



**Project to Program Shift Requires  
Evaluating for Synergy:  
Improving measurement of the impact of combined efforts  
June 2007**

**Introduction**

This short paper<sup>1</sup> was developed to encourage discussion of the advantages that a focus on measurement of synergy can provide to CARE and the development community in the fight against poverty. It has been prepared as a brief, addressing some of the basic questions about “how to” measure synergy, but does not go into great detail regarding methodology. Instead, it provides an overview on the benefits of the approach and hopes to present some simple, yet very useful, ways in which the measurement of synergy can be incorporated into final evaluations.

**What is Synergy?**

In the dictionary<sup>2</sup>, the first definition of synergy is “the interaction of two or more forces so that their combined effect is greater than the sum of their individual effects.” For CARE programming, this means implementing (or partnering in the implementation of) more than one intervention in an area, with the expectation that the “combined effect” of multiple components will result in greater positive impact than the impact of any one component all alone.

**When & why was the concept of synergy introduced in CARE?**

CARE’s Household Livelihood Security Framework, adopted in 1994, was designed around the concept of

combined effects (synergy) across sectors leading to improved impact. HLS, and other livelihood frameworks, came about as the development community began to realize that single sector interventions were not having sufficient impact on the multi-dimensional nature of poverty.<sup>3</sup> Livelihood Security approaches are based on the understanding that poor families are at risk in multiple areas of their lives (e.g., health, education, income, etc). Poor households face multiple challenges and must constantly make trade-offs to meet what they perceive to be their greatest need at any moment. For example, to have enough food on the table, a family might sacrifice educational opportunities for children and put them to work tending animals. With limited income a mother might skip important medical care during pregnancy to have money to travel to market or purchase school uniforms.

When doing holistic problem analysis in the field, CARE staff clearly identify the integrated aspect of household needs, assets, rights and capacities across sectors. However, routine incorporation of this approach into the programming cycle – from problem analysis, to program design, to evaluation and reflection that feeds into improvements in future programming – remains a challenge.

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<sup>1</sup> by Joan M. Jennings, MPH, consultant, and M. Katherine McCaston; CARE June 2007.

<sup>2</sup> The American Heritage College Dictionary, Third Edition, 1993.

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<sup>3</sup> Livelihood security approaches are not the same as the “integrated rural development approach” but rather are based on state-of-the-art technical interventions in any sector combined through integrated programs or partnerships.



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**Why is this relevant to CARE's Vision?**

In 1996, CARE started a review of its mission, vision and strategic plan. CARE, along with many others in the development community, began to understand that the potential to end poverty was hindered by a lack of focus on social justice and equity. It was clear that without addressing key underlying causes of poverty related to social injustice CARE would not reach the desired impact on poverty that it seeks.

In response to this more comprehensive view, CARE developed the Unifying Framework for Poverty Eradication and Social Justice which emphasizes the importance of working across three critical outcome areas: social positions, human conditions, and an enabling environment. Including these thematic elements in our approach to ending poverty (such as the promotion of gender equity, good governance and more) makes understanding the potential impact of synergy all the more important.

While CARE has made some gains toward increasing our understanding of synergy, we still have work to do to increase our ability to design programs that will maximize synergy for the greatest impact on poverty. CARE's new Strategic Plan focus on Signature Areas has the potential to provide considerable leverage to our ability to integrate for increased synergy both at the programmatic and organizational level.

**How can measurement of the impact of synergy help CARE and others?**

CARE is active in more than 60 countries worldwide. One of CARE's strengths has always been its close relationship with communities. Dedication to improving our understanding of synergistic effects could play an important role in documenting the impact of synergy -- across multiple interventions, as well as in combination with thematic activities that address the underlying causes of poverty. CARE is already rising to the challenge from donors to conduct quantitative evaluations and demonstrate positive impact by sector-specific interventions. With not much additional effort, CARE can include analysis of synergy within typical evaluation activities and provide additional contributions to existing knowledge.

Focusing on synergy can guide us to the answers to many questions, such as:

- Do certain interventions or activities leverage greater improvement?
- Are there certain activities that need to be in place (timing or sequencing) before impact can be reached?
- What should be done in the short-term, the mid-range and long-term?
- What combinations of efforts (including that of partners) and resulting synergy will lead to the most significant and lasting improvements?



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Improving our understanding of and ability to evaluate for combined effects could prove to be an important leverage point for CARE. By focusing on synergistic evaluation design and data analysis, CARE will be in a valuable position to contribute useful and context-specific data and information to the dialogue on poverty. Besides providing important insight and guidance for effective planning and programming, it will also provide an *important evidence base* for CARE's advocacy efforts at the national and international level.

**What interesting concepts on synergy do we find in other disciplines?**

If we look to other disciplines that study effects, we find that there are additional ways in which synergy is demonstrated, besides the basic definition of "a combined effect greater than the sum of individual effects." For example, many epidemiologic studies of exposure to carcinogens have identified a "threshold" level. No change is seen (or measured) until a negative and synergistic level is reached between various factors, at which point significant change occurs. Inversely, in a positive way, might this concept be relevant to the fight against poverty? Is there a combination of activities and impact that must be addressed before communities can rise above what might be called a threshold level of risk and lack of resources that keeps them in poverty? And does this threshold change over time?

Another concept of interest has been (re)popularized in a recent best-selling book -- the concept of a "tipping point" in relation to changes in social behavior.<sup>4</sup> A definition of a tipping point is "the event of a previously rare phenomenon becoming rapidly and dramatically more common."<sup>5</sup> Is a better understanding of "tipping points" relevant to our efforts to end poverty? Is there a synergistic level of behavior change among multiple actors that will have a rapid impact on poverty? This brief allusion to these two concepts provides just a glimpse of the importance of a better understanding of synergy in our work.

**Does CARE have any experience in measuring synergy?**

This paper mentions two examples where CARE Country Office staff designed final evaluation of a multi-sector program to also assess for the expected (greater) combined effects of synergy.<sup>6</sup> The first discussed is CARE Honduras. In 1994 CARE Honduras conducted a holistic HLS assessment to better understand the local context and causes of poverty in a new geographic region it was entering. The analysis led to a multi-sector program design that also included community mobilization and municipal strengthening efforts to improve local

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<sup>4</sup> "The Tipping Point: How Little Things Can Make a Big Difference", by Malcolm Gladwell, 2000.

<sup>5</sup> <http://en.wikipedia.org> June 2007.

<sup>6</sup> "Activities to Promote Mother and Child Well-being in CARE's PL480 Title II Integrated Programs", prepared by Joan M. Jennings, MPH and Andres Peri, PhD, consultants; July 2002.



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governance. CARE Honduras was interested in including evaluation of synergy into program final evaluation activities, to be able to understand if this multi-sector approach yielded greater results as was hypothesized. The final results were interesting and demonstrate what useful information can be found by analyzing final evaluation data for effects from synergy.

Between 1996 and 2001, CARE assisted families to achieve a statistically significant reduction in chronic malnutrition among children age two to five<sup>7</sup>. An additional small study of synergy was included in the final evaluation. Surprisingly, regression analysis showed that a family needed to participate in all three of the interventions to achieve a statistically significant reduction in malnutrition<sup>8</sup>; participation in any one or two interventions was not enough to show positive change.

Another simple analysis of synergy (cross-tabulation with stratification by participation) was done by the CARE Mozambique Food Security Project in 2002 and found a reduction in the severity of malnutrition among children age two to five in the target area. This reduction, however, was not greater for

those households that participated in both of the program's two interventions (commercial agriculture and child nutrition) and the goal of reducing the overall percentage of child malnutrition in the area had not been reached.

The second component, child nutrition, had only been introduced a year previous to the evaluation and additional analysis in fact showed that the addition of this second intervention helped the project reach more of the most vulnerable children in the area. The program continued and expanded activities within these two components and, when evaluation was conducted in 2006, a statistically significant reduction in the percentage of child malnutrition was achieved with the greatest change from 2002 found among those who participated in both interventions.

Similarly among the CARE Honduras program and the CARE Mozambique program, malnutrition was reduced by one-sixth to one-seventh over periods of 5 to 7 years. It is important to note that this data represents both participants and non-participants in very large populations, and that these achievements were reached even with periodic threats and crises that the program could not control. Most importantly, it leads to critical questions about the number and combination of interventions needed and the length of time necessary if we hope to eradicate poverty as represented by chronic child malnutrition.

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<sup>7</sup> Chronic malnutrition, or low height-for-age, is considered to be a proxy indicator for poverty, as a lack of optimal growth for children reflects a household's inability to meet basic needs.

<sup>8</sup> These families would also be benefiting from the program's thematic activities to strengthen local governance, an underlying cause of poverty.



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**How do we prepare to evaluate synergy in programs designed through holistic problem analysis?**

Within the cycle of programming, these two examples began with program design based on holistic problem analysis. After implementation over a period of years, evaluation of programming impact was conducted and compared to baseline data. The evaluation of synergy in relation to program impact was simply and easily included within evaluation activities required by the donor.

Including discussion of synergy in Strategic Planning is an important step to building our capacities. Measurement of the synergistic impacts of interventions can only be done where multiple project components overlap geographically, affecting the same communities, households and service providers (e.g. teachers, health staff, local government leaders). We need to think of long-term programming that maximizes the impact of time-bound project opportunities, along with identifying more flexible funding sources.

The easiest way to measure synergy is through evaluation of multi-sector projects by doing a household survey using a questionnaire that includes information relevant to all sectors.<sup>9</sup> In order to be able to evaluate for synergy between program components, the questionnaire must include at least two

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<sup>9</sup> Resources exist for developing questionnaires and standardized indicators. Contact CARE IMLT Unit for more information.

questions about participation in project interventions:

- a) In which program component or sectoral activities has the household participated in?
- b) How long have they participated in each?

It is also important to include demographic data relevant to social justice in the region and which can later be disaggregated by gender, race, ethnicity, caste, religion and/or other.

Often donors are only willing to fund single-sector projects. This is a challenge for the analysis of synergy across sectors but that challenge can be met. Planning for the evaluation of synergy should be incorporated into the initiation of each project. If several projects will start or end at similar times, joint baseline and/or final evaluation can be coordinated between projects.

Many times, however, various projects start at different time periods and joint survey is not possible. This is a greater challenge to evaluating for synergy, but it can also be met. When the first project in a geographic area conducts baseline survey, a random sample of households should be selected and a confidential list of the names of these families and assigned identification numbers saved. When the next (or 3<sup>rd</sup> or 4<sup>th</sup>) project begins, the evaluation team can use this



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same random sample and interview the same households.

This data can then be combined with the first database to establish a *program* baseline, and a similar process used for final evaluation, allowing for analysis of synergy between the two (or more) projects' activities.

**What types of data analyses should be done to measure synergy?**

The simplest way to assess and discuss synergy is to geographically map program interventions, map project results, and see if there are areas with greater positive impact due to potential synergy between overlapping activities. Available secondary data from other sources (national surveys on poverty, agriculture production, health, education, etc.) can also contribute to the discussion.

A more statistically valid but still simple way to evaluate for synergy is to cross-tabulate a key impact indicator against household participation in any one, two or more program activities. For example, if almost all households had an income below \$XX at baseline, those households that had an income above this level at final evaluation could be stratified by whether they participated in any one of the program's interventions (such as agriculture, health, income generation) or any combination of these interventions. Determining into which categories of participation the greatest number of families with improved income

fell would provide useful input for future programming decisions.

Regression analysis of data provides the most rigorous results statistically and also deals with potentially confusing ("confounding") factors, with regression of household participation in project activities in relation to one or more key impact indicators.

Note that to assess synergy, participation in program activities should be cross-tabulated or regressed against only one or two key high level impact indicators. For example, household income and/or child malnutrition are often used as (proxy) indicators of poverty. However, each program will need to choose which one or two indicators best represents what they hope to achieve from program synergy. Final evaluation activities will still include data analysis of a much greater number of indicators for each individual sector, as usual.

It is very useful to do data analysis for synergy as an integral aspect of your final evaluation data analysis, because the result provides very useful information that can be timely for interpreting impact, for future programming, for donors and for the development community at large. However, if including data analysis of synergy into your standard final evaluation data analysis is a challenge for the team, the analysis of synergy does NOT have to be done at the time of final evaluation data analysis. It can be



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done at any later time as long as *the database information is well labeled*. For example, regression analysis of the final evaluation database of CARE Honduras' Food Security Project was outsourced to a consultant several months after routine final evaluation data analysis was completed. The database was sent to the consultant by email and he completed the regression analysis in 3 days. Most projects do (and should) budget for additional small studies besides basic baseline and final evaluation – this type of analysis for synergy is an excellent choice for additional study.

**What are the next steps?**

The simple evaluation of synergy by participation in program activities will lead us to more questions as we seek to improve programming design. Some of these questions can be answered through further quantitative analysis – for example, a key impact indicator can be stratified by different variables taken from demographic data and will be informative for assessing if the program is achieving CARE goals for social justice and equity. Have activities resulted in positive impact for women in both male- and female-headed households? Are all ethnic sub-groups (or other potentially marginalized groups) benefiting?

Other questions may best be looked at through qualitative techniques, such as focus groups. For example, a more detailed understanding of how the mechanism of synergy led to increased

impact, or an understanding of why some families don't participate in all interventions offered.

Last but not least, with continued programming in a strategically selected area, important questions regarding the combination of activities and/or the length of time needed to achieve impact will be of interest.

**Conclusion**

It is clear that improving our understanding and ability to measure synergy can yield a multitude of benefits. We can easily and inexpensively incorporate this assessment into typical evaluation activities. Improving our ability to measure impact and synergistic effects will allow us to make more to test our assumptions, make informed decisions, and to contribute to the international body of knowledge at large as we seek significant and lasting improvements for the families we serve.