of Ecuador, it is certainly among the most vulnerable: 56.6% of its population lives below the poverty line and 31.7% live in conditions of extreme poverty, compared to 26% and 13% nationally. This translates into higher malnutrition, mortality and stunting rates among children, compared to national averages, as illustrated in Table 1.

**Table 1: Key indicators of children’s living conditions in Carchi, Ecuador**

	<b>Carchi</b>	<b>National Average</b>
<b>Malnutrition</b>	<b>26%</b>	<b>11%</b>
<b>Mortality rate of under 5-year-olds (per 1,000 births)</b>	<b>39</b>	<b>26</b>
<b>Stunting rate</b>	<b>24%</b>	<b>23%</b>

*Source: compiled from Ecuador’s Observatory for the Rights of Children and Adolescents<sup>5</sup> and the World Bank<sup>6</sup>.*

## THE SOCIAL RETURN ON INVESTMENT RESEARCH

### OBJECTIVES

The objectives of this Social Return on Investment evaluation were to:

- Measure the social impact and returns on investment of the Responsive Parenting Model.
- Broaden the evidence base on the returns on investment for early childhood development interventions, by adding social value where other analyses had only focused on economic or financial outcomes.

ChildFund intends to use the information produced by this evaluation for policy advocacy work and for further improvements of its early childhood development work.

### METHODOLOGY

Key to the Social Return on Investment methodology is the engagement of stakeholders. It starts by engaging stakeholders in developing a theory of change, which aims to logically link the model implementation activities to the (positive or negative) short-, medium- and long-term changes (or outcomes) that stakeholders have experienced. A theory of change is constructed for each stakeholder group materially affected by the intervention.

<sup>2</sup> More detail about the Responsive Parenting Model can be found in the ChildFund Research Report “Empowered and Responsive Parenting,” and its accompanying ChildFund Research Brief.

<sup>3</sup> “Rural” areas – defined by ChildFund – are ones that suffer higher shortages/ lack of public services (53%) compared with urban areas (22%)

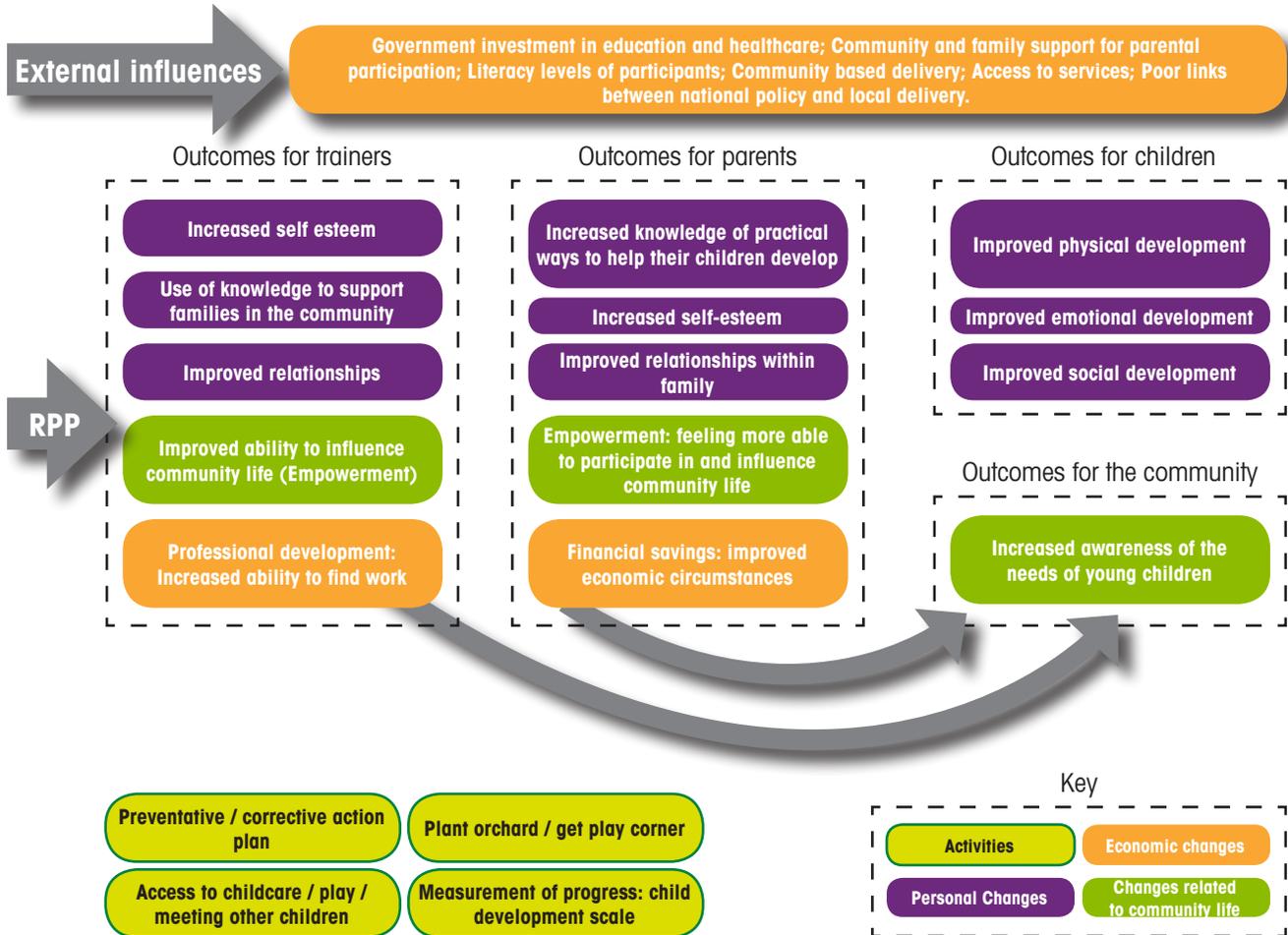
<sup>4</sup> Information available at: [http://www.pnud.org.ec/art/frontEnd/images/objetos/brochure\\_carchi.pdf](http://www.pnud.org.ec/art/frontEnd/images/objetos/brochure_carchi.pdf)

<sup>5</sup> Data available on website of the *Observatory for the Rights of Children and Adolescents* at: <http://www.odna.org.ec/idn1.html>

<sup>6</sup> The World Bank (2007), *Nutritional Failure in Ecuador, Causes, Consequences and Solutions*, The World Bank, USA

These theories of change allow us to identify the process of change, as well as the outcomes (or benefits) to be subsequently tested for in the SROI analysis. Figure 1 presents the overall theory of change, by stakeholder group, that was tested through this research.

**Figure 1: The overall theory of change for the Social Return on Investment for the Responsive Parenting Model**



The outcomes presented reflect medium-term outcomes that can become catalysts for longer-term change. For example, children’s improved physical development can, in the long run, enhance their future health prospects, educational performance, and eventually their income prospects. However, to assess these long-term outcomes, a longitudinal analysis based on various assumptions is necessary. Instead, the focus here is on shorter term outcomes and benefits that have already been effected for children, families and communities.

We tested the theories of change via questionnaires for participants designed to elicit information on the evolution of change across the different outcomes identified by respective stakeholders. The questionnaires and indicators captured the more tangible outcomes of changes in children’s physical development and families’ economic prospects, as well as the less tangible outcomes of changes in empowerment, social capital, agency and participation of women, and improved family relationships. Table 2 presents the list of outcomes and indicators used to measure these outcomes.

**Table 2: Outcomes measured through the Social Return on Investment analysis**

Stakeholder Group	Outcome	Outcome indicator description
Children	Improved physical development	Evolution in number of meals per week including fruits, vegetables and meat respectively
		Number of visits to the health centre per month
		Breastfeeding coverage over and above national average
	Improved emotional development	Evolution of relationship with parents (1-5 scale)
		Improvement of children’s capacity to express their emotions
	Improved social development	Evolution of number of days per week having the chance to play
Improvement of children’s interaction with other children		
Parents	Improved knowledge and skills	self-rated knowledge/skills in five key areas (1-5 scale)
	Increased self-esteem	Self-reported confident in expressing opinions in public (1-5 scale)
	Empowerment (agency and participation)	Self-reported well-being within the household (1-5 scale)
	Improved economic circumstances	Avoided annual spending in groceries (Orchard production), net of household investment in Orchard
	Improved relationships	Self-reported well-being within the household (1-5 scale)
Trainers	Increased employability	Number of trainers having found a job after participation
	Improved knowledge and skills	Self-rated knowledge/skills in five key areas (1-5 scale)
	Improved family relationships	Self-reported well-being within the household (1-5 scale)
	Improved self-esteem	Self-reported capacity to influence community life (1-5 scale)
	Empowerment (agency and participation)	Self-reported capacity to influence community life (1-5 scale)
Community	Increased awareness, knowledge and skills on child development	Evolution in knowledge and skills of non-participant households with whom participants have shared knowledge and skills gained through RPP

Finally, to measure the impact of the Responsive Parenting Model in Carchi, we completed two distinct steps:

- 1) Measuring the gross impact: the amount of change stakeholders have experienced since the beginning of the intervention, without attributing the change specifically to the Responsive Parenting Model, and
- 2) Measuring the net impact: the portion of this change that is fully attributable to the Responsive Parenting Model. This entailed working with stakeholders to parse out (a) the amount of change which would have happened anyway (even in the absence of the project); and (b) the amount of change which can be attributed to other actors directly or indirectly involved in the project (for example, local committees and community-based public health provision, respectively).



## THE FINDINGS: THE IMPACT OF THE RESPONSIVE PARENTING MODEL

Overall, we found that stakeholders report a positive change across all outcomes considered in this analysis. This change, however, is not uniform across outcomes:

- For children, there is a higher impact for indicators related to social and emotional development compared to those related to physical development. There was a 13% net improvement in physical development indicators, compared to a 14% improvement in emotional development indicators and 19% improvement in social development indicators.

- For caregivers (mainly mothers), the biggest changes reported are for improvements in agency and participation and in self-esteem (12.5% and 13.5% net improvement respectively). In addition, through the development of home gardens, caregivers equally experience an improvement in economic circumstances. 75% of participants considered in our sample benefited from resources in order to develop an orchard. On average, those households were found to save \$213 per year (net of costs) by avoiding the purchase of fruits and vegetables.
- For trainers, the biggest amount of change came from increased employability, improvement in self-esteem, and improvement in agency and participation (19%, 11% and 11% respectively). Trainers also reported a modest increase in knowledge and skills (8% improvement) and family relationships (7%).
- Finally, we examined one outcome related to change in the wider community, beyond caregivers participating in the Responsive Parenting Model. Based on qualitative information, we made the assumption that community members have gained 25% of the additional knowledge and skills of participants, by participants sharing with their wider communities. We found an improvement in the knowledge and skills of communities as well.



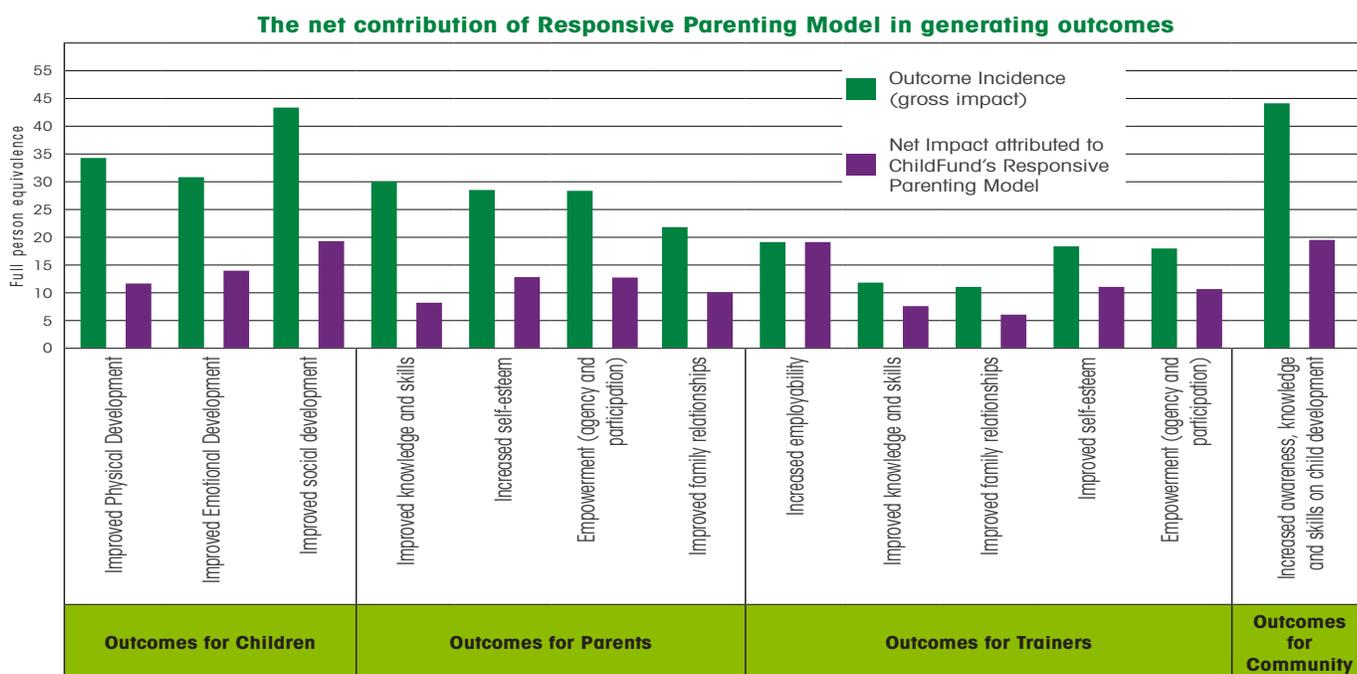
How much of this positive social change can be attributed directly to the Responsive Parenting Model?

- Trainers attributed 100% of the change they experienced in increased employability to the model, and almost 60% of personal and emotional changes they experienced. To a much lesser extent they attributed 11% to the local council and 13% to the Ministry of Health and local health service. They attributed less than 10% to other actors including the local parish and organisation for the protection of children’s rights.
- Parents felt there was more of a balance between the model and local health services. They attributed 39.75% of the changes they and their children experienced to the model, 27% to the Ministry of Health and local health centres, 12% to the organisation for the protection of children’s rights, and between 5 and 9% to the local parish, local council and community organisations. This illustrates the way in which activities “wrap around” government service provision, enhancing the effectiveness of local services.



Figure 2 presents both the gross impact and net impact for all respective stakeholders involved in the analysis. Results are presented in Full-Person Equivalence. Full-person Equivalence expresses the outcomes and impacts in a simplified form. It combines the % of stakeholders stating they have experienced an outcome (e.g., whose self-esteem has improved) with the amount of change (e.g. on a scale of 0 to 5). For example, if 50% of sampled mothers declare they have experienced an improvement of 50%, this is equivalent to 25% of sampled mothers experiencing a 100% (full) change on the same scale. We do this in order to express change in natural language, for clarity and simplicity.

**Figure 2: The Impact of the Responsive Parenting Model, net of change that would have happened in its absence and change attributable to other actors**



## THE FINDINGS: THE SOCIAL RETURN ON INVESTMENT OF THE RESPONSIVE

In order to measure the returns on investment to the Responsive Parenting Model, the costs of the intervention needed to be compared to its benefits. This required assigning a monetary price to typically non-market outcomes. To assign a value to non-market or non-economic outcomes, we applied a range of valuation techniques, such as Choice Experiments (CE) and Willingness-To-Pay (WTP) of stakeholders.

When asked to place a value on what they would be Willing-To-Pay to attend the course, trainers estimated on average that they would pay \$708 per year and parents, \$427.50 per year. When asked to prioritise those things most valuable in their lives, parenting workshop participants and trainers consistently ranked good relationships with their children and family and the community as a priority in their lives, over and above a stable job. This provided a framework for putting a financial “proxy” on outcomes, but also further reinforced an understanding of elements which contribute to the success of the project: the strength of the family and community relationships, which people hold most dear. For outcomes where empirical valuation exercises could not be conducted, we used cost estimates available in existing literature.

### COSTS: ACCOUNTING FOR THE FULL COST OF DELIVERY

The costs considered in a Social Return on Investment can be (a) financial or (b) economic. The financial costs are the budget, (i.e. amount financially spent to deliver an intervention). The economic costs are inputs used to deliver an activity or intervention that are not compensated for in financial terms. These include in-kind donations; community contributions (e.g., the community providing a building or space to hold meetings for free); and volunteered time.

While the wide majority of Social Return on Investment analyses considers financial costs only, ChildFund and Local Partners collected data on economic costs as well. The review of those data shows that the non-financial inputs in the intervention are sizeable, and we included these in the costs.

We calculated the average costs (both financial and economic or non-financial) to train a parent based on financial documents of ChildFund and partners. These are summarized below in Table 3.

**Table 3: Summary of unit costs used for the Social Return on Investment**

Financial Cost	\$ / Parent Trained
Financial Cost	\$646.00
Economic Cost	\$131.50
Of Which:	
Time input and in-kind donations of trainers:	\$80.00
Time input and in-kind donations of parents:	\$20.00
Community input (meeting rooms, etc.):	\$31.50

## BENEFITS: ACCOUNTING FOR THE FULL RANGE OF SOCIAL CHANGES

The cost-benefit analysis considered all outcomes across all stakeholders, and compared this to the financial and non-financial investments (including the time of trainers and parents). The analysis found that the model is an effective intervention from a return-on-investment perspective. **At a minimum, it generates double the amount of value that it requires for implementation. At a maximum, our estimates show that for each \$1 invested, it creates \$3.50 of social value.**

We also ran two SROI models, one evaluative, or considering only the change that has already happened, and one forecastive, which entails both (a) the amount of change that has already happened and (b) an additional forecast of two years into the future. Because two years are a relatively short amount of time, we do not consider a drop-off of impacts over these extra 2 years.

**Table 4: The social returns on investment of the Responsive Parenting Model (in US Dollars)**

Discount Rate	Evaluative Analysis			Forecastive Analysis		
	0%	3%	10%	0%	3%	10%
Present Value of Benefits <sup>7</sup>	\$117,900	\$111,165	\$97,733	\$196,501	\$178,432	\$163,686
Present Value of Costs <sup>8</sup>	\$56,763	\$55,110	\$51,603	\$56,763	\$55,110	\$51,603
Net Present Value (NPV) <sup>9</sup>	\$61,137	\$56,054	\$46,130	\$139,737	\$123,322	\$112,083
SROI ratio	2.08	2.02	1.89	3.46	3.24	3.17

When viewed in both evaluative and forecastive terms, the Responsive Parenting Model at least doubles the amount of its inputs. If we focus on the shorter term and benefits that have already been produced, for every \$1 invested in implementing this model, we get about \$2 of social value created. If we then look at the longer term, by projecting what benefits can accrue into the future, we find that the model more than triples its investment. Previous cost-benefit analyses of early childhood development interventions have already highlighted their benefits, but only in economic or financial terms. By factoring in broader social benefits as well, we find that the returns on investment of early childhood development work are considerably higher than previously thought.



<sup>7</sup> The current value in cash of any future benefits delivered by the programme. The cash value in 2014 prices is computed by discounting the future value at a specified rate of return. For further details on discounting and the notion of Present Value see: [http://www.neweconomics.org/page/-/publications/Economics\\_in\\_policymaking\\_Briefing\\_5.pdf](http://www.neweconomics.org/page/-/publications/Economics_in_policymaking_Briefing_5.pdf)

<sup>8</sup> As per above.

<sup>9</sup> The difference between the present value of the future returns from an investment and the present value of the amount of investment. The Present Value of Benefits minus the Present Value of Costs is equal to the Net Present Value.

From a program effectiveness standpoint, it is equally important to know how much value accrues to each stakeholder. Overall, we find that the overwhelming majority of the benefits generated accrue to children and parents (Figure 3). This is indicative of the Responsive Parenting Model's allocative effectiveness, since the vast majority of the benefits created accrue to its intended beneficiaries.

## CONCLUSION

ChildFund's Responsive Parenting Model doubles every dollar invested in it in the short term and more than triples every dollar in the long term. About 75% of these benefits accrue to children and their parents, and the rest, to the communities where they live. In addition to creating social value in its own right, the Responsive Parenting Model supports the take-up of existing, government-provided social services by vulnerable families. This Social Return on Investment evaluation of the Responsive Parenting Model has demonstrated the effectiveness of an early childhood development model that empowers caregivers and communities and capitalizes on locally provided social services.

In addition, this evaluation contributes to the growing body of literature on the effectiveness of early childhood development interventions:

1. Previous returns on investment analyses of early childhood development programs have been limited to economic benefits. By contrast, this research adds social value to the analysis, as not all outcomes created by early childhood development programs are economic or financial in nature.
2. Previous research on the returns on investment to early childhood development programs has focused on the long-term, making assumptions about how investments during the earliest life stage will impact the health and productivity of citizens decades into their future. By contrast, this research focuses on what children and local communities are experiencing now, how that may affect their short- to medium-term situation, and how it can lead to further change in the future.

The results demonstrate that this is a cost-effective model for improving the developmental outcomes of children and that the benefits of investing in such interventions are higher than previous research has suggested.

**Figure 3: Percentage of SHORT-TERM benefits generated accruing to respective stakeholders**

