

Development Sector Adjacency Map



A PLANNING TOOL FOR INTEGRATED DEVELOPMENT

ABOUT THIS TOOL

This tool offers decision-makers strategic considerations for the design and delivery of multi-sector, integrated development solutions.





Children learn to use computerized drawing program at an NGO-run school for children with family members suffering from leprosy in Kolkata, India. | © 2014 Biswjit, Courtesy of Photoshare

→ FHI 360 defines integrated development as, **“An intentional approach that links the design, delivery and evaluation of programs across sectors to produce an amplified, lasting impact on people’s lives.”** Though it can take many forms, effective integration ultimately improves the acceptability, reach, cost, sustainability or impact of development efforts. Yet decision-makers often have difficulty identifying sectors that can be successfully integrated. This planning tool reveals a map of common “adjacencies” — close relationships between sectors that offer promising opportunities for the use of integrated development approaches.



ADJACENCIES IN GLOBAL DEVELOPMENT

Businesses often deploy a strategy for growth using “adjacent markets” by examining other goods or services their customers need or want, and then expanding or diversifying accordingly.

This approach typically succeeds when a business conducts extensive research to understand its customer base, and when it chooses adjacencies that capitalize on the strengths of its core business model. For example, the strategic expansion by the Nike sporting goods company from shoes into adjacent markets for clothing and sports equipment was a critical factor in the company’s emergence as the leader in that industry.

In the context of global development, adjacencies are represented by the “sectors” that lie outside a program’s scope yet are sufficiently related to pose opportunities for selective expansion. Different fields of development can be related by two types of adjacencies. Some adjacent sectors have a “ripple-effect” relationship in which the success or failure of efforts in one distinct sector eventually affects the progress of another. In other instances, the joint delivery of certain services by multiple sectors may amplify a program’s impact, produce cost savings, or

represent the preferred strategy of target populations. Both types of adjacencies offer opportunities for strategic integration and should inform decisions about the funding, design, delivery, and evaluation of development efforts.

The Purpose of this Map

Integrated development seeks to deliberately leverage sector adjacencies by creating holistic approaches that amplify a program’s impact and better meet the complex needs of communities. Because most programs cannot provide everything to everyone, they must conduct strategic analyses to determine whether integration between certain sectors is possible or even desirable. Such decisions can seem complex or overwhelming if one considers all the interrelated factors that determine the quality of life. But rather than trying to tackle a challenge from every possible angle, smart integration identifies the

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most promising adjacencies in a given situation and uses those as a starting point.

This map offers:

- Insights about common adjacency relationships between core development sectors
- Strategic considerations to leverage the adjacency relationships through action

The adjacencies described in this map are common, but not universal, so the recommendations are neither prescriptive nor exhaustive. The map should be considered a catalyst for an exploration of adjacencies in specific contexts, and making related decisions about how they can be applied through integrated development approaches.

How the Adjacencies were Identified

No single analysis was available to succinctly define the relationships between development sectors in this particular way. The adjacencies in this map were identified based on data from three sources, triangulated to identify where the linkages between sectors tend to be the strongest, on average:

- A network analysis of the targets in the United Nations' Sustainable Development Goals (UNDESA)

- An evidence review that identified 544 impact evaluations assessing integrated development programs — interventions that combined activities from more than one sector (FHI 360)
- A small survey of development professionals who ranked the proximity of the relationships between the sectors (FHI 360)

SEE PAGES 13–14 FOR THE DATA POINTS DRAWN FROM EACH SOURCE.

Using this Map

The effective use of this map involves two key steps:

- 1 Know your adjacencies:** Identify adjacent sectors that are related to your area of interest. These sectors will represent the best opportunities for using integrated approaches to reach your goal.
- 2 Act on the adjacencies:** Determine how to leverage those adjacencies and create a plan of action.

A cross-cutting principle that should be considered in both steps is the utilization of participatory methods that foster the meaningful engagement of stakeholders across all levels of influence. In particular, be sure to draw on the knowledge of the people the programs are intended to serve and ensure their ongoing participation. This human-centered



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approach requires collaborations with individuals, families, communities, and leaders who can offer their perspectives on the connections between sectors, the most pressing needs in those sectors, and the ideas or solutions that may have the most impact. This approach should be standard practice to acquire an understanding of any development challenge — to reveal its causes, influences, and possible solutions. Yet it becomes even more critical in the specific context of integrated development. It has the potential to reveal sector adjacencies that were not evident to policymakers, funders, program planners, or researchers. Communities and underserved populations may also be less likely to offer narrow recommendations and more likely to provide ideas for approaches that are more holistic and comprehensive in their design.

POTENTIAL USES OF THIS MAP



Funders — Develop calls for proposals and make investment decisions that consider promising, but underutilized, multi-sector strategies to reach a goal



Policymakers — Identify specific combinations of sectors that may be the most conducive for the development and implementation of multi-sector policies



Program implementers or researchers — In new project design or revisions to existing efforts, identify and engage sectors outside of your specialty to solve problems and explore collaborations for the planning, design, and delivery of multi-sector programs

STEP ONE

KNOW YOUR ADJACENCIES

The adjacencies displayed in this tool are only a starting point for a broader analysis that should also consider the local context. Are you aware of other sector adjacencies that may be suitable for your situation? Which adjacencies on the list may not be suitable for your setting?

In this step it is crucial to blend data-driven identification of related sectors with qualitative, participatory approaches. In some instances, adjacencies are hard to find through data alone and may become evident only through consultations with local populations, who can help point out how their challenges are interrelated or multi-faceted. In other scenarios, adjacency relationships may become clear only through a rigorous analysis of the underlying associations between sectors. For example, research increasingly demonstrates that sanitation and hygiene often affect the proper nourishment of a child. As it happens, pathogens in human and animal feces can inhibit the body's absorption of key nutrients, so children who live in unsanitary conditions can be malnourished even though they receive adequate amounts of nutritious foods. As a result, nutrition interventions that focus only on food can fall short of their goals. This type of adjacency was revealed through biological

assessments and was unlikely to have been revealed through consultative approaches.

To implement Step One consider employing a root-cause analysis, a method that can help to identify sector adjacencies by combining both data and participatory approaches in the same exercise. A root-cause analysis can ascertain the multiple dimensions of a single problem and, in turn, all the development sectors that may need to be considered in the creation of a solution. [The 5 Whys](#) and the [Fishbone Diagram](#) are two common ways to conduct a root-cause analysis.

STEP TWO

ACT ON THE ADJACENCIES

Integration takes place at different levels, including funding, policy, and programs. The integration of funding may involve pooled financing or joint investment to combine “siloes” funding sources to address a common goal or objective. For example, a country's ministry of finance may require the ministries of health and education to jointly fund a series of initiatives to decrease malaria among primary school children. The integration of policy may also take different forms. In some instances, one sector may incorporate elements from another sector into its primary policy guidance. For example, a government's HIV/AIDS department

may include considerations for family planning in its national HIV policy. In other instances, policymakers from two or more sectors may collaborate to develop a unified multi-sector policy statement. So various ministries (health, environment, transportation, and agriculture) would jointly develop one harmonized policy for climate change adaptation. The integration of programs generally refers to operationalizing sector linkages through service delivery. The adjacency map is especially useful at the program level.

As in Step One, data-driven and participatory approaches should be combined in Step Two to leverage the adjacencies through direct action. The former is important for finding evidence-based best practices, and the latter for managing multi-sector planning and implementation.

First, consider which common types of integration will best fit your scenario, with regard to the local context, your goals, the number of adjacencies being leveraged, and the capacity of relevant stakeholders.

Next, decision-makers should identify existing evidence that corresponds to their specific combination of adjacencies (e.g., health and education, or agriculture and conservation, etc). Evidence showing which models are the most effective can then be used as a starting point to facilitate

multi-sector collaboration with key stakeholders, to plan the joint design, delivery, and evaluation of an integrated effort. Be sure to engage policymakers, technical experts (in all adjacent sectors), funders, researchers, and local communities in this process.

Putting the adjacencies into action can be facilitated by tools that foster multi-disciplinary collaboration, such as the [System-wide Collaborative Action for Livelihoods and Environment \(SCALE+\)](#) methodology. SCALE+ is a systems methodology to accelerate broad stakeholder engagement in sustained collaborative action to address a complex development issue. Designed by USAID and AED¹, SCALE+ originated in 2004 as a tool for integrating work on livelihoods and the environment, but it has since been effective in other cross-sector initiatives for health, education, nutrition, and governance. Successfully applied in more than 15 countries, SCALE+ uses a locally driven approach that ensures the meaningful participation of groups that are often excluded, such as youth, women, and the poor. SCALE+ can identify policy actions that complement rather than duplicate existing efforts; boost cross-sector buy-in and accountability measures; ensure that integrated approaches resonate with and correspond to local realities; and increase the likelihood that support for cross-sector programs will be institutionalized and sustained.

1. In July 2011, FHI acquired the programs, expertise and assets of AED and became FHI 360.

Common types of integration²

Different types of integration are not mutually exclusive, and can be deployed alone or simultaneously in combination with others.

For example, a single national program aimed at linking WASH and health may cross-train mid-level managers and planners from each sector, while ensuring that at the community level the key services are co-located.



COMPLETE INTEGRATION

A program's staff members receive substantial high-quality training and skills-building in topics outside their sector of expertise. People are then served with multiple services by the same provider.

- **Example:** A program committed to advancing youth-friendly development builds the capacity of its staff to offer integrated, holistic support for young people by covering their needs in health, life skills, education, and workforce development.

CO-LOCATION

This is the simplest way to bring sectors together. By intentionally targeting the same community with programming from multiple sectors, we are more likely to see benefits from the complementarities between them. The two programs, however, are not necessarily coordinated and there may not be overlap between all of the program participants.

- **Example:** A nutrition program learns of the importance of sanitation for the absorption of micronutrients by children, so it uses spatial mapping to deliver its nutrition interventions to the same districts that benefit from a new WASH campaign being delivered by the government.



COORDINATION

This approach involves the joint planning of different programs to harmonize interventions across sectors, but keeps the implementation separate. This strategy is often used by an organization that plans its interventions centrally, but employs experts from separate sectors to implement the interventions independently.

- **Example:** Local health and education specialists recognize the link between good nutrition and cognitive performance. They discuss together what each can do to improve the situation. The education program adds nutritional status to the list of possible reasons for a student's poor performance and identifies under-nourished students. The students' families are then referred to local health units for support and services.



CROSS TRAINING

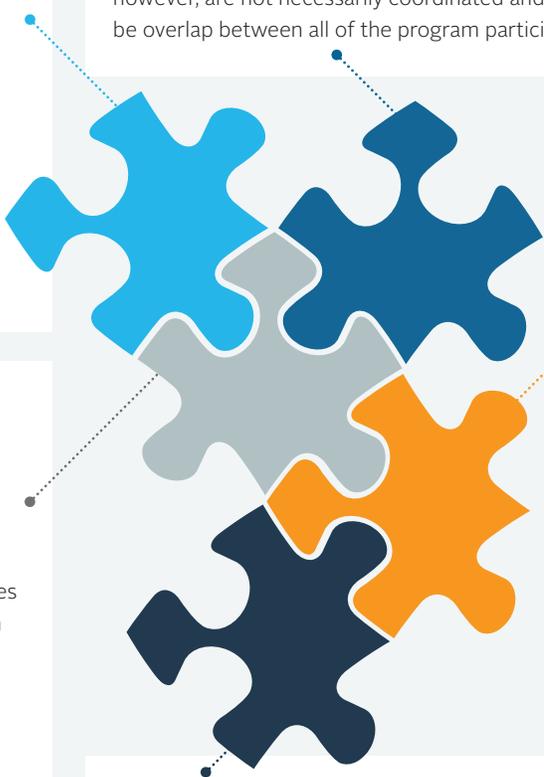
A program's staff receive basic orientation to and training in the additional sector/s so they can reinforce complementary messages and offer multi-sector information when they conduct their regular sectoral work in a community.

- **Example:** A marine-conservation program recognizes that high rates of unintended pregnancies and large families can increase the over-fishing of vulnerable stocks. They train their current environmental workers to provide information, referrals, and some basic family planning methods to their remote communities who are underserved by health services.

COLLABORATION

In addition to joint planning, this approach also includes instances when the implementation of activities is carried out together (but the services are still delivered by sector-specific staff.

- **Example:** A large agricultural company has committed to improving the health (and subsequent productivity) of its workers. The company already arranges for monthly on-site visits to farmers' homes by agricultural trainers, so it collaborates with the district health office to establish a program where local health care workers also join the monthly home visits, to offer health screenings, basic services, and referrals.



² Adapted from: Nutrition-Sensitive Agricultural Programming Online Training Course, Module 4, Part 4.



DEVELOPMENT SECTOR ADJACENCY MAP

ADJACENCIES

In the map, the *Adjacencies* are displayed by showing which other sectors are most commonly associated with one particular sector. Note that the definition of a development sector may vary

widely among global bodies and implementing organizations. For example, some organizations may bundle certain fields (e.g., health and nutrition) into a single sector, whereas others maintain these fields as distinct sectors. This map uses the following core sectors of development:³



AGRICULTURE AND FOOD SECURITY

(e.g., farming, food markets and supply chains, famine prevention, rainfall insurance)



ECONOMIC DEVELOPMENT

(e.g., livelihoods, cash transfers, microfinance, vocational training)



EDUCATION

(e.g., early education, primary/secondary/tertiary school)



ENVIRONMENT

(e.g., climate change, environmental management and conservation)



GOVERNANCE

(e.g., capacity building, peace building, conflict management, election monitoring, democracy)



HEALTH

(e.g., maternal, child and reproductive health, infectious disease, non-communicable disease, immunization/vaccination)



NUTRITION

(e.g., micronutrients, food fortification, malnutrition, feeding programs, diet diversification)



WATER, SANITATION AND HYGIENE

(e.g., water quality, management, supply; hygiene promotion and support; improved sanitation facilities)

3. The sub-sectors are illustrative only; they are not strictly exclusive or exhaustive categories.

Notably, for the purpose of this tool cross-cutting topics such as gender, youth, civil society, and technology are considered essential aspects of and relevant to program interventions in each sector, rather than separate sectors in and of themselves.

INSPIRATIONS FOR ACTION

In real-world settings, adjacencies between one or more development sectors are leveraged through a virtually infinite number of program models and approaches. No “one size” fits all settings. In light of this fact, the *Inspiration for Action* section of the map lists program models, evidence, and resources that should be considered merely as helpful examples for the corresponding adjacencies.



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| ADJACENCY | | INSPIRATION FOR ACTION | | |
|------------------------------------|------------------|---|---|--|
| CORE SECTOR | ADJACENT SECTORS | ILLUSTRATIVE TYPES OF INTEGRATION | SELECT IMPACT EVALUATIONS OF INTEGRATION | EXAMPLE TOOL OR RESOURCE FROM FHI 360 |
| AGRICULTURE AND FOOD SECURITY | | <ul style="list-style-type: none"> • Crop diversification for improving income generation and household nutrition • Bundling health insurance schemes to include rainfall insurance for farming households | <p>Kleemann, L., & Abdulai, A. (2012). Organic certification, agro-ecological practices and return on investment: Farm level evidence from Ghana: Kiel Working Paper.</p> <p>Fink, G., & Masiye, F. (2012). Assessing the impact of scaling-up bednet coverage through agricultural loan programmes: evidence from a cluster randomised controlled trial in Katete, Zambia. <i>Trans R Soc Trop Med Hyg</i>, 106(11), 660-667. doi: 10.1016/j.trstmh.2012.07.013</p> | <p>Nutrition-Sensitive Agricultural Programming: An Online Training Course</p> |
| ECONOMIC DEVELOPMENT & LIVELIHOODS | | <ul style="list-style-type: none"> • Economic strengthening programs that target households experiencing health-related vulnerabilities • Conditional cash transfers that link income support to health and education services • Market access improvements for small-scale farmers | <p>Kim, J., Ferrari, G., Abramsky, T., Watts, C., Hargreaves, J., Morison, L., Phetla, G., Porter, J., & Pronyk, P. (2009). Assessing the incremental effects of combining economic and health interventions: the IMAGE study in South Africa. <i>Bull World Health Organ</i>, 87(11), 824-832.</p> <p>Bandyopadhyay, S., & Tembo, G. (2010). Household consumption and natural resource management around national parks in Zambia. <i>Journal of Natural Resources Policy Research</i>, 2(1), 39-55.</p> <p>Desai, J., & Tarozzi, A. (2011). Microcredit, family planning programs, and contraceptive behavior: evidence from a field experiment in Ethiopia. <i>Demography</i>, 48(2), 749-782.</p> | <p>Optimizing Sustainability of Referral Networks</p> |
| EDUCATION | | <ul style="list-style-type: none"> • Establishing bridges to employment for vulnerable youth served by education programs • Retaining girls in secondary school through sex education and pregnancy prevention • Decreasing malnutrition to improve school participation and performance | <p>Akresh, R., De Walque, D., & Kazianga, H. (2013). Cash Transfers and Child Schooling: Evidence from a Randomized Evaluation of the Role of Conditionality. <i>World Bank Policy Research Working Paper</i>, No. 6340.</p> <p>Kazianga, H., De Walque, D., & Alderman, H. (2012). Educational and child labour impacts of two Food-for-Education Schemes: evidence from a randomised trial in Rural Burkina Faso. <i>Journal of African Economies</i>, 21(5), 723-760.</p> <p>Chaya, M. S., Nagendra, H., Selvam, S., Kurpad, A., & Srinivasan, K. (2012). Effect of yoga on cognitive abilities in schoolchildren from a socioeconomically disadvantaged background: a randomized controlled study. <i>J Altern Complement Med</i>, 18(12), 1161-1167.</p> | <p>Review of Development Partner Support for African Union Youth Employment and Education Priorities</p> |

| ADJACENCY | | INSPIRATION FOR ACTION | | |
|-------------|------------------|---|---|---|
| CORE SECTOR | ADJACENT SECTORS | ILLUSTRATIVE TYPES OF INTEGRATION | SELECT IMPACT EVALUATIONS OF INTEGRATION | EXAMPLE TOOL OR RESOURCE FROM FHI 360 |
| ENVIRONMENT | | <ul style="list-style-type: none"> • Marine or land preservation linked with improved access to reproductive health services for local populations • Wildlife conservation and income generation through local employment in eco-tourism • Engagement of farmers for land conservation measures or climate change adaptation | <p>Weldegebriel, Z. B., & Prowse, M. (2013). Climate-Change Adaptation in Ethiopia: To What Extent Does Social Protection Influence Livelihood Diversification? <i>Development Policy Review</i>, 31(s2), o35-o56.</p> <p>Uchida, E., Rozelle, S., & Xu, J. (2009). Conservation payments, liquidity constraints and off-farm labor: impact of the Grain for Green program on rural households in China An Integrated Assessment of China's Ecological Restoration Programs (pp. 131-157): Springer.</p> <p>Arriagada, R. A., Ferraro, P. J., Sills, E. O., Pattanayak, S. K., & Cordero-Sancho, S. (2012). Do payments for environmental services affect forest cover? A farm-level evaluation from Costa Rica. <i>Land Economics</i>, 88(2), 382-399.</p> | <p>G-FISH: Sustainable fishing for resilient communities</p> |
| GOVERNANCE | | <ul style="list-style-type: none"> • Increased birth registration for improved citizen access to key education, health, and employment opportunities • Improved tax collection for school improvement investments | <p>Baez, J. E., Camacho, A., Conover, E., & Zárate, R. D. (2012). Conditional cash transfers, political participation, and voting behavior. <i>World Bank Policy Research Working Paper</i>(6215).</p> | <p>Integrated development through the prism of governance (audio interview)</p> |
| NUTRITION | | <ul style="list-style-type: none"> • Improving micronutrient absorption in children through improved WASH practices • Providing micronutrient biscuits through school feeding programs | <p>Kleiman-Weiner, M., Luo, R., Zhang, L., Shi, Y., Medina, A., & Rozelle, S. (2013). Eggs versus chewable vitamins: Which intervention can increase nutrition and test scores in rural China? <i>China Economic Review</i>, 24, 165-176.</p> <p>Gilgen, D. D., Mascie-Taylor, C. G., & Rosetta, L. L. (2001). Intestinal helminth infections, anaemia and labour productivity of female tea pluckers in Bangladesh. <i>Trop Med Int Health</i>, 6(6), 449-457.</p> | <p>Integrating Water, Sanitation, and Hygiene into Nutrition Programming</p> |

| ADJACENCY | | INSPIRATION FOR ACTION | | |
|-------------|------------------|---|--|--|
| CORE SECTOR | ADJACENT SECTORS | ILLUSTRATIVE TYPES OF INTEGRATION | SELECT IMPACT EVALUATIONS OF INTEGRATION | EXAMPLE TOOL OR RESOURCE FROM FHI 360 |
| HEALTH | | <ul style="list-style-type: none"> Utilizing microfinance groups to offer health education for clients Establishing workplace health programs to improve productivity and well-being Delivering key child health and preventive services through schools | <p>Pronyk, P. M., Kim, J. C., Abramsky, T., Phetla, G., Hargreaves, J. R., Morison, L. A., Watts, C., Busza, J., & Porter, J. D. (2008). A combined microfinance and training intervention can reduce HIV risk behaviour in young female participants. <i>AIDS</i>, 22(13), 1659-1665.</p> <p>Baird, S. J., Garfein, R. S., McIntosh, C. T., & Ozler, B. (2012). Effect of a cash transfer programme for schooling on prevalence of HIV and herpes simplex type 2 in Malawi: a cluster randomised trial. <i>Lancet</i>, 379(9823), 1320-1329.</p> <p>Yekaninejad, M. S., Eshraghian, M. R., Nourijelyani, K., Mohammad, K., Foroushani, A. R., Zayeri, F., Pakpour, A. H., Moscowchi, A., & Tarashi, M. (2012). Effect of a school-based oral health-education program on Iranian children: results from a group randomized trial. <i>Eur J Oral Sci</i>, 120(5), 429-437.</p> | Integrating Family Planning into Other Development Sectors |
| WASH | | <ul style="list-style-type: none"> Provision of menstrual hygiene management and support by teachers Improving school attendance by reducing absenteeism due to hygiene-related illnesses | <p>Talaat, M., Afifi, S., Dueger, E., El-Ashry, N., Marfin, A., Kandeel, A., Mohareb, E., & El-Sayed, N. (2011). Effects of hand hygiene campaigns on incidence of laboratory-confirmed influenza and absenteeism in schoolchildren, Cairo, Egypt. <i>Emerg Infect Dis</i>, 17(4), 619-625.</p> <p>Gebre, T., Ayele, B., Zerihun, M., House, J. I., Stoller, N. E., Zhou, Z., Ray, K. J., Gaynor, B. D., Porco, T. C., Emerson, P. M., Lietman, T. M., & Keenan, J. D. (2011). Latrine promotion for trachoma: assessment of mortality from a cluster-randomized trial in Ethiopia. <i>Am J Trop Med Hyg</i>, 85(3), 518-523.</p> | Menstrual Hygiene Management in Schools: A Toolkit |

SOURCES

No single analysis was available to succinctly define the relationships between development sectors in this particular way. The adjacencies in this map were identified based on data from the following sources, triangulated to identify where the linkages between sectors tend to be the strongest, on average.

Sustainable Development Goal Target Network Analysis*

| CORE** | Agriculture & Food Security (SDG 12) | Economic Development & Livelihoods (SDGs 1,8) | Education (SDG 4) | Environment (SDGs 13, 14, 15) | Governance (SDG 16) | Health (SDG 3) | Nutrition (SDG 2) | WASH (SDG 6) |
|------------------------------|---|---|---|---|--|---|---|---|
| Adjacencies (Closest on top) |  |  |  |  |  |  |  |  |
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*Towards integration at last? The sustainable development goals as a network of targets

**Sustainable development goals 5, 7, 9, 10, 11, and 17 cut across most of the core development sectors so these goals were excluded from the individual sector-based analyses.

Impact Evaluations on Integrated Development Interventions*

| CORE** | Agriculture & Food Security | Economic Development & Livelihoods | Education | Environment | Governance | Health | Nutrition | WASH |
|------------------------------|---|---|---|---|--|---|---|---|
| Adjacencies (Closest on top) |  |  |  |  |  |  |  |  |
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*Publication forthcoming, 2016.

**<http://fhi360integrationevidence.com/site/>

Development Professional Opinion Ranking Survey (n=23)

| CORE** | Agriculture & Food Security | Economic Development & Livelihoods | Education | Environment | Governance | Health | Nutrition | WASH |
|------------------------------|---|---|---|---|--|---|---|---|
| Adjacencies (Closest on top) |  |  |  |  |  |  |  |  |
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Tricia Petruney wrote this document as part of FHI 360's Integrated Development Initiative and with funding support from the FHI Foundation. FHI 360 is a nonprofit human development organization dedicated to improving lives in lasting ways by advancing integrated, locally driven solutions. Our staff includes experts in health, education, nutrition, environment, economic, development, civil society, gender, youth, research, technology, communication and social marketing — creating a unique mix of capabilities to address today's interrelated development challenges. FHI 360 serves more than 70 countries and all U.S. states and territories.

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