The BALANCED Project

PHE Field Implementation: A Simple PHE Resource Guide/Compendium for Practitioners

August 2013

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Cover Photo (top) PHE youth group artwork
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Cover Photo (bottom): Community-based distribution source, Tanzania
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Foreword

This Guide was developed by the Building Actors and Leaders for Advancing Community Excellence in Development (BALANCED) Project with support from the United States Agency for International Development (USAID).

The BALANCED Project is a five-year, multi-million dollar population, health and environment (PHE) technical leadership initiative awarded by the USAID Office of Population and Reproductive Health. The Project, which is implemented by the Coastal Resources Center (CRC) at the University of Rhode (URI) and its partners—PATH Foundation Philippines Inc. (PFPI) and Conservation International (CI)—promotes wider adoption and use of effective PHE approaches worldwide by:

- Enabling local communities to become PHE champions by building their capacity to plan, implement and carry out demand-driven integrated programs in health and conservation. BALANCED builds capacity through peer-to-peer mentoring, south-to-south exchanges, and innovative learning techniques.

- Synthesizing and developing state-of-the art PHE knowledge and communicating that knowledge to key audiences. This includes demonstrating the value of integrated approaches for development that take into consideration the environment and the people who live in it.

- Scaling-up, building on, and fostering the implementation of field-based PHE initiatives in areas of high biodiversity, particularly in East Africa and Asia.

This PHE Field Implementation Guide draws on best practices and approaches used by nongovernmental organizations implementing PHE projects and the BALANCED Project's experience developing, and assisting other organizations to develop PHE projects in Africa and Asia.

Acronyms

AMREF	African Medical Research Foundation
ARI	Acute Respiratory Infection
BALANCED	Building Actors and Leaders for Advancing Community Excellence in Development
BCC	Behavior Change Communication
BINP	Bwindi Impenetrable National Park
BMS	Behavioral Monitoring Survey
BMU	Beach Management Unit
CBD	Community-based Distributor
CBFP	Community-based Family Planning
CBNRM	Community-based Natural Resource Management
CFUG	Community-based Forest User Groups (Nepal)
CHEWs	Community Health Extension Workers (Kenya)
CI	Conservation International
COMACO	Community Markets for Conservation (Zambia)
CRC	Coastal Resources Center
CRM	Coastal Resources Management
CT	Coral Triangle
CTPH	Conservation Through Public Health
CTSP	Coral Triangle Support Partnership
DHS	Demographic and Health Surveys
DMOH	District Ministry of Health
ECO	Ecological Christian Organization
ECSP	Environmental Change and Security Project
EG	Economic Growth
EHP	Environmental Health Project
EWNRA	Ethio-Wetlands Natural Resource Association (Ethiopia)
FGD	Focus Group Discussion
FHI360	formerly Family Health International
FP/RH	Family Planning/Reproductive Health

GBM	Green Belt Movement (Kenya)
GME	Greater Mahale Ecosystem (Tanzania)
GIZ	German Technical Cooperation Agency
GV	Green Volunteer (Kenya)
HEWs	Health Extension Workers
HOPE-LVB	Health of People and Environment – Lake Victoria Basin
HTSP	Healthy Timing and Spacing of Pregnancy
IEC	Information, Education and Communication
IGWG	Interagency Gender Working Group
INTERFAIS	International Food Aid Organization System
IPOPCORM	Integrated Population and Coastal Resource Management
IUCN	International Union for the Conservation of Nature
JGI	Jane Goodall Institute
JSI	John Snow International
KMNR	Kiunga Marine National Reserve (Kenya)
KPC	Knowledge, Practices and Coverage Survey
LVBC	Lake Victoria Basin Commission
LGU	Local Government Unit
LMMA	Locally Managed Marine Area
M&E	Monitoring and evaluation
MICS	Multiple Indicator Cluster Survey
MCH	Maternal and Child Health
MOA	Memorandum of Agreement
MOH	Ministry of Health
MOU	Memorandum of Understanding
MPA	Marine Protected Area
NGO	Nongovernmental Organization
NRM	Natural Resource Management
OEECC	Office of Environment, Energy and Climate Change
OH	Office of Health
PAI	Population Action International

PE	Peer Educator
PEPFAR	President's Emergency Plan for AIDS Relief
PFPI	PATH Foundation Philippines Inc.
PHE	Population-Health-Environment
PHE Ethiopia	Population, Health and Environment Ethiopia Consortium
PPE	Poverty-Population-Environment (Philippines)
PRA	Participatory Rural Appraisal
PRB	Population Reference Bureau
PSI	Population Services International
PSN	Population and Sustainability Network
RH	Reproductive Health
RHU	Rural Health Unit
RIMS	Resource Identification and Management Society (Nepal)
SANAPA	Saadani National Park
STI	Sexually-transmitted Infection
TCMP	Tanzania Coastal Management Partnership
TNC	The Nature Conservancy
TNG	Tree Nursery Groups
UN	United Nations
UNFPA	United Nations Population Fund
UNICEF	United Nations Childrens Fund
URI	University of Rhode Island
USAID	United States Agency for International Development
USG	United States Government
UZIKWASA	Tanzanian Health Organization
VHT	Village Health Team
VHCT	Village Health and Conservation Team
VIP	Verde Island Passage
WASH	Water, Sanitation and Hygiene
WCS	World Conservation Society
WFP	World Food Program

WHO	World Health Organization
WRI	World Resources Institute
WWF	World Wildlife Fund or Worldwide Fund for Nature
WWICS	Woodrow Wilson International Center for Scholars

Glossary

Adaptive Management: Mode of operation in which an intervention (action) is followed by monitoring (learning), with the information then being used in designing and implementing the next intervention (acting again) to steer the system toward a given objective or to modify the objective itself (WRI 2003).

Biological diversity or biodiversity: The variety and variability of living organisms broadly including a wide diversity of plant and animal species, communities, and ecosystems. The Earth's biodiversity consists of genes, species, and ecological processes making up terrestrial, marine, and freshwater ecosystems that both support and result from this diversity (USAID 2005).

Biodiversity hotspot: Regions of the world that harbor a great diversity of endemic species and have been significantly impacted and altered by human activities.

Conceptual framework: A conceptual framework is a diagram that shows the relationships between important elements of a program, including inputs, processes, outputs, outcomes, and impacts (Finn 2007).

Driver: Any natural or human-induced factor that directly or indirectly causes a change in an ecosystem.

Ecosystem: A dynamic complex of plant, animal and microorganism communities and the non-living environment interacting as a functional unit. Humans are an integral part of ecosystems (WRI 2003).

Ecosystem services: Benefits people obtain from ecosystems including the provisioning services such as food and water; regulating services such as regulation of floods, drought, land degradation, and disease; supporting services such as soil formation and nutrient cycling; and cultural services such as recreational, spiritual, religious and other nonmaterial benefits (WRI 2003).

Evaluation: Systematic application of quantitative or qualitative research techniques to determine the appropriateness and effectiveness of the design and implementation of a program. Evaluations determine whether programs are achieving their stated objectives and, ultimately, making a difference.

Focus Group: A group discussion lead by a moderator and topics discussed can be anything from automobiles to software to politics. The goal is to gather participant opinions and feedback in order use the information for a purpose.

Gender: The economic, social, political, and cultural attributes and opportunities associated with being women and men.

Goal: A broad, long-term improvement or change that a program or project intends to make.

Impact evaluation: Set of procedures and methodological approaches that show how much of the observed change in intermediate or final outcomes, or "impact," can be attributed to the program. It requires the application of evaluation designs to estimate the difference in the outcome of interest between having and not having the program (MEASURE YEAR).

Landscape: A mosaic of habitat patches of different sizes, shapes and patterns, whose biological character is the result of action and interaction of natural and human factors (Sanderson *et al*. 2003).

Monitoring: Routinely assessing inputs, activities, and outputs to see if a project is on track towards meeting its goals.

Monitoring plan: A management tool to help define how progress will be measured for the life of the project and helps show to what extent activities are leading to intended results.

Objective: A desired result of a project or program that contributes to the achievement of goals. Objectives should be specific, measurable, attainable, relevant, and time-bound.

Participatory Rural Appraisal: A growing family of participatory approaches and methods that emphasize local knowledge and enable local people to make their own appraisal, analysis, and plans. Participatory rural appraisal uses group animation and exercises to facilitate information sharing, analysis, and action among stakeholders (World Bank 2013).

Strategy: Planned way to approach something such as a problem or idea. A strategy is used to help ensure that something is completed and accurate.

Threats: [to biodiversity] processes and actions that may diminish biological diversity, including conversion of natural habitats, overexploitation of valuable species, introduction of invasive species, and environmental change, such as climate change, desertification and pollution (USAID 2005)

Purpose

The purpose of this Guide is to provide field-based practitioners of Population, Health and Environment (PHE) projects with a comprehensive set of ideas and resources for project implementation, from project design to evaluation. This document includes an overview of the different phases or elements of PHE project design and implementation, including country-specific examples of each topic and illustrating the concept of integration where possible. It also includes brief explanations and links to tools that are considered most useful to PHE practitioners in different stages of PHE project design and implementation. In the interest of brevity, the authors chose to limit the number of topics the Guide addresses. We acknowledge there are many other important elements of successful PHE projects, including livelihoods and women and girls' education, which are not covered here. Due to space constraints, we encourage readers interested in these topics to refer to publications, resources, guides and tools produced by our PHE colleagues and available on the United States Agency for International Development (USAID)-supported PHE Toolkit http://www.k4health.org/toolkits/phe.

The target audience for this Guide is project designers and program managers at health, development and environmental organizations and agencies (public and private sector) based in developing countries with high natural population growth rates and high biodiversity, or with threatened natural environmental resources upon which local communities depend. It targets more general audiences than some other PHE manuals. It also includes a wide range of PHE information and resources from the point of project start-up to close-out, in line with the typical project cycle format. The Guide relies heavily on the USAID framework for PHE and the importance of biodiversity conservation. This is due to the significant priority that USAID accords to PHE approaches, in light of the U.S. Foreign Assistance Act of 2002, which directed USAID to use some of its family planning (FP) funds in "areas where population growth threatens biodiversity or endangered species." The Guide is even more specifically aimed at reaching PHE implementers in Sub-Saharan Africa and Asia, where the majority of PHE projects are being implemented at the time of this publication and where unmet need for FP services is high compared to other areas of the world, such as Latin America.

In each chapter, introductory text is followed by a more detailed explanation of the topic and its importance for PHE implementation. Some chapters also include "tips for implementers" that provide key lessons learned from organizations implementing PHE approaches in Africa and Asia. At the back of the Guide are "case studies" or "country examples" that highlight successful approaches. Following the cases is an extensive list of suggested tools and resources that can assist PHE practitioners in implementing the topics covered in the Guide. Lastly, there is a Reference section that provides additional background resources that were used by the authors in writing the Guide and that may also be useful to those implementing PHE.

The Guide is organized in a way that allows PHE field practitioners to use it as a step-by-step “how to” for PHE or to refer to individual chapters as needed.

Part I: Getting Started

What is PHE?

Today, there are more than 1.5 billion people living in the world's ***biodiversity hotspots***, i.e., areas of highly-endangered flora and fauna found nowhere else on earth, that are under intense human pressure (Williams 2011). These people often lack access to basic health services and are vulnerable to economic poverty, given their direct dependence on local natural resources and other "ecosystem services," such as clean water for drinking, purification of air and water, nutrient cycling and soil formation for food production, pollination of plants, climate regulation and flood control.

Population, health and environment (PHE) approaches address the complex connection between humans, their health and their environment. The key objective of these efforts is to improve access to health services, especially family planning and reproductive health (FP/RH) services and information, while simultaneously helping communities manage their natural resources in ways that improve their health and livelihoods and conserve the critical ecosystems upon which they depend.

Within the global PHE community, there are many different definitions of PHE. Five of the most common definitions follow.

> **USAID:** As the primary donor of PHE initiatives since 2002, USAID defines PHE approaches as projects that promote "population, health and environment interventions that are conceptually linked and operationally coordinated at the field level." This means that organizations and partners are not working in silos, or on activities that are unrelated to each other. The USAID definition assumes an underlying relationship among partners and stakeholders across health and environment sectors and implies a close working relationship at the very basic project level.
>
> **Population Action International (PAI):** Within a community or a group of communities, PHE programs combine aspects of natural resource conservation or environmental work with the provision of reproductive health services, always including, but not limited to, family planning (Engelman 1998, Vogel *et al.* 1999).
>
> **World Wildlife Fund (WWF):** In their 2008 manual, *Healthy People, Healthy Ecosystems: A Manual on Integrating Health and Family Planning into Conservation Projects,* WWF defines PHE approaches as "Projects that integrate health and/or family planning and conservation elements, seeking synergistic successes and greater outcomes than if they were implemented in isolation." This approach to development recognizes the interconnectedness between people and their

environment, and supports multi-sectoral collaboration and coordination (Oglethorpe *et al.* 2008).

PHE Consortium Ethiopia: This PHE Consortium developed its own PHE definition "Population, health and environment (PHE) interventions in Ethiopia are a holistic, participatory and proactive development approach whereby issues of environment, health and population are addressed in an integrated manner for improved livelihoods and sustainable well-being of people and ecosystems."

Population Reference Bureau (PRB): "An integrated PHE approach to development recognizes the interconnections between people and their environment and supports cross-sectoral collaboration and coordination."

While there are many definitions of PHE, the common thread is the acknowledgement of direct links and connections among the reproductive health of individuals, both men and women; the health of communities living in remote biodiversity-rich areas; and the health of the natural environment or ecosystems upon which all life depends. The direct health benefits to mothers and infants of having access to FP and health services include: lower rates of maternal and infant illnesses or morbidity and mortality, increased spacing between pregnancies thereby allowing mothers sufficient time to recuperate from childbirth and increased time to spend caring for their infant. Healthier communities are more likely to participate in conservation activities and derive economic benefits from sustainable natural resource practices for food production and livelihoods.

While there is no one PHE definition or approach, practitioners agree on and develop their projects according to certain common principles. In the past, conservation organizations have recognized the need to reach out to communities in areas of high biodiversity, where communities do not have access to dependable FP/RH and other health care services. Organizations implementing FP/RH interventions have, in turn, recognized the need to reach the "last mile" rural populations in biodiversity-rich areas who most often do not have access to government health and FP services.

PHE approaches come in many forms, depending on the implementing organizations and the country or regional context in which they work. Since PHE approaches combine a number of separate but related topics, PHE approaches or initiatives are sometimes not easily communicated in short sound bites. By definition, PHE is multi-dimensional, and the complex nature of its interventions to improve both human health and ecosystem health can be challenging to describe.

At its core, the PHE development approach addresses the complex inter-relationships between population, health, environment and economic dynamics to improve the well-being of people who depend on ecosystems for food, income, and other goods and services. According to recent studies, interlinked PHE activities promote synergies across sectors, creating multiple benefits to project participants and suggesting that the

integrated approach adds value (Pielemeier *et al.* 2007; D'Agnes *et al.* 2010; Kleinau *et al.* 2005).

Brief History of PHE

This Guide focuses on PHE best practices and projects since 2008 when the USAID-supported Building Actors and Leaders for Advancing Community Excellence in Development (BALANCED) Project began promoting and advancing the PHE approach in Africa and Asia. However, it also draws on the rich literature and experiences from conservation, health and development nongovernmental organizations (NGOs) that have worked since the late 1980s to help rural communities increase access to FP and health services, while at the same time helping them to manage their natural resources in order to improve their health and livelihoods (De Souza 2009). Often referred to as the "first generation" of PHE projects, integrated conservation and development projects were promoted in the late 1980s and 1990s as an emerging approach to increase community involvement in conservation. While the results of these projects were mixed, many of the lessons learned that emerged informed the generation of integrated health and conservation projects that were funded from 2000 to the present.

Supported by USAID and the David and Lucille Packard Foundation from 2000-2011, many health and conservation organizations in Madagascar and the Philippines incorporated development initiatives into their work in order to meet the needs of communities immediately adjacent to parks and protected areas. The Packard Foundation-supported Integrated Population and Coastal Resource Management (IPOPCORM) Project aimed to improve the quality of life of fishing-dependent communities while maintaining the integrity of life-sustaining coastal habitats.

The USAID/Madagascar-funded Environmental Health Project (EHP) attempted to demonstrate that PHE approaches offer an effective long-term strategy for alleviating poverty, managing natural resources, improving health, and supporting gender equality (Pielemeier *et al.* 2007; D'Agnes *et al.* 2010; Kleinau *et al.* 2005). For more information on PHE history in Sub-Saharan Africa and Asia, please refer to the PHE Toolkit at http://www.k4health.org/toolkits/phe

What is Integration?

While PHE projects can take many forms and involve diverse health, development and environmental objectives, PHE experts agree that human health is inextricably linked to the natural environment. PHE practitioners believe it makes sense to work across sectors in order to achieve mutual goals. Assessments of PHE projects in Madagascar and the Philippines have shown added benefits of integrating across PHE sectors, such as increasing women's participation in natural or coastal resources management (NRM/CRM) and engaging men in FP/RH and decision making (De Souza 2009, Finn 2007).

Several studies have described the central hypothesis for integrating FP, health, and NRM or conservation activities—i.e., the hypothesis that the synergies produced will make these interventions more effective and sustainable, compared to vertical, sector-specific efforts (D'Agnes *et al.* 2010, Pielemeier *et al.* 2007). In remote rural areas which contain rich and unique arrays of plants and animals (areas of high biodiversity) and often intact ecosystem services, communities report high levels of unmet demand for family planning (Cleland *et al.* 2006, PAI 2011; Population and Sustainability Network 2012). In these settings, PHE interventions appear especially relevant and can meet multi-sectoral needs.

According to the USAID publication, *Integrating Population, Health, and Environment Projects: A Programming Manual*, a major potential advantage of integrated projects for all types of organizations is that they offer a strong possibility for generating high impact results and achieving economies of scale (D'Agnes 2007). Integrated projects are not new and conservation and development NGOs have piloted these approaches for more than 30 years in developing countries. Experience with implementation of integration initiatives in countries around the world shows that scale-up and sustainability requires attention to policy and program operations issues.

Integrated PHE project models vary widely but in general fall into several categories, such as parallel, coordinated and integrated, depending on the relationship of the conservation and health partners. PHE experts do not have proof as to which type of integrated model yields greater impacts (De Souza 2009, Oglethorpe *et al*. 2008).

What are some benefits from successful integrated health, development and conservation projects?

PHE practitioners believe integrated conservation and development approaches can achieve the following collective benefits:

- Builds community ownership and buy-in. Given that PHE approaches address root causes of poverty and resource degradation, implementers find that communities embrace and adopt multi-sectoral approaches and these approaches build trust among community partners.

- Saves money. By pooling and leveraging resources, PHE implementers can create economies of scale and merge funds from different streams (De Souza 2009, InterAction 2011).

- Builds resilience. Communities with functioning and intact ecosystems are more resilient to environmental shocks and disasters. Healthier people are also known to be resilient as well.

- Creates improved efficiencies in program implementation. For example, organizations can share the costs of transportation and field staff expenses.

- Strengthens local governance — by engaging local officials and providing space for dialogue and collaborative planning and coordination across sectors.

Conceptual Frameworks

According to mounting evidence, biological diversity—the genetic diversity within species, species diversity, and diversity of ecosystems and ecological processes—is threatened and under increasing pressure from human activities. For USAID projects involving biodiversity conservation, threats-based assessment is required prior to implementation of activities. Before starting a PHE project, field implementers also need to consider and understand the threats and pressures on biodiversity resources in a given place and prioritize these in order to address them. Health and FP/RH challenges should also be analyzed in the context of how they inter-relate with ecosystem/environmental threats.

Conceptual frameworks are one way to identify and represent these threats in a diagram or flow chart. This provides projects stakeholders with a visual "roadmap" of how the project will address the threats and achieve a set goal or series of goals.

In order to design the conceptual framework, it is important for project implementers to understand the rationale for integrated projects, the continuum of possible approaches for integrated programming, and the relative advantages and disadvantages of each.

A PHE conceptual framework or model illustrates the situational dynamics (e.g., demographic, social, political, economic, environmental) at play in a selected project site and the causal linkages and assumptions between the factors. Following from the conceptual model, implementers can agree upon the common **goals** for using a PHE approach; establish specific **objectives** and **strategies** to address PHE dynamics in the proposed PHE project site; and create a visual graphic of assumptions about linkages between population, health, and the environment. The 2004 publication "Conventional Wisdom on Causal Linkages among Population Health, and Environment Interventions and Targets" by Stem and Margoluis provides examples of such linkage/results chains.

Basic Steps to Develop a Conceptual Model

Below are basic steps for developing a PHE conceptual model.

- Formulate a diagram or flowchart that graphically depicts the demographic, social, political, economic, and environmental dynamics—and the relationships among these factors—at a local site.

- Identify opportunities to remediate and formulate specific objectives or short-term outcomes from the conceptual model.

- Formulate and use a results-chain methodology to select appropriate strategies and interventions to address root causal factors.

- Describe a range of implementation models.[1]

- Apply an existing PHE tool to select appropriate monitoring and evaluation indicators and devise a simple monitoring plan.

In order to develop an effective conceptual framework for a PHE project, PHE practitioners can utilize a variety of participatory research approaches to determine the local situation in the target area. According to the USAID 2011 "Project Design Guidance" document, there are various tools to conduct participatory problem identification, such as:

- **Fishbone analysis**: a problem analysis tool that looks at causes of problems and related effects—also referred to as a cause-and-effect diagram

- **Problem tree analysis:** all parties involved identify the problem and analyze needs together in order to create ownership of problem-solving

- **Force field analysis:** a framework that looks at factors that influence a situation, including helping factors and hindering factors

- **SWOT or Strengths-Weakness-Opportunity-Threat analysis**: strategic planning method that identifies a problem and evaluates the relative strengths and weaknesses of the situation

All of these methods and secondary data collection can help stakeholders and project planning teams to define the problem clearly and, subsequently, formulate the project's ***purpose*** based on the problem statement. Figure 1 shows how health, development and conservation factors are connected in a food security context and how PHE approaches can help improve reproductive health and biodiversity conservation in Tanzania. Additional information on developing conceptual frameworks can be found in "Designing and Implementing Integrated Approaches for Population, Health and Environment: Workshop for Planners and Managers" (D'Agnes and Slater 2009).

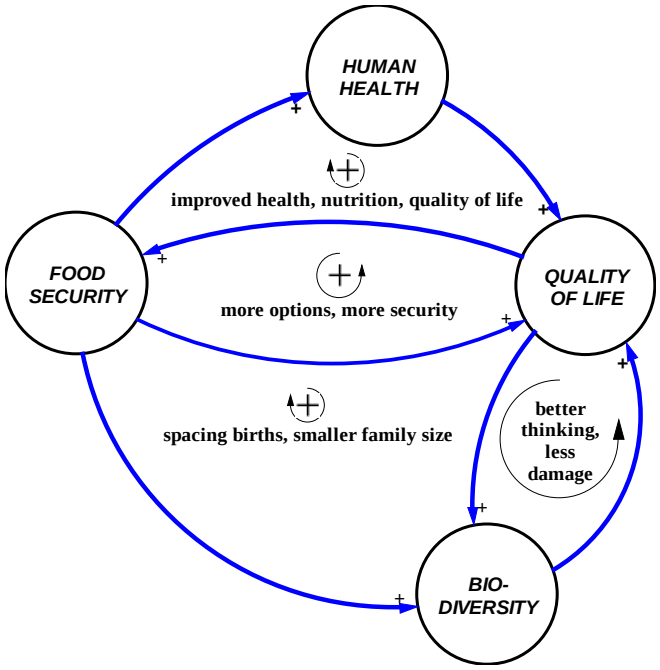


Figure 1: PHE Logic for Food and Livelihood Security

[1] Conservation organizations and health/development partners can work in parallel, coordinate efforts or integrate efforts. See Oglethorpe *et al.* 2008 page 23 for further details.

Examples of PHE Conceptual Frameworks

Pwani Project/Tanzania[2]

In northeastern Tanzania, Saadani National Park (SANAPA) is one of the newest parks in Tanzania. It invites tourists with the slogan, “where the bush meets the beach,” since it is Tanzania’s only national park with a contiguous marine zone. Home to the rare Roosevelt Sable antelope and several endangered species of marine turtles, the park is surrounded by rural villages, where residents put pressure on the park’s natural resources.

Community members are highly dependent on natural resources for their livelihoods and several of the villages are almost totally dependent on a single livelihood—either fishing or farming. Yet, both agriculture and fisheries are suffering from a decline in productivity and profitability. Village men and women and their families are at risk for even greater poverty and food insecurity in the near and long term. For women, there are additional disadvantages. They often have little or no education, and they lack a voice in household and community decision-making and finances because of the social culture and religious beliefs. And, despite having the primary responsibility for rearing children and ensuring sufficient resources to meet family needs, women’s livelihoods are limited and women have little access to monetary income. Further, poor access to modern contraceptives—and the lack of communication between partners about when and how to prevent pregnancies—restricts women’s choices about when to bear children.

In designing interventions in SANAPA, BALANCED Project staff developed a conceptual model (see Figure 2) to illustrate the underlying relationships between community members, livelihoods and the health of the community’s people and natural resources. Building on the underlying threats to conservation and drivers of environmental degradation, Figure 2 also shows the entire package of P, H, and E, interventions that were designed to address the interconnected stressors facing people living around SANAPA.

[2] Adapted from FOCUS Article – in press

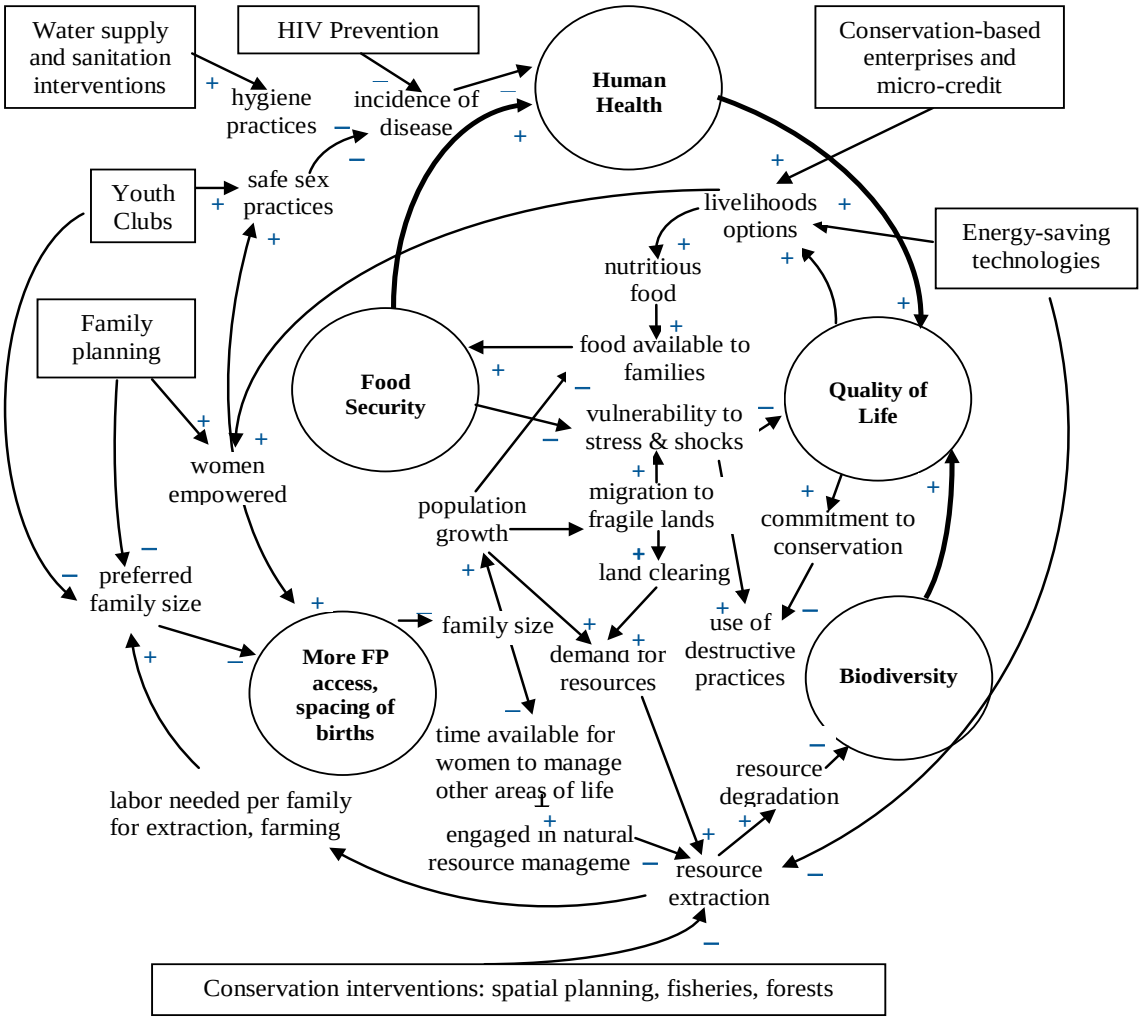
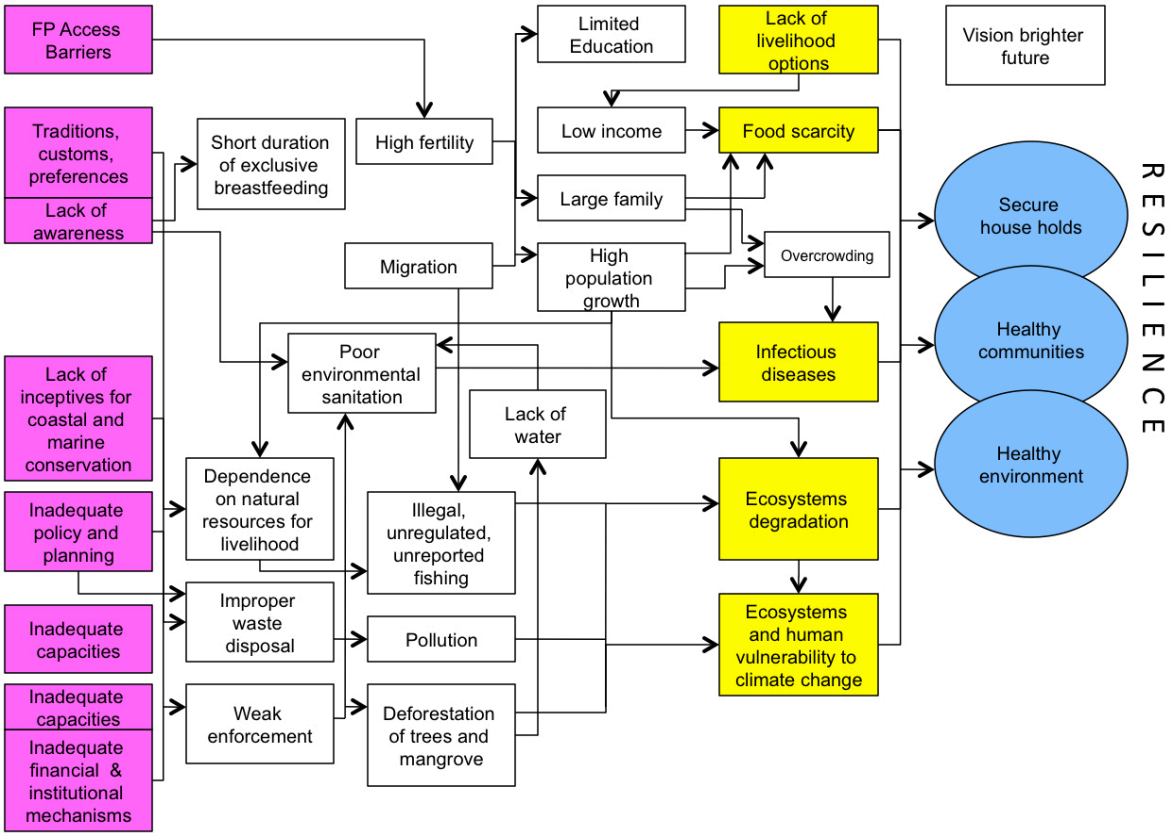


Figure 2: The Pwani Project PHE Framework with Associated Interventions

BALANCED-Philippines PHE Project

With funding support from the USAID/Philippines Office of Health (OH) and Office of Energy, Environment and Climate Change (OEECC), the BALANCED Project carried out PHE field activities in two key marine biodiversity areas in the Visayan and South Sea bioregions of the Philippines. Implemented in partnership with local governments that share jurisdiction over these marine bioregions, PFPI, CI/Philippines and CRC built the leadership and implementation capacities of national and local governments and stakeholders to respond in an integrated manner to interrelated population, health, and marine environmental issues in coastal towns surrounding the Danajon Bank (Visayas) and Verde Island Passage or VIP (Luzon). To better understand the issues and challenges specific to the targeted marine bio-zones, the BALANCED Philippines team developed a conceptual framework (Figure 3) based on the quantitative and qualitative evidence gathered prior to the implementation of the project. The graphic analysis was

used for strategic planning, direction setting and for guiding the design of interventions and communication strategies suitable for both sectoral and cross-sectoral issues.



Legend

Far-right column: "Vision for a Brighter Future" hinges on three co-dependent outcomes (three blue, interlocked circles)—secure households, healthy communities and healthy environment

Yellow boxes: direct threats to the Vision

White boxes: factors contributing to threats with arrows linked to the root causes (far-left)

Arrows: represent assumptions about the interrelationships among the factors

Figure 3: Conceptual Framework for BALANCED-Philippines PHE Project

<u>HOPE-LVB Project/Uganda</u>

The Health of People and Environment in the Lake Victoria Basin (HOPE-LVB) Project led by Pathfinder International and its partners Ecological Christian Organization (ECO) and Conservation Through Public Health (CTPH) in Uganda, and Osienala-Friends of Lake Victoria in Kenya provides underserved families and communities with knowledge and skills to improve their sexual and reproductive health, reduce poverty, and develop more sustainable practices for managing natural resources. Jointly funded by the David and

Lucile Packard Foundation and the John D. and Catherine T. MacArthur Foundation,[3] the primary focus of the HOPE-LVB Project is to support women's access to maternal care and to FP information and services, while simultaneously educating communities about population dynamics, environmental conservation, and livelihood improvement. It also contributes to reducing threats to biodiversity conservation and ecosystem degradation in the Lake Victoria Basin. The HOPE-LVB conceptual framework demonstrates the threats to the environment and community health that project activities seek to change (Figure 4).

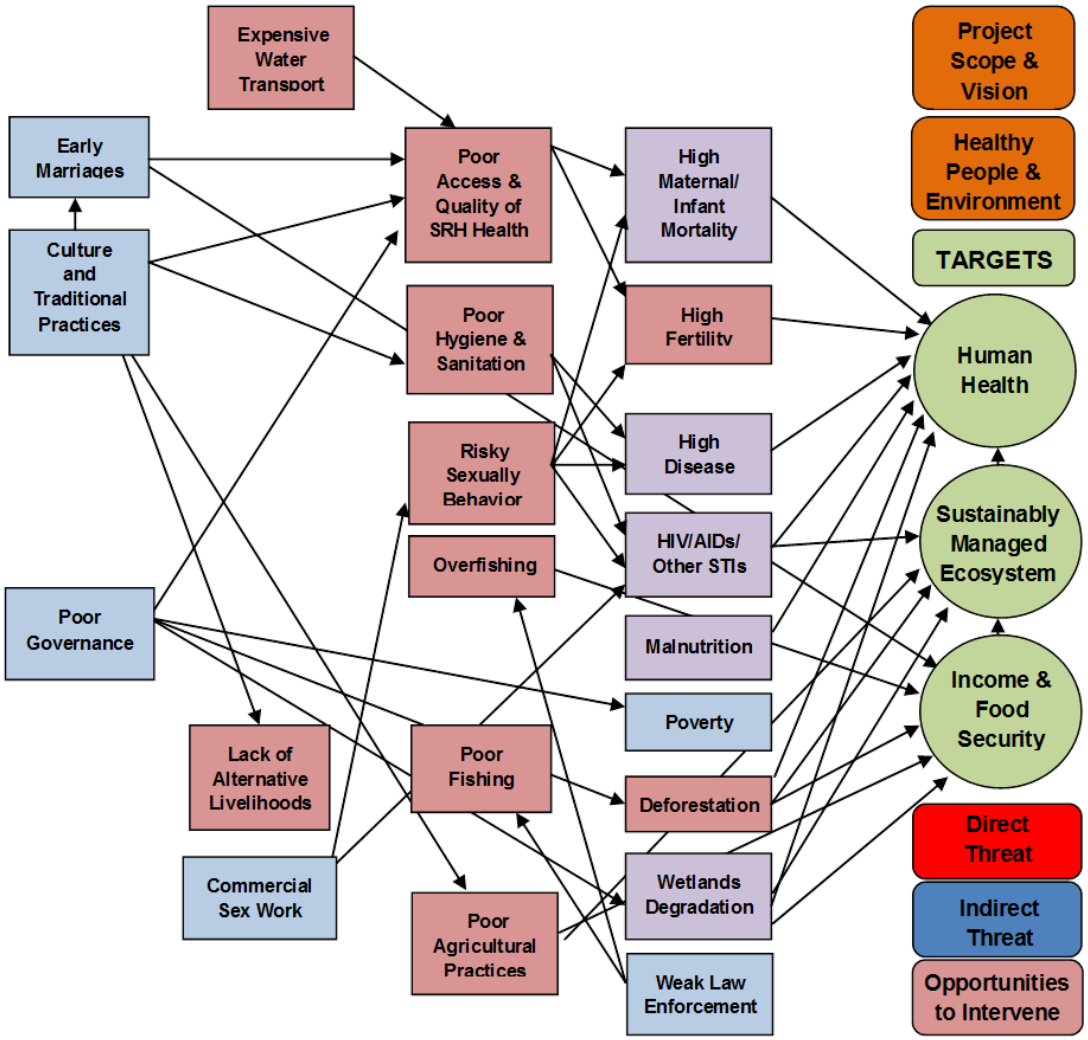


Figure 4: Conceptual Framework for the HOPE-LVB Project

Tuungane Project/Tanzania

In western Tanzania's Greater Mahale Ecosystem (GME), the population growth rate is more than twice the national average. Families living in this area have little choice but to

[3] With additional support from USAID/Washington

expand their settlements into the wild lands. However, this threatens the habitat for nearly all of Tanzania's endangered chimpanzees. Also, runoff from these settlements is clouding the waters of Lake Tanganyika making the lake water unsafe for drinking. It is also causing a decline in the productivity of the fishery, which is the source of 40 percent of food protein for families in this area. Meanwhile, rates of poverty, disease and environmental degradation are increasing. If nothing is done to stop the vicious cycle, this globally unique forest-freshwater ecosystem and the services it provides for people will likely be lost to irreparable damage in just seven to 10 years.

A holistic approach that meshes nature conservation with the health needs of people who depend on the area's natural resources seemed the best way forward. Therefore, in 2011 The Nature Conservancy (TNC) launched a non-traditional collaboration known as Tuungane (Kiswahili for "Let's Unite!"). It drew in as partners Pathfinder International—a global reproductive healthcare organization—and the Frankfurt Zoological Society, with 25 years of experience in advancing land protection and diversifying livelihoods in this area.

The Tuungane project employs a PHE approach—integrating community resource management and sustainable livelihood programs with the health needs of the underserved communities who both depend on and impact GME's natural resources. Tuungane is currently piloting a range of community-based interventions—governance, healthcare, livelihoods, and terrestrial and freshwater conservation—in six GME villages. The project vision is a healthy Mahale where human and natural communities co-exist in balance.

The three partner organizations, with more than 250 years of collective experience—40 in the region itself—are using a holistic approach in the Tuungane project to address the region's challenges. Where people and nature have endured long-standing, systemic problems, such a holistic approach is vital. While each partner has a distinct mission, there is one consistent theme at the heart of their work—i.e., empowering local communities to bring about the change they are seeking. Working together in a synergistic fashion, each partner brings a diverse set of strengths that dramatically increases the chance of success. Knowledge and information reach a wider audience than if the programs were delivered separately. It also increases the opportunities for women to participate in conservation activities, and for men and youth to become more engaged in health and family planning. The partnership also provides economies of scale. The remote location of the GME makes implementation costs expensive, but by sharing equipment and supplies, partners make funding go further. Figure 5 depicts the Tuungane Project's conceptual framework.

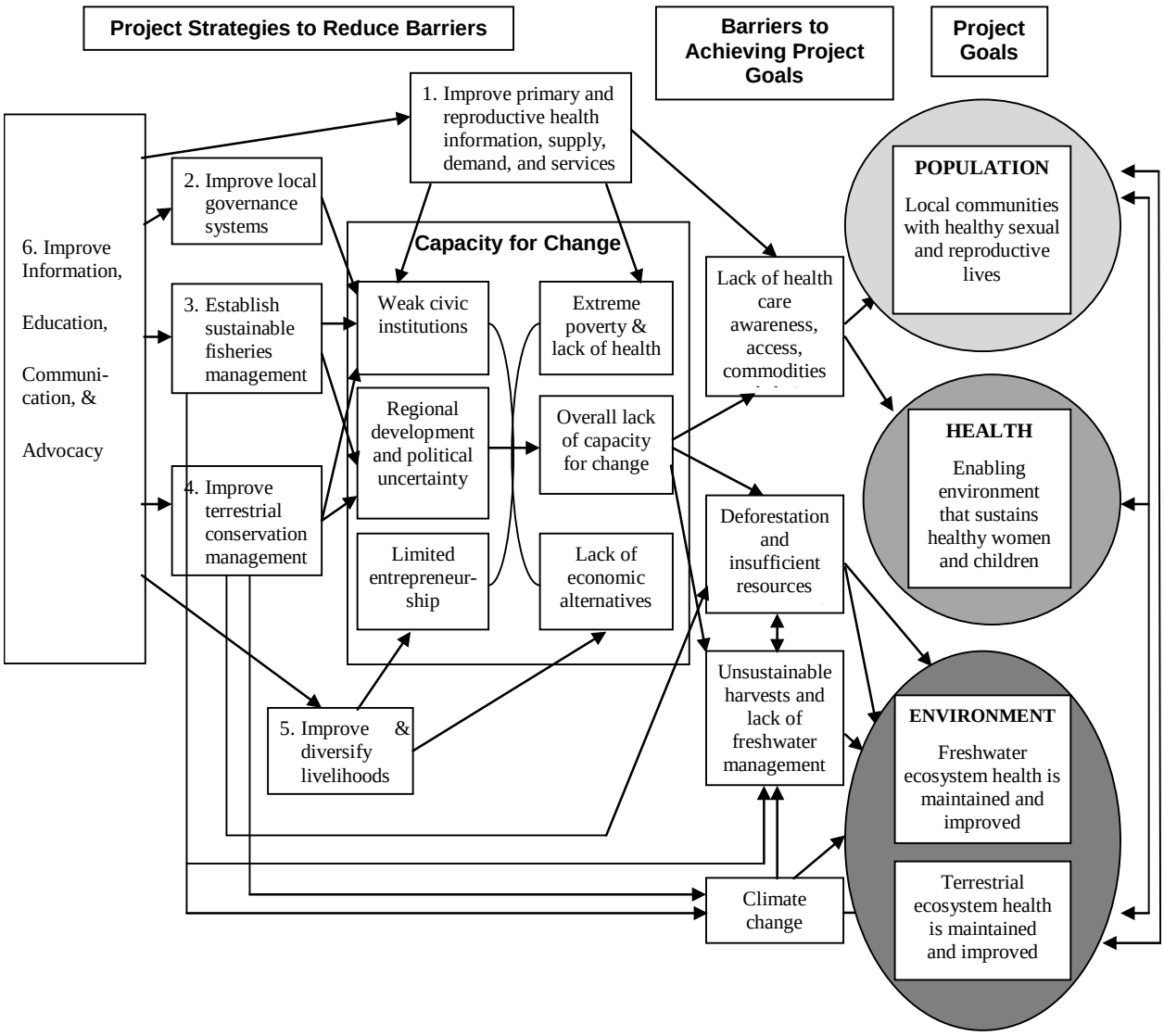


Figure 5: Conceptual Framework for the Tuungane PHE Project in Tanzania

Tips for Implementers

According to Measures of Success (Margoluis and Salafsky 1998), a good conceptual model:

- Presents a picture of the situation at the project site
- Shows implicit linkages between factors affecting the target condition
- Presents only relevant factors
- Is based on sound data and information

- Results from a team effort

Experience from the BALANCED Project revealed that it is important to ground truth (validate) a project's conceptual framework with community members and volunteers who live in the area and the environment that will be the target of a PHE intervention.

Part II. PHE Planning and Design

PHE approaches by definition are multi-sectoral and, therefore, require planning and coordination across diverse partners and actors in the family planning, general health, economic and environmental sectors, among others. For many PHE implementers, the project planning phase is critical in assessing the feasibility of the PHE approach in the identified project sites, engaging the community members and leaders, bringing stakeholders together, identifying the problem, developing participatory activities or exercises to garner community buy-in and articulating a clear plan toward addressing or mitigating the problem.

Steps in Project Planning and Design

In the past, many PHE practitioners in Africa and Asia have utilized a variety of planning tools to craft PHE interventions and projects. In general, most implementers have drawn on the collective experience of health and conservation NGOs to design participatory interventions to threats-based problems. Many PHE implementers use conceptual frameworks like the ones mentioned in the previous chapter to design their projects, from information gathering to intervention planning and monitoring and evaluation (M&E).

The steps in project design are:

- Assessment of the situation and related drivers or factors;
- Participatory discussions with local stakeholders and project partners, with official engagement of local authorities;
- Participatory problem identification and intervention design in order to build local ownership over project goals and objectives;
- Selection of interventions in health, FP/RH and environment (and other domains as relevant) to address the problem in the local cultural context.

In general, project designers should recognize the need to match the design to the capacity and complexity of the site in which the interventions will be implemented. The design should also be tailored to the available budget and the socioeconomic, geographic, political and cultural settings in which the project will be implemented.

Designing with Scale-up in Mind

If a project is considering scale-up, it should build this into the project design from the start. Such a methodology is emerging within the PHE community—i.e., to design projects by "beginning with the end in mind." The HOPE-LVB Project is working with several partners and a World Health Organization (WHO)-supported organization, ExpandNet, to explore such a scale-up strategy.

ExpandNet is an informal global network of health professionals founded in 2003 for the purpose of advancing the science and practice of scaling-up. ExpandNet has developed a framework for scaling-up, as well as a book with case studies and several guidance tools on how to: 1) design pilot projects for sustainable scale-up, 2) develop scaling-up strategies once interventions have been successfully tested, and 3) provide general practical guidance with scaling-up.

ExpandNet is providing technical support to the HOPE-LVB Project to help ensure that the PHE interventions chosen for implementation are appropriate to the settings, are implemented in sustainable ways, and are designed such that they will lend themselves to future scaling-up to surrounding areas and more generally in the participating countries. ExpandNet/WHO is using their tool entitled "*Beginning with the end in mind: Planning pilot projects and other programmatic research for successful scaling-up*" to guide this process.

For more information on ExpandNet, please see the following resources.

ExpandNet, WHO. 2011. "Beginning with the end in mind: planning pilot projects and other programmatic research for successful scaling-up." Geneva, Switzerland, World Health Organization. www.expandnet.net

ExpandNet, WHO. 2010 "*Nine steps for developing a scaling-up strategy.*" Geneva, Switzerland: WHO. www.expandnet.net

ExpandNet, WHO. 2009. "Worksheets for developing a scaling-up strategy." Geneva, Switzerland: WHO. www.expandnet.net

An assessment of the situation will help to determine the related drivers or factors that threaten the health of the community and help to identify opportunities for successful implementation of interventions. Following a participatory assessment, community meetings should be held to agree on a vision for a future and to determine and prioritize community needs. These meetings will form the basis for management policies and galvanize strong community participation. They will also help to set project objectives, identify expected results, design activities with roles and responsibilities assigned to

community actors, and determine how to measure success (see Monitoring and Evaluation section of this publication). According to the USAID publication “Integrating PHE: A Programming Manual” (D’Agnes and Margolius 2007), PHE project proposals and workplans should be reviewed with the following questions in mind and prior to the start of project field activities.

Selecting Interventions and Activities

- Are activities linked on the ground between sectors and in the communities? If activities are single sector, how do implementers plan to integrate them conceptually at the community level? How will the integration be coordinated?
- Are activities linked to their target condition? Has staff been able to ground truth the conceptual model?
- What mechanisms will be used for project implementation? Is there an implementation model? Is it appropriate given the target audience?
- What type of field level intervention will be used? Has it been used under similar conditions before?
- Will the intervention generate value-added impacts?
- What type of information, education and communication (IEC) interventions will be used?
- What type of behavior change communication (BCC) intervention is appropriate for the project area?

When designing PHE interventions, partnerships across diverse organizations are critical to achieving a common set of objectives. To plan effective interventions, PHE partners often begin projects by holding “kick-off” meetings to determine feasible project objectives, identify the project’s year-by-year goals and outputs, and develop indicators to measure progress against project objectives. Building strong and trusted relationships among staff working together and across institutions is essential to successful PHE initiatives.

Tips for Implementers

In the experience of WWF, it is highly recommended that the project design include an early-onset workshop to train project staff from the various partner organizations on all aspects of the PHE approach. This “kick-off” workshop or meeting helps ensure that staff and volunteers with different backgrounds (health, FP/RH, conservation) understand how to integrate the various sectors that comprise the project. It is also an excellent venue to help staff and partners learn how to develop, disseminate and communicate integrated PHE messages to the target audience(s).

For the BALANCED Project in the Philippines, it was important for PFPI and CI, as co-implementers, to engage in joint planning and joint activities in order to develop a common understanding of PHE and project activities and to ensure integration at all levels of the project. Such workshops should include team building activities that foster collaboration and build strong working relationships.

Part III: PHE Project Implementation

The following topics describe the basic program implementation and adaptive management principles followed by most PHE projects. PHE implementers can use the guidance below in a step-by-step manner or use selected sections based on their needs and where they are in the implementation process.

Talking to Stakeholders

Many PHE project implementers have found that the key to the sustainability of project interventions is in having broad-based and consistent stakeholder ownership and buy-in to overall project goals and objectives. All members, or at least a critical mass, of the community need to perceive that they will benefit from the project in some way, even if they will not be a direct participant.

Identifying and defining all stakeholders in the target sites or landscape is the first step in developing a successful PHE project. Stakeholders include community members, and individuals and institutions that will be impacted by the project and whose participation and support are critical to the success of the project (Conservation Measures Partnership 2004). Stakeholders can also include members of the project team, e.g., NGO staff, local authorities, researchers, as well as other individuals and institutions that have a vested interest in the success of the project. It is important at every step to ensure the appropriate stakeholders are involved in an open and transparent manner. To help in securing buy-in from various stakeholders, talk with local authorities to not only introduce the PHE approach, but to understand the authorities' vision and mission for their community and to consider how project objectives could best align with that vision and mission. Depending on the cultural context in a country, there are many ways to elicit buy-in from the other relevant stakeholders at the start of a PHE project, including:

- Participatory rural appraisals, which can help capture local knowledge using group animation and exercises to facilitate information-sharing, analysis and action amongst stakeholders

- Key informant interviews such as discussions with local officials, health officials, environmental officials, and other key decision-makers in the target area

- Focus group discussions with members of the project's primary audience where an interviewer gently explores knowledge, attitudes and practices among target communities—information that might be an important consideration in the project design and implementation

- Community meetings such as regular and formal gatherings of the local decision-making body at which there are established and recognized rules of engagement with and amongst community members

Depending on the scope of activities and funding for PHE initiatives, stakeholders range from community members to local and district-level associations or organizations, policymakers or decision-makers at multiple levels (i.e. local, district, regional); government authorities such as a Ministry of Health (MOH); Ministry of Environment and Agriculture, and/or Ministry of Finance; international or national NGOs; and other actors involved in FP/RH, health and environment.

In each country context, PHE project implementers use existing community systems and structures as well as seek to identify new and innovative approaches to participation. Village meetings tend to be the most widely used method of garnering support and participation of community members and local leaders. However, alone they may be insufficient. Working with local church assemblies, village savings and loan groups, farmer producer groups, etc. are ways to reach more stakeholders and/or increase stakeholder participation. Traditional leaders and recognized authorities are also key stakeholders of a project and their buy-in is essential to the sustainability of project efforts. For example, landowners would be critical stakeholders in a project that included a new land-use plan. Engaging such leaders may require targeted outreach efforts. In addition to trying to reach them only through village meetings, the project may need to encourage their involvement as community-based actors in the project. Finding multiple ways to engage stakeholders is critical as the most disenfranchised or vulnerable community members may not attend village meetings, so finding other innovative ways to engage them is essential.

Tips for Implementers

According to CI (Edmond and Fisher 2005), the Healthy Families, Healthy Forests project led by CI and funded by USAID from 2002 to 2008 generated many lessons learned in stakeholder engagement from PHE projects in Madagascar, Cambodia, and the Philippines. These lessons included:

- Conservation and health professionals working with local communities must be flexible and innovative. Effective stakeholder engagement requires being prepared to deal with changing conditions and plans.

- Personal relationships are a major part of life in small villages, especially remote, rural ones. These relationships are vital to gaining acceptance by and access to a community.

- When engaging community members to participate in a project, one must learn how to listen, observe, and read nonverbal communication clues.

- All members of the community need to perceive that they will benefit from the project in some way, even if they a direct participant in the project.

Community Assessments

Most PHE projects need to demonstrate to their donors or supporters that they will make a positive change in their target audiences' behaviors related to PHE. In order to quantify actual changes, where funding and other resources are available, PHE project implementers will conduct baseline surveys of community members in order to critically assess the current awareness (knowledge and attitudes) and practices of the target group, community leaders, FP service providers and local government leaders as relates to FP, health and environmental issues. The survey generates data that establishes baseline values for the important indicators against which achievements can be measured. An end line survey, using the same questions as the baseline survey with additional questions as needed, is conducted at the conclusion of the project period in order to compare and determine achievement of project objectives (expressed via indicator targets) within the target community.

Where possible, project and survey teams will use a combination of data collection methods for a comprehensive analysis and recommendations for future interventions. A range of methods for data collection include:

- Sample survey via formal, standardized questionnaire (interview)
- Participatory Rapid or Rural Appraisal (PRA)
- Focus group discussion (FGD)
- Review and secondary analysis of available demographic/health/environment data

A significant gap in the PHE community has been the lack of baseline survey tools shared among partners and collaborating agencies. This could be due to the lack of knowledge among implementers on the availability of such tools; the short duration of projects, which does not allow sufficient time for implementers to get to know or learn from other organizations; a lack of funding to conduct baseline surveys; and various other factors. In fact, there are very few publically-available baseline survey instruments, such as survey tools and questionnaires. Often, NGOs implementing PHE activities will develop their own community-based survey. They do this by drawing on what they find in a review of methods commonly used in the development community; or, they may do this by adapting a single tool, such as the Basic Necessities Survey, the Coping Strategies Index, or the Protected Areas Benefits Assessment Tool; or they may tap a resource that includes any number of tools they might adapt singularly or in some combination (e.g., the Participatory Impact Assessment, or the Household Livelihood Security Assessment). These tools provide useful guidance on how to think through the steps of undertaking an impact assessment and they provide clear instructions on how to implement the individual tools.

Some tools and resources for community-based surveys useful for the PHE community include modules drawn from:

The Demographic and Health Surveys (DHS). This USAID-supported program has collected, analyzed, and disseminated accurate and representative data on population, health, HIV, and nutrition through more than 300 surveys in over 90 countries. http://www.measuredhs.com/

KPC Rapid Catch. The Knowledge Practices and Coverage Survey (KPC) Rapid Catch Tool. The KPC is a small population-based survey that has been used by Child Survival and Health Grants Program grantees for baseline and final surveys. Indicators from this tool can be used to estimate the number of lives saved, thus providing an estimate of impact. The KPC tool consists of three parts: KPC modules; Rapid CATCH; and key indicators. http://www.mchipngo.net/controllers/link.cfc?method=tools_mande

USAID-funded Food and Nutrition Technical Assistance (FANTA) Project. This series of technical guides was produced for NGOs to help them in developing monitoring and evaluation systems for use in Title II food aid programs. The Guides are intended to provide the technical basis for the indicators and offer recommended methods for collecting, analyzing and reporting on the indicators for food aid nutrition projects. http://www.fantaproject.org/publications/home_title2indGuides.shtml

World Food Programme (WFP). This UN Agency website has links to all annual WFP in Statistics documents since 1995, Global Food Aid Statistics published by the International Food Aid Organization System (INTERFAIS), and statistics on WFP procurement activities. http://www.wfp.org/food-security

USAID-supported Community-based Family Planning Toolkit. The Knowledge for Health (K4Health) website was established by the Johns Hopkins Bloomberg School of Public Health's Center for Communication Programs. It contains several toolkits for project managers and health care providers to access useful resources. The Community-based Family Planning Toolkit (http://www.k4health.org/toolkits/communitybasedfp) contains a collection of carefully selected resources for health policy-makers, program managers, service providers and others on community-based family planning, including guidance on how to write an implementation plan, a list of core indicators to monitor and evaluate the projects and a population-based survey questionnaire and tabulation plan.

Multiple Indicator Cluster Surveys (MICS3). This UNICEF-supported Childinfo website contains UNICEF's statistical information, including data used in UNICEF's flagship publications, The State of the World's Children and Progress for Children. There are technical resources for conducting UNICEF-supported MICS surveys, which are a major source of global development data. http://www.childinfo.org/index.html

The above-mentioned survey tools are designed to capture data relating to Maternal and Child Health (MCH), FP/RH, HIV/AIDS, gender, livelihoods, or cross-sectoral PHE issues.

Behavior Monitoring Survey (BMS)

This survey tool is well tested and has proven itself a reliable instrument for use in community surveying. Following is the history of the tool's development and examples of how BALANCED and its partners, CRC and PFPI, have used it in the field.

PFPI first developed the BMS instrument to use in its early health and PHE projects in the Philippines. In 2009, BALANCED adapted that instrument and used it during the course of the project to collect baseline and end-of-project information on population, health and environment behaviors of community members living in PHE project sites in the Philippines and in Tanzania. The survey results in both countries describe the population, health and conservation factors existing in these sites and changes in thinking and behavior on P, H, and E issues (stand-alone and linked issues) during the life-of-the-project—with the assumption that those changes have been somewhat influenced by the project interventions intended to promote those same changes. Such information helps inform program managers as they design interventions to address or mitigate the P, H, and E problems facing a project site(s).

In Tanzania, CRC not only adapted the Philippines version of the BMS questionnaire, but translated it into the local Kiswahili language. CRC and BALANCED Project staff pre-tested the survey questionnaire and procedures and used the experience and information gathered to finalize the questionnaire and make necessary adjustments to the survey. Qualified female and male enumerators were hired and trained to conduct the survey. Since the survey tool consisted of many variables, CRC constructed a data entry system using a software program (CSPro 4.0) to provide a tool for easier data encoding.

Working closely with government officials at all levels proved critical to successfully implementing the BMS. The endorsement of decision-makers and leaders and the coordination of activities with local officials are absolutely necessary and their involvement in the planning of the survey intervention is both helpful and advantageous. The methodology used in conducting the BMS was found to be socially acceptable, scientifically sound, practical to use and easily replicable. Enumerators learned and implemented the technology with ease, and there was no gender issue among and between enumerators and respondents (i.e., between male enumerators asking questions of female community members, or vice versa). The primary difficulty in conducting the survey was the long distances between individual houses in the villages.

When conducting baseline surveys and gathering data, many field implementers understand and take into account the different roles of adults (men and women) and youth in conservation and development activities at all scales. Similarly, it is essential to recognize the role that gender may play in achieving long-term goals and objectives (gender refers to the economic, social, political, and cultural attributes and opportunities associated with being a female or a male). For example, men and women may play different roles in climate change mitigation and adaptation, and in freshwater conservation and food security. Understanding these roles and how to maximize the opportunities and

minimize or eliminate the challenges that may come with those different roles, is important to embarking on sustainable approaches to protecting ecosystem services and improving human well-being. For these reasons and more, it is important to conduct gender analyses as part of any broader community assessment and when designing interventions and monitoring frameworks.

Health Services

What are common health service interventions in PHE projects?

Communities living in remote areas of high biodiversity usually have limited access to health information and services. Many common but highly preventable health problems in these areas include diarrhea, malaria, childhood diseases (e.g., measles), malnutrition, and sexually transmitted infections (STIs) including HIV and AIDS. According to the United Nations Children's Fund (UNICEF) Facts for Life book, nearly nine million children around the world died in 2008 from preventable illnesses before reaching the age of five. It is possible to save lives and greatly reduce human suffering by expanding low-cost prevention, treatment and protection measures to the resource-poor settings where PHE interventions are implemented. The challenge is to ensure prevention and treatment knowledge is shared with parents, caregivers and communities—i.e., those who are the first line of defense in protecting children from illness and harm—and to provide support to address socio-cultural, behavioral, political and resource barriers to being able to act on this knowledge.

Many communities in remote biodiversity areas prioritize child health and survival. These health concerns are of paramount concern to community members, since morbidity from illness can cause significant delays in childhood development and have negative impacts on the health of family members. Chronic illness such as diarrhea, acute respiratory infections and other common conditions reduce the productivity and health of communities in remote, low resource settings.

According to international public health experts, there are many "small, doable actions" that can be performed in an integrated PHE setting that will have a significant impact on community health. To name just a few, these include simple hand washing, use of latrines, full immunization of children, having pregnant women attend pre- and post-natal health services, and the use of bed nets to protect against malaria. Using basic behavior change communication and community health education in these resource-poor settings can help to raise awareness of community members of the need for health prevention and how "small actions" can lead to significant community and public health gains.

Participatory health interventions should involve community leaders (teachers, mayors, faith leaders, etc.), women, health providers and school children as behavior change agents and messengers of good health practices. In many PHE projects, PHE implementers draw on resources from international health NGOs such as FHI360, Pathfinder International, Population Services International (PSI), the African Medical and Research Foundation (AMREF), John Snow International (JSI), I-TECH, etc. Local implementers can take these NGOs' tools and methodologies on community-based distribution systems, peer education, FP/RH, adolescent and youth sexual and reproductive health, community theater and radio programming, and health worker trainings and adapt them to the PHE context, in addition to the tools available on the PHE

Toolkit. These resources are valuable because they are already pre-tested, vetted and being used in-country. On a final note, it is vital to plan with local government health authorities to ensure that a project's PHE activities are not re-inventing already proven health strategies or creating parallel systems.

Tips for Implementers

The JGI works in western Tanzania conducting NRM and economic growth (EG) activities supported by funding from a wrap-around program between the President's Emergency Plan for AIDS Relief (PEPFAR)-supported health team and the NRM/EG sector of USAID/Tanzania. JGI's work in the Kigoma District provides an example of successful of using wrap-around funding to facilitate the mainstreaming of HIV/AIDS prevention and broader health interventions into NRM/EG activities. JGI designed a community-centered model of conservation that addressed the socioeconomic development priorities of the local people including health, education, safe water, and access to capital. Key lessons drawn from this JGI work in western Tanzania include the following.

- Mainstream information on and consideration of HIV into staff's daily work. This requires that staff be well-educated about HIV infection and understand its impact on the communities they serve. Different ways to mainstream include but are not limited to holding training on HIV and its impacts during staff meetings; and/or providing support to staff members and their families affected by HIV. Such actions help foster a sense of well-being in staff that will extend to their work in communities.

- Maintain effective communication between recipient and donors. PEPFAR wraparound funds link HIV programs with other non-health sectors that may not have strong technical knowledge of HIV; similarly, HIV program staff may lack an understanding of NRM/EG.

- Coordinate provision of technical assistance to support mainstreaming. As mentioned previously, mainstreaming HIV into NRM/EG activities is difficult when an organization lacks significant experience with HIV. A more effective approach is to contact organizations that do specialize in HIV, such as AIDSTAR-One, to inquire if they provide targeted technical assistance on how to effectively mainstream HIV into NRM/EG annual work plans, implementation plans, and budgets.

- Mainstream broader health issues into NRM/CRM interventions. Mainstreaming should extend beyond HIV to broader health issues, such as maternal and child health, water and sanitation, malaria, and nutrition. The benefits of such an approach include more than only the mitigation of HIV stigma. It can also result in improved cost-effectiveness, and better attention to the overall health needs of the larger community and not just the relatively small number of households affected by HIV.

Family Planning and Reproductive Health Services

FP/RH Services in PHE

According to the United Nations (UN), the world's population is more than 7 billion today and is expected to reach between 7.6 to 8.3 billion by 2025 (PAI 2012). Population growth is often higher in areas of high-biodiversity and conservation "hotspots." According to recent research, living in these conservation "hotspots" are almost 1.5 billion people (21 percent of the global population)—an increase of more than 400 million people over the past decade (Williams 2011). Sub-Saharan African hotspots have the highest growth rates with some growing as quickly as 2.5 percent annually.

In general, women in the least developed countries have 4.4 children and in Sub-Saharan Africa women have on average 5.2 children (PRB). In addition to the significant unmet need for contraception and the negative effects of high fertility on the health of women and their children, this sustained growth in population is among the factors that adversely affect many aspects of national development, including environmental sustainability, economic well-being and governance. Therefore, healthy timing and spacing of children and family planning continue to be one of the best opportunities to improve the health of mothers and children throughout the developing world, and especially in areas of high-biodiversity with limited access to health information and services.

As noted earlier in this document, PHE programs are generally conducted in areas of high biodiversity and conservation hotspots, which are also typically rural areas with poor water supplies and sanitation and inadequate access to health care. In some countries, women need to walk 50 kilometers (30 miles) to reach the nearest health care facility. Using an integrated, cross-sectoral PHE development approach can help in increasing access to FP and MCH services in remote communities where conservation organizations work, and where the need for health services is the greatest.

The "population" component of PHE projects involves addressing population pressures on natural resources by meeting community-voiced needs for voluntary FP/RH information and services for contraception and birth-spacing. Provision of voluntary FP/RH services and information is the cornerstone of PHE projects. Where feasible and where couples have expressed the desire to space the births of their children, PHE projects are well-positioned to offer a range of FP/RH services to couples of reproductive age and to sexually active young people. Improving access to family planning is another important way to reduce maternal mortality and improve maternal and child health by helping women avoid unintended pregnancies and allowing them to choose the timing of and number of their pregnancies.

In developing countries, the MOH is usually charged with providing FP services for men and women. Where the MOH has an active FP program, conservation and community-development groups can partner with them to extend FP information and services to their underserved populations. For example, in Ethiopia, MOH-trained health extension workers

(HEWs) are located throughout the country, including rural areas and can provide the information and services needed to communities living in these areas. A pilot intervention conducted in Kenya documented that environmental volunteers often invited community health extension workers (CHEWS) to community meetings to provide information, services (condoms and pills) and referrals on FP/RH services. Nonetheless, these community health workers often do not reach the remote areas where conservation activities are located.

Further, in rural areas where conservation efforts are implemented, local MOH clinics can be understaffed, undertrained and/or lack a consistent supply of FP commodities. It is not uncommon for a user of contraceptive pills to return to the clinic to find the stocks depleted, thus leaving the women with no method of birth control. Additionally, in areas where PHE projects operate, women and men have to walk a long distance to reach a health care clinic where they can be screened or can obtain an additional cycle of contraceptive pills. In these situations, PHE projects can establish a system of CBDs that deliver FP information and commodities to the community. The most common FP methods distributed by PHE project-related community-based distributors (CBDs) are condoms (male and female) and contraceptive pills, which are usually sold for a small fee. Developing a CBD system will depend on the national policies of the country. CBDs can be either MOH staff trained and monitored by the local health clinic; they can be trained pharmacies; or where national policies permit, they can be local individuals or stores that obtain their FP commodities from the local MOH clinic or a private supplier.

When developing a cadre of trained CBDs, it is critical to work together with the local MOH health clinic. CBDs provide information on PHE linkages, pro-environment and pro-health messages, family planning and counseling *before* distributing FP commodities or referring potential clients to a health center. It can be a win-win situation if the clinic provides FP commodities to the CBD to distribute and, in turn, the CBD reports back the distribution data to the health clinic for their records. This type of arrangement requires building a strong partnership with the local health clinic and can take time to nurture and develop. In countries/regions where the MOH system does not have enough FP commodities to provide the CBDs with a supply, trained CBDs can be linked with social marketing groups or private suppliers for FP commodities.

When developing a CBD system, it is important to include peer educators (PEs)—both adult PEs and youth PEs—who will talk to community members about PHE, conservation of resources, health and FP and gender-related issues. The PEs are responsible for educating and counseling women and men on family planning and referring them to the local health clinic for screening (for first-time FP users) and FP services. Or, in the case of a woman or man who is already using an FP method, the PE refers him/her to a CBD for FP commodities. Careful training, mentorship, and supervision is necessary to ensure CBDs and PEs provide high quality interpersonal communication that encourages dialogue and exchange and more in-depth communication around the barriers to behavior change on linked issues of population, health and the environment.

Tips for Implementers

Wellshare International has extensive experience providing FP/RH health services in Uganda and other Sub-Saharan countries. Based on its Uganda experience, the 2011 Community-based Family Planning Best Practices Manual suggests several tips for implementing FP/RH interventions including:

- Identify key FP/RH stakeholders at the national and local levels and engage them in program planning and decision-making processes.
- Clearly explain partnership roles, perhaps in the form of an Memorandum of Agreement (MOA) or Memorandum of Understanding (MOU).
- Understand how community volunteers currently participate in, or may participate in, the health system and establish criteria for selecting community volunteers.
- Train community volunteers in FP/RH messaging and identify ways to motivate community volunteers.
- Provide continued support and supervision for trainees in order to ensure adequate skills and safety of the program.
- Ensure contraceptive supplies are available upon referral or for CBDs.

Experience from the BALANCED Project activities in the Philippines confirmed that CBDs, PEs and other volunteers need continuous follow-up, monitoring, and refresher training to be effective and remain motivated. This was accomplished through a series of supportive supervision mentoring and monitoring meetings conducted with the community volunteers and the Rural Health Unit (RHU) staff that supervised them. These meetings proved to be a best practice for the scale up activities in the Philippines.

Natural Resource Management/Coastal Resources Management

What are the primary NRM/CRM activities included in PHE projects?

PHE approaches attempt to simultaneously reduce population pressures on natural resources by meeting unmet need for voluntary FP services, while building local capacity to plan, manage and conserve local natural resources for long-term sustainability of ecosystem services and biodiversity. The underpinning philosophy of PHE approaches is that healthy people, whose basic needs are met, will be able to act as better stewards of their local environment than if they were struggling with food insecurity and health issues. At the same time, lower population growth rates will reduce human pressures on local biodiversity and natural resources. As indicated before, the target populations for PHE projects are usually located in areas of high biodiversity, where local populations directly depend on local resources for food and income.

NRM and CRM strategies focus on the sustainable use and management of terrestrial and marine ecosystems for the long-term health and productivity of land and water and they address other environmental challenges. A healthy, well-managed local environment can provide essential ecosystem services to nearby communities, including food, building materials, clean water, and firewood. PHE initiatives take many forms, and most contribute to environmental sustainability by addressing the root causes of or human-induced threats to biodiversity loss, including pollution and climate change (UN 2010). In many places, these threats impede sustainable environmental management and cause negative and often unintended impacts on the robust and optimal function of critical ecosystems such as watersheds and forests.

One of the first steps in designing PHE projects is to assess threats to the local environment in the target sites or landscapes, prioritize their importance, and determine appropriate interventions to mitigate or reduce these threats. By implementing FP/RH, community health, and income generation interventions to help overcome these threats, PHE projects aim to help break the cycle of environmental degradation and poverty.

Conservation and environmentally-friendly activities in PHE projects can include those focused on:

- CRM, including fish, oyster, octopus, and crab conservation and management
- Community-based forest or land management
- Agro-forestry
- Afforestation and reforestation projects (terrestrial or mangrove)
- Watershed management

- Species conservation
- Habitat restoration
- Conservation areas with zoning for use/non-use:
  - No take zones in areas of particularly high terrestrial or marine biodiversity
  - Restrictions on harvest (timing, gear, permits, target size, etc.)
- Improved agricultural techniques/sustainable agriculture
- Ecotourism
- Integrated pest management
- Fuel-efficient stoves adoption and/or (related) biogas distribution and delivery systems
- Environmentally-friendly enterprises/alternative livelihoods, i.e., beekeeping, handicraft production, seaweed farming, etc.
- Community-based monitoring for environment/conservation activities

PHE implementers who adopt the conceptual model approach to designing interventions can assess the various threats and pressures on natural resources in the target sites and can develop appropriate interventions in response to these threats. These activities will rely on strong local leadership and governance, and link directly to food security, income generation, and dietary health.

Tips for Implementers

The International Institute for Environment and Development (IIED) Guide on Community Management of Natural Resources in Africa offers many case studies and lessons learned for local NGOs working on community-based natural resource management (CBNRM) projects. The report highlights some of the key findings based on experiences with CBNRM, which also apply to CRM projects.

- Explicitly address conservation and development objectives in CBNRM management projects. Project implementers should address the root causes of local resource exploitation and develop participatory, multi-sectoral interventions to ensure sustainable economic and social development.
- Focus on demand-driven collective management arrangements in order to devolve authority over valuable natural resources. Greater emphasis should be placed on local rights, authority and tenure over land and resources.

- Develop improved indicators and better community monitoring to strengthen the effectiveness of project implementation. Community engagement in monitoring project success is critical to empowering local actors and achieving buy-in to project goals.

Behavior Change Communication (BCC)

In the context of PHE, BCC should be an essential part of a comprehensive program that seeks to improve RH, public health, natural resource and livelihood outcomes of communities living in areas of rich biodiversity. BCC is a crosscutting component and an interactive process with communities to develop tailored IEC messages and BCC approaches using a variety of communication channels to promote positive behaviors and sustain individual, community and societal behavior change. BCC involves the development and implementation of communication messages, communication activities *and* a supportive environment needed to promote and sustain behavior change. IEC only refers to the development of communication materials and activities that form part of a comprehensive BCC strategy.

Underlying the BCC process is the understanding that individuals and communities pass through a number of stages when learning about and adopting new behaviors. PHE communication and messages must be designed with the consideration of the target population's location on this continuum (see Figure 6 – Stages of Behavior Change).

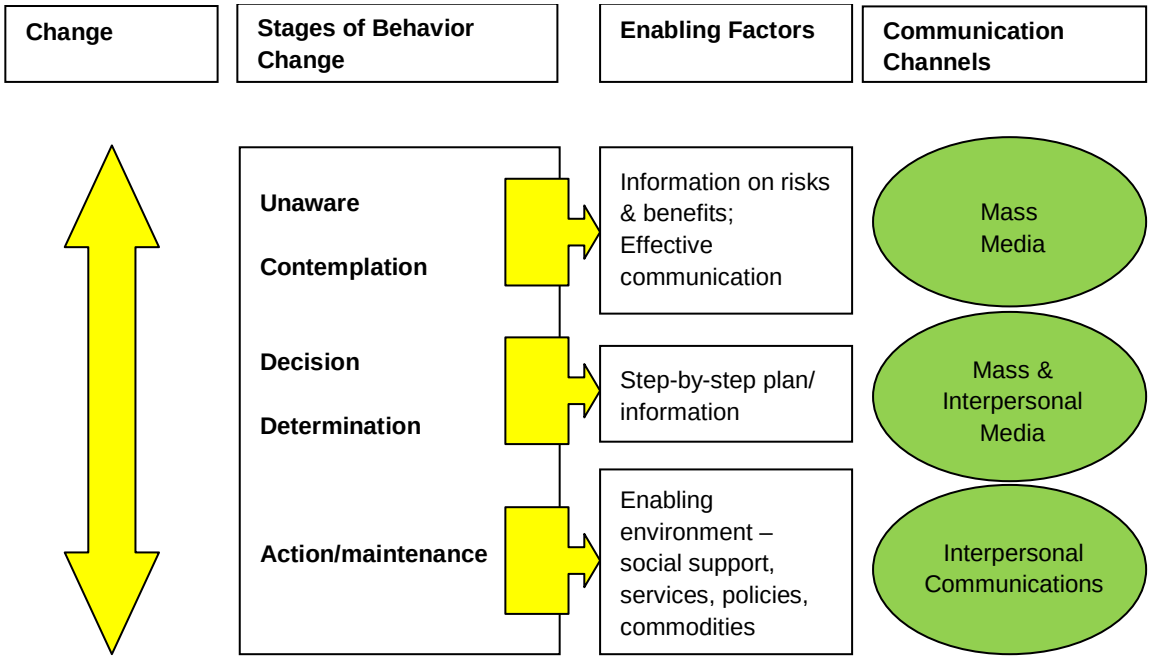


Figure 6 - Stages of Behavior Change Mode

It is important to note that behavior change does not always progress in a straight line, as depicted above. A person can decide to adopt a new behavior, but be given unclear instructions or feel frustrated because the behavior is not easy to put into practice, and thus, the individual may take no action. Others may try the behavior once or twice, but then discontinue it because they do not feel motivated by need or supported by the

environment. Therefore, a BCC intervention needs to include a variety of communication approaches and a supportive environment to enable and help sustain behavior change.

BCC interventions for PHE programs will help to increase the community's perception and understanding of PHE linkages as well as promote and support pro-environment and pro-health attitudes and behaviors that will positively affect families' lives. While the planning of BCC interventions is mainly done by program planners and project staff, the community will be involved in the development of the BCC activities.

Key elements of designing and implementing an effective BCC intervention as part of your PHE project include:

1) An integrated communication theme

An integrated communications theme for the project can be developed based on the linkages in the project's conceptual framework and the project goal and objectives. The integrated communication theme should describe the overarching goal of the project and should be a phrase with which the community can easily relate. Ideally, all of the project's BCC activities should lead to the achievement of the integrated communication theme. The theme can also be used as the "tagline" for the project. This is especially useful when the project involves several partners. It avoids the confusion that can arise when different partners describe the project in different terms. Having a common "tagline" that all partners use, helps ensure the community hears the same message from all the project implementers as to what the project is about and what it is trying to achieve. Some examples of integrated communication themes from PHE projects are:

- "Planned Family, Healthy Environment For a Better Future"/*Pwani* Project, Tanzania
- "Plan Your Families and Manage your Resources for Food Security"/IPOPCORM Project, Philippines
- "Healthy Families and Environment for a Good Life and Bright Future Health of People and Environment"/ HOPE-LVB Project, Uganda
- "Care for your Family, Care for your Environment for a Prosperous Life"/Green Belt Movement and FHI 360, Kenya

2) A BCC strategy

Program managers will need a strategy for how they plan to implement their BCC intervention. Ideally, the BCC strategy should be developed prior to training behavior change agents and PEs so that the BCC messages can be included in all capacity building activities and support materials (job aids, participant guides, etc.). Prior to developing the BCC strategy, project managers should be very clear on who the primary target audience(s) for the BCC activities will be and should gather information about those

audiences' knowledge, attitudes and practices related to the PHE behaviors that the project is seeking to influence. If possible, conduct or collect qualitative and/or quantitative information about the primary target audience before developing the BCC strategy, or as soon thereafter as possible. This information will inform the entire BCC strategy. A BCC strategy includes, but is not limited to, the following components.

- **A list of the desired behavior changes that the PHE project is seeking to achieve within its target community,** i.e. women and men of reproductive age using modern FP methods, fisherman using legal fishing gear, families planting trees, farmers using organic fertilizer, families using pit latrines, etc.

- **Factors that influence behavior change***.* Based on the quantitative and/or qualitative data collected prior to or during project implementation, list the factors that influence the desired behavior change (identified above) that can be addressed with BCC activities. For example, factors influencing whether women and men accept a modern FP method may be negative rumors about these methods, a lack of understanding about reproductive health, and/or a lack of male involvement, etc. Factors influencing whether fishermen use sustainable fishing practices may be the lack of knowledge about legal fishing gear, or of the location of breeding grounds, and/or lack of awareness of local environmental laws. BCC activities can raise awareness of issues, address the influencing factors and provide "how-to" information. However, they cannot influence supply systems, the lack of FP methods, the lack (or high-cost) of legal gear/equipment or the absence of law enforcement—all of which also influence behavior change. Other project interventions will need to address these issues.

- **BCC objectives for each desired behavior change***.* For each stated behavior change, there should be a BCC objective. BCC objectives should cover the various stages of behavior change of the primary target audience. For example, for the desired behavior change that "households are planting and conserving trees:"

  - if addressing the unaware or contemplation stage of behavior, a BCC objective could be, "Increase perception of risks to future generations of cutting trees for firewood and depleting these natural resources."

  - if addressing the determination/action stage for the same behavior, a BCC objective could be, "Increase knowledge on how to make (or purchase) fuel-efficient stoves."

  For many targeted behavior changes, you will also need BCC objectives that address the PHE linkages related to that behavior. BCC objectives that address PHE linkages should link the effect of the behavior on several aspects of life. BCC objectives for PHE linkages most often address the *unaware* and/or *contemplation* stage of behavior. For example, if the targeted desired behavior change is "women and men are using modern FP methods," an integrated BCC objective could be

"Increase perception of how large families deplete natural resources and livelihoods for future generations" (addressing the *unaware* stage of behavior change). Note that not all behaviors lend themselves to integrated linkages.

- **IEC message(s) for each BCC objective.** The next step is to develop one or more IEC messages for each BCC objective. BCC objectives that aim to increase awareness about PHE linkages (and geared to address the *unaware* and *contemplation* stage of behavior) can have integrated IEC messages that address the impact of one behavior on many facets of life, i.e. "Healthy spacing of children reduces pressure on land and improves resources for the future." For the BCC objectives that address the *determination* or *action* stage of behavior, sector-specific messages are more appropriate. Examples might be "Talk to the local extension agent to learn where to purchase legal fishing nets," or "Use family planning for healthy spacing of children." The IEC messages developed will be pretested with the community and incorporated into the IEC materials and activities.

- **List of BCC activities***.* IEC messages should be delivered through a variety of communication channels (materials and activities) based on the stage of behavior change they are addressing. If is fine to select one or two key IEC messages and deliver them through a variety of channels, as long as the messages are appropriate for the targeted stages of behavior change. Be sure to develop BCC activities that address *all* stages of behavior change because members of the primary target audience will be at different stages and/or will move from one stage to another inconsistently.

- **Timeline and Action Steps***.* When creating a timeline for the development and implementation of the planned IEC materials and activities, consider other program elements as well. Remember that systems need to be put in place and training needs to occur before rolling out the entire BCC intervention. For example, you do not want to drive demand for FP products through radio ads, billboards, etc. until your FP supply system (including CBDs) is set up and functioning. Training of the behavior change agents, such as district health officers, agricultural extension agents, fishery groups, community groups, etc., should likewise have taken place prior to beginning any awareness-raising campaigns. And, the PEs—an integral component of your BCC intervention—should be trained and ready to field questions and talk to the community about population, health and environment issues before IEC materials are printed and IEC activities are implemented.

- Usually, PHE projects will not be able to implement all the BCC activities at once. BCC activities take time, money and manpower to develop, pretest, distribute/ implement and monitor. Therefore, based on resources available, you will want to consider staging your BCC interventions over time, alternating BCC messages and activities. This way, your messages and activities do not become so routine and

predictable that the community no longer "hears" the points or no longer responds to the activities you are putting forward.

3) Development of IEC materials and BCC activities

IEC "materials" such as posters, pamphlets, stickers, and billboards are best suited for raising awareness about behaviors being promoted by the PHE project. In situations where print materials are not feasible because of the target audience's low literacy skills or because of high printing costs, you may also use IEC "activities." These are community-based activities that reach groups of people through such venues as local health fairs, or through folk/community drama, talks at village meetings, or mass media (television, radio, newspapers). They are used to address the target audience's *awareness* and *contemplation/determination* stages of behavior change. Be sure to pretest all IEC materials and activities with members of the primary target audience to ensure comprehension and acceptability of the written text, the illustrations and/or the drama scripts for community activities (see next step).

Interpersonal communication (IPC) provided by the project's behavior change agents (i.e. PEs, CBDs, extension agents, environment volunteers, women's groups, etc.) is another critical component of a BCC intervention. These behavior change agents and community volunteers should be trained on PHE linkages, BCC messages, and interpersonal counseling skills so that they can provide the support needed to help the target audience take initiative and sustain the behaviors that the PHE project is promoting.

4) Pretesting IEC materials and activities

IEC materials and activities should be pretested with members of the target audience for whom they are intended. As part of pretesting, members of the target audience are asked to review draft IEC materials or IEC activities and answer a set of open-ended questions. This allows program planners to learn if the draft materials/activities are understood and acceptable and provides feedback necessary for further refinement. Pretesting assesses the following:

- Comprehension. Is the message and content clearly understood?
- Attractiveness. Is the IEC material or radio spot interesting enough to attract and hold the audience's attention? Does the target audience like it? A poster may go unnoticed if it is not attractive.
- Acceptance. Are the messages and illustrations acceptable to target audience?
- Involvement. Does the target audience relate to the material? Do they perceive that the print material or radio spot is talking to them or to others? Is the message considered relevant to their lives?

Pretesting also involves the community in the materials development process. Members of the target audience feel proud to be asked their opinion and are instrumental in helping to find the right words and to provide recommendations for making the IEC materials and activities relevant to the community. It is easier to change materials before they are finalized than to find out that they are in appropriate and/or ineffective after having made a large investment of time and resources. Several rounds of pretesting are usually needed before an IEC material or activity is ready to finalize and distribute.

5) Monitoring and Evaluating BCC Interventions

Monitoring and evaluating BCC interventions helps to show how the IEC materials are actually being used by the health center staff, PEs or other behavior change agents (in health, fisheries, agriculture) and whether BCC objectives were/are being met.

If resources permit, conduct qualitative research, i.e. focus group discussions, intercept interviews, etc., to monitor and gauge the effectiveness of IEC materials and activities. Other methods include using “mystery clients” to visit CBDs, clinics, or your behavior change agents to observe if and how the IEC materials are being used. You can also use observers and community informants to interview community members after IEC activities in order to gauge the effectiveness of those activities. Finally, you can also use behavior monitoring surveys (BMS) or a Designing for Behavior Change survey (see Core Group tool) to monitor whether and how behaviors are changing and how well BCC activities are influencing behavior change.

Advocacy

What is PHE advocacy?

Most PHE projects work closely with policy-and decision-makers, local leaders, staff from public institutions in the ministries of health, agriculture, and environment, as well as with district, regional, and national leaders. PHE as a development approach is a new and complex concept to these stakeholders. Thus, PHE projects have found that targeted policy communications and advocacy can help decision-makers understand the approach and take steps to support, sustain and replicate/scale-up of the PHE approach.

Effective PHE advocacy depends on a well thought out communications and advocacy strategy that includes communication and advocacy objectives, targeted audiences, clear and specific messages on PHE, the messenger, defined activities and communication formats for reaching decision-makers, and a plan for evaluating advocacy efforts.

Several PHE projects have used the Spitfire advocacy/communication planning tools to develop PHE advocacy strategies. The Spitfire Strategies SMART CHART manual and tools help NGOs think through the communications planning process, evaluate communications efforts already in progress, and review completed communications efforts (Spitfire 2013). These resources and guides are freely available for use.

An illustrative PHE advocacy strategy includes the following suggested activities for reaching out to and involving target groups:

- Communicating evidence that the PHE approach is effective through briefs, presentations, and study tours
- Training others to develop comprehensive, policy advocacy strategies and action plans
- Promoting dialogue amongst a broad range of national and community leaders on the health, social, and economic benefits of increasing access to PHE services
- Working with the media to promote understanding of the benefits of family planning and improved health and the connection between these issues and the environment

Convincing decision-makers to take action that requires not just opportunistic and strategic thinking, but also: 1) evidence, 2) sound communications skills, and 3) persistence. Together, these factors lay the foundation for successful advocacy.

1) Evidence

Evidence of the success of PHE programs is critical for convincing decision-makers and particularly donors to support the PHE approach. Well-designed baseline data collection and project monitoring and evaluation systems allow PHE programs to use results in their messaging and to enhance advocacy efforts. For example, the positive, evidence-based results from the IPOPCORM project in the Philippines have been used by local district governments and NGOs to advocate for the incorporation of PHE into district development plans and to galvanize support from donors for scaling-up PHE approaches to new areas in the country. It is important to remember, however, that not all audiences are interested in the same evidence, and program staff must be adept at identifying which pieces of evidence will resonate with specific audiences. MOH staff, for example, will be more interested in changes in health indicators, while those from the environment field will find evidence of environmental benefits more compelling.

2) Communication Skills

Advocates need good communication skills to effectively use evidence to influence decision-makers. Poorly communicated evidence can confuse or, even worse, dissuade decision- makers and result in little support for the PHE approach. For more than a decade, the Population Reference Bureau (PRB) has been building the capacity of PHE practitioners to communicate about the PHE approach to decision-makers at various levels through their policy communications workshops, which have been held in the Philippines, East Africa, and Madagascar. Critical skills building components of these workshops include: drawing implications and recommendations from project results, developing policy communication/advocacy strategies, writing for policy audiences, working with the media, and presenting to policy audiences. As a result of these workshops, PHE advocates have provided valuable information to policymakers, program planners, and journalists on the multiple benefits of PHE approaches.

3) Persistence through Coalitions and Nurturing Champions

Achieving advocacy goals and effecting policy change is often a long process that takes persistence, patience, and sustained action. It requires identifying champions from many groups within a community (i.e. chieftains, elected officials, well-respected members of the community, influential community groups, etc.). Political mapping is essential to advocacy efforts and includes understanding the stance of politicians on FP/RH and environment issues, identifying other influential persons who can help you advocate with the right individuals, and finding the right messengers.

It is important to be aware of the governance processes and cycles of your region to ensure that advocacy activities are timed appropriately. Case studies of advocacy successes have shown that individual champions as well as coalitions of organizations are often critical for maintaining this sustained advocacy. Coalition building can bring together diverse groups from different sectors for PHE advocacy, and can reach a broader

range of decision-makers. At the same time, individuals who have championed the PHE approach have proven to be great communicators of the benefits of PHE and are critical for delivering presentations, talking with decision-makers, and raising the profile of PHE approaches. An example of the effective use of coalitions can be found in East Africa.

The East Africa PHE Network

In November 2007, an East Africa PHE network was established at a conference convened by PRB and LEM Ethiopia, the Environment and Development Society of Ethiopia. This conference brought together international and national policymakers, researchers, the media, community leaders, and advocates from 22 countries and five continents to create a forum for discussion of integrated health, development and conservation approaches. The conference led to the creation of PHE networks such as the PHE Ethiopia Consortium, and working groups in Kenya, Rwanda, and Uganda. It also led to the establishment of an East Africa PHE Network, which connected PHE groups throughout the continent. At the regional level, the East Africa PHE Network is primarily for facilitating communication amongst PHE practitioners in Africa. Meanwhile at the country level, PHE networks in Ethiopia, Kenya, and Uganda are engaged in developing advocacy strategies, PHE materials that promote the approach to diverse decision-makers, study tours, media outreach, and organizing events and policy dialogue to promote the PHE approach.

Monitoring and Evaluation

In order to be successful in the face of complexity, uncertainty, and interconnectedness associated with natural resource, health, and human development systems, PHE initiatives need to be flexible, adaptive, and have the capacity to learn. All development projects and national programs include some element of monitoring and evaluation (M&E). ***Monitoring*** involves routinely assessing inputs, activities, and outputs to determining if a project is on track in terms of meeting its goals. ***Evaluation*** probes deeper, assessing the impacts of the project. If projects and programs fail to reach their expected results, possible causes could include:

- The project logic/conceptual framework was faulty
- Assumptions made in the conceptual framework were not valid or were not met
- Results were poorly measured/monitored
- Implementation was poorly executed
- A combination of the above

A good monitoring plan assesses the effectiveness of project implementation, whereas evaluations help clarify if the conceptual framework and its assumptions were valid. Hence, you need both monitoring and evaluation to understand why projects succeed or fail. What makes M&E in PHE particularly complex is the wide range of topics and integrated activities covered in PHE projects—all which have to be taken into consideration when monitoring outcomes and impacts.

Developing a monitoring plan

A ***monitoring plan*** is a management tool to help design, and if needed, modify activities to achieve the results desired over the life-of-a-project or program. The monitoring plan assesses to what extent activities are leading to intended results. The plan also defines how progress will be measured. It should be tied to a results/conceptual framework that outlines the project's goals and objectives. A well-designed monitoring plan developed in tandem with the project implementation plan is an effective tool for tracking progress towards and ultimately the achievement (or lack of achievement) of project goals and objectives. Monitoring plans should include precise, measurable, timely and programmatically important indicators that aim to demonstrate program impact of an integrated PHE approach.

A good monitoring plan takes into consideration the following elements:

- Determine the audience for all monitoring information and the specific information needs of that audience. This may be the project team, local community members with whom the project is working, and other stakeholders in the project.

- Determine indicators and their definitions, data sources and the data collection strategy. Who will collect the data? What resources and staff time are required for monitoring? How frequently are data on indicators collected? How can you ensure high quality data and build in ways to verify data?

- Regularly review the monitoring data to assess if the project is on track and compare results with expectations. If performance is not as strong as expected, identify flaws in the design and/or implementation of the PHE project.

The monitoring plan typically begins with the overarching results framework, which outlines the project logic—showing how the project goals and objectives are supposed to be achieved through the sub-objectives/intermediate results. It also presents the indicators that will be used to assess whether project objectives are being met. PHE projects usually include a number of sectoral indicators related to family planning, biodiversity conservation, and health. A comprehensive list of both sectoral and integrated indicators can be found in the "Guide for Monitoring and Evaluating Population-Health-Environment Programs" listed among the resources below. To measure progress towards achieving integration, PHE projects and programs also need integrated indicators.

Integrated indicators used/adapted by the BALANCED Philippines Project

- Number of fisheries and/or MPA networks that serve as local CBD suppliers
- Number of environmental leaders (e.g., MPA managers) who are CBDs
- Number of linked messages/materials created
- Number of placements of linked PHE messages in print and electronic media by independent sources (i.e. radio and TV coverage about PHE integration)
- Number and frequency of PHE educational sessions provided in the targets
- Number of PHE IEC sessions conducted with non-traditional audiences
- Percent of households knowledgeable about a specific PHE issue
- Number of policy-makers knowledgeable about or aware of specific PHE issue
- Number of local policies/ordinances/plans that integrate PHE
- Number of new PHE partnerships created that link organizations or institutions from different sectors
- Amount of funding leveraged for PHE activities
- Number of MPA management plans formulated using multi-sectoral representation (e.g., involvement of health sector and FP-related NGOs, etc.)
- Number of MPA management bodies that include representatives from women, youth, fisher folk, indigenous persons and other marginalized groups

The monitoring plan helps project teams know if they are on track. However, to enable a program to assess its impacts and outcomes—the changes brought about as a result of activities over a specified time period—projects and programs need a broader strategy for evaluating outcomes and impacts.

The first step is to document the baseline conditions that exist at the outset. Baselines provide a basis from which to measure the effect of PHE interventions and by which to answer two fundamental questions:

1. What is the status of the ccurrent population, socio-economic, health, and environment conditions in the place where the PHE project will be implemented?

2. What aspects of current conditions or behaviors do we aspire to modify through the PHE intervention?

A baseline is designed to engage all the members of a project team and local stakeholders in a collaborative exercise of analysis and strategic thinking. The baseline conditions of interest will depend on the project's causal theory and goals and objectives. But, in general they should provide a snapshot of the current conditions and behaviors from which to measure the effect of project activities and should assist in developing a shared understanding of the need for change. A baseline data collection effort can be simple or complex and can be based on either quantitative or qualitative methods—or both. Data collection could be as simple as a day or two of PRA with the targeted communities. In some cases, it might be built into a larger site assessment. The product may be a lengthy and detailed analysis or a compilation of tables and short statements, depending on needs and resources.

Quantitative baseline indicators are useful to track and summarize what is happening in a program.

Qualitative information helps convey why or how things happened or did not happen.

An example of what can be included in a baseline study aimed at documenting community member knowledge, attitudes and practices related to PHE includes household or individual level questionnaires containing the following types of information:

- General information (date, respondent number, interviewer)

- Village information (village name, population density, growth rate, etc.)

- Household information (number of members, age, etc.)

- Material style of life (household wealth indicator—determined by looking at house construction, facilities and appliances)

- Current household productive activities (rank importance of fishing, aquaculture, farming, livestock, tourism, etc. to the household)

- Household income (disaggregated per livelihood activity)
- Reproductive health (age at first sex, concurrent partners, contraceptive use, where birth control is obtained, etc.)
- Opinions related to reproductive health (Should adolescents have access to information about sexuality? Should everyone have the right to choose how many children they want and when to have them?)
- Health status (incidences of disease, access to safe water and sanitation, etc.)
- Perceptions related to health and health-related behaviors (e.g., HIV/AIDS, condom use, sanitation, etc.)
- Community empowerment and livelihood security (questions designed for the participants to rank their perception of current status)
- Perceptions regarding biodiversity indicators (e.g., abundance of key species)
- Perceptions related to biodiversity conservation (e.g., knowledge of conservation rules, involvement in conservation, and perceived benefits of conservation) and the perceived status of threatened/economically important species
- Perceptions related to the interconnectedness between P, H, and E (e.g., this village may soon face a crisis because there are too many people and not enough fish to feed everyone)

Surveys /studies of environmental or biophysical factors are also important data collection options for PHE projects. For example, PFPI used coral reef, mangrove and fisheries monitoring to measure the extent of environmental change in the IPOPCORM project in the Philippines. These surveys present challenges since they can be expensive and time-consuming. Hence, many PHE implementers partner with research institutions or universities with complementary programs to leverage funding and reduce costs.

Evaluating PHE Projects

A baseline, along with monitoring data on indicators, allows the project to track progress and to alert the project team to potential problems. However, a baseline is not as information-rich as quantitative and qualitative project evaluations, which help assess why (or why not) and *how* projects are moving towards achieving their goals. M&E serves complementary purposes—monitoring informs when process evaluations might be needed—and it provides documentation to explain why results were or were not reached. Quantitative indicator monitoring contributes to process evaluations that aim to assess the extent to which a project or activity is progressing towards its intended outputs and results. Impact evaluations, which are often done towards the end of a project, focus on the outcomes and impacts of a project. They are usually more qualitative in nature, and

may help in understanding the changes brought about by a project, and what worked, did not work, and why.

There are many types of evaluations, and they all involve similar steps and have a similar basic goal—to assess the performance of the PHE efforts in terms of their design and implementation (were objectives achieved and did the project do what it set out to do?).

The steps of evaluation include:

1. Specify evaluation questions—The evaluation should include questions that help answer whether or not the PHE project logic and hence, project design, is/were sound in terms of reaching the PHE goals and/or if adjustments are needed.

2. Elaborate an evaluation plan—The plan should clearly state the evaluation methodology and the tools required to answer the evaluation questions. What is the timeline and who will be responsible?

3. Conduct the evaluation—The evaluation may be conducted by independent external evaluators, or as an internal self-assessment that may involve structured surveys, focus groups, semi-structured interviews, and individual key informant discussions.

4. Analyze and communicate the results—Where appropriate, perform data analysis and interpret the findings. Disseminating evaluation results to the appropriate audiences is very important.

Benefits of Evaluation

- Gauge project success
- Compile lessons learned
- Replicate project design
- Communicate performance
- Adjust project design strategies
- Guide design and implementation of new PHE projects

One of the key challenges in evaluation, particularly when project interventions are complex and results occur over a long timeframe, is to filter out the “noise” in order to determine if the interventions are really attributed with observed changes. Where possible, evaluations should look for (and/or rule out) alternative explanations for changes that occurred during the course of the project—i.e., are there changes that have nothing to do with the intervention or may be outside of the control of the implementers? Changes in local conditions make some projects fail, even though the model was accurate and the execution well done. A variety of outside factors can affect the performance of PHE projects. These include greater or lesser community and political support, growing pressures on natural resources, changes in climate and associated stresses on population and health, and changes in policies or enforcement of policies related to P, H, or E.

Attributing change to the relevant factors is critical in reaching the correct conclusions about performance, understanding how and why observed outcomes came to pass, and

determining whether changes are needed in the PHE project strategy or implementation. However, attribution is complex and needs to be based on accepted study design standards. Therefore, it might be helpful to contact outside organizations or research groups with the funding and expertise to assess to what extent outcomes and impacts can be attributed to project activities.

As M&E results become available, the project and its implementing partners and participants may be motivated to press for changes in the choice of PHE interventions, their design, or their implementation. The process of reflecting on these changes based on M&E results is referred to as *adaptive management*.

Resource Mobilization

The primary donors for PHE projects and initiatives during the past 10 years range from private individuals to foundations to bilateral government agencies. Due to the multi-sectoral nature of these approaches, funding can come from the population sector, health sector, environment sector, or from multiple sectors.

Resource mobilization can be categorized as raising or procuring cash or in-kind donations. Everyone can be considered a source of resources. Donors provide the funding, and often the technical support, to plan, implement and assess PHE activities. Meanwhile, community members can volunteer their time, effort and indigenous knowledge. Government agencies provide their frameworks, development plans, budgets, in-kind resources and their skills and authority to manage, build capacity, monitor and sustain the initiatives beyond the project life. Through a variety of venues, PHE can be implemented at all levels (community, village, subnational, national and international). PHE implementers who decide to raise funds for their projects should have the following in order to develop credible proposals and projects for a range of donors:

- A good product or idea (sustainable development vision and mission)
- A PHE conceptual model
- Scientific evidence
- A good relationship with the target audience and community
- Knowledge of sources of aid (financing, in-kind donations) and support
- Documentation of stories of how PHE has made a difference in the lives of local people

Elements of a Successful PHE Proposal

Different donors have different requirements for submitting proposals for funding. However, in general, good proposals include the following basic elements:

- Executive Summary—a one page description of the project location, target audience, objectives and expected results
- Technical Proposal
  - Situation Analysis—describe the P, H and E threats, drivers and factors in the target site, including evidence-based facts about the health of the population, access to FP/RH and health services, environmental conditions and local PHE linkages

  - Program Approach—desribe the PHE approach to be used and how the approach was designed and developed
  - Geographic Focus—provide detail on where the project will operate, criteria for site selection and socioeconomic cultural factors
  - Project Design, Technical Approaches and Interventions—describe the overall project goal, objectives and activities; state how partners will work together with local stakeholders to achieve expected results; provide timelines and due dates
  - Post-project Sustainability Plan—discuss how the project can ensure activities continue after the end of the project
  - Constraints—describe the expected challenges in implementing the project and offer proposed solutions to overcome the challenges
  - Monitoring and Evaluation—provide a high level plan for selecting indicators, collecting data and a schedule for reporting on progress
  - Management, Implementation and Staffing—list key personnel and state how project management and leadership will function
  - Institutional Capabilities and Past Performance—in one or two paragraphs describe your organization and key partners, with an emphasis on showcasing your PHE experience and past performance results
- Budget
  - Budget Summary—a table with budget line items by year and total project cost including salary, benefits, international travel (air fare, per diem, lodging, transport), equipment, supplies and other direct costs; this can also include counterpart funding/support
  - Budget Notes/Narrative—a description of how costs are estimated
- Detailed Project Budget—a full budget in an attached Excel workbook
- Project Results Framework—a table explaining how indicators are collected and reported at process, output, outcome and impact levels

Sources of PHE Funding

Following is a selected list of PHE funders. It is not comprehensive and those listed may change over time.

Foundations:

David & Lucile Packard Foundation
300 Second Street, Los Altos, California 94022 USA http://www.packard.org/

For more than 45 years, the Packard Foundation has worked with partners around the world to improve the lives of children, families, and communities—and to restore and protect our planet. The Foundation's current program areas include: Population and Reproductive Health; and Conservation Science. Packard has funded PHE initiatives in other regions and countries of the world. However, their currently funded PHE initiatives fall under their Population and RH Program within their Sub-Saharan Africa regional portfolio with a focus on Ethiopia and within their South Asia regional portfolio with a focus on India and Pakistan.

John D. and Catherine T. MacArthur Foundation
140 S. Dearborn Street, Chicago, IL 60603-5285 USA http://www.macfound.org/

The John D. and Catherine T. MacArthur Foundation supports creative people and effective institutions committed to building a more just, verdant, and peaceful world. International programs focus on issues including human rights and international justice, peace and security, conservation and sustainable development, higher education in Nigeria and Russia, migration, and population and reproductive health. MacArthur grantees work in about 60 countries; the Foundation has offices in India, Mexico, Nigeria, and Russia. Current PHE investments are in Madagascar (Blue Ventures) and Lake Victoria Basin (Kenya, Uganda). The Packard and MacArthur Foundations are jointly funding the HOPE-LVB project with additional support from USAID.

Bi-lateral or Multilateral Government Donors:

European Union (EU)
http://eeas.europa.eu/grants_contracts/grants/index_en.htm

The European Commission is the EU's executive body. The EU is made up of 27 Member States who have decided to gradually link together their know-how, resources and destinies. Together, during a period of enlargement over 50 years, they have built a zone of stability, democracy and sustainable development whilst maintaining cultural diversity, tolerance and individual freedoms. The EU is committed to sharing its achievements and its values with countries and peoples beyond its borders.

They provide support to WWF Philippines for the Integrating Population, Reproductive Health and Coastal Resources Management Actions in Tawi-Tawi, Mindanao, Philippines

Project. This project integrates reproductive health activities and fisheries management activities in three municipalities of Languyan, Sitangkai and the Turtle Islands from 2012-2015. http://www.wwf.org.ph/

United Nations Population Fund (UNFPA)
605 Third Avenue, New York, New York 10158 USA http://www.unfpa.org/public/

UNFPA is an international development agency that promotes the right of every woman, man and child to enjoy a life of health and equal opportunity. UNFPA supports countries in using population data for policies and programs to reduce poverty and to ensure that every pregnancy is wanted, every birth is safe, every young person is free of HIV/AIDS, and every girl and woman is treated with dignity and respect. UNFPA provides FP/RH support in its focal countries. UNFPA has provided funding to Blue Ventures to implement PHE.

U.S. Agency for International Development (USAID)
1300 Pennsylvania Ave, NW, Washington, DC 20523
http://transition.usaid.gov/about_usaid/

USAID is the primary US government implementer of development assistance. Today, USAID staff work in more than 100 countries around the world with the same overarching goals that President Kennedy outlined 50 years ago—i.e., furthering America's foreign policy interests in expanding democracy and free markets while also extending a helping hand to people struggling to make a better life, recovering from a disaster or striving to live in a free and democratic country. Since 2002, USAID has been the primary funder of PHE projects. Funding comes from both the USAID/Washington Office of Population and Reproductive Health as well as from USAID Country Missions and Regional Bureaus. USAID/Philippines, USAID/Nepal, and USAID/Tanzania (family planning) have all funded PHE initiatives.

Corporations:

Johnson & Johnson (J&J)
One Johnson & Johnson Plaza, New Brunswick, New Jersey 08933
http://www.jnj.com/connect/

Since 1886, J&J has grown to become one of the most broadly-based companies in human healthcare. Corporate giving focuses on protecting the environment, social development and governance and economic well-being. J&J participated in a Global Development Alliance with WWF and USAID from 2008-2011, called the PHE Alliance. The PHE Alliance implemented PHE projects in Kenya, Nepal and the Democratic Republic of Congo.

Gender

Understanding gender dynamics is a key first step to designing effective activities and to ensuring PHE approaches help promote gender equity. Gender is a complex issue and it is very important to address in order to ensure sustainability and accomplishment of program objectives. Gender can often be confused with “women’s issues,” but gender is a broader topic. Gender constraints are also important to identify in order to design effective interventions to overcome those constraints. Gender analysis requires looking at roles and relationships among men and women in a community or society through four dimensions: practices and participation; access to resources; beliefs and perceptions; laws and institutions. Gender analysis and integration tools are available to assist field practitioners (see Suggested Tools and Resources section).

Gender Concepts and Definitions

PHE practitioners may have a different understanding about the roles of men and women in family planning and in health and natural resources management, depending on where they grew up, the culture in which they were raised, and the society in which they live. When discussing gender roles, it is important to have a clear definition of the terms that describe gender roles. These terms are included below (*Adapted from UNFPA Gender Theme Group, 1998)*.

Sex refers to the biological differences between males and females. Sex differences are concerned with males’ and females’ physiology.

Gender refers to the economic, social, political, and cultural attributes and opportunities associated with being women and men. The social definitions of what it means to be a woman or a man vary among cultures and change over time. Gender is a sociocultural expression of particular characteristics and roles that are associated with certain groups of people with reference to their sex and sexuality.

Gender Equity is the process of being fair to women and men. To ensure fairness, measures must be taken to compensate for historical and social disadvantages that prevent women and men from operating on a level playing field.

Gender Equality is the state or condition that affords women and men equal enjoyment of human rights, socially valued goods, opportunities, and resources.

Gender Integration refers to strategies applied in program assessment, design, implementation, and evaluation to take gender norms into account and to compensate for gender-based inequalities.

Gender Mainstreaming is the process of incorporating a gender perspective into policies, strategies, programs, project activities, and administrative functions, as well as into the institutional culture of an organization.

Women's Empowerment means improving the status of women to enhance their decision-making capacity at all levels, especially as it relates to their sexuality and reproductive health.

Constructive Men's Engagement promotes gender equity with regard to reproductive health; increases men's support for women's reproductive health and children's well-being; and advances the reproductive health of both men and women.

Gender Continuum and Scenarios

Incorporating gender considerations into a project design and implementation can help improve project outcomes. The Interagency Gender Working Group (IGWG)—established in 1997 as a network comprising NGOs, USAID, and cooperating agencies—developed a conceptual framework known as the Gender Integration Continuum to help guide projects on how to integrate gender into their activities. This framework categorizes approaches by how they treat gender norms and inequities in the design, implementation, and evaluation of a program/policy. Terms used in the framework include:[4]

Gender blind refers to the absence of any proactive consideration of the larger gender environment and specific gender roles affecting program/policy beneficiaries or how objectives impact on gender. For example, a poverty assessment that does not consider differences between male-headed and female-headed households; or a voter registration campaign that relies on billboards/printed media, but does not consider women's low literacy rates. Unfortunately, many development projects could be said to be "gender blind."

Gender aware programs/policies deliberately consider gender issues and anticipated gender-related outcomes during both their design and implementation.

Gender exploitative approaches take advantage of rigid gender norms and existing imbalances in power to achieve the health program objectives. While this may seem expeditious in the short run, it is unlikely to be sustainable and can, in the long run, result in harmful consequences and undermine the program's intended objective. It is an unacceptable approach for integrating gender.

Gender accommodating approaches acknowledge the role of gender norms and inequities and seek to develop actions that adjust to and often compensate for them. Such projects do not actively seek to change the norms and inequities, but they strive to limit any harmful impact on gender relations. This approach may be considered a missed opportunity because it does not address underlying structures and norms that perpetuate gender inequities. However, in situations where gender inequities are

[4] From the IGWG facilitation notes www.igwg.com

deeply entrenched and pervasive in a society, these approaches often provide a sensible first step to gender integration. As unequal power dynamics and rigid gender norms are recognized and addressed through programs, it may be possible to realize a gradual shift towards challenging such inequities. For women with limited social mobility, it might take the form of a project that brings computer services to them; or it could be a service that brings condoms to their doorstep.

Gender transformative approaches actively strive to examine, question, and change rigid gender norms and the imbalance of power as a means of reaching health as well as gender equity objectives. Gender transformative approaches encourage critical awareness among men and women of gender roles and norms; promote the position of women; challenge the distribution of resources and allocation of duties between men and women; and/or address the power relationships between women and others in the community, such as service providers and traditional leaders. Some examples include income-generation activities for women; projects that secure property rights for women; education programs that work with young men and young women to challenge rigid gender roles, etc.

Projects may not fall neatly under one of the above-mentioned approaches, but may include, for example, both ***accommodating*** and ***transformative*** elements. Also, while the continuum focuses on goals, it can also be used to monitor and evaluate gender and health outcomes, since programs sometimes result in unintended consequences. For instance, an accommodating approach may contribute to a transformative outcome, even if not the explicit objective. Conversely, a transformative approach may produce a reaction that exacerbates gender inequities. Monitoring gender outcomes allows for revision of interventions.

Most importantly, program/policy planners and managers should follow two gender integration principles:

- First, under no circumstances should programs/policies adopt an exploitative approach since one of the fundamental principles of development is to “do no harm.”

- Second, the overall objective of gender integration is to move toward gender transformative programs/policies, thus gradually challenging existing gender inequities and promoting positive changes in gender roles, norms, and power dynamics.

Tips: Guiding Principles for Gender-Integrated Proposals and Projects

- Based on gender analysis, identify the potential impact of a PHE activity on specific gender dimensions (e.g., on control of resources, equity of participation, or decision-making).

- Develop an intermediate result or sub-result to address a major gender-based constraint or to conduct socio-economic research on gender roles and responsibilities, document best practices, or define a particular gender equality outcome for the project.

- Request that the program design address gender-based constraints with the potential to affect outcomes.

- Specify which gender-based constraints and measurable disparities should be monitored and evaluated to ascertain if they have been reduced or eliminated.

- Provide definitions and explanations of concepts and terms so that all stakeholders know what you mean when asking them to address particular gender issues– i.e. equality vs. equity or what is meant by gender integration in the context of the program.

- Base proposals on assessments, national and local data, and on evaluated practices on gender, when available.

- Identify how the proposed PHE activities may affect men's and women's future opportunities, decision-making, etc.

- Demonstrate that proposed key personnel have the necessary gender analysis, program design, implementation, and M&E skills.

- Demonstrate gender capabilities as evidenced by/in your staff, record of past performance, and publications and reports.

Partnerships

PHE projects depend on effective, multi-sectoral partnerships in order to be successful in meeting health, development and conservation objectives. According to a 2008 WWF study, PHE partnerships or alliances implementing field projects are usually comprised of organizations from different sectors—usually conservation, and health, family planning and/or development. PHE projects tend to be more complex, potentially more political, and involve partners that may be unfamiliar with one another's field of expertise. Family planning and reproductive health are issues that may carry a strong positive or negative stigma for individuals and communities, which can create unique dynamics among organizations in a partnership and with their target communities. For these reasons, it can be challenging to build sustainable alliances (Margoluis 2009).

The WWF study identified several factors for determining effective partnerships, including:

- Development of trust between parties
- Cooperative interpersonal relationships
- Active communication
- Mutual influence
- Joint learning

Tips for Implementers

GBM and FHI360 developed several lessons learned during their project in Kenya, including:

- When planning and designing new PHE interventions, adequate time should be allocated for buy-in by project staff, stakeholder engagement and building of networks.
- Forging collaborative partnerships with leaders and building staff expertise in the new area are valuable project investments.
- Project staff should be flexible to accept changes in intervention design, and delays in initiating project activities.
- When dealing with a sensitive subject such as family planning, it is important to always use acceptable language and terminologies.

Case Studies

Ethiopia

Ethio-Wetlands Natural Resources Association (EWNRA)

The population of Ethiopia is growing at a rate of 2.6%. At this pace, the population will double every 20 years. At the same time, environmental resources are deteriorating at an alarming rate, threatening their capacity to provide services such as fresh drinking water, food and other basic necessities. For example, within just the last three decades more than half of the forest areas and almost all wetlands of Metu woreda (district) were converted to farmland in order to feed the woreda's growing population. As life-supporting resources such as water become scarcer and of poorer quality, the overall quality of life for smallholder agricultural communities deteriorates. Families are in poorer health and there is increased pressure on women and children to work even harder to find the resources to support the family. At the same time, environmental degradation also reduces and challenges national development plans and programs. Communities in degraded watersheds/landscapes face diverse and interconnected challenges, which need integrated and coordinated efforts at all levels—efforts such as that which EWNRA has been taken by integrating population, health and environment issues in its work starting with the October 2009 seed grant it received from the BALANCED Project.

Implemented in the two watersheds of Metu woreda, Oromia district, EWNRA used a landscape approach to integrate family planning, health and environmental management at the household and micro-watershed levels. This PHE project directly supported the national government's development programs in the areas of family planning and reproductive health, securing the health of the communities, preventing land degradation, improving food security, reducing poverty, building adaptation capacity to climate change and promoting green income generating activities. As a result, the project earned local government support, making it possible to work in partnership with governmental sector offices such as health, water resources, environmental protection, women's and youth affairs and education offices at all levels. Moreover, because the project addressed the interconnected problems of both households and the watershed, there was great popular support for the project at the community level.

Working very closely with the Illu Aba Bora zonal health office and the Metu woreda health office, EWNRA received approval to provide FP services to the communities in its PHE intervention areas. Trained adult PEs, comprised of selected community volunteers and micro-watershed committee members, spoke to their neighbors about family planning, and about PHE linkages and watershed management. For community members interested in using family planning, the PEs referred them to the HEWs for counseling and to receive the method of their choice. EWNRA also trained small store owners in areas where it was difficult to access HEWs to provide FP information and condoms and contraceptive pills to

current pill users. The trust built by continually working closely with the zonal and woreda health offices enabled EWNRA to gain permission to allow these small store owners to sell FP supplies in conjunction with its environmental and development activities, thus reducing the distance women had to travel to secure FP supplies from eight kilometers to between two and three kilometers.

The long-term relationship of ENWRA in the community and the success of prior environment projects facilitated collaboration with the health sector at both the local and national levels—a first for EWNRA. This included working with DKT Ethiopia, a social marketing organization, to provide FP commodities for ENWRA's CBDs.

Kenya

WWF

Phase I of the WWF Kenya PHE project operated in one remote geographical site, the Kiunga Marine National Reserve (KMNR) in Lamu district, from 2003 to 2008. From 2008 to 2011 (Phase II), the project used funding from USAID and Johnson and Johnson to expand to two additional sites in the same district—Faza and Kizingitini service delivery hubs. The WWF KMNR program in the Lamu Seascape implemented the project in partnership with the Lamu District Ministry of Health (DMOH) and NGO health partner, Family Health International (FHI) (now FHI360). After two years, the African Medical and Research Foundation (AMREF) took over this partnership. In addition, Sailing Doctors collaborated with WWF to provide mobile health services to isolated communities in the interior of the project area.

As if often the case with communities in remote areas, local communities in the project sites had great difficulty accessing health services. In response, the project focused on improving the provision of maternal and child health (MCH) services; expanding access to FP services; ensuring reliable supplies of modern FP commodities; and improving water quality, sanitation and environmental hygiene. Despite the drought experienced in the last year of the project, and the hardships caused by the drying-up of communal water sources, the percentage of households with access to an improved water source rose from 58 percent at baseline to 76 percent at end line. The maternal, infant and child care practices of mothers (primary caretakers) also improved markedly over the project period. Women's use of a government health facility for their last birth rose from 16 to 32 percent; the percent of women who accessed postnatal care after their last birth increased from 85 to 92 percent; and the percent of mothers who sought treatment for their child under five with a fever increased from 84 to 99 percent.

Green Belt Movement (GBM)

Founded by Nobel Prize winner Wangari Mathai in 1977, the Green Belt Movement (GBM) has a long history of environmental conservation and community empowerment activities in Kenya. Those involved with GBM understand the link between their

environment and their future livelihood, and take action to improve both. One of the primary activities of GBM has been efforts to reforest Kenya. Since GBM was founded it has planted over 51,000,000 trees on common and private lands. In addition, GBM recruits local residents into their movement. These recruits receive training in agriculture and business to improve food security and household income. GBM has always focused on women. In its project sites, GBM has helped improve household incomes and food security and provided women with leadership opportunities—all factors that have contributed to these women's increased sense of empowerment and to their having a strengthened "voice" within both their families and communities.

Working in partnership with FHI360, GBM began a USAID-funded project to promote FP messages for the healthy timing and spacing of pregnancies (HTSP). They began activities to demonstrate the feasibility and potential impact of training non-health, environmental conservation workers to understand and communicate concepts in PHE, as well as to educate on family planning and better link their community with FP services. The links between family size, health, population and the environment were clear. Green Volunteers (GVs), who are semi-literate leaders of tree nursery groups (TNGs) within the GBM, participated in training on FP and PHE. They were trained and given tools to: a) teach TNG members about the links between PHE and the role that FP practices play; b) share these messages with communities through community meetings; c) partner with government-supported CHEWs to provide accurate FP education to communities, and to better link communities with health services; d) make referrals to FP services for those in need; and e) document activities through a project reporting tool.

FHI360 evaluated the outcome of the pilot project through several means: a survey of GVs, focus group discussions with community members and TNG members, key informant interviews with GBM leadership and community leaders, as well as through routine reporting information and an assessment of costs. They found that over 80 percent of GVs answered 70 percent of knowledge questions correctly. Furthermore, the survey results provided evidence that the GVs embraced the work and felt it was in keeping with the mission of GBM. Additional benefits cited from the approach were the ability to reach non-traditional FP audiences, mainly men, dispelling myths that sometimes cause negative opinions and reactions about FP.

Madagascar

Since 2004, Blue Ventures has been working with Velondriake, one of the largest locally managed marine areas (LMMAs) in the western Indian Ocean, to conserve and sustain marine and coastal areas. This LMMA encompasses more than 1,000 km^2 of marine, coastal, and terrestrial environment, and is home to nearly 8,000 people (Harris, 2007). Approximately 80 percent of this population relies on the direct use of coastal and marine resources for their livelihoods (Epps, 2007).

Blue Ventures supports the LMMA by building community capacity in governance, enforcement, and natural resource management tools. Local governance is authorized by

the government through a set of local laws, called *dinas*. These laws are enforced by local communities through a democratically elected local management committee. For example, within the LMMA, there are *dina* on gear restrictions limits destructive fishing practices (e.g., poison fishing and beach seine nets). There is a *dina* that permanently closes certain reef and mangrove areas in order to preserve critical fish habitat, and lays out seasonal closures to octopus harvesting in order to allow this economically important species to recover and in the long run provide fishers with increased profit.

To date, six zones of coral reef and one of mangrove forest have been designated as permanent no-take-areas to further reduce anthropogenic stress in Velondriake. These core protected areas were identified via a participatory process with local communities. The coral reserves were chosen for their unusually high coral cover, fish diversity, and general reef health—ecological indicators generally used to infer high reef resilience to climate change.

Recognizing that the region offers limited sources of alternative income aside from fishing, Blue Ventures has forged a public-private partnership with Velondriake and a local sea cucumber hatchery. Through targeted technical assistance and business management, Blue Ventures has worked with local fishers to develop farms for sea cucumber and seaweed that are sold on the international market. Sea cucumbers, prized on the Asian market, have been highly overfished in the local waters and these farms provide a significant amount of supplemental income. Many of these sea cucumber and seaweed farmers are women.

Although initially focused on marine conservation and sustainable fisheries management, Blue Ventures quickly realized the need to address unmet health needs of its partner communities within Velondriake. With the average woman giving birth to over six children, the local population was set to double in size in 10-15 years, outpacing the recovery rate of fisheries stocks and the region's ability to generate alternative livelihoods. Not only do smaller, healthier families reduce the growing pressure on the area's coastal and marine resources, they can also allow women to become more involved in natural resources management and participate in income generation activities.

Before Blue Ventures opened the first FP clinic in Velondriake, women seeking RH services had to walk 50km to the nearest government-run facility which was often under-stocked and out of supplies. Not surprisingly, contraceptive prevalence in the area (10 percent) was much lower than the national average (27 percent). Since 2007, Blue Ventures has provided weekly FP clinics, and trained an extensive network of 33 local women as CBDs who are able to provide contraceptives (condoms, pills, and injectables). The program has expanded to include education and supplies for WASH as well as maternal and child health, such as diarrheal treatments, water purification solutions, and bed nets within their villages. Funding for these health interventions has come from the Population and Sustainability Network, United Nations Population Fund (UNFPA), The MacArthur Foundation, USAID, and private donations.

Recognizing that healthy people are better able to be good stewards of their environment, Blue Ventures has truly integrated population, health, and environment programming into its organizational structure. Health staff work alongside conservation staff and programming is linked at all levels. This integration saves on costs (e.g., sharing transport, office space, and people), broadens the audiences that are reached with combined health and environment messages (e.g., discussing family planning at natural resource forums, or fishery management at health events), and boosts community buy-in to both conservation and health activities.

Nepal

Community-based forest resource management regimes have shown good results in helping stem the loss of Nepal's important forest cover and biodiversity as these resources are increasingly tapped to meet the population's needs for fuel, agriculture and land for growing settlements. More than 35 percent of Nepalese are active in community-based forest user groups (CFUG), which are protecting over one million hectares of forests, and thus contributing to the sustainable management of Nepal's natural resources.

While those in the CFUGS were making good progress on the helping protect the health of their environment, the health of their families was a different situation. Acute respiratory infections (ARI) among children are prevalent in the CFUG communities where firewood is used for cooking in unventilated stoves that cause 15 times more air pollution then the WHO standard. A PHE project sponsored by USAID Nepal and run by the Resource Identification and Management Society Nepal (RIMS) sought to introduce the CFUGs to the PHE approach and the linkages between population, health and environment issues, and how to not only protect and conserve the forest and use an alternative energy source (to reduce the incidence of ARI in the home), but to also plan their families. As part of its strategy to reduce the incidence of ARI, RIMS promoted home cooking stoves and biogas plants in addition to training PHE field staff on how to detect, monitor and refer ARI cases. Together with other government efforts, RIMs was able to increase the proportion of CFUG households using clean energy from 20 to 37.5 percent over a two-year period, and decrease the number of ARI case referrals from 55 percent to five percent within the same time period. In addition to improving the health of children, the CPR increased by 23 percent, and 1,178 metric tons of firewood were saved.

Philippines

More than 60 percent of the population lives in coastal communities in the Philippines. The fisher households are among the poorest segment, due to a multitude of factors, many of them interrelated. This includes large family size, high fertility among women of reproductive age, unmet FP need, dependency on fishing, declining productivity of the natural resources base spurred by over-extraction and environmental degradation, weak enforcement of fisheries codes by local governments, access constraints, gender

inequities and geographic and cultural barriers that limit women's and youth's options to manage their fertility and engage in alternative livelihoods.

With joint support from the USAID/Philippines Office of Health and its Office of Energy, Environment and Climate Change, BALANCED-Philippines scaled-up best practices and lessons learned in PHE in two key bioregions: the VIP and then Danajon Bank Marine bioregions, where over 2.8 million Filipinos reside. Of these, an estimated 250,000 are women (15-49 years) with unmet need for family planning or with a need for more effective methods of contraception. The project built on the successes of PFPI's two previous PHE projects: Poverty, Population, Environment (PPE) and IPOCORM.

Key activities of the BALANCED-Philippines project included the development a CBD and PE system for the provision of information about PHE linkages and family planning, as well as referrals to the RHU for a method of choice or to CBDs for condoms and pills for current users; development of public-private sector partnerships for the re-supply of FP commodities to CBDs; and strong mentoring and supervision at the village level. BALANCED-Philippines activities also built on the CRM efforts of local government units (LGUs) to strengthen local capacity to manage MPAs and promote sustainable livelihoods as conservation incentives. Youth PEs were also tapped to advocate for PHE using visual and theater arts. Sustainability initiatives were initiated by executing MOAs with the LGUs for their commitment to provide technical supervision and oversight to the project, commit resources for the purchase of FP supplies and PHE activities, advocate for the integration of PHE in the LGU municipal and village plans (development, CRM/fisheries, environment, etc.) to sustain the gains beyond the life-of-the-project. As a result, the CPR in the region is increasing, more women are obtaining FP methods from CBDs, MPAs are being strengthened, and communities are benefitting from enterprise activities.

Understanding the political, religious, geographic and socio-economic context of the area is critical for engaging stakeholders and ensuring broad-based community participation, buy-in and sustainability. In the Philippines, 85 percent of the population is Catholic, and over the course of the past two decades and the terms of five presidents (two women and three male), the FP/RH debate continues. FP/RH in this country is a sensitive issue on myriad fronts, including but not limited to religious, electoral, and legal. In cases such as this, a decentralized form of government can be an advantage—making it easier to remove the debate from the realm of politics, religion, or law and to reframe the argument for FP/RH as one way to address an issue of practical concern to the community.

It is possible to talk to local stakeholders using both top-down and bottom-up approaches. The first step is to orient and encourage LGUs—both the executive and legislative branches—to buy into the PHE project. In tandem, it is important to identify policymakers and decision-makers who can champion PHE and who can facilitate PHE-related policy reforms, such as MOAs, establishment of NGO and/or CBD accreditation, resolutions, ordinances, executive orders, etc. With support from local authorities, PHE implementers have the structural and authoritative support that facilitates collaboration and coordination with agencies engaged in health, environment, development, and with village leaders

(including People's Organizations). These stakeholders will, in turn, be able to help identify potential community leaders and other stakeholders who can be trained as adult PEs, youth PEs and CBDs.

Through the approaches above and more, one can start to understand the values, socio-economics and political dynamics within the community and local governments. This process will enable PHE implementers to design and plan PHE strategies and activities that are in sync with the community's way of life and in which it will be easy to involve the community in framing and achieving a shared vision of alleviated poverty, healthier families and healthier ecosystems.

Aligning the PHE approach with the government's vision and mission and eventually institutionalizing PHE into government mandates including policy reforms, development plans and budgets is the ultimate evidence of local government participation and sustainability. An example of this is the passage of PHE ordinances in three municipalities in the Philippines (Hindang, in Leyte; and Lubang and Looc in Occidental Mindoro) and the subsequent allocation of budgets in support of the community-based PHE initiatives established by BALANCED Philippines.

Tanzania

In the area surrounding Tanzania's Saadani National Park, stakeholder involvement has been a central component in designing and implementing an integrated PHE project. A 2004 PRA provided the basis for a PHE threats assessment, which then guided the PHE design. The PRA included key informant interviews, focus group discussions, community mapping, and other activities where local communities helped assess the context for PHE in their area. Based on the PRA, URI/CRC developed a program to address the integrated problems that local stakeholders had identified as critical. Since 2004, a number of activities have been implemented, including HIV/AIDS prevention, leadership strengthening, livelihood development, improving access to micro credit, and promotion of fuel efficient stoves. In 2008, CRC began increasing access to family planning through community-based distribution with support from the BALANCED Project.

Many people living around Saadani National Park are aware of the benefits of birth spacing and planning one's family. There is also a high level of awareness of the dual protection afforded by condom use. Individuals living in the area can access pills, condoms, and injectables free-of charge from the two dispensaries located in Mkwaja and Mkalamo wards. At these dispensaries, both commodities and RH/FP services are available every day. However, while the dispensary staff has training in family planning, they are reluctant to provide pills or injectables to unmarried women or married women who have not had children. The biggest obstacle to accessing pills and injectables is the distance to the dispensaries, which are located between one to 25 kilometers—and on average 7.8 kilometers—from the villages surrounding the park. For other short and long - term FP methods, or other more complicated medical needs, people must travel to the Pangani or Bagamoyo hospitals, which are more than 70 kilometers from the most remote

villages. This makes condoms the most easily accessible FP method, as they are sold in small shops in each and every village and are also distributed free-of-charge at the dispensaries.

In this situation, it made sense for the BALANCED Project to focus its FP efforts on three components. First, the project reduced the distance to access FP commodities by training MOH CBDs who distribute pills and condoms to screened individuals. This means people can access FP commodities in their villages—reducing the travel distance to less than one kilometer. Also for other short-acting and the long-term FP methods, CBDs are conducting advocacy meetings that usually generate some interested clients who can be referred to the dispensary for registration to meet with the mobile clinic team sponsored by EngenderHealth or Marie Stopes, in collaboration with MOH Pangani. Second, the project engaged local adult PEs and youth PEs, who provide integrated messages about family planning, environment, and livelihoods (fuel-efficient stoves, and savings and credit cooperative organizations or microfinance/savings accounts). If a woman is interested in adopting an FP method, the PE refers her to the local dispensary for a screening. If she decides to use pills, she can thereafter obtain them from the CBD. Third, there are project-trained PHE providers. These are small shop owners who sell condoms and provide the same integrated messages as the PEs. The PHE providers work closely with the youth PEs, who target primarily unmarried youth and are sold/given condoms to prevent STIs and unwanted pregnancies. Local leaders were educated on the benefits of an integrated PHE approach and are serving as PHE champions. District extension officers from both the health and the environmental sector are also supporting the PHE program as part of their day-to-day work in the district. Steps are being made to mainstream PHE into the district development plan so as to ensure PHE is sustained and funded after the donor-funded project ends.

Uganda

Conservation Through Public Health (CTPH)

CTPH, a grassroots Uganda-based NGO, is implementing all three pillars of PHE within the organization. Working with the central and local governments and community volunteers, CTPH established an integrated health and environment project to prevent and control disease transmission between people, wildlife and livestock. The main project site in Bwindi Impenetrable National Park (BINP) is home to over half of the world's critically endangered 880 mountain gorillas. Through additional funding from USAID, community-based family planning (CBFP) was added onto the integrated wildlife and community health model that was already in place.

CTPH incorporated community health volunteers from the Kanungu district—where BINP's main tourist site is located—and the MOH's village health team from the Kisoro district into its conservation and PHE intervention. The volunteers were taught to deliver health and conservation information, services and products to their community. They conducted couple peer education, gave village health talks and collected data on new FP

users, distributed FP products and made a number of referrals to the local health centers or hospitals—information that was then fed into the Ministry's Health Management Information System. Conservation indicators were also fed into the Uganda Wildlife Authority's human and wildlife conflict records.

In addition to women becoming conservation leaders and men becoming more involved in family planning, this PHE approach impacted 2,624 families and resulted in a 12-fold increase in new FP users within four years—a community where many myths and misconceptions about reproductive health and family planning abound. There were also improvements in hygiene and sanitation indicators, tuberculosis referrals and gorilla health management. Additional benefits included better community attitudes toward biodiversity conservation and a reduction in poaching, which still needs to be quantified. Furthermore, providing bicycles and group livestock income generating projects to the volunteers in Kanungu district led to a highly motivated team with no volunteer drop outs during the six years of project implementation. Another key to success has been the involvement of the central and local governments and the community through its leaders, Village Health and Conservation Teams (VHCT), beach management units (BMUs), and women and youth groups.

Subsequently, this VHCT model, which was implemented in a forest ecosystem, is being replicated in the HOPE-LVB fresh water ecosystem project.

Health of People and Environment – Lake Victoria Basin (HOPE-LVB) Project

In the HOPE-LVB project communities, where the population relies on fishing and farming for cash crops and for subsistence, HOPE-LVB is adapting the VHCT model and also advocating for the PHE approach to be integrated in the district development work plans. The project began with a scoping exercise to review current work and key actors at local, national and regional levels related to the population, health and environment sectors. At the local level, the main actors included local government leaders, health centers, VHTs, BMUs and the community groups/organizations. At the national levels, the exercise targeted departments within sector ministries and bodies, while at the regional level the major target was the Lake Victoria Basin Commission (LVBC). The exercise identified both opportunities for and potential challenges to PHE integration at different levels. The output from the exercise was a synopsis of key action points that would help in refining the HOPE-LVB project strategies/interventions taking into consideration the local, national and regional structures, interests and plans. This exercise was followed by a PRA and a baseline study to gain in-depth understanding of the socio-cultural, environmental and institutional settings of the project sites. The baseline served as an important opportunity to learn about relevant factors affecting ecosystem threats, the health status of the communities and availability of service delivery points, and in identifying existing capacities and areas needing strengthening. HOPE-LVB is also working with the community to identify and nurture PHE champions.

At the start of the HOPE-LVB project, Pathfinder International and its two local conservation partners also met with numerous policy stakeholders in Uganda such as the Members of Parliament concerned with population and development issues; the Population Secretariat; the Ministry of Health and the National Environmental Management Authority; district level government officials; health facility staff; VHTs, BMUs, community members including young people; the PHE Working Group members; and other FP-related NGOs to disseminate information about the project and to gather inputs. As mentioned earlier, at the regional level, the project reached out to the LVBC, an inter-governmental entity based in Kenya that oversees sustainable development of the Lake Victoria Basin. The outreach sought to facilitate smooth implementation of project activities, and to also assess stakeholder priorities, identify potential champions, determine ways to collaborate, and identify the potential entry points for institutionalization and scale-up of project activities in the future.

The project team is now working with local women, farmers and fishing groups on sustainable fisheries management, sustainable land use, watershed management, environmental conservation and agroforestry, improved sustainable agriculture practices and fuel-efficient stoves adoption and improved access to health care and family planning. These interventions are intended to address the country's rapid population growth as well as the unsustainable rates of fish harvesting (overfishing) and destructive fishing practices (use of illegal gear), poor agriculture practices and forest clearing, nutrient run-off from agriculture practices, and inadequate or weak enforcement of government policies and regulations—all of which are the driving forces behind a rapidly changing and degrading ecosystem in the project area.

Uganda Working Group

The Uganda PHE Working Group, comprised of a group of organizations implementing PHE interventions, advocates for integrated approaches to policy and decision-making stakeholders. The Group consists of equal numbers of conservation and health organizations. With support from PRB and FHI360, it conducts activities that include but are not limited to producing PHE fact sheets for distribution at World Days, producing media articles, and conducting PHE field study tours.

Zambia

With a two-year seed grant and technical support from the BALANCED Project from 2010 to 2012, Wildlife Conservation Society (WCS) Zambia's Community Markets for Conservation (COMACO) business initiative promoted FP/RH and adolescent reproductive health within the broader context of food security. The initiative sought to increase people's understanding of how FP/RH—when implemented together with livelihoods and conservation interventions—can lead to poverty alleviation. Toward this end, WCS integrated family planning and service delivery into ongoing livelihood activities in the Mfuwe, Lundazi and Chama regions. The integrated FP/RH activities targeted

COMACO producer groups (lead farmers) and youth in 22 chiefdoms (eight in Mfuwe, 10 in Lundazi and four in Chama), serving an estimated total population of 25,200.

Adult PEs, selected from among COMACO's lead farmers and extension agents, and youth PEs were trained and delivered integrated RH and conservation messages to their peers. Using interpersonal communication channels and a peer-mediated approach, WCS Zambia increased people's awareness of the links between population, health and the environment and the importance of planning their families for improving their quality of life and addressing food insecurity. The BCC activities and materials developed promoted the use of modern contraceptive methods and prevention of STIs, including HIV. WCS Zambia's PEs expanded access to FP information and products among couples and sexually active youth (15-19 years) by referring them to the local health clinics and providing FP supplies at the grassroots level. Working closely with the MOH, WCS gained approval for some of its trained PEs to carry free contraceptives from the MOH health centers to implement a CBD system among COMACO's producer groups. While there were sufficient supplies of contraceptives available at the health centers, accessibility was the problem—e.g., the long distances community members need to travel to reach the health posts, often up to 12 kilometers away. WCS Zambia envisions these FP/RH interventions, when combined with existing livelihood and conservation activities, will increase community well-being, including human health, in the long term.

Suggested Tools and Resources

Most of the suggested tools and resources listed below are found on the USAID-sponsored PHE Toolkit https://www.k4health.org/toolkits/phe housed on the Knowledge for Health portal https://www.k4health.org/toolkits. For resources not available on the PHE Toolkit, a hyperlink is included.

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