INTEGRATED SAFEGUARDS DATA SHEET
APPRAISAL STAGE

Report No.: ISDSA17650

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I. BASIC INFORMATION

1. Basic Project Data

Country:	Vietnam	**Project ID:**	P153544
Project Name:	Mekong Delta Integrated Climate Resilience and Sustainable Livelihoods Project (P153544)		
Task Team Leader(s):	Anjali Acharya,Binh Thang Cao,Greg J. Browder		
Estimated Appraisal Date:	29-Feb-2016	**Estimated Board Date:**	26-May-2016
Managing Unit:	GEN02	**Lending Instrument:**	Investment Project Financing
Sector(s):	General agriculture, fishing and forestry sector (40%), General water, sanitation and flood protection sector (40%), Public administ ration- Water, sanitation and flood protection (20%)		
Theme(s):	Climate change (40%), Water resource management (25%), Rural services and infrastructure (10%), Environmental policies and instituti ons (15%), Natural disaster management (10%)		
Is this project processed under OP 8.50 (Emergency Recovery) or OP 8.00 (Rapid Response to Crises and Emergencies)?	No		

Financing (In USD Million)

Total Project Cost:	384.00	Total Bank Financing:	307.00
Financing Gap:	0.00		

Financing Source	Amount
BORROWER/RECIPIENT	77.00
International Development Association (IDA)	307.00
Total	384.00

Environmental Category:	A - Full Assessment
Is this a Repeater project?	No

2. Project Development Objective(s)

22. The Project Development Objective (PDO) is to enhance tools for climate-smart planning

and improve climate resilience of land and water management practices in selected provinces of the Mekong Delta in Vietnam. The objective would be achieved through the provision of capital investments, technical assistance and capacity building for farmers in the selected provinces of the Mekong Delta in Vietnam and government institutions at national and sub-national levels.

3. Project Description

The project is a critical part of the long-term World Bank engagement in the Mekong Delta to strengthen integrated climate resilient management and development, across different sectors and institutional levels. More specifically, it will support information systems, the institutional arrangements, and the roadmap for building provincial and district-level planning capacity for sustainable Delta-wide development. In parallel, the project will also seek opportunities for 'low regret' investments and scope out longer term development options to be financed under future phases. The project would comprise of a combination of structural and non-structural investments, and has been informed by the World Bank financed Building Resilience in the Mekong Delta TA (P149017).The project is proposed to span a period of 6 years, with the financing of US$ 384 million ($307 m from IDA; $77 m from GoV). The project is seeking additional resources from the Global Environment Facility (GEF) to finance research and innovation activities relating to climate resilient solutions for the Mekong Delta. If the GEF grant funds are obtained during project implementation, they would finance activities which are complementary to the project and will be processed separately (“partially blended”).

The five components under the project are:

Component 1: Enhancing Monitoring, Analytics, and Information Systems (Estimated US$59.2 million, of which US$53.8 million will be financed by IDA).
Putting the Mekong Delta on a more sustainable and resilient trajectory in the face of climate change, upstream Mekong basin development, and environmentally damaging practices within the Delta itself, will require investments in both infrastructure and the enhanced capacity to monitor, plan, and manage the Delta’s land and water resources. Component 1 provides the framework for ensuring the capacity to undertake “smart investments” and cope with anticipated wide-scale environmental changes.

Sub-component 1.1. Monitoring Systems to Enhance Mekong Delta Knowledge Base: This subcomponent upgrades and expands MONRE’s monitoring systems for groundwater and surface water, and enhances its remote sensing capacity. MONRE will also undertake studies on specialized topics including river and coastal morphology, and groundwater management. MARD will develop a computer based operations system for hydraulic infrastructure which will improve the operation of the complex network of gates and canals in the Delta. MARD will also undertake an inventory of sea dykes and mangrove belts along the 700 km Delta coastline.

Subcomponent 1.2: Infrastructure and Information Systems for Enhanced Decisions. This subcomponent finances the establishment of the Mekong Delta Center, which will serve as a hub for Delta-wide information, including water, land use, environmental and climate change information, education and outreach. A Mekong Center business plan will be developed which examines options for sustainable funding and possible expansion. The foundation of the Center will be a “knowledge management platform” (KMP) which will be a GIS-based computer system providing MONRE and other stakeholders with the capability to integrate various data bases and models to help investigate the environmental and socio-economic impacts of climate change and basin developments. A Mekong Delta Climate Resilience Assessment will also be formulated which will provide a set of

recommendations to help guide planning at the regional, provincial, and sectoral levels.

Subcomponent 1.3: Mainstreaming Climate Resilience into Planning Processes. This sub-component will provide the linkages between the data and information systems with Vietnam's planning processes in the Mekong Delta. Led by MPI, this subcomponent will seek to collaborate with line ministries (primarily MARD and MONRE), sectors and provinces to draft regulations on pilot regional coordination for climate change adaptation, and climate-resilient solutions in the Mekong Delta. It will also finance reports to advise on land-use planning, spati al and territorial development, and identifying priority low-regret and climate resilient investments. Using the Mekong Climate Resilience Assessment, the subcomponent will seek to update the Mekong Delta Socioeconomic Master Plan, relevant sectoral master plans, and provincial SEDPs.

Component 2: Managing Floods in the Upper Delta (Est. US$ 101 million, of which US$ 79.1 million will be financed by IDA)
The Upper Delta area is characterized by natural occurring deep floods in the wet season. The development of an extensive agricultural flood control system has shifted the flood waters to other areas in the Delta and also reduced the beneficial effects of flooding including replenishing soil fertility, groundwater recharge, and sustaining aquatic eco-systems.

The primary objective of this component is to protect and/or reclaim the benefits of controlled flooding (flood retention) measures while increasing rural incomes and protecting high value assets in An Giang and Dong Thap provinces. This will potentially consist of: i) modifying water and agricultural infrastructure to allow for more beneficial flooding (expanding flood retention capacity) in rural areas and offer new agricultural/aquaculture cropping alternatives; ii) providing livelihoods support measures to farmers so they have alternatives to the wet season rice crop, including aquaculture; iii) constructing/upgrading infrastructures for protecting select high value assets; iv) develop flood diversion channels to lower the peak flows in the Middle Delta; and iv) facilitating agricultural water use efficiency in the dry season.

Sub-projects selected to be financed under this component include infrastructure schemes aimed at increasing flood retention capacity, irrigation and upgrading of reservoirs, livelihoods improvement (i.e. demonstration and agriculture extension support for transition from triple rice to alternative cropping), and ecosystem restoration. Details are in Annex 2.

Component 3: Adapting to Salinity Transitions in the Delta Estuary (Est. US$ 109.1 million, of which US$ 82.0 million will be financed by IDA)
The Mekong River divides into 9 distributaries which flow into the East Sea through the Estuary zone. This area is naturally characterized by low flows during the dry season which allow saline water to extend far inland. Over the past twenty years, closed freshwater systems designed for rice production have been developed in this area consisting of large polders ringed by dikes and with sluice gates to control saline water intrusion. The long-term sustainability of this strategy is questionable due to reduced dry season water availability and sea-level rise. In addition, farmers are rapidly converting to more profitable shrimp farms along the coast, often accompanied by destruction of mangrove forests.

This component aims to address the challenges related to salinity intrusion, coastal erosion, sustainable aquaculture and improved livelihoods for communities living in the coastal areas of Ben Tre, Tra Vinh, and Soc Trang provinces. This will potentially consist of: i) construction of coastal defenses consisting of combinations of compacted earth embankments and coastal mangrove belts;

ii) modification of water and agricultural infrastructure along the coastal zone to allow flexibility for sustainable aquaculture activities and adapt to changing salinity levels; iii) support to farmers to transition (where suitable) to more sustainable brackish water activities such as mangrove-shrimp, rice-shrimp, and other aquaculture activities; and iv) supporting climate smart agriculture by facilitating water use efficiency in the dry season.

Sub-projects to be financed under this component will include restoration of mangroves along the provincial coastline, construction/upgrades of river and coastal embankments, and sluice gates to improve water quality, efficiency and sustainability of aquaculture in the brackish water zone, and supporting a gradual transition from rice and other freshwater crops in the saline intruded zone to a brackish water economy including aquaculture through demonstration and aquaculture extension together with necessary adjustments to land-use plans in a longer term. Details are presented in Annex 2.

Component 4: Protecting Coastal Areas in the Delta Peninsula (Est. US$ 101.4 million, of which US $82.2 million will be financed by IDA)
In contrast to the adjacent estuary zone, there are no distributaries of the Mekong River flowing through the peninsula and historically the peninsula was covered by dense mangroves sustained by localized rainfall. In recent decades, there has been an explosion of shrimp farming along the coast which relies heavily on groundwater abstraction to maintain the proper salinity level. The over-abstraction of groundwater has resulted in land subsidence. The natural mangrove forest has been significantly reduced, although there are still some protected mangrove zones. An extensive canal network has been developed to bring freshwater from the Mekong River into the peninsula to allow rice production.

This component aims to address the challenges related to coastal erosion, groundwater management, sustainable aquaculture, and improved livelihoods for communities living in the coastal areas of Ca Mau, Bac Lieu and Kien Giang provinces. This will potentially consist of: i) restoration of coastal mangroves and/or rehabilitation of coastal dikes in erosion areas; ii) modification of water control infrastructure along the coastal zone to allow flexibility for sustainable aquaculture activities; iv) control of groundwater abstraction for agricultural/ aquaculture and enhancing freshwater supplies for domestic use; v) support to farmers to practice more sustainable brackish livelihoods such as mangrove-shrimp; and vi) support to climate-smart agriculture through water use efficiency.

Sub-projects to be financed under this subcomponent include restoration of mangroves to enhance coastal defense, transition of shrimp farming into integrated mangrove-shrimp, construction/ upgrades of river and coastal embankments, and sluice gates to manage water conditions and demonstration and aquaculture extension to improve efficiency and sustainability of brackish water aquaculture. Details are presented in Annex 2.

Component 5: Project Management and Implementation Support (Est. US$ 13.2 million, of which US$9.9 million will be financed by IDA)
This component supports project management and capacity building for MARD, MONRE and MPI to implement the Project. This component is expected to provide incremental operating costs and consultant and advisory services for overall project management, financial management, procurement, safeguards and monitoring and evaluation.

4. Project location and salient physical characteristics relevant to the safeguard analysis (if known)

The Mekong Delta population has been identified one of the most vulnerable to the impacts of climate change. Agriculture and aquaculture is likely to be affected by changes in freshwater supply due to salinity intrusion, flooding, increasing tropical cyclone intensity, and increasing temperatures. Domestic freshwater supply is expected to become less reliable due to erratic rainfall and salinity intrusion into groundwater resources. Marine fisheries, particularly coral reef fisheries, are expected to be impacted by sea-level rise, warmer oceans, and ocean acidification associated with rising atmospheric and ocean CO2 concentrations. Coastal infrastructures are exposed increased tropical storm intensity, long-term sea-level rise, and sudden-onset fluvial and coastal flooding. In addition, changes in fishing and farming practices, (heavier use of pesticides and fertilizers) and increasing industrialization and river traffic has led to a deterioration in air, surface and groundwater quality. Poor construction practices and intensified land use has led to increased mangrove deforestation, resulting in increased coastal erosion and increased vulnerability to natural disasters.

The three project components described below fall within the Mekong Delta. The Mekong Delta is characterized by the tropical monsoon climate, although cold air from Siberia and China occasionally penetrates the Mekong Delta. The general circulation is dominated by two monsoon flows: the northeast in winter and southwest one in summer periods. The southwest monsoon or the rainy season, normally affects the basin from mid-May to early October and the northeast monsoon occurs in the dry season from early November to mid-March. In the Mekong Delta, the rainfall has clear temporal and spatial distribution patterns. In the south-west area of the Delta (including Ca Mau and Soc Trang) the rainfall (of 2400 mm) has historically been much higher than that (1200 mm) in the coastal area of the East Sea (an area that includes Dong Thap).

Component 2: Upper Delta Environmental Zone (An Giang/Dong Thap/Kien Giang Provinces) This area is characterized by natural occurring deep floods in the wet season. The development an extensive agricultural flood control system has shifted the flood waters to other areas in the Delta and also reduced the beneficial effects of flooding which historically included replenishment of soil fertility, groundwater recharge, and the preservation of aquatic eco-systems. In An Giang Province, a large bird sanctuary exists at Tra Su Forest. With an area of 850ha, Tra Su Forest is home to 70 species of birds including two rare species of birds recorded in Vietnam's Red Book: Mycteria leucocephala and Anhinga melanogaster. Tràm Chim National Park is a national park in Dong Thap Province, created to protect several rare birds, in particular the Sarus Crane (Grus antigone), a species listed in the IUCN Red Book. In Kien Giang, U Minh Thuong National Park contains over 243 plant species and has a rich mammalian population, including hairy-nosed otters and fishing cats. A total of 187 birds have been recorded here, including the oriental darter, spot-billed pelican, black-headed ibis, glossy ibis, greater spotted eagle and Asian golden weaver. There are also a total of 39 amphibian species and 34 species of fish in the park.

Component 3: Delta Estuary Environmental Zone (Soc Trang, Tra Vinh, Vinh Long and Ben Tre Provinces): The Mekong River divides into 9 tributaries which flow into the East Sea through the Estuary zone. This area is naturally characterized by low flows during the dry season which allow saline water to extend upwards of 100 km inland. Over the past twenty years, closed freshwater systems designed for rice production have been developed in this area consisting of large polders ringed by dikes and with sluice gates to control saline water intrusion. The long-term sustainability of this strategy is questionable due to reduced dry season water availability and sea-level rise. In addition, farmers are rapidly converting to more profitable shrimp farms along the coast, often accompanied by destruction of mangrove forests. In Tra Vinh, bird sanctuaries are located Tra Cu, Chua Huang, and Duyen Hai. In Ben Tre, Thanh Phu is an important nature reserve of 4,510 ha,

comprising a strict protection area of 1,788 ha, a very critical coastal protection area of 949 ha, and a scientific research area of 1,773 ha. Thanh Phu Nature Reserve comprises a narrow strip of coastline between two of the mouths of the Mekong River: the Co Chien and Ham Luong estuaries. As is the case with other sites on the eastern coastline of the Mekong Delta, Thanh Phu Nature Reserve is strongly affected by erosion as well as accretion. Ben Tre also contains a planted mangrove forest at Bao Thuan, and a large bird sanctuary at Ham Vo.

Component 4: Delta Peninsula Environmental Zone (Ca Mau, Kien Giang and Bac Lieu): In contrast to the adjacent estuary zone, there are no tributaries of the Mekong river flowing through the peninsula and historically the peninsula was covered by dense mangroves sustained by localized rainfall. In recent decades, there has been an explosion of shrimp farming along the coast which relies heavily on groundwater abstraction to maintain the proper salinity level. The over-abstraction of groundwater has resulted in significant land subsidence. The natural mangrove forest has been significantly reduced, although there are still significant protected mangrove zones, particularly at Dam Roi. The Mui Ca Mau Park is home 60 species of upper plants, up to 26 mangrove tree species and two species of double mangrove and “quao” tree that are listed in Vietnam's Red Book. The Bac Lieu Bird Sanctuary is notable for its 50-odd species of bird, including a large population of white herons.

5. Environmental and Social Safeguards Specialists

Ha Thi Van Nguyen (GEN02)

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6. Safeguard Policies	Triggered?	Explanation (Optional)
Environmental Assessment OP/BP 4.01	Yes	This policy is triggered due to the potential adverse impacts associated with construction activities under Component 1, 2, 3, and 4 and implementation of the sustainable livelihood models, requiring the identification, mitigation and monitoring of potential adverse environmental and social impacts. The project is proposed as Category A given the overall scope and impacts of the four components project activities. This includes specifically the potential construction and operation of a water reservoir for water supply and fire prevention (in Cau Mau subproject scheduled for second phase) which would be located adjacent to U Minh Ha National Park in Ca Mau province, and thus may have significant impacts on natural habitats and biodiversity of the national park. The complicity of water resources issues and the significant impacts of land acquisition due to project activities are also anticipated, as well as potential future induced impacts when pilots are scaled up.

		A Regional Environmental Assessment (REA) and four Environmental and Social Impact Assessments (ESIAs) for the first phase subprojects have been prepared based on the agreed ToR. An ESMF has been prepared and disclosed during preparation phase given that the subprojects will be identified during project implementation. Each subproject will go through environmental and social screening. The full scale Environmental and Social Impact Assessment (ESIA) will be carried out for all category 'A' subproject. Category 'B' subproject will require limited ESIA or ESMP.
Natural Habitats OP/BP 4.04	Yes	The project will not impact any protected area nor will it affect important/endangered flora or fauna species or biodiversity areas of high value. The environmental and social screening and the first phase subprojects confirmed that natural habitats are present in the project areas. However, they would not have impact on any protected area nor would they affect important/endangered flora or fauna species or biodiversity areas of high value. Construction and operation of the sluices gates would have the small potential impacts on natural habitats of the rivers, canals, and estuaries including loss of small benthic habitats and disturbance of benthic organisms, temporary blockage of fish passage in the rivers and canals due to operation of the sluice gates. Impacts and mitigation measures were and will be included in the relevant subproject ESIAs to address these impacts.
Forests OP/BP 4.36	Yes	There are indigo forests in Ca Mau, Kien Giang, An Giang, and Dong Thap. The activities to restore coastal landscapes to enhance resilience of inland farming systems, reduce vulnerability to the impacts of sea-level rise and coastal erosion including mangrove reforestation in targeted areas may have the potential to have adverse impacts on the rights and welfare of local people and their level of dependence upon natural and plantation forests. No significant impacts on forests were found in the first phase subprojects, and associated mitigation measures were included. Forest Management Plans will be prepared for all mangrove reforestation undertaken as part of the Project, and for any subprojects that may affect the indigo forests.
Pest Management OP 4.09	Yes	The more reliable irrigation water would induce increased irrigated agricultural activities which may involve in the use of agricultural chemicals. In order to mitigate these environmental impacts, an integrated pest management plan (IPM) program will be implemented for each applicable subproject as a part of the ESMP. A Pest

		Management Framework (PMF) was developed and included in the ESMF as a guideline for preparation of an IPM program. The PMF stipulates prohibition of the use of very toxic chemicals, and provides directions and approach for IPM.
Physical Cultural Resources OP/BP 4.11	Yes	It is not expected that the project will necessitate relocation of PCRs such as monuments, temples, churches, religious/spiritual and cultural sites. Should this be unavoidable, all effort will be made to limit impacts on such PCRs. In such a case, a PCR management Plan will be prepared in consultation with local stakeholders and religious/cultural authorities. The project will involve relocation of graves which are also considered physical cultural resources (PCRs). Since the project includes dredging and excavation activities, which may result in chance finds, a chance finds procedure has been included in the ESMF for application in subproject ESMPs.
Indigenous Peoples OP/ BP 4.10	Yes	The project entails multiple subprojects in a large geographical area of Mekong Delta Region where ethnic minority communities (Cham, Chinese and Khmer) are likely to be present. Of the 4 sub-projects selected for the first year implementation, two (Kien Giang and Tra Vinh/ Vinh Long) have EM peoples present in the subproject areas. Ethnic minorities (mainly Khmer) account for 23.6% of Cau Khe District (Tra Vinh Province). This represents 31,335 households. In the two districts located in Vinh Long Province, the number of EM household is very little. No EM household is affected by land acquisition. These EM households are potentially affected by the Subproject due to the proposed livelihood improving models.
Involuntary Resettlement OP/BP 4.12	Yes	Project activities will involve some land acquisition resulting in physical land take and impacts on livelihoods and resources. At this stage, this may occur in components 2 3 and 4. For the four first year subprojects, total permanent land acquisition is estimated at 1,249,974 m2 (especially 132,240, 1,100,00, and 17,734 in Kien Giang, An Giang and Tra Vinh/Vinh Long sub-projects). Temporary land acquisition, for the purpose of work space during construction, is estimated at 274,253 m2. It is estimated that the total number of household affected by these subprojects is 825 (respectively 58, 752, and 13 in Kien Giang, An Giang, and Tra Vinh/Vinh Long sub-projects), of which 70 HHs (respectively 58 and 12 in Kien Giang and Tra Vinh/Vinh Long sub-projects) will need to be relocated.

Safety of Dams OP/BP 4.37	Yes	The project may fund the construction of a water reservoir for water supply and fire prevention. No structure will be higher than 10 meters, and the dam and reservoir are not anticipated to pose any hazards. In line with OP/BP 4.37, the ESMF has provisions for meeting the requirements of the policy, including ensuring the involvement of qualified engineers.
Projects on International Waterways OP/BP 7.50	Yes	This policy triggers for the project considering the nature of activities to be implemented within broad areas of the Vietnam Mekong Delta and that Vietnam is a riparian on the International Mekong river basin, of which it is a downstream riparian. The proposed investments under the project will involve additions or alterations that will rehabilitate, upgrade, or make changes to existing schemes. No project activities will be implemented on the mainstream of the Mekong, and construction of the sluice gates will be implemented on the primary and secondary infield canals. The four subproject Environmental and Social Impact Assessments (ESIAs) prepared for the first year of implementation confirmed that the project would not have appreciable harm to the Mekong flow and water quality. Further, the proposed project area is located in the most downstream of the Mekong, therefore, the investments will not certainly affect the water quality or flow in the upstream riparian countries. Therefore, it is assessed that the project falls within the riparian notification exception under paragraph 7(a) of OP 7.50, and that no riparian notification is required. The memorandum for approval of the riparian notification exception was signed by the Regional Vice President in March, 2016.
Projects in Disputed Areas OP/BP 7.60	No	None of the proposed project sites are in a Disputed Area.

II. Key Safeguard Policy Issues and Their Management

A. Summary of Key Safeguard Issues

1. Describe any safeguard issues and impacts associated with the proposed project. Identify and describe any potential large scale, significant and/or irreversible impacts:
The project would mainly involve the following physical investments under Components 2, 3, 4: i) Rehabilitation and reinforcement of low dikes in the floodplain, sea and river dikes to create a sediment area for mangrove/for flood/salt intrusion regulation and control, and embankments to prevent high tides; ii) Construction of infield sluice gates and culverts through the sea dykes to control salinity intrusion/shrimp-rice farming; iii) Construction and rehabilitation of irrigation systems including dredging canals for water regulation and water quality improvement; iv) Construction of two reservoirs for freshwater water supply and a water treatment plant; v) Mangrove planting, restoration, and protection; vi) Sustainable agriculture systems focused on

land use/zoning and water resources management; vii) Development of livelihoods models that are climate change (CC) resilience in the three zone of the project, including floating rice farming, conversion of rice to other high economic value crops, aquaculture and rice-shrimp and mangrove forest-shrimp models; and vii) Capacity building on specific livelihood activities. Civil works under Component 1 will be small including of a small building to house the Mekong Delta Center in Can Tho city and expanding and upgrading MONRE's monitoring systems in the Mekong Delta for surface water and groundwater, including construction of water resources monitoring stations.

The project is expected to bring about significant positive changes to the Mekong Delta region in terms of (i) enhanced capacity of the region to adapt to climate change adaptation due to implementation of sustainable climate resilience livelihoods models; (ii) increase in agricultural productivity and thus contributing to poverty reduction and economic development due to optimum fresh water-salinity intrusion regulation and flood control; (iii) improvement water quality due to reduced use of fertilizers, pesticides, and aquaculture chemicals; and (iv) Increased mangrove cover for enhancing ecological restoration and reducing coastal erosion.

Regional level impacts

Environmental and social impacts have been identified and assessed in detail –both at the regional level as well at the project-specific levels. Given the types and locations of the proposed subprojects and the nature of social conditions and water resources management in the lower part of Mekong Delta, a Regional Environmental Assessment (REA) was conducted. The REA confirmed that rapid population growth and intensive agricultural and aquaculture development over the past decades have significantly reduced the natural values in the delta area and key lessons include (a) highly controlled multi-crop farming systems have depleted soil fertility and cut off agricultural areas from natural fertilization processes of the Mekong River, (b) shrinking Mekong Floodplain area has exacerbated flooding in unprotected areas, (c) draining of wetland depressions in the delta for agricultural expansion; (d) dry season agriculture is shifting the delta's balance between fresh and marine environments; and (e) centralized water control initiatives such as the saline control structures in the coastal areas of the delta often limit the livelihood and economic opportunities for farmers seeking to take advantage of market driven opportunities. Based on the key basin-wide drivers of change (rainfall and temperature, hydropower development, land use, and sea level rise) it was found that key changes in the Mekong Delta will be an increase in flood magnitude and volume and duration, shortening of transition seasons, and increase dry season water levels.

The REA found no major adverse regional negative impacts resulting from the proposed project and that the regional adverse impacts can be mitigated through implementation of the subproject ESMPs. Summary of key regional impacts for Components 2, 3 & 4 include:

- Installing water/flood control structures in the upper delta will change the hydrological flow and is likely to have major positive regional impacts by increasing flood retention and restoring floodplain ecosystems and agriculture. Flooding will provide nutrients and sediment in the wet season reducing the use of fertilizers and pesticides. Under the new livelihood models farmers will be transitioning from triple rice cropping to double rice plus crops and aquaculture. This will be a step-by-step process that includes agricultural extension, access to markets and sustainable agricultural practices.
- Installing water/salinity control structures in the estuary and peninsula will have major positive impacts by increasing protection from coastal erosion, and minor negative regional impacts by blocking the movement and migration of coastal and estuarine fisheries in the in-field rivers of the Delta. The loss in capture fisheries may be offset by increasing the areas mangroves,

which in combination with improved coastal management should increase biodiversity. Bio-monitoring should be undertaken in the project areas. The combination of mangroves and sea dikes will also provide positive benefits by reducing the damages caused by storm surges and sea level rise.

- The operation of the sluice gates will need to be flexible, and incorporate hydrological modeling and surface water monitoring of salinity to determine zones for freshwater, brackish and saline farming. The operations and zones may need to be altered depending on wet, average or dry years. For example, the province of Vinh Long is impacted by salinity in dry years.
- The development of livelihood programs in the Delta Estuary should help farmers to transition to adapt to salinity intrusion and improve climate resilience. Promoting sustainable aquaculture, extensive shrimp and mangrove-shrimp should lead to reduced groundwater abstraction and surface water pollution associated with intensive shrimp. Groundwater use studies and surface water monitoring is required to confirm this during and after the implementation of the project.
- Constructing the reservoir in Ca Mau and improving water and sanitation facilities in the delta peninsula is likely to have major positive regional impacts. Dry season freshwater shortages and access to water and sanitation are critical challenges in coastal areas. The reservoir, if operated effectively, and complemented by climate smart agriculture should reduce the exploitation of groundwater. Dam safety measures and further hydrological and hydraulic modeling is required to enhance the benefits and reduce any negative impacts during construction and operation of the reservoir.

The REA, however, confirmed that these impacts are likely to be local or sub-regional and can be managed through subproject safeguard instruments and Environmental and Social Management Plan (ESMP). To enhance government capacity for taking regional impacts into account, Component 1 has specifically included activities to improve monitoring systems, strengthen planning tools for mainstreaming climate resilience, and creating decision support systems and a Mekong Delta Climate Resilience Assessment to feed into provincial and delta-wide plans and investments.

Project-level impacts

The main social impacts/risks due to construction of civil works and implementation of livelihoods models would include: (i) loss of crops, trees, livelihoods, and other properties due to permanent and temporary land acquisition and relocation of households; (ii) farmers' reluctance/resistance to changes in livelihood models; (iii) low preparedness of farmers in implementing the livelihood models; (iv) disproportionate impacts/benefits from project activities on the more vulnerable such as poor, elderly, and ethnic groups; and (v) relocation of graves.

Typical and site-specific environmental adverse impacts during pre-construction, construction, and preparation of the water infrastructures (including sluice gates) and implementation of livelihoods models include: (i) safety risk due to UXOs; (ii) increased nuisance from dust and noise; (iii) water and land pollution due to waste generation; (iv) interference with local agricultural and aquaculture activities; (v) sedimentation and water pollution on agricultural land and in aquaculture ponds; (vi) exposure of acid sulfate soil from excavation activities; (vii) interruption in irrigation and/or domestic water supply; (viii) risks to health and safety of local people and construction workers; (ix) disturbance of local road and waterway traffic; (x) temporary blockage of fish passes to the rivers and canals; and (xi) water use conflict among rice farming, aquaculture, and salt production water users.

The four ESIAs of the first phase subprojects confirmed these impacts to be moderate, short to medium term, unavoidable, and can be mitigated through effective consultation and adequate compensation. The project sites do not include physical cultural resources; however, throughout the implementation of subprojects, a relocation of graves would be necessary.

The findings of the ESIAs indicate the main adverse impacts during operation to include: i) Impacts of waterway traffic interruption due to operation of the sluice gates; ii) Impacts on water quality and aquatic life as a result of increasing use of agrochemicals due to provision of more freshwater for rice irrigation; iii) Impacts of solid waste and waste water from pilot of aquaculture models; iv) Increase of water use conflict between rice farming and brackish water aquaculture due to unproper sluice gate system management; and v) Potential environmental risks such as epidemic of fish or shirmp desease, structure damage; and vi) Temporary blockage of fish passes to the in-field rivers and canals due to temporaty closure of the sluice gates. However, these adverse impacts were assessed as low to moderate and can be mitigated.

Induced impacts: The ESIAs also determined that during project implementation a limited number of sustainalbel livelihood models will be piloted, and no significant negative impacts on the environments would be anticipated. However, in the long term, scaling up of these models, especially intensive aquaculture model, if not properly managed at the planning level may result in changes in land use on a broad scale significantly affecting the envirnment and biodiversity in the region.

Indigenous People (OP 4.10). The project will entail multiple subprojects in a large geographical area of Mekong Delta Region where ethnic minority communities are likely to be present. The application of OP 4.10 at the subproject level will be identified on a case by case basis with support from early screening exercises. Of the 4 sub-projects selected for the first year implementation, two (Kien Giang and Tra Vinh/Vinh Long) have EM peoples present in the subproject areas. Most of the EM households are Khmers with small population of Hoa (Chinese) and Cham. Among the three groups, the Khmer is the poorest and most vulnerable group, followed by the Cham while the Chinese have an equal standing with the Kinh. Khmers make up a large proportion of the poor and landless, and often work as hired laborers on the rice and aquaculture farms as well as collecting natural aquatic resources to sell to aquaculture farmers as feed stock for shrimp.

Involuntary Resettlement (OP 4.12). Project activities are likely to involve some land acquisition resulting in physical land take and impacts on livelihoods and resources. At this stage, this may occur in components 2 3 and 4. It may be necessary to compensate local communities for lost homes, immovable assets, and/or lost revenues/livelihoods as a result of any flood control/ saline intrusion measures or changes in fishing and farming practices and/or changes in cropping. Additional assistance to farmers who may have changes in their current livelihoods may also be needed, and is being identified through a social analysis. Total permanent land acquisition is estimated at 1,249,974 m2 (especially 132,240, 1,100,00, and 17,734 in Kien Giang, An Giang and Tra Vinh/Vinh Long sub-projects). Temporary land acquisition, for the purpose of work space during construction, is estimated at 274,253 m2. It is estimated that the total number of household affected by these subprojects is 825 (respectively 58, 752, and 13 in Kien Giang, An Giang, and Tra Vinh/Vinh Long sub-projects), of which 70 HHs (respectively 58 and 12 in Kien Giang and Tra Vinh/Vinh Long sub-projects) will need to be relocated.. Vulnerable groups (poor, women head of households, disabled head of households) are also present and will receive special assistance. Based on the above, social impacts are significant for the An Giang and Kien Giang

sub-projects and not significant for sub-projects in Tra Vinh/Vinh Long.

2. Describe any potential indirect and/or long term impacts due to anticipated future activities in the project area:

The construction of proposed works will have long term impacts on current livelihood models which may have to change to adapt to changing environmental conditions and climate change impacts. The shift to new and more sustainable, climate-resilient livelihoods is expected to help farmers diversify production and increase incomes. All farmers will receive support such as training and transfer of knowledge from pilot livelihood demonstrations models, or by using farmer cooperatives or collective groups to implement livelihood adaptation models in order to reduce the risks for farmers. Some HH may be more reluctant to change (i.e. elderly, ethnic minority households, poor and landless or land poor households) and will need specific support in order for them to adapt their livelihood. Change in the institutional arrangement in agriculture in the Mekong Delta is expected by using farmer cooperatives or collective groups to implement the livelihood adaptations. Forming new cooperatives, or implementing through existing cooperatives, will help to instill farmer confidence through collective risk sharing, particularly with risk-averse farmers that may be unwilling to adopt the new adaptation models.

3. Describe any project alternatives (if relevant) considered to help avoid or minimize adverse impacts.

The alternatives of “without the subproject” and “with the subproject” and technical alternatives have been analyzed for all the four first phase subprojects. The technical, financial, environmental and social aspects, and construction methods have been considered in carrying out the alternative analysis. Every effort has been made to significant impacts on the environment and society and to avoid/minimize the need for land acquisition. The safe approach will apply for the subproject identified during project implementation.

4. Describe measures taken by the borrower to address safeguard policy issues. Provide an assessment of borrower capacity to plan and implement the measures described.

In order to assess the overall environmental impacts of the proposed investment, including the four first phase subprojects and subprojects which may be selected during implementation, the Borrower has prepared a Regional Environmental Assessment (REA) and four ESIAs associated with ESMPs for the four first phase subprojects have been prepared. Since not all subproject will be identified during project preparation, an Environmental and Social Management Framework (ESMF) has also been developed.

Regional Environmental Assessment (REA). Given the types and locations of the proposed subprojects and the nature of social conditions and water resources management in the lower part of Mekong Delta, the REA was conducted to provide strategic recommendations to guide the Project design and ways to enhance potential positive impacts and mitigate potential negative impacts. MARD and MONRE will follow recommendations of the REA that the project should implement measures to monitor and manage the potential regional and regional/sub-regional impacts by: (a) enhancing monitoring of surface water, groundwater and fisheries in project areas during construction and operation of water control infrastructure, supported by groundwater use studies; (b) monitoring of riverbank and coastal changes to determine the effectiveness of investments in coastal protection; (c) establishing zones and flexible management for freshwater and brackish aquaculture considering participatory approach for determining operating schedules of water control infrastructure; (d) step-by-step implementation of livelihood models including agricultural extension and market services; (e) involve MONRE and other agencies to use the modeling developed for the project for coastal erosion, salinity intrusion and the transport of

sediments and nutrients to the upper delta floodplains; (f) incorporating lessons learned from ongoing WB projects in the Mekong Delta; and (g) apply the lessons from the implementation of the three first-year subprojects into the design and operation of subprojects in Phase II. Key follow-up activities will be taken by MARD and MONRE will involve project area environmental and social surveys; GIS mapping of any problem areas or hotspots; hydrological modeling to determine changes in flow in the upper delta, estuary, and peninsula; hydraulic modeling to determine effectiveness of sluices, canals and water control infrastructure; reviewing yield (t/ha), price and farm-based income for alternative cropping; and enhance flood and drought early warning systems in relation to agriculture and aquaculture in the three hydro-ecological zones.

Environmental and Social Management Framework (ESMF). The ESMF has been prepared to ensure that activities to be financed under the Project would not create adverse impacts on the local environment and local communities, and that the residual and/or unavoidable impacts will be adequately mitigated. The framework covers requirements for: (i) adequate safeguard screening including impacts on natural habitats, forests, and physical cultural resources; (ii) impact assessment and development of mitigation measures, including the Environmental Codes of Practice (ECOP) for construction activities and chance finds procedures; (iii) procedures for preparation, review, and clearance of safeguards instruments during implementation; (iv) safeguards implementation, supervision, monitoring, and reporting; (v) institutional strengthening and capacity building programs; and (vi) institutional arrangements and budget. The ESMF also includes a screening checklist to exclude all investment proposals that may cause significant or irreversible social and environmental impacts. A subproject will not be eligible for funding if it would: (i) involve the significant conversion or degradation of critical natural habitats; (ii) involve significant conversion or degradation of critical forest areas; (iii) contravene applicable international environmental agreements; and (iv) be located in a physical cultural resources site recognized at the national or provincial level. The ESMF is adopted by MARD.

Environmental and Social Impact Assessments (ESIAs) and Environmental and Social Management Plans (ESMPs). The objectives of the ESMPs are to: i) ensure compliance with the applicable provincial, national, laws, regulations, standards, and guidelines; ii) ensure that there is sufficient allocation of resources on the project budget for implementation of ESMP-related activities; iii) ensure that environmental risks associated with a project property managed; iv) respond to emerging and unforeseen environmental issues not identified in the subproject ESIA; v) provide feedback for continual improvement in environmental performance. The ESMPs consist of the set of good practice mitigation measures to address common construction related impacts which referred to as Environmental Codes of Practices (ECOP), site-specific environmental and social measures to deal with the impacts specific to the subproject areas and activities. The ESMPs also include monitoring, and institutional measures to be taken during implementation and operation to eliminate adverse environmental and social impacts, offset them, or reduce them to acceptable levels. Each subproject ESMP includes a Compliance Framework which lays out the role and responsibilities of the contractor and a penalty system to address no-compliance cases of the contractor to the environmental management requirements of the subproject. The ESMPs include the budgets for their implementation including for capacity building in project environmental management. Some key mitigations measures at subproject level include:

- Management of dredged materials. A sampling survey suggested that dredged materials from excavation during construction of sluice gates and dredging of canals are mainly silt and clay with high organic content and low levels of heavy metals. Therefore, the materials could be used for dikes, roads, construction of houses. However, other areas may contain acid sulfate soil and /or heavy metals and toxic chemicals and could be an issue. During detailed design PPMU will

prepare a Dredge Materials Disposal Plan (DMDP) containing: (a) detailed estimate of the nature and quantity of dredged materials; (b) chemical analysis of the dredged materials; (c) indicative lands for disposal; (d) communication plan for local residents informing the quality of the dredges and any restriction on the use for housing construction and gardening in case the materials found to be unsuitable; and (e) inventory of planned road and dikes to transport the dredged materials.

- Management of the use of pesticides and agrochemicals. The Government has been promoting a number of integrated pest management (IPM) practices to reduce the use of pesticides and agrochemicals both for rice, fruit, vegetable, and shrimp farming. Promotion of the IPM practices will be continued and the project will support necessary training and scale up of the activities found to be effective in the Mekong Delta. A Pest Management Framework (PMF) has been prepared and included in the ESMF. It will be for preparation of Pest Management Plan for relevant subprojects and/or activities that promote the use of toxic agrochemicals to be implemented under Components 2, 3, and 4.
- Management of water use conflict. To reduce potential water use conflicts, the size of the sluices has been calculated to assure not only effective management of irrigation system but also balance the water need of different water users. Optimum operation and maintenance of sluice gates will be developed taking into account close communication and consultation with upstream and downstream water users to ensure water need both in terms of quantity and quality to the key water users.
- Management of aquaculture wastes and disease. The project will adopt biosafety approaches which do not use pesticides and insecticides nor antibiotics for rice-fish and forest-shrimp models. For addressing environmental impacts of wastes and deasese in extensive and intensive aquacuture models, the project will follow the Vietnam Good Aquaculture Guidelines (VietGAP) and the EHS Industry Specific Guideline on Aquaculture. Capacity building and water quality monitoring will also be a focus.
- Temporary interruption of waterway traffic. Short closure periods of sluice gates will minimise disruptive impacts on waterway transport. Closing of the sluice gates will be made in close consultation with the local community and an annoucement will be made to the public at least 1 month before the closing date.

The subproject owner, which are the provincial Departments of Agriculture and Rural Development, through it Provincial Project Management Unit (PPMU), will include content of the corresponding ESMPs into the standard tender documents to be used as a basis for contractors to implement environmental management during construction phase. The Central Project Management Unit (CPMU) will be responsible for overall supervision and monitoring of the subproject including implementation of the ESMPs and will provide safeguard training to the subproject staff. The CPMU will assign an Environmental Safeguard Coordinator (ESC) and the Social Safeguard Coordinator (SSC) to assist in the coordination, supervision, and monitoring of safeguard implementation activities. Implementation of the ESMPs on the ground will be supervised monitored by Construction Supervision Consultant, Environmental Control Officer of the PPMU, and the Independent Environmental Monitoring Consultant hired by the CPMU.

Social

Regional Social Assessment (RSA). The RSA focuses on regional analysis at project level with its overall objective to better understand the impacted communities in order to improve community engagement in long-term delta investment planning processes to ensure long-term sustainability and client ownership of the proposed investments. It was done by engaging with subproject communities in order to enhance the understanding of current climate change adaptation practices and social impacts that may result from the proposed World Bank livelihood adaptation models. The findings suggest that the construction of proposed works might cause a long term impacts on

current livelihood models which may have to change to adapt to the impacts of the proposed investments (dyke reinforcement, sluice gates etc.), to the new environmental situation and to the impacts on climate change. With the shift to new adaptation models it is expected that farmers will diversify their production and increase their income. These new livelihoods will also be more sustainable and farmers will reduce their vulnerabilities to climate change and environment. Some HH may be more reluctant to change (i.e. elderly, ethnic minority households, poor and landless or land poor households) and will need specific support in order for them to adapt their livelihood. To address these non-safeguard issues, the report proposes recommendations to address climate, environmental and social vulnerabilities of the Project. At subproject level, SIAs were prepared to include social aspects into the project design.

Resettlement Policy Framework (RPF). The RPF has been prepared in accordance to the Bank's policies and guidelines governing preparation and implementation of subprojects and/or components. It also lays down the principles and objectives, eligibility criteria of displaced persons (DP), modes of compensation and rehabilitation, potential relocation of these persons, approval procedures, participation features and grievance procedures. The RPF also includes guidance on screening, policy application implication for potentially linked activities and for subprojects identified in project implementation.

Ethnic Minority Planning Framework (EMPF). The EMPF sets out guidelines to: (i) ensure that the EM people receive social and economic benefits that are culturally appropriate; (ii) avoid potentially adverse effects on the ethnic minority communities; and (iii) when such adverse impacts cannot be avoided, minimize, mitigate, or compensate for such effects. The EMPF also includes guidance on screening, policy application implication for subprojects identified in project implementation.

Resettlement Plan (RP) and Ethnic Minority Development Plan (EMPD). Three RAPs and two EMDPs for year 1 subprojects have been prepared. Each RAP addresses adverse social impacts due to involuntary resettlement and lays down the principles and objectives, eligibility criteria of the affected persons (APs), entitlements, legal and institutional framework, modes of compensation and rehabilitation, stakeholders participation, grievance procedures, and monitoring. RPs include the measures to ensure that displaced people are: (i) informed about the options regarding resettlement; (ii) consulted and offered alternative resettlement choices; and (iii) provided with effective compensation and livelihood restoration. RAPs were prepared in accordance to the guidelines set forth in the project's RPF. Three full RPs (An Giang, Kien Giang and Tra Vinh-Vinh Long) have been prepared. RAP for Ben Tre subproject is not required as the land acquisition for the 5 proposed sluice gates have been completed in another Bank funded project closed in 2013 (Vietnam Natural Disaster Risk Management Project – P073361). The total estimated cost of RP implementation is 304billion VND equivalent to 13,600,000 USD.

The EMDP includes a summary of the SA, consultations, the scope of impacts and mitigation measures, activities for the enhancement of project implementing agencies and estimated costs for the Plan. Each EMDP addresses adverse social impacts on ethnic minorities and proposes measures to mitigate impacts and to maximize benefits. EMDPs have been prepared in accordance to the guideline set forth in the project's EMPF. In the two subprojects (Tra Vinh – Vinh Long and Kien Giang) with EM present in the project area, no EM household is affected by land acquisition. These EM households are potentially affected by the subproject due to the proposed livelihood adaptation models and may need specific support to change/adapt their livelihood. The free, prior and informed consultation with EM show that there is broad community support from EM peoples for the subproject implementation. Development activities have been proposed to maximize benefits for EM. These EM development activities include: i) Training to raise awareness of the

community on husbandry and agricultural production; ii) Training to raise awareness of the community on climate change and adaption to changes in water resources, ecological and social. iii) Livelihood Development Training; iv) Develop livelihood models, with the participation of organizations, social organizations, coordinate the selection of models site, support technical guidance, implementation, monitoring and replicable results. Estimated budget for these development activities are 2,969,250,000 VND (132,000 USD) and 1,413,250,000 VND 62,811 USD) for Tra Vinh – Vinh Long and Kien Giang subprojects respectively.

Social Safeguard Implementation, Monitoring, and Training. All implementing agencies (IAs), (MARD, CPO, PPMUs), through its dedicated social staff/unit, will be responsible for implementing and monitoring the social safeguard instruments (RPF, EMPF, EMDP, RP). The implementation of social safeguard instruments will be internally monitored by the IAs in close coordination with the respective Peoples' Committees at different administrative levels and externally supervised by independent monitoring consultant. Implementing agencies must to ensure that activities related to social safeguards will be properly tracked, reported and documented. Independent monitoring consultant will be mobilized by MARD around the same time as implementation of project activities and will be retained until the end of the project/sub-project. The performance and compliance to social safeguard instruments will also be subject to regular supervision from the Bank Task Team (at least twice a year). During the project implementation, appropriate trainings will be provided to CPO, PPMUs, consultants and local community representatives on the safeguard instruments to be applied to the Project. This includes a week long hands on training in the project area on Cumulative Impact Assessment and the implementation of ESIAs to be provided to counter-parts and main consultants.

Grievance and Redress Mechanism (GRM): Each subproject safeguard instruments (ESMP, RAP, EMDP) also includes a GRM to provide the framework within which complaints about safeguards compliance can be handled, grievances can be addressed and disputes can be settled quickly. The GRM will be in place before the subproject construction commences.
Within the Vietnamese legal framework citizen rights to complain are protected. As part of overall implementation of the subproject, the GRM will be established by Environmental and Social Unit of the PPMU. It will be readily accessible, handle grievances and resolve them at the lowest level as quickly as possible. The key process and elements of the GRM include, procedures for submission of complaints and grievance resolution, responsible person, and contact information.

The complaints can be received in verbal or writing forms, by telephone, fax, or email. They can be sent to the local authorities, contractor, construction supervision engineer, PPMU, or the independent environmental monitoring consultants and will be logged in the record system and sent to responsible person for taking action. To facilitate complain process, subproject information leaflets will be prepared and distributed at the subproject sites to provide practical information about grievances to local residents including contacts and addresses.

The GRM also refers to the WB’s Grievance Redress Service (GRS) and clearly indicates that subproject affected communities and individuals may submit their complaints to the WB’s independent Inspection Panel which determines whether harms occurred, or could occur, as a result of WB non-compliance with its safeguards policies and procedures. The website address to provide information on how to submit complaints to the World Bank’s GRS is also provided.

5. Identify the key stakeholders and describe the mechanisms for consultation and disclosure on safeguard policies, with an emphasis on potentially affected people.

Public Consultation and Information Disclosure. Two rounds of consultations were organized in October 2015 and January 2016. The affected people and communities and other relevant stakeholders have been consulted on the REA, RSA, ESMF, RPF, EMPF, first phase subproject ESIAs and ESMPs, RPs, and EMDPs. The feedbacks from the consultations have been incorporated into the project design, the final draft REA, RSA, ESMF, RPF, EMPF, subproject ESIAs, ESMPs, RPs, and EMDPs. Draft version of environmental and social safeguards instruments have been disclosed both locally at MARD, the PPMUs, and subproject areas, and through the InfoShop in Washington, DC on January 26 and 27, 2016, respectively. The final environmental and social safeguards instruments will be disclosed locally and at the InfoShop, respectively. The Appraisal Stage Integrated Safeguards Data Sheet of the project will also be disclosed at the InfoShop.

B. Disclosure Requirements

Environmental Assessment/Audit/Management Plan/Other	
Date of receipt by the Bank	27-Jan-2016
Date of submission to InfoShop	27-Jan-2016
For category A projects, date of distributing the Executive Summary of the EA to the Executive Directors	17-Mar-2016
"In country" Disclosure	
Vietnam	26-Mar-2016
Comments:	
Resettlement Action Plan/Framework/Policy Process	
Date of receipt by the Bank	27-Jan-2016
Date of submission to InfoShop	27-Jan-2016
"In country" Disclosure	
Vietnam	27-Jan-2016
Comments: Intensive consultation of RPF and first year RAPs were carried out in October 2015 and January 2016. In-country disclosure was made on January 27.	
Indigenous Peoples Development Plan/Framework	
Date of receipt by the Bank	27-Jan-2016
Date of submission to InfoShop	27-Jan-2016
"In country" Disclosure	
Vietnam	27-Jan-2016
Comments: Intensive consultation of EMPF and first year EMDPs were carried out in October 2015 and January 2016. In-country disclosure was made on January 27.	
Pest Management Plan	
Was the document disclosed prior to appraisal?	NA
Date of receipt by the Bank	NA
Date of submission to InfoShop	NA
"In country" Disclosure	
Comments:	
If the project triggers the Pest Management and/or Physical Cultural Resources policies, the	

respective issues are to be addressed and disclosed as part of the Environmental Assessment/ Audit/or EMP.
If in-country disclosure of any of the above documents is not expected, please explain why:

C. Compliance Monitoring Indicators at the Corporate Level

OP/BP/GP 4.01 - Environment Assessment	
Does the project require a stand-alone EA (including EMP) report?	Yes [×] No [ ] NA [ ]
If yes, then did the Regional Environment Unit or Practice Manager (PM) review and approve the EA report?	Yes [×] No [ ] NA [ ]
Are the cost and the accountabilities for the EMP incorporated in the credit/loan?	Yes [×] No [ ] NA [ ]
OP/BP 4.04 - Natural Habitats	
Would the project result in any significant conversion or degradation of critical natural habitats?	Yes [ ] No [×] NA [ ]
If the project would result in significant conversion or degradation of other (non-critical) natural habitats, does the project include mitigation measures acceptable to the Bank?	Yes [ ] No [ ] NA [×]
OP 4.09 - Pest Management	
Does the EA adequately address the pest management issues?	Yes [×] No [ ] NA [ ]
Is a separate PMP required?	Yes [ ] No [×] NA [ ]
If yes, has the PMP been reviewed and approved by a safeguards specialist or PM? Are PMP requirements included in project design?If yes, does the project team include a Pest Management Specialist?	Yes [ ] No [ ] NA [×]
OP/BP 4.11 - Physical Cultural Resources	
Does the EA include adequate measures related to cultural property?	Yes [×] No [ ] NA [ ]
Does the credit/loan incorporate mechanisms to mitigate the potential adverse impacts on cultural property?	Yes [×] No [ ] NA [ ]
OP/BP 4.10 - Indigenous Peoples	
Has a separate Indigenous Peoples Plan/Planning Framework (as appropriate) been prepared in consultation with affected Indigenous Peoples?	Yes [×] No [ ] NA [ ]
If yes, then did the Regional unit responsible for safeguards or Practice Manager review the plan?	Yes [×] No [ ] NA [ ]
If the whole project is designed to benefit IP, has the design been reviewed and approved by the Regional Social Development Unit or Practice Manager?	Yes [×] No [ ] NA [ ]
OP/BP 4.12 - Involuntary Resettlement	
Has a resettlement plan/abbreviated plan/policy framework/ process framework (as appropriate) been prepared?	Yes [×] No [ ] NA [ ]

If yes, then did the Regional unit responsible for safeguards or Practice Manager review the plan?	Yes [×] No [ ] NA [ ]
Is physical displacement/relocation expected? 280 Provided estimated number of people to be affected	Yes [×] No [ ] TBD [ ]
Is economic displacement expected? (loss of assets or access to assets that leads to loss of income sources or other means of livelihoods) 3012 Provided estimated number of people to be affected	Yes [×] No [ ] TBD [ ]
OP/BP 4.36 - Forests	
Has the sector-wide analysis of policy and institutional issues and constraints been carried out?	Yes [ ] No [ ] NA [×]
Does the project design include satisfactory measures to overcome these constraints?	Yes [ ] No [ ] NA [×]
Does the project finance commercial harvesting, and if so, does it include provisions for certification system?	Yes [ ] No [ ] NA [×]
OP/BP 4.37 - Safety of Dams	
Have dam safety plans been prepared?	Yes [ ] No [ ] NA [×]
Have the TORs as well as composition for the independent Panel of Experts (POE) been reviewed and approved by the Bank?	Yes [ ] No [ ] NA [×]
Has an Emergency Preparedness Plan (EPP) been prepared and arrangements been made for public awareness and training?	Yes [ ] No [ ] NA [×]
OP 7.50 - Projects on International Waterways	
Have the other riparians been notified of the project?	Yes [ ] No [ ] NA [×]
If the project falls under one of the exceptions to the notification requirement, has this been cleared with the Legal Department, and the memo to the RVP prepared and sent?	Yes [×] No [ ] NA [ ]
Has the RVP approved such an exception?	Yes [×] No [ ] NA [ ]
The World Bank Policy on Disclosure of Information	
Have relevant safeguard policies documents been sent to the World Bank's Infoshop?	Yes [×] No [ ] NA [ ]
Have relevant documents been disclosed in-country in a public place in a form and language that are understandable and accessible to project-affected groups and local NGOs?	Yes [×] No [ ] NA [ ]
All Safeguard Policies	
Have satisfactory calendar, budget and clear institutional responsibilities been prepared for the implementation of measures related to safeguard policies?	Yes [×] No [ ] NA [ ]
Have costs related to safeguard policy measures been included in the project cost?	Yes [×] No [ ] NA [ ]

Does the Monitoring and Evaluation system of the project include the monitoring of safeguard impacts and measures related to safeguard policies?	Yes [×] No [ ] NA [ ]
Have satisfactory implementation arrangements been agreed with the borrower and the same been adequately reflected in the project legal documents?	Yes [×] No [ ] NA [ ]

III. APPROVALS

Task Team Leader(s):	Name: Anjali Acharya,Binh Thang Cao,Greg J. Browder	
Approved By		
Safeguards Advisor:	Name: Peter Leonard (SA)	Date: 26-Mar-2016
Practice Manager/ Manager:	Name: Iain G. Shuker (PMGR)	Date: 27-Mar-2016