Lessons Learned by the Environmental Health Project – Madagascar

1. The integration of health, population and natural resource management programs can achieve good results in each sector compared to programs implemented separately because of complementarities of interventions and programmatic synergies that occur when local NGOs work in partnership.

   This report compares the results from the baseline and post-interventions surveys to answer the question whether integrated activities are more effective. The community-centered and integrated PHE program has achieved impact over a three-year period. Twenty-nine out of 44 key PHE indicators resulted in clearly higher outcomes in integration (24 statistically significant at the 0.05 level and five at the 0.1 level, all at a power of 0.8) than in non-integration communities as shown in the summary table at the beginning of this document; for only two indicators non-integration communities showed better results, although this could have occurred by chance alone. For the remaining 13 indicators the evaluation methodology was a limiting factor[1] and not able to tell whether any differences between integration and non-integration groups existed. As expected in a social experiment where the comparison group also benefited from interventions, though not integrated, the non-integration sites saw improvements as well, but these lagged behind the integration sites for most indicators.

   Three results illustrate the impact of integrated PHE comparing integration to non-integration communities and baseline to follow-up surveys:

   - The contraceptive prevalence rate reached 17 percent in integrated communities in 2004 compared to 8 percent in communities without integration or about a 5 percent increase compared to 2001;

   - The prevalence of moderate & severe chronic malnutrition (stunting) dropped by almost 6 percent from 2001 and was 5 percent lower in integrated communities (47 percent compared to 52 percent); and

   - Tree planting increased by 12 percent from 2001 and was practiced by 70 percent of households in integrated communities compared to 58 percent in non-integrated villages.

   The achievements of communities where activities were integrated compare favorably to those achieved by vertical sector programs. This is noteworthy for three reasons. First, results were achieved in multiple sectors, not just in a narrow

[1] The evaluation of PHE integration in Madagascar had four methodological limitations, which are not uncommon in social science research and that overall may have led to underestimating the effectiveness of integration rather than overestimating it when comparing baseline and impact surveys and integration and non-integration communities: sample size, quasi-experimental design, multi-purpose survey instrument, and a short implementation period between baseline and follow-up surveys and external events.

subset of technical interventions. Second, without the integrated PHE program the underserved populations living around forest corridors would not have benefited form essential health and agricultural services. Third, these results were achieved at relatively low costs, rapidly, over a three-year period, and at scale reaching about 125,000 people. All this indicates that important synergies exist in an integrated approach that covers multiple sectors.

2. At the community level, people's choices related to PHE must be seen in the context of their livelihood and food security.

   Basic economic needs have to be met to maximize the impact of the interventions in PHE. As the higher diarrheal disease prevalence and unchanged high levels of child malnutrition have shown, factors other than program interventions seem to play a major role in health outcomes. Based on the asset index included in the household surveys and field observations, the majority of households in the program area live well below the poverty line. Three in four households do not produce enough food to last an entire year, and cash income to supplement harvests is not readily available. Voahary Salama NGOs and other partners (for example, the USAID funded eco-regional conservation and development project) have promoted cottage industry and income generation. Data from two surveys, however, indicated that these activities are still at small scale level, and few families benefited from credits or were provided equipment to improve productivity.

3. The most cost-effective way to reach target populations at scale in ecologically sensitive areas is through local NGOs that have the interest in and capacity to reach these communities.

   Most ecologically sensitive areas are in remote locations and often NGOs are the only actors willing and interested in working in these areas, as is the case in Madagascar. Few governments have the capacity and resources to work in remote communities. The total population living along three major environmental corridors is estimated to be 500,000 people, living mostly in about 650 small communities under 1,000 inhabitants each. To date, approximately 25% of this population has been reached through integrated PHE activities that are implemented by nine NGOs.

4. Local NGOs offer a good return on investment

   Except for one NGO all were small local organizations that implemented integrated PHE activities. These NGOs had an annual budget that varied between US $100,000 and $200,000 counting all sources compared to $1-2 million or more available to large donor funded programs. A larger beneficiary population in the same proportion does not necessarily accompany the higher funding. With this modest funding small local NGOs achieved results for some key indicators such as contraceptive prevalence rates that compare favorably to larger donor

investments in relative terms. For example, a 2 to 3 percent increase in CPR compared to 10 percent at funding levels that were lower by a factor of 10 to 20.

5. PHE integration is effective when actors stay focused on small doable actions.

   Although the aim was to limit community-centered and integrated PHE integrations to a few small doable actions, the NGOs addressed a relatively broad range of issues. Were efforts were focused on a few key integrations, often driven by available funding, the NGOs showed consistently better results. For example, family planning resulted in a greater number of women using contraceptives in all areas, but vaccination coverage did not improve as clearly or the indicator did not change as in the case of sanitation.

6. Different mechanisms can successfully implement Integrated PHE

   From the outset, the evaluation of the integrated PHE program in Madagascar had been designed as a natural experiment by comparing three different implementation modes: multidisciplinary teams within one organization (the gold standard); different health and environment teams within the same organization; and field agents from different sector specific organizations—health, agriculture, environment working together. While the two surveys showed clear differences between the three intervention modes, they all produced positive outcomes in some areas although not necessarily the same across all types. Available resources and organizational capacity can explain the differences in achievements.

7. Community-centered PHE fosters participation, especially by women

   In integration communities women seemed to be more engaged in community groups and mobilization efforts, including in groups that are traditionally dominated by men such as farmers' associations. Women's participation increased by 4 percent in integration communities to 33 percent, while it decreased by 5 percent in the non-integration group to 26 percent.

8. Better government services make a difference and NGOs depend on it

   Although higher levels were achieved for most indicators in integration communities, the non-integration group experienced at times substantial increases as well. This was especially true for services provided by government institutions such as health centers, which were often supported by donor projects. Better supplies of contraceptives through public providers, for example, benefited NGOs directly, because they procure contraceptives from government facilities. In other cases such a immunization NGOs may help public providers to increase outreach services. However, integration communities achieved substantially higher levels for two thirds of the key PHE indicators than the non-integration group.

9. The Evaluation Methodology has its weaknesses, but measures "real-life" synergies and is one of a few attempts to use a social science approach to measure the impact of PHE integration

Despite the methodological limitations, important differences between integration and non-integration communities were identified. Because the comparison group included sector specific interventions in health or environment, the greater achievements by integration sites are likely due to synergies attributable to the integration of PHE activities. Due to these methodological limitations the true effectiveness of PHE integration was probably underestimated.

The only other country where integrated PHE integrations are evaluated using a similar quasi-experimental design are the Philippines. The CEMOPLAF project in Ecuador did pre- and post-integration comparisons but did not include a non-integration group.

10. The Anosy region (Type 3.b) was identified as high-need and underserved area

    Communities in the Anosy region performed lower for may key indicators than all other sites, often for both integration and non-integration sites. They also posted the lowest scores for indicators related to poverty such as the wealth index and the availability of soap. Knowledge about basic public health issues such as STDs and access to services seems lowest here as well. In part this may be explained by the absence of major donor funded projects in this area such as USAID that focus on such issues. However, where donors invest heavily, such as the World Bank nutrition project (SECALINE), which aims at reducing malnutrition, they seem to be effective, because it could explain why malnutrition rates seem to be lowest in this region. Given the poor socioeconomic situation in Anosy such a finding would otherwise be unexpected.

11. Successful integration at scale is dependent on the establishment of effective mechanisms for a range of partners to collaborate.

    The experience from the integrated PHE program in Madagascar has shown that NGOs can play a significant role in improving family planning and maternal and child health services and making improvements in agriculture and natural resource management for populations that are inaccessible and underserved. NGO support by donors and their projects in the form of direct funding and technical capacity building has been critical to the success of integrated PHE. As a result of being part of VS, these NGOs have increased their capacity to implement integrated activities and now see themselves as part of a larger effort. Future programs in the health and environment sector should consider expanding the roles of NGOs as a cost-effective way to rapidly cover difficult to reach populations in vast geographic areas with interventions that promise to have a health impact and protect natural resources and remaining ecosystems in the longer run. Bringing together all these partners in a collaborative effort is the only way that an impact at scale is possible.