COVER SHEET

INITIAL ENVIRONMENTAL EXAMINATION

PROGRAM/ACTIVITY DATA:

Program/Activity Number: 680-233
Country/Region: Benin/West Africa
Program/Activity Title: Family Health Program (FHP)
Period Covered: September 2012 to September 2016
IEE Prepared By: Scott Stofel, MEO, USAID/Benin
IEE Amendment (Y/N): No
IEE Expiration Date: December 31, 2016

ENVIRONMENTAL ACTION RECOMMENDED;

Categorical Exclusion: X Negative Determination: X
Positive Determination:___ Deferral: X

ADDITIONAL ELEMENTS:

EMMP CONDITIONS X PVO/NGO X-- Pesticide use: 22 CFR 216.3 (b)(1) applies X

Other Relevant Environmental Compliance Documentation:
***Supplemental Environmental Assessment for Presidential Malaria Initiative Indoor Residual Spraying (IRS) for Malaria Control in Benin* 04/2008**

Programmatic Environmental Assessment for Insecticide-Treated Materials in USAID Activities in Sub-Saharan Africa (ITMPEA).

SUMMARY OF FINDINGS (Please Limit Text to This Page):

Scope: This IEE addresses the entire portfolio of existing, new, and proposed activities of the USAID/Benin Family Health Program, encompassing the projects listed in the table below.

Family Health Program	**LOP funding**	**Start Date**	**End Date**
Accelerating Reduction of Malaria-Related Morbidity and Mortality in Benin (ARM3)	$20 million	12/2011	09/30/2016
Appui au système sanitaire intègre pour la sante de tous (ASSIST)	$12.5 million	07/01/13	09/30/2016
Indoor Residual Spraying (IRS)	$3 million (approx.)/year	08/2011	09/30/2016
Direct government to government support National Malaria Control Program (NMCP)	$1 million (approx.)	10/01/2012	09/30/2016
Ministry of Health (non-NMCP)	$3.95 million	01/31/2013	09/30/2016
Commune Development Fund (FADEC)	$1,350,000	05/01/2013	09/30/2015

Central Medical Stores (CAME)	$4.5 million	09/30/2013	09/30/2015
Center for Epidemiological Research (CREC)	$420,000	10/2012	09/30/2016
Regional Institute of Public Health (IRSP)	$950,000	10/2012	09/30/2016
Sustainable Leadership, Management and Governance (SLMG)	$2.5 million	9/30/2012	9/29/2015
Advancing communities and local organization APS for health promotion and service delivery	$2 million (approx.)/year	12/2012	09/2016
ProFam Private Clinic Service Improvement (SIFPO)	$1.1 million	09/30/2012	09/29/2015
Commodity Procurement Activities (DELIVER AND CENTRAL COMMODITIES PROCUREMENT)	$6.1 million (approx.)/year	Ongoing	ongoing
WHO/AFRO Polio Grant	$100,000/year	Ongoing	ongoing
Peri-Urban Hygiene Improvement / WASH+	$950,000	10/1/2012	09/30/2015

For purposes of analysis, this IEE synthesizes current and anticipated Family Health Program activities under the office's various projects and initiatives into a set of nine (9) intervention categories, each of which contains a number of entailed activities.

In addition, this IEE sets out project-level implementation procedures intended to assure that conditions in this IEE are translated into project-specific mitigation measures, and to assure systematic compliance with this IEE during project and program implementation. These procedures are themselves a general condition of approval for the IEE, and their implementation is therefore mandatory.

Recommended Determinations and Conditions
This section reproduces verbatim the recommended determinations and conditions contained in the IEE. Lists of entailed activities in each intervention category are omitted, however. Note that Negative Determinations are recommended pursuant to 22 CFR 2 1 6.3(a)(2)(iii).
To preserve cross-references, the table of activities and recommended determinations for each intervention category retains its section number from the IEE (3.2 through 3.10)
Note that ANNEX 2 to the IEE lists activities by project and matches these to their recommended determinations.

3.2 Direct and capacity-building support for health service delivery and access to health services

Recommended Determination(s) for this intervention category:
Negative Determination subject to the following conditions: a) Training. Any training activities for professional health workers or community health workers involving techniques that would generate and require disposal of hazardous or highly hazardous waste (e.g. sharps, afterbirth from delivery, waste from testing for HIV or malaria.) must include

training in or ensure that the training curriculum covers best management practices concerning the proper handling, use, and disposal of medical waste, including blood, sputum, and sharps.

b) Direct provision of or support for ground-level service delivery: The FHP team and IPs must ensure, to the greatest extent feasible, that the medical facilities and operations benefitting from USAID support have adequate procedures and capacities in place to properly handle, label, treat, store, transport and properly dispose of blood, sharps and other medical waste and that norms and training include environmental health considerations. The ability of IPs and the FHP Team to assure such procedures and capacity is understood to be limited by its level of control over the management of the beneficiary facilities and operations.

"Proper Management" of health care wastes is defined as being in substantial conformity with the USAD Bureau for Africa's Environmental Guidelines for Small Scale Activities in Africa (EGSSAA) Chapter 8, "Healthcare Waste: Generation, Handling, Treatment and Disposal" (http://pdf.usaid.gov/pdf_docs/pnadk154.pdf) particularly the section titled, "Minimum elements of a complete waste management program." Other important references to consult for sound waste management practices are "WHO's Safe Management of Wastes from Healthcare Activities."

3. Support to health delivery & management systems must involve all feasible efforts to assure that these systems:

- address and support proper waste management (including handling, labeling, treatment, storage, transport and disposal of medical waste)
- address and support the capacity of medical facilities for waste management;
- prioritize environmental health considerations

It is understood that the USAID support to health delivery and management systems does not, in most cases, equate to direct USAID control over these systems. However, IPs must proactively advance these principles in their analysis and recommendations.

4. Home care and Community Health Workers. IPs must, as appropriate, include healthcare waste (HCW) management messages and develop appropriate disposal mechanisms in home-based and community-based situations that are cost effective and safe. Positive messages about personal and household hygiene, sanitation, and proper disposal of condoms and other potentially harmful materials should be delivered, as appropriate, along with standard health care messages, and these messages should be included in training, protocols, and guidelines.

5. Small grants. The formal AFR subproject/subgrant review process, as set out by the AFR Environmental Review Form (available at www.encapafrica.org/compliance.htm) must be completed and duly approved by USAID prior to funding of any small grant. The process requires identification of potential adverse impacts and design of appropriate mitigation and monitoring measures. Note that the process can result in a development of a new IEE or development a full environmental assessment. In such cases, the IEE or EA must be completed and approved prior to funding of the grant. Environmental mitigation and monitoring conditions that result from the subproject/sub-grant review process become required elements of grant implementation.

3.3 Social marketing, education, and behavior change communication (BCC)

Recommended Determination
Categorical Exclusion per 22 CFR 216.2 (c)(viii) However, the FHP team should encourage IPs to identity opportunities in behavior change interventions to include messages that emphasize the need to store potentially dangerous products out of the reach of children or animals; proper disposal of waste (e.g. used condoms); and proper use of LLITNs and other insecticide treated materials. Bed net use for clothing, fish nets and wrapping should

be discouraged, as should indiscriminate disposal of worn-out netting.

3.4 Epidemiological surveillance and reporting

Recommended Determination
Categorical Exclusion per 22 CFR 216.2 (c)(viii) NOTE: this categorical exclusion does NOT apply to surveillance activities that include collection of blood or body fluid samples, or otherwise generate hazardous or highly hazardous medical waste. (See section 3.1).

3.5 Policy & strategy development (including promotion of commodity supply chains & formulation of clinical norms)

Recommended Determination
Negative Determination subject to the following condition: 1. Implicated IPs and the FHP Team must undertake all feasible efforts to assure that clinical norms and other aspects of service delivery codified through policy and planning support: • address and support proper waste management (including handling, labeling, treatment, storage, transport and disposal of medical waste) • the capacity of medical facilities for waste management; • prioritize environmental health considerations It is understood that the final content of policy is the decision of host country government organs. However, IPs must proactively advance these principles in their analysis and recommendations. *Mandatory references*. The USAID Bureau for Africa's Environmental Guidelines for Small Scale Activities in Africa (EGSSAA) Chapter 8, "Healthcare Waste: Generation, Handling, Treatment and Disposal http://pdf.usaid.gov/pdf_docs/pnadk154.pdf) contains guidance which must inform the Team's activities to promote proper handling and disposal of medical waste, particularly in the section titled, "Minimum elements of a complete waste management program." Other important references to consult in establishing a waste management program are "WHO's Safe Management of Wastes from Healthcare Activities" The ability of the Team to assure such procedures and capacity is understood to be limited by its level of control over the management of the facilities and operations that USAID/Benin is supporting.

3.6 Support for laboratory testing and implementation of quality control measures for anti-malarial medications at national and local levels

Recommended Determination
Negative Determination subject to the following condition: Appropriate management and disposal protocols must be developed for pharmaceutical and chemical wastes resulting from this activity. The implicated IP must assure their implementation, to the maximum degree consistent with IP control or influence over actions on the ground. Appropriate management and disposal protocols are defined as being generally consistent with the mandatory references cited under section 3.5, above.

3.7. Procurement, storage, management, and disposal of public health commodities

Recommended Determination

A. For LLITN Activities:

Negative Determination subject to the following **condition**,

1. The implicated IP(s) is/are required to purchase and use only WHO-approved brands of long-lasting treated nets and adhere to all relevant stipulations made in the USAID Africa Bureau Programmatic Environmental Assessment for Insecticide-Treated Materials in USAID Activities in Sub-Saharan Africa (ITM PEA).

Note that where procurement is accompanied by promotion or social marketing (as in the case of LLI TNs), the provisions of Section 3.3 also apply. Note that where procurement is accompanied by training or capacity-building, the provisions of section 3.2a/so apply

B. For all other activities in this intervention category:

Negative Determination subject to the following **conditions:**

1. Implementing partners conducting activities involving procurement, storage, management and/or disposal of public health commodities, including pharmaceutical drugs, immunizations and nutritional supplements, should ensure, to the extent possible, that the medical facilities and operations involved have adequate procedures and capacities in place to properly manage and dispose of such commodities.

2 .Consignees for any pharmaceutical drugs procured under this funding will be advised to store the product according to the information provided on the manufacturer's Materials Safety Data Sheet (MSDS).

3. If disposal of any of these pharmaceutical drugs is required, due to expiration date or any other reason, the consignee will be advised that the preferred method of disposal is to return to the manufacturer. If this is not possible then follow WHO guidelines for Safe Disposal of Unwanted Pharmaceuticals.

4. Disposal of packaging and other public health commodities will be treated using the guidelines provided in Environmental Guidelines for Small-Scale Activities in Africa (EGSSAA), Chapter 15: Solid Waste.

Note that where procurement is accompanied by:
• promotion or social marketing the provisions of Section 3.3 also apply.
• training or capacity-building, the provisions of section 3.2 also apply
• service delivery, the provisions of section 3.2 also apply.

3.8 Water supply and sanitation

Recommended Determination
A. Promotion of point-of-use water treatment: Categorical Exclusion per 22 CFR 216.2 (c)(viii)
B. VERY SMALL SCALE construction or rehabilitation of small-scale water & sanitation infrastructure (defined as isolated wells, boreholes and latrines such that the total investment in a given community is less than $100,000 and the total national program size is less than $1 mn/yr) **Negative Determination** subject to the following **conditions,**

1. **Good-practice design standards** must be implemented for new construction and rehabilitation works, generally consistent with USAID's Environmental Guidelines for Small-Scale Activities in Africa (water supply & sanitation chapter); www.encapafricaorq/eqssaa.htn.
These standards must be specified in the EMMP (see Section 4 of this IEE):

- For water supply, they must include siting of new wells well away from groundwater contamination sources (e.g. latrines, cesspits, and dumps), exclusion of livestock from water points, and prevention of standing water at water supply points.
- For latrines, they must include provisions to prevent contamination of water supplies, appropriate choice of latrine type given local environmental conditions (e.g. pit latrines are rarely suitable in locations where the water table is high), provision of hand wash stations, and development and implementation of a system for ongoing latrine cleaning and maintenance

2. **Water quality assurance plan**. For water supply activities, the IP will develop and implement a Water Quality Assurance Plan that will ensure that all new and rehabilitated USAID-funded water supplies provide safe drinking water, defined as meeting local and WHO water quality standards.

This Plan must be approved by the MEO prior to initiation of these activities.

The plan must include and assign responsibility to the IP for initial water quality testing. When feasible, the program must also set in place capacities and responsibilities to provide reasonable assurance that ongoing water quality monitoring occur.

The standards for initial and ongoing testing-- including types of contaminants for which testing should be conducted, testing methods, testing frequency, and issues such as public access to results- should follow any applicable USAID guidance, as well as local laws, regulations and policies.

The plan must include a response protocol in the event that the water does not meet water quality standards.

The plan must include testing for Arsenic per Guidance Cable State 98108651. Specifically, the USAID managing team must assure that the standards and testing procedures described in "Guidelines for Determining the Arsenic Content of Ground Water in USAID-Sponsored Well Programs in Sub-Saharan Africa" (www.encapafrica.orgldocs.htm#specificwater). Note that this guidance requires initial testing, and quarterly testing for four quarters. If the program terminates in less than four quarters, remaining testing is the responsibility of the mission. Water violating the 10ppb Arsenic standard may not be supplied for public consumption.

WATER AND SANITATION INFRASTRUCTURE OTHER THAN VERY SMALL SCALE
(defined as piped community water supplies, or any investment in water and sanitation infrastructure exceeding $100,000 in a single community or more than $1 mn/yr at the national program level)

DEFERRAL
3.9 Construction other than water/sanitation infrastructure

Recommended Determination

A. Rehabilitation and construction of facilities in which the total surface area disturbed is less than 1000m2.

Negative Determination Subject to the Following Conditions.

1. **No complicating factors.** The site is not within 30m of a permanent or seasonal stream or

water body, will NOT involve displacement of existing settlement/inhabitants, has an average slope of less than 5% and is not heavily forested or in an otherwise undisturbed local ecosystem. Sites violating one or more of these criteria are subject to the determinations and conditions for "construction other than very small-scale" (immediately below).

2. **Construction will be undertaken in a manner generally consistent with the guidance** for environmentally sound construction, provided in the Small Scale Construction chapter of the USAID Environmental Guidelines for Small-scale Activities in Africa (http://pdf.usaid.gov/pdf_docs/pnadk154.pdf) At minimum, (1) During construction, prevent sediment-heavy run-off from cleared site or material stockpiles to any surface waters or fields with berms, by covering sand/dirt piles, or by choice of location. (Only applies if construction occurs during rainy season.); (2) Construction must be managed so that no standing water on the site persists more than 4 days; (3) IPs must require their general contractor to certify that it is not extracting fill, sand or gravel from waterways or ecologically sensitive areas, nor is it knowingly purchasing these materials from vendors who do so; (4) IPs must identify and implement any feasible measures to increase the probability that timber is procured from legal, well-managed sources.

3. **Asbestos**. If the presence of Asbestos is suspected in a facility to be renovated, the facility must be tested for asbestos before rehabilitation works begin. Should asbestos be present, then the work must be carried out in conformity with host country requirements, (if any) and in conformity with guidance to be provided by the FHP team, in consultation with the MEO and REA. All results of the testing for asbestos shall be communicated to the C/AOR.

4. **Paint.** No lead-based paint shall be used, when lead-free paint is used, it will be stored properly so as to avoid accidental spills or consumption by children; empty cans will be disposed of in an environmentally safe manner away from areas where contamination of water sources might occur; and the empty cans will be broken or punctured so that they cannot be reused as drinking or food containers.

5. **Water supplies.** Where water supplies for drinking or washing patients or laundry are upgraded or provided, measures will be taken to ensure that drainage from laundry and bathing facilities does not affect the water supply nor pose threats for transmittal of infectious diseases. The conditions of section 3.8 applying to water supplies will also be observed.

6. **Waste handling equipment and infrastructure**. USAID intervention must result in the facilities that possess adequate infrastructure and equipment to appropriately handle the health care wastes they may generate; see Section 3.2.

B. Construction other than very small-scale (facilities in which the total surface area disturbed is more than 1000 m2.) **DEFERRAL**

3.10 Indoor Residual Spraying (IRS)

A revised Supplemental Environmental Assessment for Presidential Malaria Initiative-Indoor Residual Spraying (IRS) for Malaria Control in Benin 01/2011 was completed for all 9 communes of the Department of Atacora (current spray area) and the 4 communes in Oueme/Plateau (discontinued spray area).

The report states under the section Adverse Impacts and Mitigation Measures that**,**

"Based on USAID's experience with implementation of IRS in fifteen other sub-Saharan African countries under the President's Malaria Initiative (PMI), the most likely potential adverse health impact of the IRS intervention is unintentional pesticide exposure, leading to acute yet transitory health impacts on beneficiaries and spray operators. To mitigate this risk, all individuals involved in the implementation of spraying – from spray operators to wash persons to storekeepers – will be trained in the best management of IRS, and community members will be informed on how to

minimize direct exposure to insecticides (e.g., staying out of houses sprayed for two hours, removing furniture and food from houses prior to spraying, etc).

The highest risk to the environment is the likely contamination to the biodiversity found in Benin i.e. (rivers, lakes, wetlands, marshes, forests) etc in the mentioned regions.

Although based on preliminary mapping exercises and reconnaissance visits in Atacora region conducted in 2010, November, there seem to be no settlements or homesteads close to these natural water bodies, as a risk mitigation, during the detailed logistical assessment, mapping of structures will be undertaken and houses within 30 meters from water bodies will not be sprayed as a measure of minimizing risk to contamination from spills.

Additional mitigation measures include utilization of personal protective equipment, best practice in store keeping and pesticide storage and management, best practices for re-use/disposal of contaminated water from operations, and enforcement of multiple supervisory layers."

3.11 Government to Government funding

Section 1.3.3 "Country Systems Strengthening" describes activities that are proposed for support through direct funding to three Government of Benin institutions. USAID's general goal should be to mitigate the identified environmental and health risks to a similar extent, as activities managed more directly by USAID. To accomplish this goal, USAID needs to do the following:

- USAID must evaluate the capacity of the target institutions to assure environmentally sound delivery of the intended services, including the sufficiency of the standards they employ; the demonstrated policy, procedural and operational capacities to assure that appropriate environmental soundness standards are met; and the track record of these institutions for meeting such standards;

- Depending upon the host government's capacity, USAID must define, and negotiate with the Government of Benin, the appropriate role for USAID in environmental oversight. Possible approaches to filling any gaps in the Government of Benin's capacity include, but are not limited to the provision of third-party monitoring and targeted investments in staffing and materials focused on environmental protection.

- USAID must negotiate an environmental mitigation and monitoring regime with the Government of Benin that provides both parties with reports on the environmental factors of relevance to the activity such that both parties can understand how well the necessary mitigation measures are being met.

- Adaptive management discussions between USAID and the Government of Benin must include the status of implementation of this environmental mitigation and monitoring regime.

4.0 Restrictions, Implementation and Monitoring

Refer to Section 4 for additional restrictions and guidance regarding implementation and monitoring of program activities in accordance with this IEE.

APPROVAL OF ENVIRONMENTAL ACTION RECOMMENDED:

CLEARANCE:

Mission Director: _____ Date: 9/14/12

Kevin Armstrong

CONCURRENCE:

AFR Bureau Environmental Officer: _____ 9/27/12

Brian Hirsch

Approved: X Disapproved: Date File No:

ADDITIONAL CLEARANCES:

GH Bureau Environmental Officer Date:

Family Health Team Leader: _____ MD Date: 9/14/12

Milton Amayun

Regional Environmental Advisor: _____ Date: 9/14/12

Anne Dix

Mission Environmental Officer: _____ Date: 14 Sept 2012

Scott Stofel

APPROVAL OF ENVIRONMENTAL ACTION RECOMMENDED:

C L E A R A N C E :

Mission Director:_____ Date:

Kevin Armstrong

CONCURRENCE:

AFR Bureau Environmental Officer:_____

Brian Hirsch

Approved: Disapproved: Date File No:

ADDITIONAL CLEARANCES:

GH Bureau Environmental Officer Date:

Family Health Team Leader:_____ Date:

Milton Amayun

Regional Environmental Advisor:_____ Date:

Anne Dix

Mission Environmental Advisor:_____ Date:

Scott Stofel

INITIAL ENVIRONMENTAL EXAMINATIONPROGRAM/ ACTIVITY DATA:

Program/Activity Number: 680-233

Program Activity Title: Family Health Program

Country/Region: Benin/West Africa

Functional Objective: Investing In People

Program Area: 3.1-Health

Program Elements: 3.1.1-HIV/AIDS
3.1.3-Malaria
3.1.6-Maternal and Child Health (MCH)
3.1.7-Family Planning and Reproductive Health (FP/RH)

1.0 BACKGROUND AND PROGRAM DESCRIPTION

1.1 PURPOSE AND SCOPE OF IEE

This IEE addresses the entire portfolio of existing, new, and proposed activities of the USAID/Benin Family Health Program.

Development of this single IEE for the Family Health Program was undertaken for organizational and programmatic reasons. Specifically, it should better enable the Family Health Team to oversee environmental compliance of the Family Health portfolio.

For purposes of analysis, this IEE synthesizes current and anticipated Family Health Program activities under the office's various projects and initiatives into a set of nine (9) intervention categories, each of which contains a number of entailed activities. As with all IEEs, and in accordance with 22 CFR 216, it reviews the reasonably foreseeable effects of each activity on the environment. On this basis, this IEE recommends Threshold Decisions and, in some cases, attendant conditions, for these activities.

In addition, this IEE sets out project-level implementation procedures intended to assure that conditions in this IEE are translated into project-specific mitigation measures, and to assure systematic compliance with this IEE during project and program implementation. These procedures are themselves a general condition of approval for the IEE, and their implementation is therefore mandatory.

This IEE is a critical element of a mandatory environmental review and compliance process meant to achieve environmentally sound activity design and implementation. It replaces and supersedes the SO level IEE currently covering the USAID/Benin Family Health Program portfolio.

1.2 DESCRIPTION OF THE FAMILY HEALTH PROGRAM

The Family Health Program falls within the Foreign Assistance Reform (FAR) framework under the "Investing In People" Functional Objective. The USAID/Benin Family Health Program is under the Health Area (Program Area 3.1) and includes activities in the Program Elements of HIV/AIDS (3.1.1), Maternal and Child Health (MCH) (3.1.6), Family Planning and

Reproductive Health (FP/RH) (3.1.7), and Malaria (3. 1.3) within an integrated approach to health systems strengthening.
Inclusion in the President's Malaria Initiative (PMI) in 2008 expanded the scale of malaria prevention and treatment activities in Benin and added indoor residual spraying (IRS) to the prevention activities being implemented.

1.2.1 Development Objective and Intermediate Results

The Global Health Initiative country development objective for 2011-2015 is "Improved Health Status of Beninese Families." Activities will focus on reducing deaths from malaria, lowering maternal mortality and reducing under-five mortality through a variety of interventions. Interventions are focused on malaria, family planning and reproductive health, maternal and child health including immunizations.

These services include: (1) treatment and prevention of childhood illnesses with a focus on immunization, malaria, diarrhea, and respiratory infections; (2) services to mothers and babies to ensure safe pregnancy, delivery, post-partum care, and health of newborns, including prevention of mother to child transmission of HIV/AIDS and prevention of malaria during pregnancy; (3) family planning services; (4) prevention of HIV/AIDS transmission, including promotion of voluntary counseling and testing services. Increasing the use of family health services will result in a healthier population and a strengthened human resource base, thereby contributing to reduced morbidity and mortality.

The development objective is supported by three intermediate results:

- **Intermediate Result 1(IR1): Improved public health sector performance in delivering integrated family health services.**

Despite good geographic access to public health services, poor infrastructure, shortages of human resources, medicines and supplies, and costly referral care limit service delivery in Benin. Strengthening the public health system is the core of this IR. Planned activities under the sub-results include:

1.1 Improved planning and management of health systems and services, especially at decentralized level. USAID will support training and technical assistance to improve leadership capacity at the Ministry of Health (MOH) central level with an emphasis on the phased delivery of the *Paquet Interventions à Haut Impact (PIHI)* to all districts by the *Direction de la Santé de la Mère et de l'Enfant (DSME)* and the National Malaria Control Program.

Under this sub-result, support for rationalizing and strengthening the network of community health workers will play an important role in strengthening service delivery, including prevention and health promotion, for those services that may be appropriately delivered at community level. At the department level, the quality improvement collaboratives will receive further training and support in organizing health services to health centers. At the central level, the focus will be on improving the leadership, planning and supervision skills of MOH staff to enable them to manage national programs effectively. Services to be addressed include focused antenatal services, with the use of Active Management of the Third stage of Labor (AMTSL) to prevent postpartum hemorrhage as a core element in reducing maternal deaths. Support to the national immunization program will focus on the revitalization of routine immunization services, through the achievement of the Reaching Every District (RED) Strategy. This will be measured by the vaccination rates in each department and the polio cases confirmed through surveillance activities. For malaria, the Department of Atacora will be helped in the planning and supervision of additional rounds of Indoor Residual Spraying (IRS) in selected communes. Other activities include supporting the Health Management Information System focused on malaria indicators for the PNLP and the Demographic and Health Survey. The support for the expansion of reforms

towards transparency and efficiency at the Central Medical Stores (CAME) will include regional CAME offices and peripheral health units outside Cotonou.

1.2 Improved quality service delivery, especially for women and young children, at health facilities. USAID will support quality improvements in service delivery, with an emphasis on the elements of PIHI, by providing quality improvement support through training and mentoring to nurses, midwives and other clinic or maternity staff who are at the frontlines of serving mothers and children. The elements of the PIHI cut across malaria, maternal health/family planning (FP) and child health, and are intended to be applied to the different levels of the health system, including the community and the household. As a national policy, PIHI needs to be adopted by both the public and private health service providers to ensure maximum impact on health. This sub-result will be implemented through the initiation of quality improvements in health services provided at health centers as well as referral facilities like the *Centre Hospitalier Départemental*, where children with severe malaria will be treated with the TETU (Triage, Evaluation and Treat with Urgency) approach. Checklists, supervision visits, case studies will all be used to upgrade the clinical knowledge and competence of health staff. Special attention will be given to staff's awareness and attitudes towards pregnant mothers during labor and delivery, preserving their dignity at a time of vulnerability.

1.3 Essential commodities more available at service and product delivery points. The quality and timeliness of care and treatment will not be possible without the essential medicines and supplies needed for the case management of malaria, pregnant mothers and sick children. A vaccination program will lose credibility if vaccines are not available to maintain child health, and a family planning program will not be effective if commodity stock-outs are frequent. The aim of this sub-result is to enable the supply chain for both the public and private health sub-sectors to effectively manage the procurement and flow of essential drugs, vaccines and supplies. For malaria, the prevention of stock-outs of Artemisinin-based Combination Therapy (ACT) and sulfadoxine-pyrimethamine (SP) will be emphasized; for child health, vaccines and antibiotics for pneumonia; and for FP, injectable contraceptives, implants and condoms. USAID will support the training of staff in the management of the supply chain, from the planning and quantification of orders to the point of reporting back to the MOH on the use of products. Training and technical assistance will support the introduction of implants for long-term FP use, and to prepare for the addition of vaccines against pneumococcus and rotavirus for children. USAID will continue to support the procurement of kits and drugs for malaria, to diagnose and treat children testing positive for malaria. USAID will also supply SP to prevent malaria in pregnant women.

IR 2. Improved private health sector performance in delivering integrated family health services.

The private health care sub-sector is an increasingly important source of health care for the Beninese. Its potential to improve the health status of Benin's families is enormous, and its coverage of services rises to 60-70 percent of care provided nationally when the public health sector is on strike. The size of the target group of private sector and NGO health providers in Benin is currently unknown, as it is a mix of large private hospitals run by faith-based organizations, private clinics run by licensed health practitioners, pharmacies and dispensaries, unlicensed traditional practitioners, and itinerant service providers and drug vendors (mostly unlicensed). Activities under this IR will seek to enable private and NGO health providers to deliver the same quality services USAID has supported in the public sector for years. The first step will be to map and quantify the sub-sector, and provide training and technical assistance to motivate unlicensed providers to conform to GOB protocols and standards. Because the MOH is authorized by law to work only with the 189 licensed facilities and practitioners, activities under this IR will seek to double that number of licensed facilities by 2015. Hence, in the next three years, USAID will provide support and technical assistance to gradually enable and equip the MOH to enforce comprehensive regulations, including government accreditation and

enforcement of biennial inspections of all private health facilities. Planned activities under the sub-results include:

2.1 Improved public sector policies, oversight and supervision of private sector service delivery. USAID will engage private health sector providers to follow national policies on licensing, staff skills and service standards, while building the capacity of the GOB/MOH to assume a supervisory role over private health providers. This will help align clinical practices and standards of both the private and public sectors along the lines of best practices recommended by WHO or UNICEF. Information on the diagnosis, management and follow-up of killer diseases or conditions in Benin will be disseminated, and seminars or short courses will be held. Mentoring, technical assistance and exchange visits will be organized in collaboration with other donors and Beninese health professional associations to upgrade the capacity of Benin's private health sector. The focus will be on malaria prevention and control, maternal health and FP, and child health – and interventions will closely follow the MOH protocols and plans. On FP services, the socially franchised private network of ProFam clinics is ahead of the MOH in the insertion of implants, and their experience can be used to help the public sector adopt the use of implants for FP.

2.2 Improved quality service delivery, especially for women and young children, at private health facilities. Activities will mirror those provided to the public sector to improve the quality of service delivery with a particular emphasis on PIHI. As in the public sector, the focus for quality improvement will be on the prevention and case management of malaria, the use of AMTSL for preventing hemorrhage during delivery, and IMCI for sick children. USAID will support training and mentoring to nurses, midwives and other clinic or maternity staff who are at the frontlines of serving mothers and children. Checklists, supervision visits, case studies will all be used to upgrade the clinical knowledge and competence of staff. Special attention will be given to staff awareness and attitudes towards pregnant delivering mothers, protecting their dignity at a time of vulnerability. Activities under this sub-result will also support increasing the access of private clinics to supplies available through CAME.

2.3 Strengthened private health sector providers, as both for-profit and not-for-profit businesses. To improve sustainability of services, private providers must be able to manage their costs and revenues effectively. USAID will support activities to enhance the viability and sustainability of private for-profit and not-for-profit health service providers. The ProFam franchises will be showcased as a private not-for-profit model, alongside for-profit private clinics. Joint training with public health sector providers will be organized around the subjects of leadership training, project development, financing, personnel management, and clinic or pharmacy management. USAID will initiate discussions with the World Bank and the European Union on how a privatized health insurance system could be set up in Benin.

IR 3. Improved preventive and care-seeking behavior of an empowered population.
This IR will focus on activities that will positively influence decisions and actions taken by individuals, households and communities to improve or maintain health. Interpersonal communication and social marketing campaigns using a diverse mix of media will be used, with community radio as an information channel for those outside the urban areas. It also includes the strengthening of the role of communities in the financing of and advocacy for health care at the community level. This is based on the fact that community financing for health care has outpaced central government financing as a percentage of total resources available to health zones. Planned activities under the sub-results include:

3.1 Increased appropriate health-promoting behaviors made by households, and especially women. This sub-result includes the promotion of personal and household behaviors that lead to disease prevention and health maintenance. This sub-result also recognizes the central role women play in maintaining family health in the home and in the community. For malaria prevention, children and young mothers sleeping under a mosquito net will be an ongoing theme

for behavior change communication, as it was in the recent universal distribution campaign of long-lasting impregnated mosquito nets. Motivating mothers to take SP during pregnancy is another theme. For child health, the use of Orasel with zinc to treat diarrhea in young children will continue to be emphasized, together with hand-washing at appropriate times and point-of-use disinfection of drinking water to prevent it. Mothers will be encouraged to practice exclusive breastfeeding of infants beginning at birth and until six months to promote good infant nutrition. For FP, the use of condoms (female and male) for FP and HIV prevention and family planning, as well as other modern contraceptive methods will be promoted to avoid pregnancy. Many of the above behaviors depend on women; hence, messages will appropriately target women in their local languages.

3.2 Informed families make appropriate choices on accessing public and private health services and commodities. This sub-result focuses on educating families to use health facilities and services in appropriate ways. This includes the ability of women to make informed FP choices about long-term methods such as implants and injectables which are available at a clinic or health facility. In line with their roles in maintaining family health, mothers will be strongly encouraged to bring their children for vaccinations at the appropriate intervals to maintain health, or mothers who have fistulas to seek surgical repair of their condition. Prompt decision-making to seek treatment after the recognition of the signs of and symptoms of malaria and pneumonia in children will be emphasized. Families will be informed of the need for children with fever to be tested with Rapid Diagnostic Tests (RDTs) and, in case of malaria, to be treated with artemisinin-based combination therapy (ACTs).

3.3 *Strengthened community-level contribution to health sector decisions and financing.* This sub-result promotes the education of local community clients to advocate, organize and manage aspects of their health care to the extent possible, including assuring health care financing for health services. USAID will support activities to enhance the ability of community members, especially women, to shape and actively participate in the financing and management of their *mutuelles* and Village Health Committees and to mobilize immunization campaigns, bednet distribution campaigns, and potentially, to manage the work of CHWs. This will also include information campaigns to organize support for emergency transport of obstetric emergency cases, assist the very poor to access a free Caesarian section funded by the government, or apply for health services with support from the Indigent Fund.

1.3 DESCRIPTION OF FAMILY HEALTH PROGRAM PROJECTS AND INDICATIVE ACTIVITIES

The Family Health Program portfolio consists of the projects listed in the table below. The projects are summarized below, and indicative activities listed. These project descriptions and indicative activities form the basis for the general Family Health Program intervention categories listed in section 1.4.

Family Health Program	**LOP funding**	**Start Date**	**End Date**
Accelerating Reduction of Malaria-Related Morbidity and Mortality in Benin (ARM3)	$20 million	12/2011	09/30/2016
Appui au système sanitaire intègre pour la sante de tous (ASSIST)	$12.5 million	07/01/13	09/30/2016
Indoor Residual Spraying (IRS)	$3 million (approx.)/year	08/2011	09/30/2016
Direct government to government support National Malaria Control Program (NMCP)	$1 million (approx.)	10/01/2012	09/30/2016

Ministry of Health (non-NMCP)	$3.95 million	01/31/2013	09/30/2016
Commune Development Fund (FADEC)	$1,350,000	05/01/2013	09/30/2015
Central Medical Stores (CAME)	$4.5 million	09/30/2013	09/30/2015
Center for Epidemiological Research (CREC)	$420,000	10/2012	09/30/2016
Regional Institute of Public Health (IRSP)	$950,000	10/2012	09/30/2016
Sustainable Leadership, Management and Governance (SLMG)	$2.5 million	9/30/2012	9/29/2015
Advancing communities and local organization APS for health promotion and service delivery	$2 million (approx.)/year	12/2012	09/2016
ProFam Private Clinic Service Improvement (SIFPO)	$1.1 million	09/30/2012	09/29/2015
Commodity Procurement Activities (DELIVER AND CENTRAL COMMODITIES PROCUREMENT)	$6.1 million (approx.)/year	Ongoing	ongoing
WHO/AFRO Polio Grant	$100,000/year	Ongoing	ongoing
Peri-Urban Hygiene Improvement / WASH+	$950,000	10/1/2012	09/30/2015

1.3.1 Accelerating Reduction of Malaria-related Morbidity and Mortality in Benin (ARM3 Benin)

This five-year, $20 million project was awarded in August 2011. Estimated life-of-project dates are December 2010 to December 2016. It will support the national malaria strategy through a wide array of prevention and case management activities. It will implement a broad BCC strategy to promote prompt referral to health facilities for treatment and compliance with ACTs; the use of bed nets; and early antenatal care (ANC) attendance and use of intermittent preventive treatment of malaria in pregnant women (IPTp). It will also procure and distribute LLITNs through the private sector, using a social marketing approach. In case management, it will support training of MOH staff involved in the prevention, diagnosis, and control of malaria, and strengthen and help implement a supervisory strategy, as part of a comprehensive quality assurance and integrated approach, to ensure high-quality malaria diagnostics and case management with ACTs, focused ANC (including provision of sulfadoxine-pyrimethamine) and LLITN distribution to pregnant women and children under five years of age during routine services. This project will also take on the Triage, Evaluation and Treatment with Urgency (TETU) component.

Targeted investments will also be made to support reforms and capacity building to strengthen the public sector logistics and supply chain management system. Activities will focus on standardizing the system, complying with international norms, and emphasizing linking commodity purchases to actual commodity consumption in order to avoid stock-outs and commodity expiration. Technical assistance under this mechanism will assist the National Malaria Control Program strengthen its ability to collect, analyze and disseminate a variety of information on morbidity and mortality due to malaria.

1.3.2 Support Integrated Health System Strengthening for All (ASSIST)

By mid- FY13, USAID/Benin plans to award a cooperative agreement to bring an expert technical assistance team to assist the Government of Benin to reduce maternal, newborn and child mortality. ASSIST will be a principle mechanism for USAID/Benin for technical assistance for health systems strengthening and advancing universal health care (RAMU). This work will include strengthening human resource management practices, expanding the package of high impact interventions offered at the community level, facilitating quality improvement approaches for PIHI performance, strengthening routine health information system and data based decision making, promoting private sector licensing, credits and public sector oversight, increasing civil society awareness of RAMU, and positioning private sector clinics and mutuelles for participation in RAMU.

Health services supported include malaria treatment, family planning and reproductive health, Integrated Management of Childhood Illness (IMCI), Prevention of Mother-to-Child Transmission of HIV (PMTCT), and community and clinical emergency obstetric and neonatal care. The activity will end in September 2016.

1.3.3 Country Systems Strengthening

Prior to September 30, 2012, USAID/Benin will give direct funding to the following country systems: **Centre de Recherche Entomologique de Cotonou (CREC); Institut Régional de Santé Publique (IRSP);** and the **National Malaria Control Program (NMCP).** These institutions have a demonstrated track record managing USAID malaria funds for capacity building that focuses on leadership, management, and governance; planning; policy development; drug resistance monitoring, and on improving the health information and supply chain systems.

Government to Government funding will be provided to the **Ministry of Health** and possibly the following implementation units: Maternal and Child Health Unit, Public Health Division, Department of Resources and Financial Management, Expanded Immunization Program and/or the Department of Planning and Prospective (DPP) for activities that focus on training of health care workers according to national guidelines; introduction and expansion of quality assurance techniques throughout the health system; reduction of financial barriers through support and expansion of community health insurance schemes; support and expansion of community-level health services; strengthening of the health system in the areas of data collection and use, planning, and human resources management; and community mobilization and community-based health education and behavior change communication (BCC) activities.

The **Central Medical Stores of Benin (CAME)** will also receive direct financial support for capacity building including for commodity security committee activities, forecasting, stock re-allocations, and inter-agency coordination of procurement planning. G2G will also support essential training, the supervision of the logistics supply chain information system (Medistock) and commodity management quality control. USAID/Benin currently procures malaria and contraceptive commodities directly; however, in line with USAID Forward we will assess and determine how CAME can play a greater role in health commodity procurement with the aim of gradually taking over malaria and contraceptive commodity procurements by FY2015.

USAID/Benin is also exploring opportunities to invest in the **Commune Support Funds (FADeC)** for the immunization Reaching Every District (RED) strategy to contribute to health decentralization and improved vaccination coverage. In the first year, we will target 10 low vaccination coverage communes will be targeted with the MoH and UNICEF. USAID/Benin will identify a vetted, proven auditing firm to monitor these investments and prepare a monthly governance report.

1.3.4 Benin Leadership, Management and Governance

Under IR 1 and 2, USAID/Benin will support a national, long term strategy to build leadership, management, and governance capacity in the MOH, to be incorporated into all phases of development, implementation, and monitoring and evaluation of priority health programs in Benin. This initiative will be implemented by SLMG in partnership with the Regional Institute of Public Health (IRSP). This is a 3-year, $2 million initiative SLMG will offer core training to managers and establish competency expectations/standards set (e.g. at the end of this training, decentralized managers should be able to develop annual plans to budget, oversee essential commodities to avoid stock outs, oversee human resources to ensure compliance with standards of care). At the end of year two, SLMG will assess the impact of this training among the participant cohorts.

This work will be initially targeted towards leaders at the centralized level for several MoH programs listed in the section above and expanded in year two to the six Department Medical Directors, select Zonal Medical Coordinators, and major private health facility managers and network leaders. Expected results include changes to human resources policies within the MOH that will create a motivated workforce; strengthened capacity within IRSP to develop and institute leadership, management and governance courses; the development of accreditation standards for leadership courses; conferences aimed at bringing together the public and private health sectors; and the establishment of coordinating bodies within the MOH to ensure adherence and also to introduce sustainability measures such as training of trainers and institutionalization into courses at IRSP.

1.3.5 SIFPO/PSI

This is a 3 year, $1,200,000 initiative to advance the Profam network of private clinics initiated with USAID/Benin financial and technical support. SIFPO/PSI will play a complementary role to SHOPs in the realization of IR 2. Its objective is to improve delivery of reproductive and maternal health services among the Profam franchise of 50 private clinics. The project will collaborate with UNFPA and the MoH to review and modify training and communication materials on maternal and newborn care and post-partum family planning. It will train and mentor staff at 50 Profam clinics to integrate active management of third stage labor, essential newborn care and post-partum family planning counseling through expansion of PIHI implementation. Building on USAID/Ghana's work, SIFPO/PSI will assess the feasibility and if appropriate, introduce vasectomy services to expand long term contraception options for men. SIFPO/PSI will take the lead in working with the MoH to develop an accreditation and performance recognition system for private clinics. Efforts will focus on strengthening the organizational capacity of the franchise with business and financial skill building to enhance its sustainability.

1.3.6 Advancing Communities/Grant Management to Engage Local Organizations

To support USAID/Benin in its efforts to efficiently channel an increasing level of funding to PVOs/NGOs and their partners in Benin and increase civil society participation, Advancing Communities will support the Mission to develop an RFA to select a capable organization in Benin to lead a health grant management mechanism. This organization would be responsible to screen potential civil society recipients; organize information events about funding opportunities; contribute to the Annual Program Statements; manage the selection, vetting and award process; organize capacity building for local organization recipients as needed (e.g. work planning, results based management, best practices in reproductive health and family planning, gender analysis, and financial management). Up to $1.2 million is planned over the life of this plan to access this field support mechanism.

The following limited competition awards are planned:

Limited Local Competition APS: Family Planning community based service delivery. Up to two awards will be made to local organizations to raise demand for and make available free counseling and family planning products at the community level. These will be implemented in communes with low contraceptive prevalence and low accessibility to services.

Limited Local Competition APS: Social Marketing. A local organization will be selected to manage nation-wide social marketing of point of use water purification treatments, ORS zinc, and condoms[1]. They will strengthen supply chain management among wholesalers, develop and disseminate promotional materials, and conduct outreach to women's and religious groups, primary and secondary school teachers and students, mutuelle members and other influential, organized groups. USAID/Benin will collaborate with ASSIST to monitor this work.

Limited Local Competition APS: Health Communications. Local organizations will implement the national PIHI behavior change strategy that will support individual behaviors and social change that lead to disease prevention and health maintenance, with a focus on child spacing and family planning, HIV prevention, antenatal care and maternal nutrition, skilled delivery assistance, post-partum and newborn care, breastfeeding and child nutrition, immunizations, diarrheal disease control, pneumonia care seeking, and malaria[2] prevention (IPT, sleeping under nets) and care seeking within 24 hours of onset of symptoms. It is envisioned that an award will be made to an organization for each of the 12 administrative departments; however, if the capability is sufficient, this may be reduced to 6 Health Departments (which group 2 administrative departments).

Under Annual Program Statements (APS), local organizations will compete for the opportunity to lead behavior change communications activities at the health department level. The scope will include: training local broadcasters; managing radio spot diffusion; organizing campaigns and other public health events; interpersonal communication skill building of social opinion leaders, CHWs, and health workers; dissemination of job aids; monitoring knowledge, attitudes and practice; and adapting messages and communication channels to improve gender sensitivity and effectiveness.

Local Competition APS: Integrated Community Case Management for Sick Children (iCCM). IFHP will make 4-6 awards to local organizations to support health zones with existing USAID/Benin supported community health worker programs providing the complete package of iCCM for malaria, diarrhea, malnutrition, and pneumonia services. The table below specifies the 10 health zones with existing USAID/Benin support. Work under the APS includes scale-up of confirmatory testing for malaria, referral system strengthening, integration of mobile phone approaches for improved communications, refresher training, and equipping CHWs to

[1] ABMS distributes oral contraceptives, IUDS, hormonal implants, cycle beads and super nets through private pharmacies. That component may fit best under SIFPO/PSI with the Profam Clinics.
[2] ASSIST will collaborate closely with ARM3 to integrate malaria control and prevention into the strategy.

provide new interventions as authorized by the MoH (e.g. injectable contraceptives and essential newborn care).

1.3.7 Indoor Residual Spraying

As part of a malaria control program under the President's Malaria Initiative (PMI), USAID implements indoor residual spraying (IRS) for malaria vector control using bendiocarb. Benin is characterized by perennial malaria transmission and IRS is used to reduce malaria incidence in the seasons of highest transmission. RTI International implements activities in Benin under this project, number GHN-I-01-06-00002 Task Order 1. This mechanism supports all aspects of on-the-ground implementation of IRS, including the procurement and delivery of all insecticides and equipment, preparation of environmental assessments and monitoring of environmental compliance, training and assistance with IRS management and implementation, and capacity building for local institutions for implementation of future IRS activities. Spraying is accompanied by appropriate community mobilization and information, education, communication (IEC) and BCC efforts to ensure acceptance and compliance with IRS. Each round of spraying costs approximately $2.75 million.

Spraying began in May 2008 and will be continued under phase II of the PMI, which is extended to 2014. To date, four rounds of IRS have been conducted in the southeast of Benin. RTI International assisted the National Malaria Control Program in developing a long-term IRS strategy in 2009. Under this long-term strategy, IRS activities were moved to northern Benin and new target areas were identified, based on coverage surveys and clinical assessments, as well as entomological and sociological surveys to establish the presence, density, and resistance of mosquitoes and the acceptance of IRS by the population. There have already been 2 completed rounds of IRS in northern Benin. It is estimated that USAID will spend approximately $25 million on IRS activities in Benin during the 2008-2014 period (nine rounds of spraying).

Abt Associates and its sub-partner, the Center for Entomological Research in Cotonou (CREC), will also strengthen Benin's entomological capacity through support for the national insecticide resistance surveillance program and funding of operations research (OR) to assess the effect of insecticide resistance on the impact and efficacy of insecticide treated nets and IRS. PMI support will allow ongoing surveillance activities to continue, expand the number of sites, and expand the system to include resistance monitoring for additional insecticides. Data from the OR will be used to inform the scale-up of IRS and LLITN coverage.

A revised Supplemental Environmental Assessment for Presidential Malaria Initiative Indoor Residual Spraying (IRS) for Malaria Control in Benin was conducted in January 2011 for the original area (4 communes in Oueme/Plateau) and the extension area (9 communes in Atacora) selected for IRS in Benin.[3]

1.3.8 Commodity Procurement Activities

The Family Health Program obligates funds into central-level mechanisms [DELIVER Task

[3] As noted, the potential environmental impacts of IRS activities are specifically considered in the *Supplemental Environmental Assessment for Presidential Malaria Initiative Indoor Residual Spraying (IRS) for Malaria Control in Benin*. More generally, pesticide activities considered under this program are covered in the PERSUAP, which was prepared on February 18, 2008 in accordance with AFR Bureau guidance and fulfilled all analytical elements required by 22CFR216.3 (b)

Order 7 for Malaria, Central Commodities Procurement] on an annual basis to purchase public health commodities for public and private health facilities and community-based programs. As we develop leadership, management and governance capacity we will work towards transferring some procurement directly to CAME.

The following commodities for prevention and treatment are procured: long-lasting insecticide-treated bed nets (LLITNs), preventive treatments for pregnant women, rapid diagnostic tests for malaria and HIV, treatments of artemisinin-based combination therapy (ACT), suppositories for pre-referral treatment of severe malaria cases, quinine drug kits (including glucose solution, perfusion equipment, etc.) for inpatient treatment of severe malaria, contraceptives, condoms, and laboratory microscopes and reagents for microscopy (slides, Giemsa stain, etc.). Procurement activities are expected to continue throughout the life of the Family Health Program, with average annual expenditures for commodities of $6.1 million.

1.3.9 WHO/AFRO Polio Grant

Activities in Benin under grant number AFR-G-00-07-00003 include support for quarterly surveillance meetings and reports, social mobilization activities, reinforcement of acute flaccid paralysis (AFP) surveillance activities, and oral polio vaccine campaigns. Activities are anticipated to continue until Benin is certified polio free. Average annual contribution is $100,000.

1.3.10 Peri-Urban Hygiene Improvement/WASH+: This initiative focuses on establishing approaches to effectively improve water and sanitation in high risk urban populations. The final goal of this project is the reduction of household vulnerability to diarrheal disease and cholera in peri-urban areas of Cotonou. The objectives include conducting a comprehensive baseline survey of environmental health practices and conditions in poor, underserved peri-urban neighborhoods of Cotonou; promotion of hand washing with soap, and safe water storage and treatment at point of use; and building the technical capacity of local partners in designing, delivering and monitoring hygiene behavior change interventions. These goals will be achieved primarily through advocacy and resource leveraging between technical and financial partners as well as the MOH.

1.4 FAMILY HEALTH PROGRAM INTERVENTION CATEGORIES FOR ENVIRONMENTAL REVIEW

For the purposes of environmental review and compliance, the project-level intervention approaches and indicative activities described above have been consolidated into the following intervention categories.

1. Direct and capacity-building support for health service delivery and access to health services
2. Social marketing, education, and behavior change communication (BCC)
3. Epidemiological surveillance and reporting
4. Policy & strategy development (including promotion of commodity supply chains & formulation of clinical norms)
5. Support for laboratory testing and implementation of quality control measures for antimalarial medications at national and local levels
6. Procurement, storage, management, and disposal of public health commodities
7. Water supply and sanitation
8. Construction other than water/sanitation infrastructure
9. Indoor Residual Spraying (IRS)

Each intervention category has a number of entailed activities; these are set out and, where not

self-explanatory, annotated in Section 3 of this IEE.

Note that individual Family Health Program projects frequently implement activities in more than one intervention category. Annex 2 of this IEE lists activities under each project, and matches these to their recommended determinations.

2.0 COUNTRY AND ENVIRONMENTAL INFORMATION (BASELINE INFORMATION)

2.1 BENIN PHYSICAL AND SOCIO-ECONOMIC PROFILE

Benin is a small country with total area of 112,620 sq. km. (Approximately the size of Pennsylvania) It is bordered by Togo to the west, Nigeria to the east and Burkina Faso and Niger to the North. To the south, Benin adjoins the Gulf of Guinea along a 125 km. coastline (see Map 1).

There are four distinct geographic and topographic zones in Benin:

1) The Mountainous region (associated with the Atakora mountain range in the northwest Benin), the main watershed for Benin and source for the Oueme, Pendjan and Mekrou rivers;
2) The Coastal zone, a relatively narrow strip of land that contains all of the lagoons and some of the most important lakes in Benin;
3) The Plateau region made up of clay and sand deposits that is found just north of the coastal zone and continues about 100 km. inland; and
4) The peneplain of Benin (large plateau) that increases in elevation very slowly from south to north.

Benin is covered by about 333 sq. km of lakes and lagoons. The river system is extensive arid totals 3050 km. in length. Benin has three climatic zones. The southern zone is humid and has four seasons (two wet, two dry); this zone contains the best soils, vegetative growth and the highest levels of biodiversity. The central zone has two seasons. The northern zone is the driest region and has two seasons.

Benin is a poor country with low health and education standards. Benin's health status is among the lowest in the world. Infant, child and maternal mortality rates, although falling, are among the highest in West Africa and the fertility rate remains high. Benin's population is projected to double in less than 25 years, adversely affecting the gains of economic growth and placing stress on its limited social infrastructure. About 40 percent of Benin's population of nine million is urban, while about half live in the southern part of the country, which represents only about 10 percent of the total land area. As in many West African countries, a large percentage of the population is young; 45 percent of Benin's population is 15 years old or younger. Illiteracy rates are also high, at about 70 percent. The economy of Benin is highly dependent on subsistence agriculture, cotton production, and regional trade.

Benin's major development constraints include a lack of infrastructure, accelerated urbanization, increasing unemployment, deforestation, soil degradation, and environmental pollution. Corruption continues to pose a serious threat to long-term development efforts although there is some limited government action to combat the problem. The most important environment issues currently facing Benin include inadequate supplies of potable water, low access to sanitation, poaching (which threatens wildlife populations), deforestation, and increasing desertification. Pressure from rapid population growth is a significant contributing factor to these problems.

2.2 BENIN HEALTH SECTOR PROFILE

The majority of health services in Benin are delivered by public sector facilities and practitioners. The public health workforce experiences rapid turnover, leading to inconsistent delivery of services and improperly followed protocols. Delays in approving and disseminating regulatory texts and weak management and planning capacity hamper effective implementation. The public sector alone cannot meet the demand for health products and services in Benin. The private sector, which provides about 40 percent of medical care, is largely unregulated.

The public health system is divided administratively into three levels: central, regional, and peripheral (where the Health Zone is located) community. Services are provided at four levels: regional referral hospitals; communal health centers and urban health centers; *arrondissement* health centers; and village health units. There is a disproportionately high concentration of health workers in the southern part of the country.

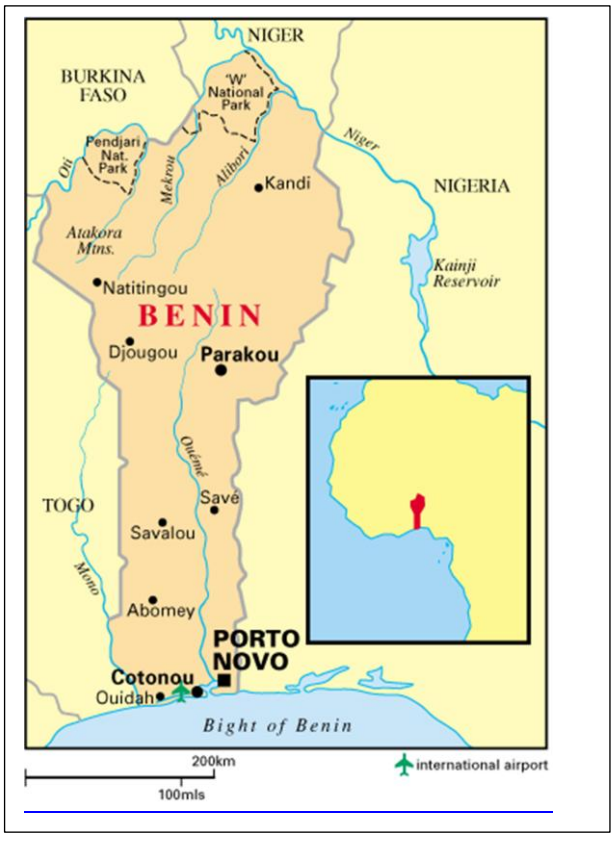
Some health experts believe Benin serves as a regional model for the implementation of a cost recovery system based on the Bamako Initiative and a successful national drug distribution program. The mechanism for community participation is the election of representatives to community health management committees (COGEC/COGEA, community financing accounts for approximately 30 percent of recurrent costs.

Sustainability remains an important concern. Regions experience irregular supply of essential drugs and contraceptives, causing frequent stock outs. Although decentralization has been embraced as a principle, it has not been implemented effectively. While part of the goal of the existing decentralization legislation is to help improve the delivery of health services, weak management and planning capacity hampers effective implementation.

2.3 LOCATIONS AFFECTED

Certain current activities implemented under the USAID/Benin Family Health Program, such as social marketing, commodities procurement and distribution, mass media communication activities, and policy and system strengthening activities, are national in scope. The IRS targets implementation principally in the northwest areas of the country. While it is unlikely that the entire package of activities will be implemented in all regions of the country, the projects will be free to implement key project activities wherever the need for such interventions is greatest.

Map 1: Benin (political)



,Source: Indo-African Chamber of Commerce & Industries
(available online at: www.indoafrican.org/iacci-countryprofiles.htm)

2.4 BENIN ENVIRONMENTAL POLICIES AND PROCEDURES

Institutions for environmental management have developed slowly but steadily in Benin since the creation of the Ministry of Environment in 1992. The country adopted an overarching environmental law (loi cadre sur 1'environnement) in 1999 that places environmental impact assessment (EIA) at the core of the Government efforts towards achieving the goals of the sustainable development. The Benin Environmental Agency *(Agence Béninoise pour l'Environnement [ABE])* was created in 1995 and shares the responsibility and objectives in the areas of environmental management and impact assessments with The Ministry of Environment and Natural Protection (MENP).

Through the late 1990s, EIA capacity building was emphasized as a key area of donor-funded environmental management efforts. These capacity building initiatives consisted of three main types of activities including (i) enacting a framework environmental law with specific requirements for EIA (and preparing and adopting implementation decrees for EIA law), (ii) developing sectorial guidelines for EIA, and (iii) holding several training workshops for the staff in line ministries, in consulting firms, and a few NGOs.'[4]

The ABE also helped to create EIA cells in a number of ministries, including the Ministry of Health. The main role of these units is to undertake the screening of the public investment projects included in the budget of each year, and recommend appropriate actions (under the

[4] World Bank, 2004. Report No. E897. (available online at: www-wds.worldbank.org)

guidance of the ABE) with the goal of mitigating any residual negative environmental or social impacts. Based on the sectorial guidelines prepared by the ABE, they provide guidance and supervision of EIA studies and mitigation plans. However, these units' degree of activity varies across sectors: the Agriculture Ministry still retains important environment functions, and the units within the Transport Ministry and Water Directorate have been reinforced. Units in certain other ministries are hindered by lack of training and resources. Sector and regional focal points send monthly reports to ABE who elaborates an annual report, which is sent to both sector and regional focal points and shared online.[5]

ABE has overall responsibility for ensuring that EIAs are carried out for all projects in accordance with national standards. The process is led and coordinated through the ABE's Department of Environmental Assessment and General Studies. This department's action strategy is based on the Environmental Impact Study Task Force. The Task Force is a forum of experts of national standing selected on the basis of their experience and skill from various public and private institutions. The Task Force meets at the request of the ABE, whenever it is necessary to study or prepare any ETA related document or file. The ETA process in Benin consists of the following steps.

- Screening (pre-screening)

Scoping (scanning)

- Public hearings
- Analysis of the environmental impact study report
- The decision
- Follow-up-assessment-audit[6]

3.0 Potential Environmental Impacts & Recommended Determinations, Including Conditions

For the purpose of environmental review, current and anticipated activities in the USAID/Benin Family Health Program portfolio are grouped into the following intervention categories.

1. Direct and capacity-building support for health service delivery and access to health services
2. Social marketing, education, and behavior change communication (BCC)
3. Epidemiological surveillance and reporting
4. Policy & strategy development (including promotion of commodity supply chains & formulation of clinical norms)
5. Support for laboratory testing and implementation of quality control measures for antimalarial medications at national and local levels
6. Procurement, storage, management, and disposal of public health commodities
7. Water supply and sanitation
8. Construction other than water/sanitation infrastructure
9. Indoor Residual Spraying (IRS)

Each category contains a number of entailed activities. In this section, the potential impacts of these activities are analyzed, and on this basis Recommended Determinations are made. In many cases, Negative Determinations entail conditions. Upon approval of this IEE,

[5] Source: World Bank, 2008. Report No.: AB4245. (Available online at: www-wds.worldbank.org)

[6] Benin Environmental Agency, 1997. Benin's Experience with Environmental Assessments. (Available online at: http://www.ceaa.gc.ca/default.asp?lang=En&n=B4993348-1&offset=5&toc-show)

implementation of these conditions becomes mandatory.

3.1 ADVERSE IMPACTS OF HEALTH CARE SERVICE DELIVERY DUE TO FAILURE TO PROPERLY MANAGE RESULTING WASTES

This section is a general discussion and analysis of waste-related impacts of health care activities. It is referenced at several points in the analyses of the specific FHP activities that follow in sections 3.2-3.9. It supports the analysis of these specific activities; no recommended determinations are attached specifically to this section.

Although small-scale healthcare activities provide many important benefits to communities, they can also unintentionally do great harm via poor management of the wastes they generate. These wastes generally fall into three categories in terms of public health risk and recommended methods of disposal:

- *General* healthcare waste, similar or identical to domestic waste, including materials such as packaging or unwanted paper. This waste is generally harmless and needs no special handling; 75-90% of waste generated by healthcare facilities falls into this category, and it can be burned or taken to the landfill without any additional treatment.
- *Hazardous* healthcare wastes including infectious waste (except sharps and waste from patients with highly infectious diseases), small quantities of chemicals and pharmaceuticals, and non-recyclable pressurized containers. All blood and body fluids are potentially infectious.
- *Highly hazardous* healthcare wastes, which should be given special attention, includes sharps (especially hypodermic needles), highly infectious non-sharp waste such as laboratory supplies, highly infectious physiological fluids, pathological and anatomical waste, stools from cholera patients, and sputum and blood of patients with highly infectious diseases such as TB and HIV. They also include large quantities of expired or unwanted pharmaceuticals and hazardous chemicals, as well as all radioactive or genotoxic wastes.

Pharmaceutical Wastes & Medical Supplies, Including Condoms. Pharmaceutical drugs including vaccines have specific storage time and temperature requirements, and may expire or lose efficacy before they are able to be used, particularly in remote areas where demand is low and/or infrequent. Pharmaceutical waste may also accumulate due to inadequacies in stock management and distribution, and lack of a routine system of disposal.

The effects of pharmaceutical waste in the environment are different from conventional pollutants. Drugs are designed to interact within the body at low concentrations to elicit specific biological effects in humans, and which may also cause biological responses in other organisms. There are many drug classes of concern, including antibiotics, antimicrobials, antidepressants, and estrogenic steroids. Their main pathway into the environment is through household use and excretion, and through the disposal of unused or expired pharmaceuticals.

Effects on aquatic life are a major concern in disposal of pharmaceuticals. A wide range of pharmaceuticals have been discovered in fresh and marine waters globally, and even in small quantities some of these compounds have the potential to cause harm to aquatic life.

Additional health risks related to disposal include burning pharmaceuticals and plastic medical supplies (including new or used condoms) at low temperatures or in open containers results in release of toxic pollutants into the air. Inefficient and insecure sorting and disposal may allow drugs beyond their expiry date to be diverted for resale to the general public.

Potentially infectious wastes. However, improper training, handling, storage and disposal of the waste generated in health care facilities or activities can spread disease through several mechanisms. Transmission of disease through infectious waste is the greatest and most immediate threat from healthcare waste. If waste is not treated in a way that destroys the pathogenic organisms, dangerous quantities of microscopic disease-causing agents-viruses, bacteria, parasites or fungi-will be present in the waste. These agents can enter the body through punctures and other breaks in the skin, mucous membranes in the mouth, by being inhaled into the lungs, being swallowed, or being transmitted by a vector organism. Those who come in direct contact with the waste are at greatest risk. Examples include healthcare workers, cleaning staff, patients, visitors, waste collectors, disposal site staff, waste pickers, substance abusers and those who knowingly or unknowingly use "recycled" contaminated syringes and needles. Although sharps pose an inherent physical hazard of cuts and punctures, the much greater threat comes from sharps that are also infectious waste. Healthcare workers, waste handlers, waste-pickers, substance abusers and others who handle sharps have become infected with HIV and/or hepatitis B and C viruses through pricks or reuse of syringes/needles.

Contamination of water supply from untreated healthcare waste can also have devastating effects. If infectious stools or bodily fluids are not treated before being disposed of, they can create and extend epidemics. The absence of proper sterilization procedures is believed to have increased the severity and size of cholera epidemics in Africa during the last decade.

3.2 DIRECT AND CAPACITY-BUILDING SUPPORT FOR HEALTH SERVICE DELIVERY AND ACCESS TO HEALTH SERVICES

This FHP intervention category includes the following activities;

1. Technical assistance, coaching, and training to develop, maximize, and sustain the capacity of NGOs and Ministry of Public Health (MOH) to collaborate in ensuring access to high-impact integrated health interventions at the community level and strengthen their clinical, management, and leadership capabilities.
2. Technical assistance and training to strengthen the capacity of the MOH and other structures within the GOB to manage national health programs
3. Technical assistance and training aimed at strengthening management capacity within the health system through improved use of data for decision making; including encouraging greater use of feedback from clients and other interventions aimed at improving management of human, financial, and other material resources.
4. Technical assistance and training for NGOs and other community based groups to improve internal management skills and advocacy for NGOs and other community-based groups in order that they may play a greater role in overseeing planning and management of health services.
5. Technical assistance, training and small grants to NGOs and other community based groups to work with communities to promote family health and support community health workers (CHWs) to implement community level management of childhood illness.
6. Expand community *mutuelles* to new areas and develop strategies to improve their functioning; includes using *mutuelles* for health education and promoting health services, linking members of health *mutuelles* to micro-credit and income generating activities (IGAs) to enhance sustainability and linking *mutuelles* to community-based distribution of health products.
7. Training and technical assistance to strengthen capacity of community-based service agents; products currently included are ACTs, paracetamol, aspirin, condoms, spermicides, re-supply of birth control pills, ORS, and antibiotics for pneumonia. Activities include monitoring performance.
8. Provide technical assistance and training to ensure adequate supply chain management and improve commodities logistics management; includes working with health zones and health centers to create mechanisms for including commodities used at community level in their records, including commodities needed in their processes for drug resupply and working out strategies for actual supply and resupply of CHWs.
9. Training on clinical interventions, norms for service delivery, and formative supervision to improve and expand quality of care to a greater number of facilities. Intervention areas include:
    a. integrated management of childhood illnesses (IMCI) to address the most common causes of childhood illness and death, including prevention and treatment of malaria, diarrhea and pneumonia and acute respiratory infections, nutrition and immunization
    b. reproductive health and family planning
    c. safe pregnancy and delivery
    d. intermittent presumptive treatment of malaria in pregnancy
    e. clinical interventions during third stage of labor to reduce the incidence of post-partum hemorrhage and basic essential newborn care
    f. prevention of transmission from mother to child of HIV/AIDS
    g. diagnosis, treatment and counseling for HIV/AIDS and other sexually transmitted

infections, including voluntary counseling and testing[7]

h. diagnosis and treatment of malaria, both simple and severe.

10. Technical assistance to strengthen the capacity of the Ministry of Public Health (MOH) and other structures within the GOB to manage the national MCH and immunizations program
11. Pilot integrated service models and different incentives schemes for improved health work performance and retention.
12. Training for the host country and community counterparts of Peace Corps Volunteers to enhance the sustainability of projects implemented under the Small Project Assistance Program (SPA) and to build greater self-reliance
13. Small grants to local communities to develop and implement small community- initiated projects in HIV/AIDS, malaria, reproductive health/family planning and maternal and child health.
14. Expansion of a social franchising model which promotes family health standards of care in private sector.

Potential Adverse Impacts & Considerations Regarding Recommended Determinations

All activities in this FHP intervention category are intended to improve and expand the delivery of and/or access to health care services. As detailed in section 3.1 the delivery of these services present a set of potentially significant adverse environmental impacts, particularly waste-related.

Where USAID support for service delivery is direct and this support fails to address waste management or to consider the capacity of medical facilities to properly handle, label, treat, store, transport and properly dispose of medical waste, unnecessary and potentially significant adverse impacts will result for which USAID bears full responsibility.

Where USAID instead funds capacity-building for service delivery agents-e.g. public health workers, NGO staff-or for the entities that manage delivery of care (e.g. government ministries), USAID is likely to have less control over service delivery on the ground. Reduced control means that USAID's responsibility for adverse impacts is shared or attenuated--but not eliminated.

For example, proper waste management requires that the systems and structures governing health care delivery address and require appropriate management. Where USAID's support means that it has substantial influence over these systems and structures, USAID support must work to best assure that they support appropriate health care waste management.

Similarly, the purpose of training is to influence the actions of service delivery agents. Appropriate management of health care waste depends heavily on individual actions of these agents: e.g. do they conscientiously separate sharps and "red bag" waste? Training therefore must, as appropriate, address proper handling, use and disposal of health care waste.

Recommended Determination

Accordingly, a Negative Determination with Conditions, per 22 CFR 216.3(a)(2)(iii), is recommended for direct and capacity-building support for health service delivery and access to health services. The conditions are as follows:

1. **Training.** Any training activities for professional health workers or community health workers involving techniques that would generate and require disposal of hazardous or highly hazardous waste (e.g. sharps, afterbirth from delivery, waste from screening for HIV or STIs.) must include training in or ensure that the training curriculum covers best management practices concerning the proper handling, use, and disposal of medical

[7] Treatment with anti-retroviral (ARV) therapy is not included in the Health Program.

waste, including blood, sputum, and sharps.

2. **Direct provision of or support for ground-level service** delivery. The FHP team and IPs must ensure, to the greatest extent feasible, that the medical facilities and operations benefitting from USAID support have adequate procedures and capacities in place to properly handle, label, treat, store, transport and properly dispose of blood, sharps and other medical waste and that norms and training include environmental health considerations. The ability of IPs and the FHP Team to assure such procedures and capacity is understood to be limited by its level of control over the management of the beneficiary facilities and operations.

   "Proper Management" of health care wastes is defined as being in substantial conformity with the USAID Bureau for Africa's Environmental Guidelines for Small Scale Activities in Africa (EGSSAA) Chapter 8, "Healthcare Waste: Generation, Handling, Treatment and Disposal" (URL: http://pdf.usaid.gov/pdf_docs/pnadk154.pdf) particularly the section titled, "Minimum elements of a complete waste management program." Other important references to consult for sound waste management practices are "WHO's Safe Management of Wastes from Healthcare Activities."

3. **Support to health delivery & management systems must** involve all feasible efforts to assure that these systems:
   - address and support proper waste management (including handling, labeling, treatment, storage, transport and disposal of medical waste)
   - address and support the capacity of medical facilities for waste management;
   - prioritize environmental health considerations

   It is understood that the USAID support to health delivery and management systems does not, in most cases, equate to direct USAID control over these systems. However, IPs must proactively advance these principles in their analysis and recommendations.

4. Home care and Community Health Workers. IPs must, as appropriate, include healthcare waste (HCW) management messages and develop appropriate disposal mechanisms in home-based and community-based situations that are cost effective and safe. Positive messages about personal and household hygiene, sanitation, and proper disposal of condoms and other potentially harmful materials should be delivered, as appropriate, along with standard health care messages, and these messages should be included in training, protocols, and guidelines.

5. Small grants. The formal AFR subproject/sub-grant review process, as set out by the AFR Environmental Review Form (available at http://www.encapafrica.org/meo_course/Course_Materials/Module8--Writing_IEE_and_Sample_Env_Docs/AFR-EnvReviewForm-17Jan05-with_cover.pdf) must be completed and duly approved by USAID prior to funding of any small grant. The process requires identification of potential adverse impacts and design of appropriate mitigation and monitoring measures. Note that the process can result in a development of a new IEE or development a full environmental assessment. In such cases, the IEE or EA must be completed and approved prior to funding of the grant. Environmental mitigation and monitoring conditions that result from the subproject/sub grant review process become required elements of grant implementation.

3.3 SOCIAL, MARKETING, EDUCATION, AND BEHAVIOR CHANGE COMMUNICATION (BCC)

This Family Health Program intervention category includes the following activities;

1. Small grants to NGOs and CBOs to support awareness raising efforts and information, education, and communication and behavior change communication activities to promote family health, including follow-up on LLITN use in homes.
2. Promotion of insecticide treated nets (LLITNs) through CHWs and women's groups, including follow up on use in homes.
3. Develop and manage a communications initiative to increase the knowledge of Beninese about HIV/AIDS, RH/FP, MCH and malaria, including accurate information to increase demand for and use of beneficial products and services and information to encourage and sustain healthy behaviors, such as the use of long-lasting insecticide treated nets (LLITNs) and prompt treatment of febrile illness.
4. Support social mobilization activities under WHO/AFRO Polio Grant oral polio vaccine campaigns.

Potential Adverse Impacts & Considerations Regarding a Recommended Determination

Public awareness, education, and related social marketing initiatives are an important component of a national family health promotion strategy. Traditional and modern modes of outreach and communication can be used to enhance understanding, generate demand, or overcome stigma for a particular Family Health Program priority.

In many cases, these initiatives promote use of commodities such as condoms, drugs, and insecticide treated nets. Improper disposal of these items by end-users (the targets of the marketing message) has adverse environmental impacts; see discussion under 3.1 above. However, the use and subsequent disposal stimulated by these programs is geographically dispersed, reducing the intensity of the impact, and USAID/IPs have very limited control over end-user actions. Taken together, these factors suggest that the categorical exclusion to which activities of this nature normally qualify can also stand in this case,

Recommended Determination.

Accordingly, a Categorical Exclusion, per 22 CFR 216.2(c)(viii) (programs involving nutrition, health care, or population and family planning services) is recommended for activities in this intervention category.

However, the FHP team should encourage IPs to identity opportunities in behavior change interventions to include messages that emphasize the need to store potentially dangerous products out of the reach of children or animals; proper disposal of waste (e.g. used condoms); and proper use of LLITNs and other insecticide-treated materials. Bed-net use for clothing, fish nets and wrapping should be discouraged, as should indiscriminate disposal of worn-out netting.

3.4 EPIDEMIOLOGICAL SURVEILLANCE AND REPORTING

The USAID/Benin Family Health Program will:

- Support epidemiological surveillance and reporting activities through technical assistance provided to the WHO/AFR Polio Grant for completion of quarterly surveillance meetings and acute flaccid paralysis surveillance activities.

- Support epidemiologic surveillance for malaria through technical assistance to the National Malaria Control Program to improve the functioning of malaria sentinel surveillance sites.

For both activities, technical assistance is provided to improve the collection of data already generated by the hospitals during case management. The activities do not involve the collection of blood or body fluid samples or other activities that may generate medical waste.

Potential Adverse Impacts
No significant adverse impacts, whether direct or indirect are foreseeable from this intervention category. These activities conform to a class of activities eligible for categorical exclusion.

Recommended Determination.

A Categorical Exclusion is recommended for epidemiological surveillance and reporting per 22 CFR 216.2 (c)(viii) programs involving nutrition, health care, or population and family planning services.

NOTE: this categorical exclusion does NOT apply to surveillance activities that include collection of blood or body fluid samples, or otherwise generate hazardous or highly hazardous medical waste. (See section 3.1).

3.5 POLICY & STRATEGY DEVELOPMENT (INCLUDING PROMOTION OF COMMODITY SUPPLY CHAINS & FORMULATION OF CLINICAL NORMS)

Establishment of a favorable policy environment is critical to the long-term success of Family Health Program activities **at a national** level. Specific activities in this intervention category include:

1. Finalize strategic plans and other planning documents and policies on key aspects of public health programs, such as community health insurance schemes *(mutuelles)*, quality assurance, community-level provision of services, and decentralized management of essential medicines.
2. Encourage dialogue between the central and local levels of the MOH in order to decentralize health services; ensure that planning and policy formulation is based on sharing of information and consultations among all levels of management and with communities and representatives of civil society.
3. Develop and update clinical norms for health agents providing the minimum package of family health services.
4. Develop and update policies and clinical norms within the Ministry of Public Health (MOH) and other GOB structures to manage the national HIV/AIDS program
5. Support the development, implementation and updating of clinical norms for the prevention, diagnosis, and treatment of malaria.
6. Contribute to the institutionalization of the integrated CCM/IMCI package at the national level through technical assistance for the formation of a National Child Health Committee (NCHC) to update and harmonize policy and guidelines for CHWs and foster Open, informed discussion that leads to decisions on such issues as compliance with standards, attrition of CHWs, drug supply, and drug safety.

Potential Adverse Impacts & Considerations Regarding a Recommended Determination

All policy and strategy development activities under the Family Health Program are intended to improve and expand the delivery of and/or access to health care services. As detailed in section 3.1, the delivery of these services present a set of potentially significant adverse environmental impacts, particularly waste-related.

Where USAID-supported policy & strategy development fails to address waste management or to consider the capacity of medical facilities to properly handle, label, treat, store, transport and

properly dispose of medical waste , the changes to and expansion in service delivery that results can result in unnecessary and potentially significant adverse impacts for which USAID bears partial responsibility.

Recommended Determination.

Accordingly, a Negative Determination with Conditions, per 22 CFR 216.3(a)(2)(iii), is recommended for the activities of this intervention category. The condition is as follows:

> Implicated IPs and the FHP Team must undertake all feasible efforts to assure that clinical norms and other aspects of service delivery codified through policy and planning support:
> - address and support proper waste management (including handling, labeling, treatment, storage, transport and disposal of medical waste)
> - the capacity of medical facilities for waste management;
> - prioritize environmental health considerations
>
> It is understood that the final content of policy is the decision of host country government organs. However, IPs must proactively advance these principles in their analysis and recommendations.
>
> *Mandatory reference.* The USAID Bureau for Africa's Environmental Guidelines for Small Scale Activities in Africa (EGSSAA) Chapter 8, "Healthcare Waste: Generation, Handling, Treatment and Disposal"
> URL:http://pdf.usaid.gov/pdf_docs/pnadk154.pdf

This contains guidance which must inform the Team's activities to promote proper handling and disposal of medical waste, particularly in the section titled, "Minimum elements of a complete waste management program." Other important references to consult in establishing a waste management program are "WHO's Safe Management of Wastes from Healthcare Activities" The ability of the Team to assure such procedures and capacity is understood to be limited by its level of control over the management of the facilities and operations that USAID/Benin is supporting.

3.6 SUPPORT FOR LABORATORY TESTING AND IMPLEMENTATION OF QUALITY CONTROL MEASURES FOR ANTI-MALARIAL MEDICATIONS AT NATIONAL AND LOCAL LEVELS

The Family Health Program will provide technical assistance and training to the National Laboratory for Quality Control to improve drug quality control capability through the following activities:

a. establishment and implementation of quality control standards for anti-malarial drugs,
b. support *in vivo* efficacy testing of ACTS
c. development of a pharmaco-vigilance system.

The program will also support the establishment of mini-labs (portable field laboratory kits contained in an briefcase-size; impact-resistant, waterproof case) at the field level to sample drugs to detect counterfeit or defective drugs and influence appropriate actions such as informing the public and withdrawing drug3 from the market if problems are identified,

Potential Adverse Impacts & Considerations Regarding a Recommended Determination

These activities are expected to generate small quantities of pharmaceutical and chemical waste. The quantities may not be sufficient to result in significant adverse impacts, but they are part of the *overall* waste stream generated by the FHP, which does have potentially significant adverse impacts. As such, appropriate management must be assured, consistent with the degree of effective USAID control over actions on the ground.

Recommended Determination
A Negative Determination with Conditions, per 22 CFR 216.3(a)(2)(iii), is recommended for the activities in this intervention category. The condition is as follows:

> Appropriate management and disposal protocols must be developed for pharmaceutical and chemical wastes resulting from this activity. The implicated IP must assure their implementation, to the maximum degree consistent with IP control or influence over actions on the ground.
>
> Appropriate management and disposal protocols are defined as being generally consistent with the mandatory references cited under section 3.5, above.

3.7 PROCUREMENT, STORAGE, MANAGEMENT, AND DISPOSAL OF PUBLIC HEALTH COMMODITIES[8] (generically, "Procurement")

FHP Activities in this intervention category include:

1. Promotion of insecticide treated nets (LLITNs) through CHWs and women's' groups, including provision of nets.
2. Technical and material support to increase use of LLITNs through purchase and sales of LLITNs at subsidized rates via social marketing.
3. Refurbishment and provision of essential basic health equipment to health facilities and maternities, including microscopes.
4. Material assistance to strengthen the capacity of the Ministry of Public Health (MOH) and other structures within the GOB to manage the National Malaria Control and Maternal & Child Health Programs. (Procurement aspects; see also section 3.4 for policy support

[8] As used herein, "public health commodities" may include pharmaceutical drugs and vaccines, condoms, laboratory and medical supplies, basic medical equipment and personal protective gear.

elements.)

5. Develop and manage an integrated marketing, sales and distribution network for products related to HIV/AIDS, malaria, reproductive health and child survival. Products include: condoms, oral contraceptives, injectable contraceptives, cycle beads to use standard day method for family planning, oral rehydration salts and zinc, point of use water treatment to prevent diarrhea; and long-lasting insecticide treated nets.
6. Purchase of essential basic health equipment for severe malaria treatment and severe malaria drug kits; purchase and deliver rapid test kits for malaria and HIV.
7. Procurement of laboratory reagents for the quality control of malaria drugs.

Potential Adverse Impacts & Considerations Regarding Recommended Determinations

Many procured commodities inevitably end up as waste (e.g. condoms, LLITNs, laboratory chemicals, test kits), generate waste as a consequence of their use (e.g. injectable pharmaceuticals); or have the potential to end up as waste due to spoilage or expiration (pharmaceuticals). Improper disposal of potentially infectious and pharmaceutical wastes has potentially significant adverse impacts, as discussed in section 3.1.

With respect to LLITNs, the distribution of LLITNS has been shown to be a cost-effective and efficacious approach to malaria vector control in many situations, and as such provides significant public health benefits. Along with these benefits, however, the use of these treated materials with insecticides creates tangible risks to human health and the environment throughout the life cycle of the insecticide products. Continuous exposure to LLITNs may have some risks which need to be monitored over time. In addition to concerns regarding distribution and use of LLINs, disposal of bed nets-particularly by burning--can result in adverse environmental and human health effects.

Adverse health effects also arise from conversion of LLITNs to improper use (e.g. use as fishnets, clothing, and wrapping.)

These issues have been considered and mitigation measures specified in the USAID Africa Bureau Programmatic Environmental Assessment for Insecticide-Treated Materials in USAID Activities in Sub-Saharan Africa (ITM PEA). Note, however, that agency guidance on preferred final disposal of used and contaminated bed nets is still evolving.

Recommended Determinations.

For LLITN activities, a Negative Determination with Conditions, per 22 CFR 216.3 (a)(2)(iii), is recommended. The condition is as follows:

> The implicated IP(s) is/are required to purchase and use only WHO-approved brands of long lasting treated nets and adhere to all relevant stipulations made in the USAID Africa Bureau Programmatic Environmental Assessment for Insecticide-Treated Materials Sub-Saharan Africa (ITM PEA) and the Global Health Bureau's PMI-LLIN IEE of January 2009.

Note that where procurement is accompanied by promotion or social marketing (as in the case of LLITNs), the provisions of Section 3.3 also apply.

Note that where procurement is accompanied by training or capacity-building the provisions of section 3.2 also apply

For **all other activities in this intervention category**, a Negative Determination with

Conditions, per 22 CFR 216.3(a)(2)(iii), is recommended. The conditions are as follows:

1. Implementing partners conducting activities involving procurement, storage, management and/or disposal of public health commodities, including pharmaceutical drugs, immunizations and nutritional supplements, should ensure, to the extent possible, that the medical facilities and operations involved have adequate procedures and capacities in place to properly manage and dispose of such commodities.

2. Consignees for any pharmaceutical drugs procured under this funding will be advised to store the product according to the information provided on the manufacturer's Materials Safety Data Sheet (MSDS).

3. If disposal of any of these pharmaceutical drugs is required, due to expiration date or any other reason, the consignee will be advised that the preferred method of disposal is to return to the manufacturer. If this is not possible then follow WHO guidelines for Safe Disposal of Unwanted Pharmaceuticals.

4. Disposal of packaging and other public health commodities will be treated using the guidelines provided in Environmental Guidelines for Small-Scale Activities in Africa (EGSSAA), Chapter 15: Solid Waste.

Note that where procurement is accompanied by:

- *promotion or social marketing the provisions of Section 3.3 also apply.*
- *training or capacity-building, the provisions of section 3.2 also apply*
- *service delivery, the provisions of section 3.2 also apply.*

3.8 WATER SUPPLY AND SANITATION

FHP Activities **in this intervention** category will **consist of**

1. Promotion of point-of use water treatment.
2. Construction or rehabilitation of small-scale water & sanitation infrastructure, such as latrines, boreholes and shallow wells.

Potential Adverse **Impacts** & **Considerations Regarding a Recommended Determination** In general, well-executed water and sanitation interventions bring substantial health and environmental benefits. However, active efforts are required to prevent unintended adverse impacts that can offset or negate these benefits:

Wells, boreholes, and water supply systems. In operation, wells and bore holes can:

1. Deplete groundwater when abstraction exceeds replenishment of groundwater resource.

2. Create stagnant (standing) water in the vicinity of the water supply point and creation of diseases vectors breeding sites (mosquitoes, risks of contamination of fetched water, foot infection of water point users, seepage in and contamination of the wells, etc.)

3. Create human health risks from provision of biologically or chemically contaminated water. Even if water is not contaminated initially, it can become so thru flooding, failure to exclude livestock from the water point, use of contaminated containers to draw water from hand-dug wells, and other factors.

4. Lead to human health risks from contamination of water fetched from the water points to the end users (arising from contamination of containers, mishandling, etc).

However, for small-scale interventions, these impacts can be controlled below the level of significance by appropriate siting, water quality assurance protocols (including testing), design (including drainage and exclusion of livestock from water points) and maintenance.

Latrines. In operation, latrines can contaminate shallow groundwater and wells and, when not well-maintained or of an open-pit design, can be the source of multiplication of flies, mosquitoes, spread of diseases, and foul odors.

More specifically, poorly designed sanitation facilities can lead to insect-borne diseases: There are two groups to consider. Firstly, *culex* mosquitoes, which do *not* transmit malaria but can transmit filariasis, breed extensively in septic tanks and flooded latrines. Secondly, flies and cockroaches often thrive on excreta and have been implicated in some transmission of fecal-oral disease. Mosquitoes, flies, aid cockroaches all constitute a great nuisance, and poor urban households have consistently been shown to spend substantial amounts of their scanty household income on using control coils and nets.

Recommended Determinations.
Pursuant to the analysis above, the following Determinations are recommended.

A. *Point of use water* ***treatment.*** **Categorical Exclusion per** 22 CFR 216**.2 (c)(viii) programs involving nutrition, health care, or population and family planning services**

B. *Very small-scale water* ***and sanitation*** *infrastructure,* a Negative **Determination** with Conditions, per 22 CFR 216.3(a)(2)(iii), is **recommended** for very small-scale wat/san infrastructure activities (defined as isolated wells, boreholes and latrines such that the total investment in a given community is less than $100,000 and the total national program size is less than $ l mn/yr). The conditions are as follows:

1. Good-practice design standards must be implemented for new construction and rehabilitation works, generally consistent with USAID's *Environmental Guidelines for Small Scale Activities in Africa (water supply & sanitation chapter)* *www.encapafrica.org/egssaa.htm.*

These standards must be specified in the EMMP (see Section 4 of this IEE).

- For water supply, they must include siting of new wells well away from groundwater contamination sources (e.g. latrines, cesspits, and dumps), exclusion of livestock from water points, and prevention of standing water at water supply points.

- For latrines, they must include provisions to prevent contamination of water supplies, appropriate choice of latrine type given local environmental conditions (e.g. pit latrines are rarely suitable in locations where the water table is high), provision of hand wash stations, and development and implementation of a system for ongoing latrine cleaning and maintenance.

2. Water quality assurance plan. For water supply activities, the IP will develop and implement a Water Quality Assurance Plan that will ensure that all new and rehabilitated USAID-funded water supplies provide safe drinking water, defined as meeting local and WHO water quality standards.

This Plan must be approved by the MEO prior to initiation of these activities.

The plan must include and assign responsibility to the IP for initial water quality testing.

When feasible, the program must also set in place capacities and responsibilities to provide reasonable assurance that ongoing water quality monitoring occurs.

The standards for initial and ongoing testing- including types of contaminants for which testing should be conducted, testing methods, testing frequency, and issues such as public access to results- should follow any applicable USAID guidance, as well as local laws, regulations and policies.

The plan must include a response protocol in the event that the water does not meet water quality standards.

The plan must include testing for Arsenic per Guidance Cable State 98108651. Specifically, the USAID managing team must assure that the standards and testing procedures described in "Guidelines for Determining the Arsenic Content of Ground Water in USAID-Sponsored Well Programs in Sub-Saharan Africa" Note that this guidance requires initial testing, and quarterly testing for four quarters. *If the program terminates in less than four quarters, remaining testing is the responsibility of the mission. Water violating the 10 ppb Arsenic standard may not be supplied for public consumption.*

C. Water and sanitation infrastructure other than very small scale (defined as piped community water supplies, or any investment in water and sanitation infrastructure exceeding $100,000 in a single community or more than $1 mn/yr at the national program level) is recommended for DEFERRAL.

3.9 CONSTRUCTION OTHER THAN WATER/SANITATION INFRASTRUCTURE

FHP Activities in this intervention category will consist of technical and financial assistance for small-scale construction, including the refurbishment of health facilities and maternities.

Potential Adverse Impacts & Considerations Regarding a Recommended Determination

Impacts of the construction process. Construction itself has a well-known set of potential adverse impacts:

- *Disturbance to existing landscape/habitat.* Construction typically necessitates clearing, grading, trenching and other activities that can result in near-complete disturbance to the pre-existing landscape/habitat within the plot. If the plot contains or is adjacent to a permanent or seasonal stream or other water body, grading and leveling can disrupt local drainage.
- *Sedimentation/fouling of surface waters.* Runoff from cleared ground or materials stockpiles during construction can result in sedimentation fouling of surface waters, particularly if the site is located in close proximity to a stream or water body.
- *Standing water.* Construction may result in standing water on-site, which readily becomes breeding habitat for mosquitoes and other disease vectors; this is of particular concern as malaria is endemic in much of Benin.

Experience shows that these impacts are controllable below the level of significance with basic good construction management practices.

- *Adverse impacts of materials sourcing.* Construction requires a set of materials often procured locally: timber, fill, sand and gravel, bricks. Unmanaged extraction of these

materials can have adverse effects on the environment. For example, stream bed mining of sand or gravel can increase sedimentation and disturb sensitive ecosystems; purchase of timber from unmanaged or illegal concessions helps drive deforestation.)

While IPs generally have direct control over their general contractors (GCs), construction materials are often procured by GCs from sub-vendors. In the case of timber, these sub-vendors are often the terminus of a long and untraceable supply chain.

This separation from source both limits the actions that IPs can take to assure environmentally responsible sourcing of these materials and reduces IP responsibility for these impacts. (It should also be noted that for the relatively small construction projects anticipated under the FHP portfolio, adverse impacts related to materials sourcing should be quite limited.

However, IPs can and should undertake reasonable due diligence to assure that they do not bear direct responsibility for adverse impacts, and to reduce indirect impacts so far as feasible.

In the absence of complicating factors,' USAID AFR Bureau has concluded that very small-scale general construction involving a total "disturbed area" of less than 1000m2 is of its nature very unlikely to create significant adverse impacts. Construction at larger scales (or very small-scale construction in the presence of complicating factors) does present the risks that the impacts described above could be significant.

Impacts of facilities in operation. In operation, general/institutional facilities & compounds generate a set of waste streams (e.g. gray water, latrine discharge, solid waste). In general, if improperly managed, such wastes can contaminate ground and surface water, create breeding habitat for disease vectors, etc.

For example, failure to design or maintain appropriate drainage structures can result in standing water within the compound or on adjacent lands, which is of particular concern as malaria is endemic in Benin. Local erosion, including damage to adjacent fields, and sedimentation of nearby surface waters can also result.

If latrine design or a maintenance failure permits insects or other disease vectors free in-and-out access to the pit/tank, pathogens in human waste can be spread within the compound and to the nearby community. Similarly, spilling latrine waste during pump-out releases contained pathogens into the environment. Storing solid waste (usually a mixture of food scraps, packaging, and paper) in open containers creates breeding habit for and attracts disease vectors such as rodents.

For *health care facilities*, the above risks are heightened due to (1) the higher likelihood that infectious diseases that may be present in human excreta, (2) the vulnerability of patient populations to poor environmental health conditions, and (3) the particular hazards of health care waste, as described in Section 3.1 Failure to provide infrastructure for appropriate management of health care waste in facility construction/rehabilitation, and failure to observe appropriate design standards for sanitation provision can have significant, adverse consequences.

In general, the potential impacts of facilities construction and operation somewhat larger than 1000m2 are controllable with basic good design and operating practices. However, the precise nature of the potential impacts-and the appropriate design and operating practices to mitigate them-are highly dependent both on location and the specific characteristics of the infrastructure. Not enough information is known regarding FHP construction at this scale to assess these impacts.

Recommended Determinations.

*A. Rehabilitation and very small-scale construction***.** Pursuant to the analysis above, a Negative Determination with Conditions, per 22 CFR 2 1 6.3(a)(2)(iii), is recommended for rehabilitation of existing facilities, and for construction of facilities in which the total surface area disturbed is less than 1000 m2. The conditions are as follows:

1. **No complicating factors.**[9] The site is not within 30m of a permanent or seasonal stream or water body, will NOT involve displacement of existing settlement/inhabitants, has an average slope of less than 5% and is not heavily forested or in an otherwise undisturbed local ecosystem. Sites violating one or more

[9] Complicating factors include, e.g. siting within 30m of a permanent or seasonal stream or water body, or displacement of existing settlement/inhabitants, or building on an average slope in excess of 5%, or building on a site that is heavily forested or in an otherwise undisturbed local ecosystem.

of these criteria are subject to the determinations and conditions for "construction other than very small-scale" (immediately below).

2. **Construction will be undertaken in a manner generally consistent with the guidance** for environmentally sound construction, provided in the Small Scale Construction chapter of the USAID Environmental Guidelines for Small-scale Activities in Africa (www.encapafrica.org`) At minimum, (1) During construction, prevent sediment heavy run-off from cleared site or material stockpiles to any surface waters or fields with berms, by covering sand/dirt piles, or by choice of location. (Only applies if construction occurs during rainy season.); (2) Construction must be managed so that no standing water on the site persists more than 4 days; (3) IPs must require their general contractor to certify that it is not extracting fill, sand or gravel from waterways or ecologically sensitive areas, nor is it knowingly purchasing these materials from vendors who do so; (4) IPs must identify and implement any feasible measures to increase the probability that timber is procured from legal, well-managed sources.

3. **Asbestos.** If the presence of Asbestos is suspected in a facility to be renovated, the facility must be tested for asbestos before rehabilitation works begin. Should asbestos be present, then the work must be carried out in conformity with host country requirements, (if any) and in conformity with guidance to be provided by the FHP team, in consultation with the MEO and REA. All results of the testing for asbestos shall be communicated to the C/AOR.

4. **Paint.** No lead-based paint shall be used, when lead-free paint is used, it will be stored properly so as to avoid accidental spills or consumption by children; empty cans will be disposed of in an environmentally safe manner away from areas where contamination of water sources might occur; and the empty cans will be broken or punctured so that they cannot be reused as drinking or food containers.

5. **Water supplies.** Where water supplies for drinking or washing patients or laundry are upgraded or provided, measures will be taken to ensure that drainage from laundry and bathing facilities does not affect the water supply nor pose threats for transmittal of infectious diseases. The conditions of section 3.8 applying to water supplies will also be observed.

6. **Waste handling equipment and infrastructure.** USAID intervention must result in the facilities possessing adequate infrastructure and equipment to appropriately handle the health care wastes they may generate; see Section 3.2.

B. Construction other than *very-small scale.* Pursuant to the analysis above, a DEFERRAL is recommended for construction of facilities in which the total surface area disturbed is more than 1000 m2.

3.10 INDOOR RESIDUAL SPRAYING

Indoor residual spraying activities are describing in section 1.3.4 of this IEE. The potential adverse impacts of IRS are well-documented and significant, and include health impacts on householders and spray operators, particularly women, environmental damage and human exposures from pilferage of IRS pesticides, contamination of water supplies and consequent human exposure from rinsing and mixing operations, etc.

Due to the significance of the potential impacts, IRS activities in Benin operate under the

Supplemental Environmental Assessment for Presidential Malaria Initiative Indoor Residual Spraying (IRS) for Malaria Control in Benin. (Benin IRS SEA)). All activities relating to IRS are covered under the SEA.

3.11 Government to Government funding

Section 1.3.3 "Country Systems Strengthening" describes activities that are proposed for support through direct funding to three Government of Benin institutions. USAID's general goal should be to mitigate the identified environmental and health risks to a similar extent as in activities managed more directly by USAID. To accomplish this goal, USAID needs to do the following:

- USAID must evaluate the capacity of the target institutions to assure environmentally sound delivery of the intended services, including the sufficiency of the standards they employ; the demonstrated policy, procedural and operational capacities to assure that appropriate environmental soundness standards are met; and the track record of these institutions for meeting such standards;
- Depending upon the host government's capacity, USAID must define, and negotiate with the Government of Benin, the appropriate role for USAID in environmental oversight. Possible approaches to filling any gaps in the Government of Benin's capacity include, but are not limited to the provision of third-party monitoring and targeted investments in staffing and materials focused on environmental protection.
- USAID must negotiate an environmental mitigation and monitoring regime with the Government of Benin that provides both parties with reports on the environmental factors of relevance to the activity such that both parties can understand how well the necessary mitigation measures are being met.
- Adaptive management discussions between USAID and the Government of Benin must include the status of implementation of this environmental mitigation and monitoring regime.

4.0 Restrictions, Implementation and Monitoring

4.1 GENERAL RESTRICTIONS:

1. **Pesticides.** With the sole exception of procurement, distribution, and promotion of LLITNs subject to the conditions enumerated in section 3.7.. The *Supplemental Environmental Assessment for Presidential Malaria Initiative-Indoor Residual Spraying (IRS) for Malaria Control in Benin 01/2011* approved the procurement of carbamates. This IEE does NOT authorize support for any other procurement or use of pesticides

2. **Small-scale agricultural interventions in support of nutrition.** This IEE does not anticipate nor address interventions such as kitchen gardens/vegetable cultivation, improved food processing, etc. in support of nutritional enhancement objectives. Undertaking any such activities within the FHP will require a duly approved amendment to this IEE prior to implementation.

4.2 GENERAL PROJECT IMPLEMENTATION AND MONITORING REQUIREMENTS

In addition to the specific conditions enumerated in Section 3, the negative determinations recommended in this IEE are contingent on full implementation of the following general monitoring and implementation requirements:

1. **IP Briefings on Environmental Compliance Responsibilities.** The FHP team shall provide each FHP Implementing Partner (hereinafter IP), with a copy of this IEE; each IP shall be briefed on their environmental compliance responsibilities by their cognizant C/AOR. During this briefing, the IEE conditions applicable to the IP's activities will be identified.

2. **Development** of EMMP. Each IP whose activities are subject to one or more conditions set out in section 3 of this IEE shall develop and provide for C/AOR review and approval an Environmental Mitigation and Monitoring Plan (EMMP) documenting how their project will implement and verify all IEE conditions that apply to their activities.

   These EMMPs shall identify how the IP shall assure that IEE conditions that apply to activities supported under subcontracts and sub-grant are implemented. (In the case of large sub-grants or subcontracts, the IP may elect to require the sub-grantee/subcontractor to develop their own EMMP.)

   (Note : sample EMMP formats are available at www.encapafrica.org/meoEntry.htm.)

3. **Integration and implementation** of EMMP. Each IP shall integrate their EMMP into their project work plan and budgets, implement the EMMP, and report on its implementation as an element of regular project performance reporting.

   IPs shall assure that sub-contractors and sub-grantees integrate implementation of IEE conditions, where applicable, into their own project work plans and budgets and report on their implementation as an element of sub-contract or grant performance reporting.

4. Integration of compliance responsibilities in prime and sub-contracts and grant agreements.

a. The FHP team shall assure that any future contracts or agreements for implementation of the project, and/or significant modification to current contracts/agreements shall reference and require compliance with the conditions set out in this IEE, as required by ADS204.3.4.a.6 and ADS 303.3.6.3.e.

b. IPs shall assure that future sub-contracts and sub-grant agreements, and/or significant modifications to existing agreements, reference and require compliance with relevant elements of these conditions.

5. Assurance **of sub-grantee and sub-contractor** capacity **and compliance.** IPs shall assure that sub-grantees and subcontractors have the capability to implement the relevant requirements of this TEE. The IP shall, as and if appropriate, provide training to sub-grantees and subcontractors in their environmental compliance responsibilities and in environmentally sound design and management (ESDM) of their activities.

6. FHP Team **monitoring responsibility.** As required by ADS 204.5.4, the FHP team will actively monitor and evaluate whether the conditions of this IEE are being implemented effectively and whether there are new or unforeseen consequences arising during implementation that were not identified and reviewed in this IEE. If new or unforeseen consequences arise during implementation, the team will suspend the activity and initiate appropriate, further review in accordance with 22 CFR 216. USAID Monitoring shall include regular site visits.

7. New **or modified activities.** As part of its Work Plan, and all Annual Work Plans thereafter, IPs, in collaboration with their C/AOR, shall review all on-going and planned

activities to determine if they are within the scope of this IEE.

If any IP adds new activities or makes substantial modifications to existing activities, an amendment to this IEE addressing these activities shall be prepared for USAID review and approval. No such new activities shall be undertaken prior to formal approval of this amendment.

Any ongoing activities found to be outside the scope of the approved Regulation 216 environmental documentation shall be halted until an amendment to the documentation is submitted and written approval is received from USAID.

8. **Compliance with Host Country Requirements.** Nothing in this IEE substitutes for or supersedes IP, sub-grantee and subcontractor responsibility for compliance with all applicable host country laws and regulations. The IP, sub-grantees and subcontractor must comply with host country environmental regulations unless otherwise directed in writing by USAID. However, in case of conflict between host country and USAID regulations, the latter shall govern.

ANNEX 1. Acronyms

ACT	Artemisinin-based combination therapy
ADS	Automated Directives System
AFR	USAID Bureau for Africa
ANC	Antenatal care
AOR	Award Officer Representative
ARV, ART	Anti-retroviral (therapy, treatment)
BEO	Bureau Environmental Officer
CAME	Central Medical Store
CBO	Community Based Organization
CHW	Community health worker
COR	Contract Officer Representative
DSME	Maternal and Child Health Unit
EA	Environmental Assessment (per 22 CFR 216)
EMMP	Environmental Mitigation and Monitoring Plan
ERF	Environmental Review Form
ESDM	Environmentally Sound Design and Management
FBO	Faith Based Organization
FHP	Family Health Program
FP	Family Planning
FP/RH	Family Planning/Reproductive Health
GC	General Contractor
GOB	Government of Benin
HIV/AIDS	Human Immunodeficiency Virus/ Acquired Immune Deficiency Syndrome
IEC/BCC	Information, Education, Communication/Behavior Change Communication
IEE	Initial Environmental Examination (per 22 CFR 216)
IGA	Income generating activity
IMCI	Integrated Management of Childhood Illness
IP	Implementing Partner
IPTp	Intermittent preventive treatment of malaria in pregnant women
IRS	Indoor Residual Spraying
ITM	Insecticide-treated Materials
ITN	Insecticide-treated net
LLITN	Long-lasting insecticide treated net
MCH	Maternal and Child Health
MEO	Mission Environmental Officer
MOH	Ministry of Health
NGO	Non-governmental organization
NMCP	National Malaria Control Program
ORS	Oral rehydration salts
PEA	Programmatic Environmental Assessment
PERSUAP	Pesticide Evaluation Report and Safer Use Action Plan
PMI	President's Malaria Initiative
PMTCT	Prevention of Mother to Child Transmission (of HIV/AIDS)
QA	Quality Assurance
REA	Regional Environmental Advisor
RDT	Rapid diagnostic test
SEA	Supplemental Environmental Assessment
SP	Sulfadoxine-pyrimethamine
STI	Sexually Transmitted Infection
VCT	Voluntary HIV Counseling and Testing