

**COMBINED PROJECT INFORMATION DOCUMENTS / INTEGRATED  
SAFEGUARDS DATA SHEET (PID/ISDS)  
APPRAISAL STAGE**

**Report No.:** PIDISDSA15864

**Date Prepared/Updated:** 30-Dec-2015

**I. BASIC INFORMATION**

**A. Basic Project Data**

<b>Country:</b>	Ecuador	<b>Project ID:</b>	P157324
		<b>Parent Project ID (if any):</b>	
<b>Project Name:</b>	Ecuador Risk Mitigation and Emergency Recovery Project (P157324)		
<b>Region:</b>	LATIN AMERICA AND CARIBBEAN		
<b>Estimated Appraisal Date:</b>	17-Dec-2015	<b>Estimated Board Date:</b>	25-Feb-2016
<b>Practice Area (Lead):</b>	Social, Urban, Rural and Resilience Global Practice	<b>Lending Instrument:</b>	Investment Project Financing
<b>Sector(s):</b>	General agriculture, fishing and forestry sector (20%), Health (10%), General transportation sector (40%), Flood protection (30%)		
<b>Theme(s):</b>	Natural disaster management (100%)		
<b>Borrower(s):</b>	Ministry of Finance		
<b>Implementing Agency:</b>	Ministry of Finance		
<b>Is this project processed under OP 8.50 (Emergency Recovery) or OP 8.00 (Rapid Response to Crises and Emergencies)?</b>			
<b>Financing (in USD Million)</b>			
<b>Financing Source</b>		<b>Amount</b>	
Borrower		0.00	
International Bank for Reconstruction and Development		150.00	
Total Project Cost		150.00	
<b>Environmental Category:</b>	B - Partial Assessment		
<b>Appraisal Review Decision (from Decision Note):</b>			
<b>Other Decision:</b>			
<b>Is this a Repeater</b>	No		

project?	
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## B. Introduction and Context

### Country Context

Ecuador is located in the northwestern part of South America and borders Colombia, Peru and the Pacific Ocean. The country has a total area of 283,561 km<sup>2</sup> and a population of 15.9 million inhabitants. Ecuador is an upper middle-income country with an economy that remains heavily dependent on oil. Oil represents over half of total exports in 2014, with food and agricultural goods following behind with approximately one-fourth of exports. Over the past decade, Ecuador has experienced growth in the context of a favorable external environment and foreign savings that have financed a large expansion of the public sector. From 2012 to 2014, growth decelerated moderately though, from 5.2 down to 3.8 percent. Yet showing a strong rate, Ecuador is now facing external challenges linked to the fall in oil prices. In terms of GDP per capita: between 2000 and 2014, GDP per capita increased by 45 percent in real terms, and the dollar GDP increased four-fold. Economic growth in Ecuador has been inclusive, which has directly reduced poverty and inequality levels and increased the middle class. Between 2006 and 2014, poverty measured by income (using the national poverty line) decreased from 37.6 percent to 22.5 percent, whilst extreme poverty was reduced from 16.9 percent to 7.7 percent.

The Ecuadorian landscape is dominated by the Andes Mountains, fertile river valleys, and a large number of volcanoes. Two tectonic plates, the Nazca Plate and the South American Plate, also converge in Ecuador. These geological dynamics make Ecuador susceptible to several types of natural and geological occurrences including earthquakes, volcanic eruptions, tropical storms, floods and landslides. Flooding mainly affects the coastal zone, while volcanic eruptions affect the central zone. Drought has been recorded in the northern coastal and central regions and frequent landslides affect urban areas and infrastructure. While climate change is expected to change the frequency and intensity of extreme climate events in many regions of the world, climate extremes are already the most common type of disasters in Ecuador, adversely affecting the population and the economy of the country.

**Hazard Context.** Ecuador suffers from extreme vulnerability and high exposure to natural hazards, ranking 70th out of 192 countries on INFORM's risk management index (with an overall risk of 4.2/10) where hazard and exposure stands at 4.5/10, vulnerability at 3.8/10, and lack of coping capacity at 4.3/10. According to the World Bank's Natural Disaster Hotspot study (2005), Ecuador ranks 18th among countries with the highest economic risk exposure to three or more hazards. Approximately 96 percent of the population lives in coastal and mountainous regions that are exposed to seismic, volcanic, flood, landslide and El Niño hazards. Ecuador has 35 volcanoes with 4,352,168 people (or 29 percent of the population) living within a 30km distance from a volcano. Furthermore, high migration flows have increased the vulnerability and poverty of urban areas that are host to 66 percent of the population.

**Cotopaxi Volcano:** On August 14, 2015, the Cotopaxi volcano, about 50km south of Quito and 33km northeast of Latacunga, began erupting after being dormant for 138 years. The 5,897m high volcano released high columns of ash (up to 2km above the crater) which affected Latacunga town and put surrounding densely populated areas at risk (e.g. Quito southern neighborhoods). Since then, the volcano has shown irregular activity and has been very closely monitored, so that an evacuation alert could be immediately given to the populations if necessary. According to

national risk mapping and the analysis from the National Secretariat of Disaster Risk Management (SGR): (i) an estimated 400,000 people (including at least 145,000 in the very high risk areas) and some key infrastructure (including 7 health centers, 133 schools, 41km of roads, 39.5km of electrical infrastructure) would be affected if an eruption triggers explosions, volcanic gases, mudslides, lava flows, lahar and debris avalanches; (ii) potential damages and losses are estimated at US\$1.37 billion. Under a moderate scenario modeling conducted by R. Williams (2006), there is a high probability of lahar and debris avalanches that would effectively cause damages to at least 50 percent of schools, hospitals and prisons in the towns of Latacunga and San Felipe. Data from the National Institute of Geophysics (IG-EPN for Instituto Geofísico de la Escuela Politécnica Nacional), which has been monitoring the volcano for decades using high technology, confirm that a VEI2-3 level of eruption (as experienced 138 years ago in 1854) could generate ash columns up to 8km high and up to 30 million m<sup>3</sup> of lahar. The level of alert since August is Yellow, meaning the volcano is exhibiting signs of elevated unrest above known background level, and could be elevated to Orange or Red at any time. The Government of Ecuador (GoE) has been working to ensure that all technical and operational entities are alert and ready in case of an emergency, in particular through its Technical Working Groups (Mesas Técnicas de Trabajo).

El Niño Phenomenon: In Ecuador, the El Niño phenomenon is characterized by a decrease in the intensity of trade winds, high sea surface temperatures along the coast increasing evaporation and cloud formation, and an intertropical equatorial convergence zone – which create favorable conditions for heavy rainfall. During an El Niño episode, the coast experiences hot and humid air from the northeast which accentuates precipitation levels. The normal process of cloud displacement to the mountainous area of the Andes is more pronounced, producing unusual rain along the coast. At a global scale, the US NOAA is forecasting what could become the strongest El Niño on record. The analysis conducted by the Ecuadorian National Institute of Meteorology and Hydrology (INAMHI) based on data from NOAA, indicates that the phenomenon has already started in Ecuador (as of November 2015) and that the Niño conditions are likely to intensify in the coming months, possibly reaching similar impact levels as the past episodes of 1982-83 (strong event) or of 1986-87 (moderate event). In both cases, the phenomenon is expected to generate higher precipitation levels (than during non-El Niño years) from November 2015 to March 2016 at least. Heavy rains would affect most of the country, the littoral zone in particular, causing flooding and landslides. During the 1982-83 El Niño episode, the GoE recorded 700,000 people affected, 307 deaths, and estimated economic losses at US\$1.43 billion (2015 US\$). During the 1997-98 El Niño episode, increase in sea level reached up to 42cm in some areas, causing significant coastal flooding as well as pluvial flooding, and subsequent drainage challenges: discharges in most coastal rivers were recorded to reach return periods of 100 years. The GoE recorded 13,374 families affected, 293 deaths, 30,000 subsequent homeless people, and data from the Latin American Development Bank (CAF) reveal that the event resulted in US\$882 million in damage and an additional US\$2.0 billion in losses. For this El Niño, the GoE is estimating potential damages and losses at US\$4.43 billion, with potentially 297,765 people, 1,303 health centers and 2,900 schools affected.

### **Sectoral and institutional Context**

Emergency Management and Risk Reduction. In 2008, Ecuador transitioned from a vision of risk management focused on emergency management to a vision integrating risk management in the territorial and sectoral development. In 2010, the code for “territorial planning” was created, ensuring the inclusion of risk management into land use plans. The Banco del Estado (BEDE) was created to fund prevention works and the SGR was created to lead the National Decentralized

Risk Management System through the Autonomous Governments (GAD – Gobiernos Autonomos Descentralizados). The objectives of the SGR are to promote the reduction of vulnerability; ensure that private and public institutions include risk management in their planning; encourage the use of science and research in risk management; develop capacities for preparedness, prevention, mitigation and risk reduction; and organize the humanitarian response and ensure that the reconstruction processes reduce vulnerability. The SGR created the Risk Management Committees (CGR) to support inter-institutional coordination. Risk reduction and emergency response during emergencies or disasters is a permanent responsibility of the CGRs that operate on three territorial levels: municipal, provincial and national. Despite those major advances, there is still no law regulating the National Decentralized Risk Management System.

Hydrometeorological and Oceanic Risk Knowledge and Monitoring. The institutions that contribute to hazard knowledge at the national level are the INAMHI, the Instituto Nacional de Pesca (INP) and INOCAR (for oceanographic information). At the international level, Ecuador actively participates in the regional efforts to produce information on El Niño: through the Estudio del Fenomeno Regional de El Niño (ERFEN) since 1974, the International Research Center for El Niño (CIFFEN) created in 2002 with the headquarters located in Ecuador and the objective to promote and develop actions to consolidate science-policy interaction and the strengthening of climate and ocean services aiming to contribute on risk management and adaptation to better cope climate change and climate variability. The correlation between the El Niño and climate variability is being studied especially through the readings over NINO3.4 (specific Niño region defined and studied by NOAA) capturing both the important sea surface temperature variability and the changes of strong precipitation. Those inform most predictions about how the El Niño events may affect global climate variability and shifting rainfall patterns (IRI 2015b).

Agriculture/Livestock. Ecuador has 1.1 million agricultural households each with a plot of land varying from 1 ha and 20 ha, regarded as small and medium producers, who own about 1.6 million hectares (25 percent of total area at national level). Over the past decade, the Ecuadorian livestock production (including cattle pigs, goats, and poultry and livestock agribusiness derivatives) has contributed to the Agricultural GDP by 37 percent, equivalent to approximately 3 percent of total GDP. In the last thirteen years, production of milk has contributed to 1.4 percent of total GDP, and meat to 1.3 percent. These sub-sectors are expected to grow due to the potential for generating products and by-products with high added-value and the increasing global demand for these products.

The occurrence of lahars and falling ash has a direct impact on productive capacity and the GoE has decided to take action and build safe temporary shelters to protect the productive animals around the Cotopaxi volcano. The greatest threat to sector in the case of the Cotopaxi is on dairy and agricultural production. The agricultural area at risk around the volcano account for 20 percent of the national daily milk production, involving 12,380 producers, 129,842 animals and 48,237 hectares of land. Much of this production is small scale, meaning that farmers are not likely to have the financial reserves to react to an event of this nature and mitigate production impacts. With respect to El Niño, during the past 1997-98 event, extensive floods in agriculture lands caused significant economic losses. The fall in agricultural demand for labor affected about 11 percent of the economically active population in coastal areas – which typically contain the highest agricultural production in the country (Guayas, Los Ríos and El Oro). Furthermore, cattle were lost due to the impossibility to be evacuated in time.



Transport. The Ecuadorian road network has a total of 5,609 km of main roads, subject to multiple hazard risks. 52 percent of the main road network is located in landslide-prone areas. Moreover, 3,754 km (66 percent of the total) are located in areas where seismic intensities have been registered where the physical integrity and functionality of the road system and related infrastructure (bridges and retaining walls) is at risk. 476 km (8.5 percent of the total) of main roads are on areas with volcanic hazard - an area of 913.57 km<sup>2</sup> has a high probability of being affected by mud and lahars from a Cotopaxi eruption (including bridges connecting Quito). Besides the geophysical risk, roads are also highly vulnerable to hydro-meteorological hazards – 2,572 km (46 percent of total) of main roads are in flood prone areas with 450 km (8 percent) on areas with high flood hazard . During El Niño 1997-98, several roads and bridges were flooded, affected by landslides or destroyed. An assessment showed that the road network and bridges were suffering from a lack of maintenance prior to the event, therefore a high number of road sections and critical points of the network were vulnerable. The main damages on the road network occurred in five coastal provinces (Manabí, Guayas, El Oro, Esmeraldas y Los Ríos). A few provinces inland were also affected (in the Sierra: Bolívar, Chimborazo, Cañar, Azuay y Loja). Total damages to the sector during the 1997-98 El Niño amounted to US\$785 million, corresponding to both direct damages and losses from impeded roadways and greater costs for transportation.

The 1997-98 El Niño showed there were vulnerable sections in the road networks because there were limitations at the time in knowledge of the phenomenon and its relation with the road network, weaknesses in integrated watershed management, high exposure of the road network infrastructure to hazard, design deficiencies, particularly related to bridge design and drainage design.

Water Infrastructure and Flood Protection. Water resources in Ecuador are abundant but unequally distributed, and key drivers of economic development such as the agriculture and hydropower sectors are water-intensive sectors (irrigation represents 80 percent of consumptive water uses). Hence, adequate regulation and management, and safeguarding the ecological integrity of upstream watersheds is critical to sustain environmental flows and ensure water availability for the different uses in the country, including water for human consumption. Climate change is also likely to impact water (and energy) production. Changes in rainfall patterns and the occurrence of extreme weather events are likely to increase water stress and affect the water balance, therefore affecting negatively the availability of water for investments in water supply and sanitation, as well as hydropower. Both the Ministry of Agriculture, Livestock, Aquaculture and Fisheries (MAGAP) and the Public Water Company (EPA) intervene in water resources management, at different levels and on different scales. EPA focuses on hydraulic infrastructure mostly dedicated to flood prevention and protection (and is not a regulatory body). EPA in case of an emergency would also attend the local Governments to restore water supply and sanitation services. Although there has been great progress over the last decade in providing access to water and improved sanitation services in Ecuador, the level and quality of service provided remain low in comparison with the regional average. In 2010, the share of Ecuadoran households connected to a public drinking water distribution network was 72 percent in urban areas and 27 percent in rural areas, while the average in the Latin American and Caribbean region was 94 percent and 62 percent, respectively.

Drinking water systems are highly vulnerable to volcanic activity as collection systems are

derived from rivers, springs and deep wells. Collection sources, driving lines, plant treatment points and distribution lines are highly vulnerable to lahars and other volcanic flows; partial or permanent damage to units or components is a very high probability. With respect to El Niño, hydraulic systems that were designed to withstand lower risk and intensity of flooding events are highly vulnerable; the water and sanitation sector during the past El Niño episodes was heavily affected with damage concentrated in adduction pipelines, water treatment plants (where deteriorating raw water quality resulted in higher treatment costs) flooded sewer systems and sewerage treatment sites. Total damage from the 1997-98 El Niño was US\$16.7 million dollars corresponding to both direct infrastructure damage and lower revenues and higher expenses for service provision. That episode showed there were vulnerable sections in the water supply systems at the time (which contributed to the intensity of damages) because there were improper design and construction techniques, lack of capacity response, lack of maintenance, pollution of wells and weaknesses in integrated watershed management.

Health. Ecuador is a country where malaria, dengue, cholera, rabies and other tropical diseases are endemic. These diseases are exacerbated by poverty, lack of access to basic water and sanitation services, housing and hygiene, as well as the effects of climate change. There is evidence in Ecuador showing the correlation between changes in weather conditions caused by El Niño and changes in occurrence of infectious diseases, especially for those caused by vectors (e.g. malaria) and those which are waterborne (e.g. cholera). The 1997-98 El Niño brought dire health consequences – on the one hand those directly related to climate events that influence health (direct rainfall, increased river flow, mudslides and landslides) and on the other hand those originating from the induced effects of these physical impacts (collapse of drainage or sewage systems, untreated water systems, overcrowded housing, accumulation of garbage, inadequacy of waste disposal systems, increased vector populations due to flooding and problems with accessibility and service delivery). Damages to the health sector from the 1997-98 El Niño amounted to US\$18.8 million corresponding to costs to both infrastructure and equipment as well as increased costs for operations and disease control.

With respect to a volcanic eruption, besides the obvious threats of lahars or lava, the main health concern is related to the inhalation of ash particles and their impact depending on the physicochemical characteristics. The common effects of this phenomenon are irritations of the chest, nose, throat, and increasing cases of bronchitis and asthma. Ash inhalation may also increase the effects of chronic lung and heart diseases. This threat already exists in case of high volcanic activity, without eruption.

## **C. Proposed Development Objective(s)**

### **Development Objective(s)**

The Project Development Objective is to reduce the potential effects of the El Niño phenomenon and the Cotopaxi volcano, and support the recovery of basic and production services in affected areas in case of a natural disaster, in selected sectors.

### **Key Results**

The results of the proposed Project will be measured through the following set of indicators:

- Direct Project beneficiaries (directly deriving benefits from an intervention financed by the Project) disaggregated by gender;
- Number of people protected through flood mitigation works (disaggregated by producers,

non-producers);

- Number of productive animals protected and housed in shelters supported by the Project;
- Number of people attended by the equipment provided to the health centers;
- Number of people for whom basic and productive services have been restored after a disaster occurs;
- Number of people benefiting from rehabilitated infrastructure after a disaster occurs.

## **D. Project Description**

Natural disaster refers to any natural disaster, national or localized in scope, that poses a threat to life, assets and/or productive capacity, which can be originated by geological or hydro-meteorological events. A geological hazard is a natural event originated in the crust of the earth, as earthquakes, volcanic eruptions, tsunamis (tidal waves), landslides (as a secondary event after an earthquake for example), etc. A hydro-meteorological hazard is a natural event produced by the climate variability as heavy rains, flooding, landslides, etc.

Preparatory activities under Component 1 are guided by the Alert Declarations in effect related to the Cotopaxi volcano and El Niño, and the emergency preparedness action plan prepared by the GoE. Component 2 is designed to face any natural disaster meeting certain trigger criteria, described in the Project's Operations Manual (MOP). The main trigger is the issuance by the SGR of an Alert Declaration of Orange for the El Niño phenomenon, or Red for the Cotopaxi volcano or any other eligible disaster. While the official Declarations may be in effect for a defined period of months, implementation of Component 2 once triggered, may occur over a period of years.

Component 1: Disaster Preparedness and Risk Mitigation (USD\$48.8 million): This Component aims to reduce the potential impacts of the hazards expected from El Niño and Cotopaxi volcano, according to the emergency preparedness action plan prepared by the GoE (jointly by the SGR, MICS and MF). This plan is a selection of emergency activities that include, inter alia: river dredging, clearing of waterways, road rehabilitation, retaining walls and other preventative stabilization works, purchase of Bailey bridge components, building of livestock shelters, and procurement of medicines, supplies and components necessary to protect public health. Some activities require immediate action and are being prioritized because of the imminent risk of flooding (already happening in certain regions where the effects of El Niño have started) or imminent risk of volcanic eruption, and the associated investments could be therefore be supported by retroactive financing. The use of the retroactive financing modality is critical to the GoE because the heavy rainfalls caused by El Niño are expected to hit by end of December 2015 and the GoE wants to mitigate the risk of flooding to protect the population and assets in time, and avoid cost overruns in case works are interrupted due to the weather conditions.

This Component is divided into four subcomponents corresponding to activities implemented by four line Ministries under the coordination of MF: EPA, MAGAP, MTOP, and MSP.

Subcomponent 1.1: Disaster Preparedness and Risk Mitigation Emergency Measures in the Water and Flood Protection Sector (US\$10.0 million) executed by the Public Water Company (EPA). The Project will mitigate the risk of flooding by ensuring river beds are cleared of sediments and riverbanks are protected, in the critical areas through: (i) mechanical dredging activities in select rivers and waterways, and (ii) the rehabilitation or construction of retaining and protection walls and flood control infrastructure along select rivers; all through the carrying out of works and the

provision of goods, consultants' services, non-consulting services and training.

Subcomponent 1.2: Disaster Preparedness and Risk Mitigation Measures in the Agriculture, Livestock, Aquaculture and Fisheries Sector (US\$7.0 million) executed by the Ministry of Agriculture, Livestock, Aquaculture and Fisheries (MAGAP). The Project will mitigate (i) the risk of flooding by ensuring the drainage systems can accommodate excess rainfall through cleaning and desilting of select drainage channels in public irrigation and drainage systems in critical areas; and (ii) the risk of loss of dairy production by ensuring the cattle at highest risk around the Cotopaxi are evacuated and provided basic care through the construction and equipment of two temporary shelters for animals; all through the carrying out of works and the provision of goods and consultants' services.

Subcomponent 1.3: Disaster Preparedness and Risk Mitigation Measures in the Transport Sector (US\$21.8 million) executed by the Ministry of Transportation and Public Works (MTOP). The Project will mitigate the risk of damage to the road network in critical areas by reducing its vulnerability and improving its climate resilience against the potential El Niño effects and its robustness against the potential effects from the Cotopaxi volcano, through: (i) protection and stabilization works on select sections of the road network, (ii) emergency maintenance works on select sections of the road network and select bridges, (iii) emergency maintenance works on machinery and equipment, (iv) the acquisition and held of bailey bridge components; all through the carrying out of works and the provision of goods, consultants' services, non-consulting services and training.

Subcomponent 1.4: Disaster Preparedness and Risk Mitigation Measures in the Health Sector (US \$10.0 million) executed by the Ministry of Public Health. The Project will improve MSP's capacity to respond to the effects of El Niño, in particular the occurrence of diseases, and to prepare in general for an Emergency by providing resources and training to the sector, through: (i) the purchase of protective equipment, reagents and drugs, (ii) the provision of training to health centers, (iii) the purchase of ambulatory health modules; all through the carrying out of works and the provision of goods, consultants' services, non-consulting services and training.

Component 2: Post-Disaster Recovery and Reconstruction (USD\$102.0 million): This Component aims at supporting recovery and reconstruction in the transport and water sectors, and restoring crop and livestock production, should an eligible disaster occur. It will follow a framework approach based on a list of eligible activities that contribute to the rehabilitation or reconstruction of select transport/road, water/sanitation infrastructure, crop and livestock production or any other sector agreed between the Borrower and the Bank and described in the POM, all through the carrying out of works and the provision of goods, consultants' services, non-consulting services and training.

Expected damages from a volcano eruption or heavy rainfall or other extreme climate event or other natural disaster such as an earthquake, include: (i) in the transport sector: destruction of part or totality of bridges, damages to the primary road network, as well as the secondary one down to the rural level, cutting access to key economic areas and/or leaving some populations isolated, potential damages and disturbance to Ecuador's ports, etc.; (ii) in the water sector: contamination of the potable water production and distribution system, destruction of part or totality of water and sanitation systems, clogging of sewage and drainage systems, damages to flood control infrastructure, etc. ; (iii) in the agriculture sector: irrigation, drainage, land leveling, compensation

schemes to producers, etc.

Once the Component triggered, the selection process of activities to be financed under Component 2 will follow the process led by MICS supported by the SGR and the Working Groups, as well as a process based on a list of criteria described in the POM to ensure the PDO is met. In summary, the POM will described the eligibility criteria (for example: (i) be within the geographical area impacted by the disaster noted in the Alert Declaration issued by the SGR; (ii) be classified as a Category B or C sub-project), and the prioritization and selection criteria (for example: (i) to the extent possible focus interventions on specific geographic areas to maximize the impacts of the investments; (ii) recovery of vital infrastructure to restore critical basic and productive services; (iii) ensure access and connectivity; (iv) sub-projects that have an advanced level of preparedness and can ensure rapid response and recovery.

Component 3: Project Implementation, Monitoring and Evaluation (USD\$1.2 million): This Component will finance the activities of the PCU within MF. MF will manage, evaluate, supervise and implement the Project, coordinating and consolidating the work of its four co-executing agencies EPA, MAGAP, MTOP, MSP, including on fiduciary, procurement, and environmental and social safeguard aspects. Funding will provide support to MF mainly, EPA, MTOP, MAGAP and MSP for Project management, monitoring and evaluation (M&E), through the procurement of consultants' services and goods, training and operating costs.

**Component Name**

Component 1: Disaster Preparedness and Risk Mitigation

**Comments (optional)**

**Component Name**

Component 2: Post-Disaster Recovery and Reconstruction

**Comments (optional)**

**Component Name**

Component 3: Project Implementation, Monitoring and Evaluation

**Comments (optional)**

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

The potential Project intervention area covers the whole of the country, depending on the actual scope of the eligible natural disaster(s) that Component 2 will address. Respect to Component 1, the Project will cover 20 of the 25 provinces: the provinces of Cotopaxi, Napo and Tungurahua related with a potential eruption of the snow-covered Cotopaxi Volcano, located about 50km south of Quito and 33km northeast of Latacunga, the capital of the Cotopaxi province, And regarding the El Niño phenomenon, 17 provinces, excluding Napo, Tungurahua, Sucumbíos, Orellana, Pastaza, Morona Santiago y Zamora Chinchipe . According to the related risk mapping, at least an estimated 400,000 people and some key infrastructure could be affected if a potential eruption triggers explosions, mudslides, avalanches or other eruption-related incidents. Data from



the Institute of Geophysics of Quito, which has been monitoring the Volcano for decades with high technology, show that a VEI2-3 level of eruption could generate ash columns up to 15km high and up to 60 million m3 of lahars.

Regarding El Niño effects, during the period September-November 2015, precipitation above normal is expected in isolated coastal areas and the south of Ecuador; and precipitation below normal in the rest of the coastal region, center and north of the Andes in Ecuador. Minimum temperatures below normal are expected in the central Sierra of Ecuador. Overall, the strongest impacts are expected in the most humid zones in the coast, where the pluviometric levels are linked to the surface temperature indices of the sea. The highest precipitation anomalies occur in areas close to the cordillera, where under normal condition precipitation is also high. The Guayas flood plain seems to be the area where the impact is strongest, causing flooding and landslides. This area concentrates 40% of the population of the country. Medium; noticeable but weak impacts are expected in the north of the coast and the western flank of the cordillera. Lastly, insignificant impacts are expected in the interandean valleys and the Amazons basin.

Different types of forest exist in the Project area from dry to moist forest ecosystems, and there is a number of different categories of protected areas in both the Cotopaxi Volcano and El Niño impacted areas. People live in the buffer zones of these protected areas. In terms of social composition, there is presence of indigenous peoples across the Project area, including in the cantons of Mejía, Ruminahui, Latacunga, Salcedo, and Saquisilí that, based on thematic disaster diagnostic studies carried out by the Government, are the most affected by a potential eruption of the Cotopaxi Volcano.

## **F. Environmental and Social Safeguards Specialists**

Felipe Jacome (GSU04)

Martin Henry Lenihan (GSURR)

Tuuli Johanna Bernardini (GENDR)

## **II. Implementation**

### **Institutional and Implementation Arrangements**

Due to their convening and coordinating power, as well as their decision-making power in terms of financial allocation throughout the sectors, MF will be responsible for overseeing Project implementation. On that purpose, a Project Coordination Unit (PCU) will be created. The PCU will be established directly under the Office of the Minister of Finance and include the necessary technical, administrative, financial and procurement staff for the Project's effective implementation. The team at MF will have overall responsibility, ensuring compliance with fiduciary agreements, procurement guidelines, social and environmental management and monitoring, reporting and evaluation of processes and results. Although MF has never implemented directly a WB-financed project, they are familiar with WB policies and procedures and have been closely following all types of engagement processes, part of the WB program assistance to Ecuador.

MF will have four co-executing agencies: MSP, MAGAP, MTOP; and EPA, which will execute the activities and report to MF. They will use their fiduciary and social and environmental procedures and personal – all in compliance with WB policies and procedures – and will be the ones who validate the quality of works and the invoices before sending the information to MF. There will be

one designated account, and MF will consolidate all the data to be sent to the Bank, and give authorization for payments or transfers. MF will sign co-execution agreements by component with its co-executing agencies to guarantee coordination and collaboration (or subsidiary agreement in the case of EPA which is a public company). These agreements will specify the roles and responsibilities of these agencies under the Project, specifically related to fiduciary and social and environmental management, execution and supervision of civil works and procurement of goods and services.

MF will be the only channel of communication with the WB. Frequent trainings on procurement, financial management (FM), safeguards, others as necessary, will be provided to all entities during Project implementation. Annex 3 of the Project Appraisal Document (PAD) provides a detailed description of the implementation arrangements.

### III. Safeguard Policies that might apply

Safeguard Policies	Triggered?	Explanation (Optional)
Environmental Assessment OP/BP 4.01	Yes	Potential social and environmental impacts are related to the disaster preparation and risk mitigation, as well as to post-disaster recovery and reconstruction investments. The Government is preparing an Environmental and Social Screening and Assessment Framework (ESSAF) to guide the Project's social and environmental management. See further details under Summary of Key Safeguard Issues.
Natural Habitats OP/BP 4.04	Yes	Given the rich biodiversity and the number of different types of protected areas in Ecuador, the Project applies a precautionary principle to trigger OP/BP 4.04 particularly as the actual scale and location of the potential natural disaster impacts and the related response investments are still unknown. The ESSAF will include guidance to screen for potential natural habitats impacts and address them appropriately.
Forests OP/BP 4.36	Yes	Given the forest coverage of the potential intervention area, the Project applies a precautionary principle to trigger OP/BP 4.36 particularly as the actual scale and location of the potential natural disaster impacts and the related response investments are still unknown. The ESSAF will include guidance to screen for potential forest related impacts and address them appropriately. No reforestation activities to prevent landslides or other type of disasters are projected.
Pest Management OP 4.09	Yes	Component 1 will finance personal protection equipment for safe handling of chemical larvicides to control mosquitoes as vectors for several diseases that are expected to spread due to the El Niño effects

		that might cause increased use of chemicals. The assessment of MSP's capacity and adequacy of the system for managing chemicals is being conducted and will be finalized prior to Project Approval. The Project will rely on MSP's procedures if they are found to be acceptable to the Bank. In case a Pest Management Plan is required, it will be ready before any equipment/chemicals (financed by the Project) can be used.
Physical Cultural Resources OP/BP 4.11	Yes	Given the rich physical cultural resources (PCR) of Ecuador, the Project applies a precautionary principle to trigger OP/BP 4.11 particularly as the actual scale and location of the potential natural disaster impacts and the related response investments are still unknown. Chance finds of cultural artefacts may not be ruled out during project implementation. The ESSAF will specify appropriate requirements for screening of investments and appropriate management measures in case of any known cultural resources were to be affected, as well as to ensure proper chance find procedures are included in sub-project Environmental Management Plans (EMP).
Indigenous Peoples OP/BP 4.10	Yes	<p>This policy is triggered due to the presence of indigenous peoples within the Project area. The majority of Component 1 disaster mitigation activities will concentrate on existing infrastructure works that are not expected to have effects on indigenous populations. A screening of the zone of influence of the shelters for cattle to be constructed under component 1 revealed that close to 90% of the population were Mestizo, while the indigenous populations were scattered throughout the zone and not concentrated in communities; the indigenous population in this Project area do not meet the characteristics set out in OP 4.10. This was confirmed by the local social scientist advising the task team and the Client.</p> <p>For the contingent component (component 2), the Project will count on an Indigenous Peoples Planning Framework (IPPF, applicable to the whole Project in fact) which will form a part of the ESSAF. The IPPF includes specific guidance on how to effectively engage indigenous communities as well as procedures to be used for screening all activities identified post-Appraisal, ensuring that they maximize social benefits and avoid or mitigate</p>

		adverse impacts on indigenous peoples.
Involuntary Resettlement OP/ BP 4.12	Yes	Project activities may result in limited temporary or permanent involuntary resettlement or land acquisition. Investments identified under Component 1, including maintenance of existing infrastructure such as roads, canals, and irrigation systems, dredging of rivers, and construction of cattle shelters in public land were screened and found to trigger minimal disruption and to not require land acquisition. Given that the final design of Component 1 works is still pending and the identification of investments for disaster response (Component 2) will only be done during the response to the disaster, a Resettlement Policy Framework (RPF) is being finalized and will form a part of the ESSAF to ensure full application of the appropriate safeguard policies.
Safety of Dams OP/BP 4.37	Yes	Project will not finance construction of major dams. However, as there are major dams in the area susceptible to El Niño effects, the Project applies a precautionary principle to trigger OP/BP 4.37, in case EPA, the responsible Government agency, would need to incur to any dam related rehabilitation works with Project financing under Component 2 on Post-Disaster Recovery and Reconstruction. The ESSAF will provide guidance on the applicable safeguards procedures to be followed.
Projects on International Waterways OP/BP 7.50	No	Project activities will not be conducted in or influence international waterways. In case of a disaster and identification of activities to be financed under Component 2, those that would need to trigger this policy would be excluded from Project financing.
Projects in Disputed Areas OP/ BP 7.60	No	Project activities will not be conducted in disputed areas.

#### IV. Key Safeguard Policy Issues and Their Management

##### A. Summary of Key Safeguard Issues

<b>1. Describe any safeguard issues and impacts associated with the proposed project. Identify and describe any potential large scale, significant and/or irreversible impacts:</b>
The Project triggers OP/BP 4.01 on Environmental Assessment. It is classified as an "Environmental and Social Category B" operation under that OP/BP. The Project will be implemented in areas that are expected to be (Component 1) and will be (Component 2) hit severely by the El Niño phenomenon and the potential eruption of Cotopaxi (it could be another type of natural disasters for areas of intervention under Component 2). Given the magnitude of expected damage caused by both events, the Project is designed to provide rehabilitation and

<p>recovery support to affected areas in which public infrastructure and services delivery result severely impacted. The civil works identified and planned for preventive action under Component 1 are mostly rehabilitative works and minor in scale and thus site-specific. Three works will include dredging and require preparation of specific EMPs that the Public Water Company EPA is finalizing in consultation with the Ministry of Environment (MAE). The works will take place at different locations in large geographical area. Under Component 2 dedicated to recovery and reconstruction phase; investments will focus on rebuilding and rehabilitating existing transport/ road and water/sanitation/flood protection infrastructure and crop and livestock production. Consequently, no significant or irreversible environmental impacts are anticipated due to the Project-financed activities. Furthermore, the ESSAF will include a negative list to exclude any potential "Category A" investment from Project funding.</p>
<p><b>2. Describe any potential indirect and/or long term impacts due to anticipated future activities in the project area:</b></p>
<p>Not applicable as the temporal cattle shelters will count with proper environmental management during construction, operation and closure, and the rest of the both preventive and response works are expected to cover maintenance, rebuilding and rehabilitation works.</p>
<p><b>3. Describe any project alternatives (if relevant) considered to help avoid or minimize adverse impacts.</b></p>
<p>Not applicable to the main bulk of the planned preventive and response works. Regarding the temporal cattle shelters, temporal resettlement of cattle in existing ranches outside the potentially affected area of the Cotopaxi Volcano was considered. This alternative was not pursued, however, due to the complexity of the related planning, social negotiation needs and logistics.</p>
<p><b>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.</b></p>
<p>The proposed Project is being prepared and implemented according to Paragraph 12 of the World Bank's Operational Policy 10.00, which allows for certain exceptions to the investment project financing policy requirements, including deferral of safeguards requirements. The Government request assistance from the WB and the WB decided to follow OP 10.00 because Ecuador is currently facing two imminent natural hazards (as of November 2015) which could cause major damages and losses (estimated at US\$6 billion in total) at any time during the next 0 to 24 months, and have an important negative impact on the economic and social development of the country: (i) a potential eruption of the Cotopaxi Volcano, and (ii) potential adverse effects from the 2015-16 El Niño phenomenon.</p> <p>The exception allowing for deferral of environmental and social requirements was granted for this Project and the Bank has prepared, in accordance with its policies, a Safeguards Action Plan (SAP), a Project-level safeguards planning document that provides a time-bound plan setting forth the steps and the sequential planning and coordination for Project activities and the preparation by the GoE of the relevant safeguards instruments to ensure compliance with the safeguards requirements. The SAP is guided by the dual objective of ensuring that there is a roadmap for safeguards compliance during Project implementation and providing clear guidance to the GoE on the types of actions and instruments required so as to facilitate speedy implementation of emergency services.</p> <p>The deferral that is being requested is for postponing the disclosure of safeguards instruments to after Appraisal. Site-specific safeguards instruments (EMPs and, if necessary, IPPs and/or RAPs) are required for all investments financed under the Project; also those subject to retroactive</p>



financing under Component 1. Said instruments must be ready, acceptable to the Bank and disclosed as early as possible, and latest before works start on the ground. Each co-executing agency will disclose a minimum of one EMP, cleared by the Bank, associated with their respective works under Component 1. To address the above referred aspects, each co-executing Ministry counts at least with the minimum of environmental staff and management capacity to deliver the required environmental management with Bank assistance. Each Ministry has named a responsible staff to contribute to preparation of the Project's social and environmental management instruments.

The co-executing agencies are preparing an Environmental and Social Screening and Assessment Framework (ESSAF) for the Project to ensure identification and adequate management of social and environmental issues and risks relating to Project implementation. The ESSAF will include an Indigenous Peoples Planning Framework (IPPF) that covers specific guidance on how to effectively and pro-actively engage indigenous communities as well as procedures to be used for screening all activities identified post-appraisal, to ensure they maximize social benefits and avoid causing any potential adverse impacts. The ESSAF will also include a Resettlement Policy Framework (RPF) prepared in accordance with OP 4.12, providing guidance for land acquisition in the event that project activities require it. The RPF reflects the two following principles: 1) Prior to the approval of sub-projects, the responsible Ministry needs to ensure that the sites, boundaries and ownership of the related land plots are clearly identified and confirmed by presenting a legal title; and 2) For all activities (preparation and emergency response phases), the responsible Ministry is obliged to develop and implement Resettlement Action Plans (RAPs) in case of involuntary resettlement, including agreement and payment of compensation measures prior to the commencement of works for that particular subproject. However, rapid implementation support will be made available by the Bank to help with the preparation of the instruments. Guidance will also be provided on conducting rapid social assessments, and simplified templates made available for the completion of site-specific RAPs when required. The ESSAF will also include a section on environmental good practices.

Beyond the IPPF and RPF, the ESSAF will consist of:

- i. Screening methodology for all types of potential civil works related with rehabilitation of water and road infrastructure, and restoration of crop and livestock production to identify relevant environmental and social issues and risks as well as environmental enhancement opportunities, as well as to determine relevant national requirements related to environmental, health and safety management and the applicability of the Bank's Operational Policies on environmental and social safeguards. Said methodology will include a negative list to exclude any potential "Category A" investment from Project funding.
- ii. A simple template for site specific EMPs to be completed and customized for each subproject based on the results of site screening to specify the siting, design, demolition/land clearing, and construction management requirements for construction and other physical activities.
- iii. Procedures, roles and responsibilities for carrying out and approving site-screening templates and site specific EMPs, ensuring that subproject siting, designs, plans, specifications and implementation plans reflect the environmental screening outcomes and EMP requirements are compliant with applicable Bank safeguards and meet relevant policies/acts, strategies/rules and regulations of GoE.
- iv. Approach and Action Plans, if necessary, to mitigate the direct and indirect/induced impacts on any type of forest, protected areas and buffer zones and/or physical cultural resources, considering the potential risks to these resources.

- v. A multi-tiered GRM to receive and handle complaints relating to exclusion and inclusion errors during beneficiary targeting, those adversely affected by the Project, and delivery of Project benefits. Such mechanisms will rely on existing community institutions and the four Executive Units and the overall Project coordination by the Ministry of Finance, as applicable.
- vii. Generic sub-project safeguard supervision/monitoring form developed for rehabilitation works to record compliance with the sub-project specific safeguards instruments (EMP, IPP, RAP). These will be administered by EPA, MTOP and MAGAP that will be mobilized to provide close technical support and supervision at the local levels.
- viii. Capacity building needs of EPA, MTOP and MAGAP relating to safeguards, and a plan for training programs at various levels that will be required to implement the ESSAF and monitor compliance.

Each planned civil work counts or will count with the necessary and minimum environmental permitting requirements by the national legislation. Each will have an applicable Environmental Management Plan (EMP), whose level of detail and scope depends on the type of activity, as acceptable to the Bank and disclosed in-country and at the Bank InfoShop. In practice, the construction of temporary but major cattle shelters to prevent livestock lost due to a potential volcanic eruption and the dredging works require and will count with the most detailed EMPs, whereas preventive maintenance of road sections and potential canals and irrigation systems rely on environmental good practices specified for the type of works and natural and human environment in question. Use of retroactive financing to cover costs of Component 1 requires that the GoE and Project-financed contractors and supervisors comply with the EMPs.

Environmental monitoring, evaluation and reporting on environmental and social management will be part of the Project implementation process and local authority reporting system. During construction, contractors will keep records of all activities carried out on the Project site, which will be submitted to the responsible co-executing agency. Departmental environmental officials will be responsible for monitoring at the local level on a quarterly basis. Compliance to environmental and social screening will be generated from annual reports, evaluation reports and feedback meetings and implementation support missions.

**Awareness on Environmental Mitigation Measures:** The ESSAF will also outline provisions for the awareness/orientation sessions for environmental and social training aimed at contractors of civil works. Appropriate training will cover areas such as: screening of projects, policy and legal framework on environment and construction, disposal of solid and liquid waste from premises, and measures to prevent the spread and contraction of HIV/AIDS. Environmental and social rules for contractors will be incorporated within construction bids and contracts to enhance obligations on contractors.

Regarding the participating Ministries' capacity to plan and implement pertinent social and environmental management, each co-executing Ministry counts at least with the minimum of environmental staff and management capacity to deliver the Project-required social and environmental management with Bank assistance. Each planned civil work counts or will count with the necessary and minimum environmental permitting requirements by the national legislation. While the co-executing Ministries have no direct or very limited experience in implementing Bank funded projects and may be unfamiliar particularly with the Bank social safeguard policies, over the past decades the Government has implemented important pro-poor policies and taken steps in the inclusion of indigenous peoples and other minorities. All four co-executing Ministries have experience in the consultation and dialogue with indigenous

communities. For example, the Ministry of Health includes a Division for Intercultural Health. In the absence of a staff member focused solely on social issues in the co-executing Ministries, the Project coordinators will oversee and coordinate social safeguards aspects.

Overall, the Project is expected to contribute to enhance the Government's capacity of social and environmental management in disaster prevention and response.

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

The Project key stakeholders are the public institutions in charge of disaster prevention and response. The potentially affected people are determined mainly based on their geographic location and socio-economic factors that contribute to their vulnerability.

Regarding the planned dredging and canal clean-up works, EPA will disseminate near-by landowners the message on the availability of sediment for potential and strictly voluntary material disposal in private lands. The Project will develop a protocol to verify the voluntary disposal of dredged materials and include it in the social and environmental management of each investment, as applicable.

Regarding gender, it is well documented in the literature that gender and equality have a strong link to disaster vulnerability and resilience. However, the planned Project investments will be mostly gender neutral, as they focus on maintenance and rehabilitation/reconstruction of existing infrastructure. In view of Cotopaxi's potential eruption, the Ministry of Social and Economic Inclusion (MIES) has taken into account gender implications through the mesas sectoriales, and included them into contingency plans for activities such as temporary shelters and non-food items. However, the activities in need of a strong gender mainstreaming will be covered by other sources of funding. The Project will take gender into account in its broadest terms by disaggregating number of beneficiaries.

Regarding citizen engagement, the Project will include a strong citizen engagement component in the road maintenance and rehabilitation activities implemented by the MTOP (% of funding). The MTOP implements a participatory methodology in the road maintenance across the county by small groups of people (10 to 20 people on average) become registered as a community based organization / microenterprise and carry out small manual labor activities under the supervision of the Ministry's staff. These microenterprises are paid formally and contribute in taxes. The Project will also include a grievance redress indicator at the intermediate level. As detailed in the ESSAF, contractors following EMPs will have the obligation to document and resolve grievances. The involved co-executing Ministry will follow up on the grievances and report them to the PIU. Furthermore, a strategy for citizen and stakeholder engagement will be prepared and carried out during early stages of the project implementation.

Regarding the ESSAF, an advanced draft will be published in-country and at the Bank InfoShop preferably before negotiations and latest by the end of January, 2016. Subsequently, consultation will be organized on the draft ESSAF with relevant GoE agencies, local authorities, and civil society representatives to collect feedback and contributions to the final document that will be published similarly before Project effectiveness.

**B. Disclosure Requirements**

**Environmental Assessment/Audit/Management Plan/Other**

Date of receipt by the Bank	06-Jan-2016
Date of submission to InfoShop	31-Jan-2016
For category A projects, date of distributing the Executive Summary of the EA to the Executive Directors	////
<b>"In country" Disclosure</b>	
Ecuador	31-Jan-2016
<i>Comments:</i> An advanced draft of the ESSAF will be prepared and send to the Bank prior to Project Negotiations. It will be published in-country and at the Bank InfoShop no later than one month after Negotiations (and if possible prior to Project Negotiations). Subsequently, consultations will be organized on the draft ESSAF with relevant GoE agencies, local authorities and civil society representatives to collect feedback and contributions to the final document that will be published similarly before Project Effectiveness.	
<b>Resettlement Action Plan/Framework/Policy Process</b>	
Date of receipt by the Bank	06-Jan-2016
Date of submission to InfoShop	31-Jan-2016
<b>"In country" Disclosure</b>	
Ecuador	31-Jan-2016
<i>Comments:</i> An advanced draft RPF annexed to the ESSAF will be prepared and send to the Bank prior to Project Negotiations. It will be published in-country and at the Bank InfoShop no later than one month after Negotiations (and if possible prior to Project Negotiations). Subsequently, consultations will be organized on the draft RPF/ ESSAF with relevant GoE agencies, local authorities, and civil society representatives to collect feedback and contributions to the final document that will be published similarly before Project Effectiveness.	
<b>Indigenous Peoples Development Plan/Framework</b>	
Date of receipt by the Bank	06-Jan-2016
Date of submission to InfoShop	31-Jan-2016
<b>"In country" Disclosure</b>	
Ecuador	31-Jan-2016
<i>Comments:</i> An advanced draft IPPF annexed to the ESSAF will be prepared and send to the Bank prior to Project Negotiations. It will be published in-country and at the Bank InfoShop no later than one month after Negotiations (and if possible prior to Project Negotiations). Subsequently, consultations will be organized on the draft IPPF/ ESSAF with relevant GoE agencies, local authorities, and civil society representatives to collect feedback and contributions to the final document that will be published similarly before Project Effectiveness.	
<b>Pest Management Plan</b>	
Was the document disclosed prior to appraisal?	No
Date of receipt by the Bank	////

Date of submission to InfoShop	////
"In country" Disclosure	
Comments:	
<b>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.</b>	
<b>If in-country disclosure of any of the above documents is not expected, please explain why:</b>	
Pest Management OP 4.09 is triggered as Component 1 will finance personal protection equipment for safe handling of chemical larvicides to control mosquitos as vectors for several diseases that are expected to spread due to the El Niño effects and might cause increased use of chemicals. The assessment of MSP's capacity and adequacy of the system for managing chemicals is being conducted and will be finalized before Project Approval. In case a Pest Management Plan is required, it will be ready before any equipment/chemicals (financed by the Project) can be used. In any case guidance will be provided as part of the ESSAF, on OP 4.09 as well as all the other policies triggered under the Project. This include as well OP 4.11 on Physical Cultural Resources.	

### ***C. Compliance Monitoring Indicators at the Corporate Level***

<b>OP/BP/GP 4.01 - Environment Assessment</b>			
Does the project require a stand-alone EA (including EMP) report?	Yes [ <input checked="" type="checkbox"/> ]	No [ <input type="checkbox"/> ]	NA [ <input type="checkbox"/> ]
If yes, then did the Regional Environment Unit or Practice Manager (PM) review and approve the EA report?	Yes [ <input type="checkbox"/> ]	No [ <input type="checkbox"/> ]	NA [ <input checked="" type="checkbox"/> ]
Are the cost and the accountabilities for the EMP incorporated in the credit/loan?	Yes [ <input checked="" type="checkbox"/> ]	No [ <input type="checkbox"/> ]	NA [ <input type="checkbox"/> ]
<b>OP/BP 4.04 - Natural Habitats</b>			
Would the project result in any significant conversion or degradation of critical natural habitats?	Yes [ <input type="checkbox"/> ]	No [ <input checked="" type="checkbox"/> ]	NA [ <input type="checkbox"/> ]
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 [ <input type="checkbox"/> ]	No [ <input type="checkbox"/> ]	NA [ <input checked="" type="checkbox"/> ]
<b>OP 4.09 - Pest Management</b>			
Does the EA adequately address the pest management issues?	Yes [ <input checked="" type="checkbox"/> ]	No [ <input type="checkbox"/> ]	NA [ <input type="checkbox"/> ]
Is a separate PMP required?	Yes [ <input type="checkbox"/> ]	No [ <input type="checkbox"/> ]	NA [ <input checked="" type="checkbox"/> ]
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 [ <input type="checkbox"/> ]	No [ <input type="checkbox"/> ]	NA [ <input checked="" type="checkbox"/> ]
<b>OP/BP 4.11 - Physical Cultural Resources</b>			
Does the EA include adequate measures related to cultural property?	Yes [ <input checked="" type="checkbox"/> ]	No [ <input type="checkbox"/> ]	NA [ <input type="checkbox"/> ]



Does the credit/loan incorporate mechanisms to mitigate the potential adverse impacts on cultural property?	Yes [ <input checked="" type="checkbox"/> ]	No [ <input type="checkbox"/> ]	NA [ <input type="checkbox"/> ]
<b>OP/BP 4.10 - Indigenous Peoples</b>			
Has a separate Indigenous Peoples Plan/Planning Framework (as appropriate) been prepared in consultation with affected Indigenous Peoples?	Yes [ <input checked="" type="checkbox"/> ]	No [ <input type="checkbox"/> ]	NA [ <input type="checkbox"/> ]
If yes, then did the Regional unit responsible for safeguards or Practice Manager review the plan?	Yes [ <input type="checkbox"/> ]	No [ <input checked="" type="checkbox"/> ]	NA [ <input type="checkbox"/> ]
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 [ <input type="checkbox"/> ]	No [ <input type="checkbox"/> ]	NA [ <input checked="" type="checkbox"/> ]
<b>OP/BP 4.12 - Involuntary Resettlement</b>			
Has a resettlement plan/abbreviated plan/policy framework/process framework (as appropriate) been prepared?	Yes [ <input checked="" type="checkbox"/> ]	No [ <input type="checkbox"/> ]	NA [ <input type="checkbox"/> ]
If yes, then did the Regional unit responsible for safeguards or Practice Manager review the plan?	Yes [ <input type="checkbox"/> ]	No [ <input checked="" type="checkbox"/> ]	NA [ <input type="checkbox"/> ]
Is physical displacement/relocation expected?	Yes [ <input type="checkbox"/> ]	No [ <input checked="" type="checkbox"/> ]	TBD [ <input type="checkbox"/> ]
Provided estimated number of people to be affected			
Is economic displacement expected? (loss of assets or access to assets that leads to loss of income sources or other means of livelihoods)	Yes [ <input type="checkbox"/> ]	No [ <input type="checkbox"/> ]	TBD [ <input checked="" type="checkbox"/> ]
Provided estimated number of people to be affected			
<b>OP/BP 4.36 - Forests</b>			
Has the sector-wide analysis of policy and institutional issues and constraints been carried out?	Yes [ <input type="checkbox"/> ]	No [ <input type="checkbox"/> ]	NA [ <input checked="" type="checkbox"/> ]
Does the project design include satisfactory measures to overcome these constraints?	Yes [ <input type="checkbox"/> ]	No [ <input type="checkbox"/> ]	NA [ <input checked="" type="checkbox"/> ]
Does the project finance commercial harvesting, and if so, does it include provisions for certification system?	Yes [ <input type="checkbox"/> ]	No [ <input type="checkbox"/> ]	NA [ <input checked="" type="checkbox"/> ]
<b>OP/BP 4.37 - Safety of Dams</b>			
Have dam safety plans been prepared?	Yes [ <input type="checkbox"/> ]	No [ <input type="checkbox"/> ]	NA [ <input checked="" type="checkbox"/> ]
Have the TORs as well as composition for the independent Panel of Experts (POE) been reviewed and approved by the Bank?	Yes [ <input type="checkbox"/> ]	No [ <input type="checkbox"/> ]	NA [ <input checked="" type="checkbox"/> ]
Has an Emergency Preparedness Plan (EPP) been prepared and arrangements been made for public awareness and training?	Yes [ <input type="checkbox"/> ]	No [ <input type="checkbox"/> ]	NA [ <input checked="" type="checkbox"/> ]
<b>The World Bank Policy on Disclosure of Information</b>			
Have relevant safeguard policies documents been sent to the World Bank's Infoshop?	Yes [ <input type="checkbox"/> ]	No [ <input checked="" type="checkbox"/> ]	NA [ <input type="checkbox"/> ]
Have relevant documents been disclosed in-country in a public place in a form and language that are understandable and	Yes [ <input type="checkbox"/> ]	No [ <input checked="" type="checkbox"/> ]	NA [ <input type="checkbox"/> ]

accessible to project-affected groups and local NGOs?	
<b>All Safeguard Policies</b>	
Have satisfactory calendar, budget and clear institutional responsibilities been prepared for the implementation of measures related to safeguard policies?	Yes [ <input type="checkbox"/> ] No [ <input type="checkbox"/> ] NA [ <input type="checkbox"/> ]
Have costs related to safeguard policy measures been included in the project cost?	Yes [ <input type="checkbox"/> ] No [ <input type="checkbox"/> ] NA [ <input type="checkbox"/> ]
Does the Monitoring and Evaluation system of the project include the monitoring of safeguard impacts and measures related to safeguard policies?	Yes [ <input type="checkbox"/> ] No [ <input type="checkbox"/> ] NA [ <input type="checkbox"/> ]
Have satisfactory implementation arrangements been agreed with the borrower and the same been adequately reflected in the project legal documents?	Yes [ <input type="checkbox"/> ] No [ <input type="checkbox"/> ] NA [ <input type="checkbox"/> ]

## V. Contact point

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## VI. For more information contact:

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## VII. Approval

Task Team Leader(s):	Name: Diana Marcela Rubiano Vargas, Van Anh Vu Hong	
<b><i>Approved By</i></b>		
Safeguards Advisor:	Name: Svend Jensby (SA)	Date: 30-Dec-2015

Practice Manager/ Manager:	Name: Tiguist Fisseha (PMGR)	Date: 30-Dec-2015
Country Director:	Name: Emmy Silvyu Yokoyama Tsuchikame (CD)	Date: 31-Dec-2015