INITIAL ENVIRONMENTAL EXAMINATION (IEE)

PROJECT/ACTIVITY DATA:

Activity Name: Rice Field Fisheries Enhancement Project Phase II  
Country/region: Cambodia  
Start Date: 5/1/2016  
End Date: 4/30/2021  
Life of Project Amount ($) : 6,000,000  
IEE Prepared by: Sothira Seng  
Date: 2/16/2016

ENVIRONMENTAL ACTION RECOMMENDED: (Place X where applicable)

Categorical Exclusion: [ X ]  
Negative Determination with Conditions: [ X ]  
Positive Determination: [ ]  
Deferral: [ ]

Purpose and Scope

The purpose of this document, in accordance with Title 22, Code of Federal Regulations, Part 216 (22CFR216), is to provide a preliminary review of the reasonably foreseeable effects on the environment, as well as recommended Threshold Decisions, for the activities detailed below. This document provides a brief statement of the factual basis for Threshold Decisions as to whether an Environmental Assessment or an Environmental Impact Statement is required for the activities managed under the scope of this document.

The activities under review are recommended for the threshold decisions indicated above in the “Environmental Action Recommended” section.

Background

The Rice Field Fisheries Enhancement Project Phase II (RFFEP II), implemented by WorldFish, will begin on or about May 1, 2016. These activities are covered under the Feed the Future, Biodiversity and Global Climate Change-Adaptation fund of Cambodia-new Food Security and Environment Program of the office of Food Security and Environment. The purpose of the Food Security and Environment program is to strengthen sustainable and resilient pathways out of poverty. This RFFEP II will contribute to the project’s two Intermediate Results: Improved inclusive management of targeted landscapes and poverty reduced within targeted populations and landscapes. The project builds on the successes of the pilot RFFEP I, implemented by WorldFish from April 18, 2012 to April 17, 2016.
The (RFFEP II) will strengthen the capacity of Community Fish Refuge (CFR) Committees and communities to develop, maintain and improve the governance of Rice Field Fisheries (RFF) systems in their CFRs. The project will continue working with the 40 CFRs supported by the previous RRFEP and will expand the approaches to at least 100 new CFRs in the four provinces of Feed the Future Zone of Influence.

“Food security” in Cambodia essentially means ‘rice security’ followed by ‘fish security’. Rice and fish coexist in one type of production system known as Rice Field Fisheries (RFF). RFF are defined here as the fishing undertaken in and around rice fields which include nearby small rivers and swamps, particularly during the flood season. RFF are found extensively in a large part of the country and correspond to an estimated 28,500 km² of both floodplain and rain-fed rice fields. The fishing in flooded rice fields is typically a part-time, often subsistence activity of rice farmers during lean periods. Non rice farmers may also catch fish in flooded rice fields during peak flood times because it is considered an open access resource.

The RGC’s Fisheries Administration (FiA) has an ambitious program to promote the development of 1,200 CFRs in 75 percent of all communes by 2019, as stated in its Strategic Planning Framework (SPF) 2010-2019 (FiA 2010). The rapid nation-wide adoption in the last several years has resulted in the establishment of a total 779 CFRs according to the FiA records in 2013, of which 419 were deemed to be working well, while 360 were judged to be institutionally weak. Out of the 779 CFRs, 179 are located in the four Feed the Future (FTF) target provinces around Tonle Sap Lake: Kampong Thom, Siem Reap, Pursat and Battambang.

Description of Activities

The overall goal of RRFEP II is to increase resilience to climate change by improving food and nutrition security of poor and vulnerable rural households in the Tonle Sap floodplain environment. This is a 5-year project that seeks to develop a set of sustainable RFF management and enhancement practices through improved understanding of the dynamics of RFF, the effects of different types of interventions and impacts, and to promote best practices for scaling up to the FiA target of 1,200 CFRs, and improve the nutrition status of women and children under 5 years old.

The project will implement three main components:

1) Scaling up the sustainable CFR approach, tested and refined through RFFEP, to new CFR sites in the four FTF target provinces;
2) Developing and testing a multi-purpose use and governance model for water in CFRs, by integrating the fish refuge function of CFR with other food production and livelihood diversification activities; and
3) Enhancing the nutritional outcome of increased fish and other food production through awareness raising, education and behavior change among household members about the

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1 “Rice-fish culture”, a practice that releases hatchery-raised fingerings into rice-fields, raising the fish there until market size, is a type of aquaculture production system and is different from RFF. RFF is primarily based on replenishment of wild fisheries into rice fields. However, the boundaries between extensive rice-fish culture involving paddy field modification and rice field fisheries overlap. This is generally only a problem for the statisticians as the incremental intensification to increase rice field productivity is generally a positive development.
importance of fish and dietary diversity for health, child growth and development, and appropriate food preparation, hygiene and sanitation.

The first component (1) will target scale up of sustainable CFR approach to 100 - 120 new sites. The components (2) and (3) will be implemented at 40-60 CFR sites (this includes the 40 existing RFFEP I sites).

Activities in the first component will include an assessment of all existing CFR sites in the Fisheries Administration inventory for the four target provinces. The assessment will determine their level of implementation, capacity, and the needs for technical interventions to improve the physical environment as well as the governance of each CFR.

Based on the assessment, the types of support to each CFR will include:
- support for financial self-reliance and sustainability;
- governance and management support for sustaining CFR committee operations;
- substantial improvement in the physical environment and CFR infrastructure; and
- major support on both CFR infrastructure and the management interventions.

For Components 2 and 3, examples of additional interventions to develop a CFR water management model for multi-purpose water use include:
- Supplementary irrigation for dry season rice farming
- Small-scale pond aquaculture near CFR, especially for nutrition-rich fish species
- Small-scale horticulture on dikes and drawdown areas of CFR, especially for nutrition-rich vegetables
- Supplementary irrigation for homestead vegetable gardens
- Supplying water tanks and filters for safe drinking water
- Coordination and conflict resolution mechanism for water allocation decisions for above water uses
- Community management and benefit-sharing arrangements for above water uses
- Coordination for addressing any related social shock/stress, climate change, gender discrimination at village level.

Cross-Cutting Capacity Strengthening

Besides the three main activities above, the capacity strengthening plays an important role in the sustainability of the project. The project will develop the skills and knowledge base of local partner NGO staff through training events and on-the-job training. During the project inception period, training courses will be conducted for technical staff in NGOs and local government agencies followed by similar courses for community groups who manage the CFRs. Annual reflection workshops will be held to facilitate learning and knowledge sharing among peer farmer groups and NGO staff. In the final year of the project further dissemination events will be organized for development professionals, scientists and government officers.

The project will also build the capacity of target local communities for adaptive management of the CFR. Members of the CFR committees and other key stakeholders will learn how to collectively develop and implement a plan, monitor and evaluate the progress, reflect on the
progress and make adjustments, and to communicate their achievements to other members of the communities.

Through the implementation of the baseline and M&E surveys, local NGOs and provincial line agency staff will improve their skills in data collection and research, supervised by WorldFish, with additional guidance from FiA. Although scientific assessments and publication of science and communication products will be led by WorldFish scientists, co-authorship with partner organizations and local researchers will improve their writing and impact analysis skills, and raise their profile. Specific contextual case studies designed to help us better understand the dynamics of ecosystems and water governance in communities would best be undertaken by university students. Small research grants and co-supervision of these student thesis projects will significantly improve their overall knowledge and research design and analytical skills.

Country Information

1. The legal requirements for Environmental Impact Assessments (EIAs) in Cambodia are set out in the Law on Environmental Protection and Natural Resource Management, 1996 (Chapter III) (EPNRM Law) and the Sub-Decree on Environmental Impact Assessment, 1999 (EIA Sub-Decree). There are also a number of Prakas (a regulation promulgated by a Ministry to implement a law) on the procedures implementing the EIA Sub-Decree 1999:
   - Prakas on Guidelines for Conducting EIA Report (49 MoE, March 2000);
   - Prakas on Determination of Service Charge for Environmental Impact Assessment Report Review and Follow-up and Monitoring of Project Implementation (No. 745, October 2000);
   - Prakas (Declaration) on General Guidelines for Conducting Initial and Full Environmental Impact Assessment Reports (No. 376 BRK.BST 2009);
   - Prakas on Registration of Consulting Firms for Studying and Preparing Environmental and Social Impact Assessment Report (No. 215 Brk MoE 2014); and

2. Cambodia is currently preparing a new Environment Law with an EIA component.

2. The National Law on Fishery, 2006 can be accessed at the following website: https://drive.google.com/a/usaid.gov/file/d/0B4-Y-ilHHPRUNjlmNzYyYzMtM2EwYy00ZjMwLTllZDiNtNjRmMmM2Y0NDcw/view?pli=1


4. Tropical forests and the conservation of biodiversity play a fundamental role in sustainable development. As such The U.S. Foreign Assistance Act (FAA) of 1961, as amended by Sections 118 and 119, requires that all USAID Missions conduct a periodic country analysis of the conservation and sustainable use of tropical forests and biological diversity. These analyses can help inform project design and implementation.

The USAID Cambodia Tropical Forestry and Biodiversity (118/119) Assessment can be
Evaluation of Environmental Impact Potential

While development activities are intended to provide benefits for targeted recipients, when managed ineffectively they may cause adverse impacts that can offset or eliminate these intended benefits. Impacts can be direct, indirect, or cumulative. They can also be beneficial or negative. The USAID Sector environmental guidelines are good resources in finding more information on potential impacts for various sectors.

The following link is to all sector guidelines: http://www.usaidgems.org/sectorGuidelines.htm

The following are summaries of potential environmental impacts for respective sector(s) that are related to the scope of this IEE.

Irrigation
The following are some potential adverse impacts from mismanaged irrigation projects:

- Increased soil salinity
- Alterations to hydrology and watersheds
- Increased erosion and sedimentation
- Threats to human health
- Damage to water quality for all users (toxic substances; nutrient pollution; and anaerobic effects)
- Damage to sensitive ecosystems, such as rivers, wetlands and coastal estuaries
- Disruption of local socioeconomic arrangements
- Inefficient use of scarce water resources
- Depletion of groundwater resources
- Cumulative and area-wide effects on environmental quality

In addition, stagnant water pools are breeding place for disease vectors (mosquitoes that carry malaria, etc.). They can also increase transmission of water-related diseases.

Capture fisheries
The following are some potential adverse impacts from mismanaged captured fisheries development projects:

- Over harvesting
- By-catch
- Toxic substances (such as with cyanide fishing)
- Introduced species

Aquaculture
The following are some potential adverse impacts from mismanaged aquaculture fisheries
development projects:

- Pollution
- Habitat destruction
- Impacts on Freshwater sources
- Introduced species
- Disease other adverse effects to wild populations
- Adverse impacts on upstream and downstream users
- Possible environmental impacts of aquaculture for different production types can be found at page 10 of USAID Fisheries and Aquaculture guidelines - http://usaidgems.org/Sectors/fisheries.htm

**Recommended Threshold Decisions**

This activity is a cost-type award to a Category 1 PIO, WorldFish. In the absence of WorldFish environmental and social safeguards policy, pursuant to ADS 308.3.11(c), because WorldFish will be carrying out a specifically identifiable project, a Negative Determination with Conditions is recommended for activities related to irrigation, capture fisheries, and aquaculture. A Categorical Exclusion is recommended for technical support, trainings, and capacity building activities.

- **Justification for Categorical Exclusion Request**

Some of the activities described justify Categorical Exclusions, pursuant to 22CFR216.2(c)(1) and (2), for which an Initial Environmental Examination, or an Environmental Assessment are not required because the actions do not have an effect on the natural or physical environment.

Specifically, as currently planned, these activities fall into the following classes of action:
- Education, technical assistance, or training programs except to the extent such programs include activities directly affecting the environment (such as construction of facilities, etc.)
- Analyses, studies, academic or research workshops and meetings

The activities under review that justify Categorical Exclusion include:

Activities in Component 1, including:
- Support for financial self-reliance and sustainability;
- Governance and management support for sustaining CFR committee operations.

Activities in Components 2 and 3, including:
- Coordination and conflict resolution mechanism for water allocation decisions for above water uses;
- Community management and benefit-sharing arrangements for above water uses;
- Coordination for addressing any related social shock/stress, climate change, gender discrimination at village level.

Cross-Cutting Capacity Strengthening, including:
• Training for NGOs, local government agencies, and community groups on CFR management, adaptive management, and monitoring and evaluation;
• Research for publication conducted in partnership with local NGOs, provincial and local government, and university students, for baseline studies, monitoring and evaluation, and case studies.

- **Negative Determination with Conditions**

The following conditions and mitigation measures are recommended for this activity:

WorldFish will provide the USAID AOR with the documented environmental due diligence process that will be applied to USAID-supported activities. These documents will be approved by USAID AOR prior to initiation of activities.

a. USAID/Cambodia will ensure that WorldFish has in place for USAID-supported activities an effective environmental due diligence process that at a minimum:
   i. Reliably identifies support for environmentally sensitive activities and/or activities that require environmental review, licensing or permits under host country environmental regulations.
   ii. Verifies that such reviews are approved and/or permits or licenses are in place prior to commencing activities.

b. WorldFish will report on the adequacy and effectiveness of their environmental due diligence process as part of their periodic reporting to USAID/Cambodia.

c. USAID/Cambodia will verify adequacy and effectiveness of these environmental compliance processes. If USAID determines that WorldFish has deficiencies in their processes, then USAID may require corrective action and may provide appropriate training and other capacity building; for instance, providing training to acquaint WorldFish implementers with standard practices followed by major international donors in the areas of environmental risk screening, impact analysis, and promotion of environmentally sustainable projects.

Activities with potential impacts to the environment under the following sectors are recommended for a Negative Determination with Conditions threshold determination. When implemented ineffectively these activities may cause adverse impacts that can offset or eliminate the intended benefits. Mitigating environmental impacts with these activities requires a participatory approach to activity/program design and management. Strong technical design of the projects is also critical. The following are specific conditions to mitigate the potential negative impacts for respective sectors.

**Irrigation**
The following are conditions and best practices that should be implemented:

• Irrigation systems over 100 ha or deemed to have a significant effect on the environment shall be classified as positive determination and an approved Environmental Assessment or Environmental Impact Statement will be required.
• For rehabilitation of existing irrigation systems or irrigation systems less than 100ha and do not have significant effect on the environment, WorldFish shall conduct and prepare a supplemental Environmental Review Checklist (ERC) documenting a site specific
environmental review. A link to an ERC template is below. The ERC should include an EMMP and a completed “APPENDIX: A CHECKLIST FOR PLANNING ENVIRONMENTALLY SOUND SMALL-SCALE IRRIGATION”, starting on page 57 of the below mentioned sector environmental guideline. Development of the irrigation system will not begin until such a review and report is completed and approved by the AOR in consultation with a USAID Engineer and the Mission Environmental Officer.

A template for the ERC can be found under the Asia section at the following website: http://www.usaidgems.org/compliance.htm

Other conditions to highlight include:

- Incorporate community involvement including men and women in planning and operation
- Design for local soil conditions
- Account for water availability, including considering climate variability and future change
- Design for local crop conditions and varieties
- Plan for operation, maintenance and management of the project
- Ensure that the design accounts for health risks
- Ensure community and farmer involvement in mitigation and monitoring
- Design monitoring programs to handle complex situations
- Plan to include analyses of the economic social and environmental impacts of monitoring and mitigation
- Use proper, efficient monitoring tools, including well-organized data sets, control plots, stream and weather monitoring stations, photo and video records, and monitoring of technology adoption and dissemination.
- Follow environmentally sound construction practices as outlined in the USAID Sector Environmental Guidelines – Agriculture. This document can be found at: http://www.usaidgems.org/Sectors/agriculture.htm
- An Environmental Monitoring and Mitigation Plan (EMMP) shall include the principles of the agriculture guidelines.

**Capture fisheries**
The following are conditions and best practices that should be implemented:

- All fisheries development activities shall be conducted following principles for environmentally sound development, as provided in the USAID Sector Environmental Guidelines – Fisheries and aquaculture. This document can be found at the following site: http://usaidgems.org/Sectors/fisheries.htm
- Promote best practices for capture fisheries (see page 15 of the guidelines).
- An Environmental Monitoring and Mitigation Plan (EMMP) shall include the principles of the Fisheries and Aquaculture guidelines.
- Common mitigation measures for different types of fisheries activities can be found on page 24 of the guidelines.
Aquaculture
The following are conditions and best practices that should be implemented:

- All aquaculture development activities shall be conducted following principles for environmentally sound development, as provided in the USAID Sector Environmental Guidelines – Fisheries and aquaculture. This document can be found at the following site: http://usaidgems.org/Sectors/fisheries.htm
- Promote best practices for aquaculture (see page 16 of the guidelines). This includes proper siting and design, construction, operation and monitoring of aquaculture systems.
- An Environmental Monitoring and Mitigation Plan (EMMP) shall include the principles of the Fisheries and Aquaculture guidelines.
- Common mitigation measures for different types of fisheries activities can be found on page 24 of the guidelines.

Monitoring and Implementation

In addition to the specific conditions enumerated in the Negative with Conditions section, the threshold determinations recommended are contingent on full implementation of the following general monitoring and implementation requirements:

1. Environmental compliance actions and results in USAID solicitations and awards. The Agreement Officer shall include language and reference to this IEE in appropriate solicitations and awards. Suggested language for use in solicitation and awards can be found at the following link: http://www.usaid.gov/ads/policy/200/204sac

2. Implementing Partner (IP) Briefings on Environmental Compliance Responsibilities. The Agreement Officer’s Representative (AOR) shall provide WorldFish with a copy of this IEE; WorldFish shall be briefed on their environmental compliance responsibilities by their AOR. During this briefing, the IEE conditions applicable to WorldFish’s activities will be identified.

3. Development of Environmental Mitigation and Monitoring Plan (EMMP). For activities that are subject to one or more conditions set out in the “Recommended Threshold Decision” section of this IEE, WorldFish shall develop and provide an EMMP for USAID AOR review and approval, documenting how their project will implement and verify all IEE conditions that apply to their activities.

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

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

5. **Integration of environmental compliance responsibilities in sub-contracts and grant agreements.** WorldFish shall assure that sub-contracts and sub-grant agreements reference and require compliance with relevant elements of the IEE and any attendant conditions.

6. **Assurance of sub-grantee and sub-contractor capacity and compliance.** WorldFish shall assure that sub-grantees and subcontractors have the capability to implement the relevant requirements of this IEE. WorldFish 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.

7. **Implementing Team monitoring responsibility.** As required by ADS 204.3.4, USAID will actively monitor and evaluate whether there are new or unforeseen consequences arising during implementation that were not identified and reviewed in accordance with 22 CFR 216. USAID shall also monitor the need for additional review. If additional activities not described in this document are added to this program, an amended environmental examination must be prepared and approved.

8. **New or modified activities.** As part of its initial Work Plan, and all Annual Work Plans thereafter, WorldFish, in collaboration with their AOR, shall review all planned and ongoing activities to determine if they are within the scope of this IEE.

If any activities are planned that would be outside the scope of this IEE, 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. This includes activities that were previously within the scope of the IEE, but were substantively modified in such a way that they move outside of the scope.

9. **Compliance with Host Country Requirements.** Nothing in this IEE substitutes for or supersedes WorldFish, sub-grantee and subcontractor responsibility for compliance with all applicable host country laws and regulations for all host countries in which activities will be conducted under the USAID activity.

WorldFish, sub-grantees and subcontractor must comply with each host country’s environmental regulations unless otherwise directed in writing by USAID. However, in case of conflict between host country and USAID regulations, the latter shall govern.

**Revisions and Limitations**

If during implementation, project activities are considered outside of those described in this document, an amendment shall be submitted. Pursuant to 22CFR216.3(a)(9), if new activities are
added and/or information becomes available which indicates that activities to be funded by the project might be “major” and the project’s effect “significant,” this determination will be reviewed and revised by the AOR of the project, and submitted to the Mission Environmental Officer and Bureau Environmental Officer for approval and, if appropriate, an environmental assessment will be prepared.
APPROVAL OF INITIAL ENVIRONMENTAL EXAMINATION

Acting Office Director
Food Security and Environment

_Cleared by email_  _03/18/2016_
Sang Lee  Date

Mission Environmental Officer

_Cleared by email_  _03/18/2016_
Menglim Kim  Date

Regional Legal Advisor

_Cleared by email_  _03/21/2016_
Christopher Kelly  Date

Regional Environmental Advisor

_Cleared by email_  _03/21/2016_
Aaron Brownell  Date

APPROVAL:

Mission Director

Rebecca Black  March 22, 2016  Date

CONCURRENCE:

Bureau Environmental Officer

William Gibson  March 22, 2016  Date