TERMS OF REFERENCE – PART A

ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT FOR THE REHABILITATION OF THE AGUS-PULANGI HYDROPOWER COMPLEX PROJECT 2 (FULL ESIA FOR THE PREFERRED OPTION)

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APHC PROJECT 2

ACRONYMS

APHC	Agus-Pulangi Hydropower Complex
BARMM	Bangsamoro Autonomous Region in Muslin Mindanao
CENRO	City Environment and Natural Resources Officer
CSR	Corporate Social Responsibility
DAO	Department Administrative Order
DENR	Department of Environment and Natural Resources
DOE	Department of Energy
DOH	Department of Health
DOT	Department of Transportation
DPWH	Department of Public Works and Highways
E&S	Environmental and Social
ECC	Environmental Compliance Certificate
EIA	Environmental Impact Assessment
EIARC	Environmental Impact Assessment Review Committee
EIS	Environmental Impact Statement
EMB	Environmental Management Bureau
EPIRA	Electric Power Industry Reform Act
EPRMP	Environmental Performance Report and Management Plan
ESF	Environmental and Social Framework
ESIA	Environmental and Social Impact Assessment
ESP	Environmental and Social Panel
ESS	Environmental and Social Standards
EU	European Union
FPIC	Free Prior and Informed Consent
HPP	Hydroelectric Power Plant
IEC	Information, Education and Communication
IP	Indigenous People
IPP	Indigenous Peoples Plan
LGU	Local Government Unit
MOS	Multiple Options Study
MW	Megawatt
NGO	Non-government organizations
NPC	National Power Corporation
OE	Owner's Engineer
POE	Panel of Experts
PSALM	Power Sector Assets and Liabilities Management Corporation
WB	World Bank

LIST OF APPENDIX

1 BACKGROUND INFORMATION

1.1. Partner country

Philippines

1.2. Contracting authority

The contracting authority is the European Union, represented by the European Commission, for and on behalf of the partner country.

1.3. Country background

The Philippines is a middle income, archipelago nation in Southeast Asia with a population of about 105 million. In recent years, the country has maintained investment-grade ratings from major credit rating agencies as a result of its sound macroeconomic fundamentals. It is increasingly characterized by a robust inclusive economic growth, a healthy current account surplus, adequate international reserves, and a sustainable fiscal position. The Philippines' medium-term growth outlook is positive, driven by strong domestic demand and supported by an expected rise in public investment spending.

Under the Philippine Development Plan 2017-2022 (PDP), the acceleration of strategic infrastructure development is outlined as a priority, supported by the government infrastructure development agenda, through the "Build, Build, Build" initiative. Under this programme, public investment is expected to increase from 5.4 percent of GDP in 2017 to 6.9 percent of GDP in 2020. Investment is likely to be a key driver of growth, which is expected to rise on the back of the government's infrastructure and human capital investments. In this context, the development of the energy sector will continue to play a key role in supporting further economic growth and poverty alleviation, which is especially relevant for poorer regions such as Mindanao.

Over the past 25 years, the European Union has been a key development partner in Mindanao, working with the Government of the Philippines and civil society organisations in promoting peace, human security and development, including in the most vulnerable and conflict-affected communities. The EU remains one the biggest donors to provide support to Mindanao and the Peace Process through a comprehensive approach supporting directly the political settlement with the Instrument contributing to Stability and Peace (IcSP) and supporting longer term development mainly through the Development Cooperation Instrument (DCI). The EU has also been a major humanitarian donor for the relief assistance to the civilians affected by the armed conflict and natural disasters.

Through the Access to Sustainable Energy Programme (ASEP), the EU is also supporting the uptake of renewable energy in the Philippines, including in Mindanao. The rehabilitation of Agus-Pulangi Hydropower Complex (APHC) has the potential to contribute to the socio-economic development and poverty alleviation of the region, which in turn can support normalisation and peacebuilding, in line with the efforts of the government, EU and other donors. The project is also coherent with the EU's approach to catalyse investments that support the Sustainable Development Goals (SDGs) and with the external dimension of the European Green Deal.

1.4. Current situation in the sector

The Agus-Pulangi Hydropower Complex (APHC) is located on the island of Mindanao and it consists of seven run-of-river hydropower plants with a total installed capacity of about 1,000 MW. Mindanao is the second largest island in the Philippines. Mindanao and the smaller islands surrounding it make up the island group of the same name. Located in the Southern region of the archipelago, the entire Mindanao island group had an estimated total of 25.5 million residents in 2018, almost a quarter of the total population of the Philippines, and has a multi-ethnic and multi-religious society, including Muslims, Christians and indigenous peoples (IPs).

The Mindanao power system is not connected to the Luzon-Visayas power system, but there are plans to interconnect them in the space of the next few years. The Agus-Pulangi Hydropower Complex (APHC) has been the backbone of the Mindanao power system for decades. The hydropower plants were commissioned between the late 60s to the early 90s, and all require rehabilitation to extend their lives, increase capacity and energy, and enhance dam safety. In addition, APHC is located in a conflict-affected area with a complex socio-cultural context that requires a careful analysis of the options and may render project implementation very delicate.

The Government of the Philippines has requested international donors, led by the World Bank, to help study the rehabilitation needs, and to finance the rehabilitation project. The European Union, as a key development partner in Mindanao and in the energy sector, has agreed to fund the Environmental and Social Impact Assessment for the rehabilitation, through the EU Access to Sustainable Energy Programme (ASEP).

1.5. Power generation in the Philippines

The power sector in the Philippines is mostly privately owned and operated. Power generation has become highly competitive and new investments are made exclusively by the private sector. The government continues to own some older oil-fired power plants and some key hydroelectric assets, especially in Mindanao. A competitive wholesale electricity market has been operating for more than a decade in Luzon and the Visayas. A spot market is not yet fully operational in Mindanao, but new investments in generation capacity could lead to the emergence of wholesale competition. Transmission remains state-owned, but new investment and operations have been assigned to a private concessionaire on a long-term basis. The Luzon and Visayas grids are interconnected and there are plans to build an undersea interconnect to the Mindanao grid. Distribution is a mix of 20 investor-owned utilities, including world-class companies providing services in the cities of Manila, Cebu, and Davao; and 121 rural electric cooperatives (ECs), which are owned by their member consumers. One hundred of these ECs are connected to the main transmission networks in Luzon, the Visayas and Mindanao; the remaining 21 are spread across islands that have no connection to the larger grids.

The sector institutional structure accompanying privatization of operating assets dates from the passage of the Electric Power Industry Restructuring Act (EPIRA) 2001. The Department of Energy (DOE) is the lead policy agency. The Energy Regulatory Commission (ERC), an independent Government agency, provides economic regulation for the sector as a whole. The National Electrification Administration (NEA), a Government-owned and controlled corporation (GOCC), is the apex agency for the 121 ECs. The Philippines Electricity Markets Corporation (PEMC) is the operator of the Wholesale Electricity Spot Market (WESM). The Power Sector Assets and Liability Management (PSALM) Corporation holds the remaining government assets in the sector, including the transmission assets, hydro facilities, and distributed generation plants of the Small Power Utilities Group of the National Power Corporation (NPC-SPUG).

The Philippines has a rapidly growing electricity sector. The installed power generation capacity increased from 15.7GW to 22.7GW while electricity consumption went up from 49.2 TWh to 77.8 TWh in the past decade. Table 1 provides a breakdown of installed capacity by the type of generation at the end of 2017 (see the tables and figures in Appendix 1). In recent years, power generation capacity additions were dominated by coal fired power plants owing to government's 'technology neutral' and cost-sensitive approach to meet growing power demand. Coal-fired installed capacity increased from nearly 6 GW to above 8 GW between 2015 and 2017. While coal power generation capacity accounted for about 35% out of the total installed capacity, coal power plants generated 46.8 TWh, or nearly 50% of electricity produced in the Philippines in 2017.

Coal is set to continue playing a major role in power mix in the future. As per the Philippine Energy Plan 2016-2030, the Government is looking to develop a technology neutral power sector in line with a so-called 70-20-10 strategy. Within this context, power plant technologies considered per type of operation are as follows: 70 percent baseload capacity from coal, geothermal, big hydropower, natural gas, nuclear and biomass; 20 percent mid-merit capacities from natural gas; and 10 percent of peaking capacities from oil-based plants and variable renewable energy such as solar photovoltaic (during daytime) and wind. According to DOE forecasts, some 17 GW of power capacity will need to be added

by 2030 to support continued electrification, increases in consumption by households as a result of higher income levels, and economic growth. Coal-fired power generation is seen by the energy authorities as a main solution to reliable, sufficient and affordable supply of electricity. As per the Philippine Energy Plan, coal consumption will increase from 11.7 mtoe in 2016 to 51.3 mtoe under a business-as-usual scenario and to 40.7 mtoe under a clean energy scenario in 2040.

1.6. Situation in Mindanao

The situation in Mindanao reflects overall developments in the sector. The installed nameplate capacity of the Mindanao power system grew from about 1.7 GW in 2003 to nearly 3.6 GW in 2017. Coal-fired power plants accounted for about 70% of the capacity additions during that time, with the bulk of coal capacity having been added in the past three years. (Table 2 shows the installed capacity at the end of 2017.) Until recently, the power system was energy deficient, but significant addition of coal-fired capacity in recent years has overcome the power shortages and even resulted in capacity surpluses. In 2017, the installed capacity of about 3.6 GW was well above peak demand of about 1.7 GW, even when considering lower available capacity and reserve margin requirements. As a result of this supply surplus, dispatch priority was given to coal power plants, whereas APHC plants became underutilized and had to spill water.

However, demand for APHC energy and capacity is expected to increase in the years to come for the following reasons:

- According to Department of Energy forecasts, system peak demand in Mindanao is expected to increase to about 3.4 GW in 2025 and 5 GW in 2030. A number of factors contribute to the projected rapid rise in demand: continued electrification, increases in consumption by households as a result of higher income levels, and economic growth. The rehabilitated APHC can play an important role in meeting the increased demand in a least-cost and an environmentally sustainable manner.

- In the immediate future, increases in power capacity in Mindanao are likely to be dominated by coal-fired generation. This will further increase base load capacity of the system and will need to be accompanied by adequate regulating (hydropower) capacity to provide load-following and other ancillary services.

- The planned connection of the Mindanao power system to the Luzon-Visayas system and integration of the Mindanao power market into the Philippines Wholesale Electricity Supply Market would create additional demand for APHC capacity and energy.

1.7. The Agus-Pulangi Hydropower Complex (APHC)

As noted above, the Agus-Pulangi plants have an installed capacity of about 1,000 MW. However, only about 600-700 MW is currently available. This is partly due to limitations of the ageing equipment. The major technical shortcomings that reduce outputs are the high temperatures in some units due to problems in the cooling systems, and increased vibration of turbine-generators' shafting in other units. Additionally, all plants require varying degrees of modernisation of mechanical and electrical auxiliary equipment and of control and protection systems.

The general location of the APHC is shown in Figures 1 and 2. Six of the plants of the Agus-Pulangi Hydropower Complex are located on the Agus River that flows for 36.5 km from Lanao Lake (at Marawi City) to Iligan Bay (South-West of Iligan City), crossing the provinces of Lanao Del Sur and Lanao Del Norte. As such, the project area covered by the Agus plants straddles two administrative regions, Lanao Del Sur being part of the Bangsamoro Autonomous Region in Muslim Mindanao (BARMM), but not Lanao Del Norte. The seventh plant is the Pulangi IV Plant, the first of five plants envisaged on the Pulangi River, which is the longest river in the province of Bukidnon. It has a length of 320 kilometres and is one of the major tributaries of the Rio Grande de Mindanao, an extensive river system in Mindanao. These hydropower plants are owned by the Power Sector Assets and Liabilities Management Corporation (PSALM) and operated by the National Power Corporation (NPC). PSALM and NPC are wholly owned-and-controlled government entities. The plants connect to the 138 kV transmission system, except for the Agus VI plant, which connects to the grid at the 69 kV level.

The following is a brief description of the seven hydropower plants (the capacity and commissioning dates are summarised in Table 3):

- The Agus I hydropower plant is situated in the heart of Marawi City with an elevation of 702 meters. It is the upstream-most of the seven hydropower plants envisaged along the Agus River. It has two generating units, each of 40 MW installed capacity. Construction was started in February 1979, and the units were commissioned in June 1992 and March 1994. A fire inside the control room in 1999 put the plant out of operation for 5 years. The units were re-commissioned at the end of 2004 after replacement of equipment of the control room, excitation transformer, busbars, DC system and governor controllers.

- The Agus II hydropower plant is located downstream of the Agus I plant and is situated about 5km from Marawi City. It has three generating units, each of 60 MW installed capacity. Construction was started in May 1975, and the units were commissioned in June 1979, August 1979 and November 1979.

- The Agus III project has not yet been constructed. Maranao Energy Corporation has the development rights for the project. Agus III hydropower plant is expected to be a 225 MW project with a small storage of 1.2 million m^3. The feasibility study has been prepared, but the timing of detailed design preparation and construction has not been confirmed.

- The Agus IV hydropower plant is located at Baloi, Lanao del Norte, and has three generating units, each of 52.7 MW installed capacity. Construction was started in July 1979, and the first two units were commissioned in March 1985, with the third unit commissioned in April 1985. Water hyacinths are emerging as a problem at some plants, notably at Agus IV (but also at Agus II and Pulangi IV).

- The Agus V hydropower plant is located west of Iligan City, Lanao del Norte, and has two generating units, each of 27.5 MW installed capacity. Construction was started in October 1980, and the units were commissioned in February 1985 and March 1985.

- The Agus VI hydropower plant, formerly known as the Maria Cristina Falls Hydro Electric Power Plant, is located 8.5 km southwest of Iligan City and has five generating units. The first two units had an installed capacity of 25 MW each but have recently undergone a major rehabilitation and the installed capacity has been increased to 34.5 MW each; the other three units have an installed capacity of 50 MW each. Construction was started in 1950, and the first two units were commissioned in July 1953 and November 1956, with the three remaining units commissioned in July 1969, April 1971 and April 1977. The upgraded Units 1 and 2 are operational but have not yet been taken over from the Contractor due to contractual issues; these two units are not in the scope of the Multiple Options Study that will be initiated in advance of the Environmental and Social Impact Assessment (ESIA) (see below).

- The Agus VII hydropower plant is located downstream of the Agus VI plant near where the Agus River discharges into Iligan Bay, and has two generating units, each of 27 MW installed capacity. Construction was started in January 1979, and the units were commissioned in March 1983 and December 1983.

- The Pulangi IV hydropower plant is located in Maramag, Bukidnon in the central part of Mindanao. It uses two reservoirs, produced by damming the Pulangi River, to supply water to a run-of-the-river hydroelectric power plant. It has three generating units, each of 85 MW installed capacity. Construction was started in March 1982, and the units were commissioned in December 1985, June 1986 and March 1986.

1.8. Major existing/planned hydropower plants, other essential interventions in the basins

Some key developments in the Agus River Basin include the Balo-i Flood Risk Management Project expected to be implemented by Department of Public Works and Highways (DPWH) with potential

financing from the Asian Development Bank (ADB). The project is being prepared by ADB. A significant factor contributing to the lower available capacity of APHC is the constraint on the discharge outflow from Lake Lanao due to potential flooding in the Balo-i flood plain between the downstream of Agus II and upstream of the Agus IV reservoir. For example, Agus II has a rated design discharge of 210 m3/s but receives only 120 m3/s due to this constraint, thereby reducing its capacity from 180 MW to about 100 MW. Removing this constraint by the implementation of the already-planned flood protection project in the Balo-i flood plain would allow a significant increase in the generation output that could be provided from the Agus cascade even without rehabilitation. It would also allow the possibility of further increases in the installed capacity of the cascade by utilising the increased discharge made possible by removing the flood constraint.

This Balo-i flood protection project had been the responsibility of NPC prior to the unbundling of the utility. However, it was not implemented due to various reasons including security concerns. It has been reported that the responsibility was transferred at one point in time to the engineering unit of the Philippines Army, but now the responsibility lies with DPWH. The World Bank has obtained general information on the flood protection project. The Balo-i project is designed to mitigate high magnitude natural floods in the 20+ year frequency range, which significantly exceed the design discharge of the Agus II HPP (210 m3/s). The near-future works are two short dikes near Balo-i town downstream of Agus II, which are an initial stage (about 5-10% of total footprint) of a much more extensive network of dikes to channel flood waters related to natural discharge fluctuations through the Balo-i Floodplain area. The Balo-i Project is not considered “associated facilities” under the ESF as it is not (a) directly and significantly related to the project; (b) carried out, or planned to be carried out, contemporaneously with the project and; (c) necessary for the project to be viable and would not have been constructed, expanded or conducted if the project did not exist. It must be noted that there is no interdependence in viability: the design discharge for the dikes is much smaller than the natural floods handling (530m3/s 10a RP, 830m3/s 100a RP) for which the dikes are designed. The plans for regulating the floodplains envisage a much larger system of dikes than needed for the discharge of Agus II HPP, with the objective to protect from natural floods and not the full design discharge of the Agus II HPP.

Another development in the Agus River Basin is Agus III, which will be developed under a private entity proponent. It seems that the ECC has already been issued. To be more specific, it seems that DENR approved the change of ownership to a private developer (ECC may have been issued for NPC when it was still planning to develop it).

Concerning the Pulangi River Basin, notable developments include the construction of Pulangi V HPP which some articles reported would be developed downstream of existing Pulangi IV HPP. Pulangi V involves construction of a dam of about 143m which will inundate 2,833 ha. It should be noted that NPC is not privy to the proposed Pulangi V and Pulangi VI projects, which are on the downstream part of Pulangi IV HPP. Its watershed areas are also not covered under NPC’s jurisdictions.

The Pulangi Hydropower Complex is located within Pulangi Watershed Reservation which holds the Pulangi River, the longest river in Bukidnon. It is one of the major tributaries of the Rio Grande de Mindanao, an extensive river system in Mindanao Island, Philippines. Pulangi Watershed is the second largest watershed in the country with an area of about 1.8 million ha. It is under the administrative jurisdiction of the DENR. Through a Memorandum of Agreement (MOA) signed in 2014, the NPC was given the responsibility to manage and develop 40,772 ha of the watershed within the immediate vicinities of Pulangi IV HPP. Supporting Pulangi Watershed are 3 major tributaries, namely: the Nabalintungan (Kulaman) River Watershed, Kitanglad-Manupali Watershed and Sawaga Watershed. Nabalintungan is the primary water resource to run the turbines of Pulangi IV HPP of the NPC.

The Agus Hydropower Complex is located within the Lake Lanao-Agus River Watershed. Lake Lanao was proclaimed watershed reserve by virtue of Proclamation No.871 issued on February 26, 1992 and is included in the initial components of the National Protected Areas System (NIPAS) governed under NIPAS Act of 1992 (Republic Act No. 7586). Such proclamation established the Lake Lanao Watershed Reservation for purposes of protecting, maintaining and improving its forest cover and water yield for hydropower, irrigation and domestic use. To strengthen NPC’s jurisdiction over the area, it forged a MOA with DENR National Office for co-management covering 13,700 ha and with then DENR-ARMM (now BARMM-MENRE) covering 29,366 ha.

1.9. Socio-cultural context and security issues

APHC is located in a conflict-affected area with a complex socio-cultural context that requires a careful analysis of the options and may render project implementation very delicate. A conflict-sensitive approach and careful consideration of the potential impacts on the impoverished, conflict-affected and vulnerable populations is required. Grievances over traditional rights and ancestral domain may arise, compounded by weak local governance in addressing right-of-way or land acquisition for various reasons.

Mindanao has a multi-ethnic and multi-religious society, including Muslims, Christians and indigenous peoples (IPs). Muslims make up 5-7% of the total population of the Philippines and approximately 21% of Mindanao's population. Mindanao consists of 6 administrative regions, one of which is the Bangsamoro Autonomous Region in Muslim Mindanao (BARMM)—replacing the Autonomous Region in Muslim Mindanao (ARMM) as a result of the ratification in January 2019 of the Organic Law for the Bangsamoro Autonomous Region (BOL)—that comprises territories predominantly populated by Muslims. To ensure the smooth implementation of the rehabilitation project, NPC's Board (DOE) has instructed NPC management to engage and involve the BARMM in the ESIA.

Though in general there have been improvements recorded, 7 out of 10 of the poorest provinces with high poverty incidence among households are located in Mindanao. Not surprisingly, most of these provinces are conflict-affected. The closely intertwined factors of poverty; lack of access to secure land tenure; minimal delivery or absence of public goods and basic services, including security; ineffective/imposed institutions of governance; and perceived suppression of Islamic and indigenous practices and customs combine, among others, to deepen a sense of injustice and fuel the armed conflict.

Adding to the vulnerability and insecurity in these areas is the proliferation of various armed groups, firearms and weapons. The BARMM and CARAGA regions, homes respectively to Muslim separatist and communist armed rebellion, have persistently been among the 10 poorest regions of the country. Civilians have been heavily affected by the armed conflict, notably during the Zamboanga siege in 2013 and the Marawi siege in 2017, and by cyclical repeated displacements.

This situation is exacerbated further by the effects of natural disasters (worsening floods, environmental degradation, landslides, droughts, typhoons etc.) that have hit many provinces of Mindanao in recent years, compounded by the impact of climate change and by the destruction of forests and natural resources leading to further population displacements and, destruction of property and physical infrastructure.

Indigenous peoples are among the most deprived and vulnerable groups in Mindanao. Their ancestral lands are constantly shrinking due to the pressure of mining, logging, population growth, installation of agro industries and new farm settlers. Many IPs continue to be hunter-gatherers, although some have started cultivating farms with an average of less than one hectare of land. The Pulangi River Basin is situated in a predominantly IP region. The Scoping Report identified that there are no groups considered IPs under national legislation in the project areas of the Agus plants IV-VII included in APHC Project 1 but plenty in Project 2 areas. Further screening is still to be undertaken as part of the ESIA to assess whether the Maranao commuities in the Agus area would meet the criterria of ESS7.

The ratification in January 2019 of the Organic Law for the Bangsamoro Autonomous Region (BOL) constitutes a major step for the Peace Process in Mindanao. In parallel to the political process of establishing a new institutional framework for governing the Bangsamoro, a normalisation process shall be implemented through which communities affected by decades of armed conflict can return to a peaceful life free from fear of violence and crime. Measures towards justice and reconciliation during the transition period, as well as comprehensive socio-economic programmes, will allow communities to pursue sustainable livelihoods and political participation within a peaceful deliberative society.

1.10. Related programmes and other donor activities

The APHC rehabilitation programme has been developed through consultation between the World Bank and the relevant agencies of the Philippines since 2017 initially with the Power Sector Assets and

Liabilities Management Corporation (PSALM) who owns the APHC assets. The World Bank proposed to the Department of Finance (DOF) how it intends to support the APHC rehabilitation in February 2018. DOF responded positively and appointed the National Power Corporation (NPC) as the implementing entity of the preparation since it operates the APHC. A joint World Bank-NPC initial scoping activity, conducted in May 2018, identified the various studies required for the project preparation. These studies are being managed and funded by several parties led by the World Bank (see details below). The World Bank and the Agence Française de Développement (AFD) have also expressed an interest in co-financing the ensuing phases of the rehabilitation. Under its framework for supporting investments in the SDGs through blended finance (so-called "blending"), the EU has the possibility, if requested and following the blending appraisal process, to provide grant funding in the context of a loan package with international financial institutions.

1.11. Multiple Options Study (MOS)

Since the six Agus Hydropower Plants (HPPs) are developed in a cascade, it is necessary to assess the priority, grouping and sequencing of HPPs for rehabilitation based on their conditions, needs of Mindanao power system, and economic and financial viability. Furthermore, the environmental and social impacts need to be assessed particularly in order to identify the impacts caused to the upstream Lake Lanao and the midstream Balo-i Lake if the design discharge is altered. The options to consider are:

- Option 1: Restore Agus HPPs rated capacity, extend their operating life and ensure safety (including dam safety instrumentation) through rehabilitation or replacement of equipment, improve operational performance and conditions with installation of state-of-the-art monitoring, control, protection and dispatch systems.

- Option 2: Option 1 plus additional measures to increase capacity & energy production through efficiency improvements of generating units, but without major changes to civil works and embedded parts.

These two options are provided as guidance to categorise the types of intervention that can be envisaged. Option 1 and 2 entail the restoration or replacement of equipment, which may result in increased capacity and/or energy output; under these scenarios the plant discharge constraint remains. Obviously, some equipment in a plant may require replacement while others may only be repaired. And the scope of rehabilitation will differ from one plant to another.

The scope and footprint are unlikely to add significant ES impacts or risks to those expected under Options 1 and 2.

The MOS will strengthen the World Bank's knowledge of the hydropower sector in Mindanao and inform its due diligence for the rehabilitation of APHC. For each of the seven APHC power plants, a detailed assessment is being undertaken on the condition of the installed equipment and the existing structures and, on the basis of a techno-economic analysis, recommendations will be made on potential options and the scope of the rehabilitation works that may be carried out in the future. For the equipment, the options being considered include repairs to the existing equipment, and replacement with comparable equipment to address ageing or obsolescence

The following comprise potential rehabilitation activities that are being investigated and analysed to make justified recommendations regarding the rehabilitation/replacement of parts, and to prepare recommendations aimed at increasing efficiency and an extended service life:

Turbines:	The mechanical design and condition of the existing hydraulic turbines and related components, including the history of maintenance.

Generators:	The condition of existing generators and related components are being investigated and analysed, including the history of maintenance.
Step-up transformers and generator main leads:	The existing condition of the step-up transformers and the generator main.
Monitoring, control, automation and protection systems:	The existing monitoring, control, automation and protection systems.
Main mechanical equipment:	The existing condition of the plant mechanical auxiliary systems and equipment, including the history of maintenance.
Auxiliary mechanical and electrical systems:	The auxiliary mechanical and electrical auxiliary systems.
Penstocks:	The existing condition of the penstocks.
Instrumentations:	The condition of the existing instrumentation, and Instrumentation Plan.
Addressing any other plant-specific issues:	Other plant-specific issues that need to be addressed through appropriate remedial or mitigation measures. These may include: improving safety for extreme earthquakes and floods; addressing existing or potential sedimentation issues; addressing existing or potential water hyacinth problems; addressing identified environmental (environmental flows, solid waste and garbage coming from communities around Lake Lanao, asbestos, polychlorinated biphenyl (PCBs), etc.) and social issues; reviewing the existing Emergency Preparedness Plan and recommending required improvements; and reviewing the existing Operation and Maintenance (O&M) plan and recommending required improvements.

The MOS will provide recommendations on the two rehabilitation options, including "assessing environmental, safety and social safeguard issues and measures". In particular, it will assess the following aspects with regard to environmental health and safety, environmental and social aspects and the measures needed to address the following to bring the plants in line with international good practice and the World Bank's ESF:

- Reviewing general safety for extreme earthquakes and floods under various design operational conditions;
- Ensuring that the monitoring instrumentation is updated and recommending procedures for regular monitoring of instrumentation data;
- Ensuring that critical environmental and social impacts are identified for each plant, with appropriate mitigation measures recommended (these can include such aspects as release of adequate environmental flows, dealing with asbestos where this exists in the plants, checking for polychlorinated biphenyls (PCBs) in transformers, legacy social issues, etc.);
- Confirming that effective Emergency Preparedness Plans exist;

- Confirming what other studies and assessments may be needed to be carried out by the government at a later stage.

The MOS is being conducted by a consultant contracted by the World Bank (Tractebel/Engie). The contract is funded through the Bank-Executed Trust Fund (BETF) component of the Multi-Donor Trust Fund (MDTF) for which the sole contributor to date is the Department of Foreign Affairs and Trade (DFAT) of the Government of Australia.

1.12. Feasibility Study (FS)

Based on the recommendation of the MOS, NPC will prepare a FS for the preferred option to be appraised by the World Bank and other potential co-financiers. and it should be noted that the MOS, FS and ESIA are likely to be prepared with overlaps enabling information sharing and feedback between the studies. The FS is expected to be undertaken by consultants recruited by NPC. The contract is to be funded through the Recipient-Executed Trust Fund (RETF) component of the MDTF contributed by DFAT.

1.13. Environmental and Social Impact Assessment (ESIA)

The ESIA will be conducted in parallel with the MOS/FS in order to inform the FS on the environmental and social impacts and mitigation measures (including cost of mitigation) of the two options. As indicated above, the Agus river system is complex and requires a thorough assessment particularly of the preferred option. Both ESIA/MOS are inputs to the FS, however, the FS is expected to be undertaken while the full ESIA is being prepared. . The ESIA is being conducted according to the requirement of the World Bank's Environmental and Social Framework (ESF) and relevant guidelines. It is funded and managed by the EU, and is being conducted in two phases: a screening and scoping phase of the various options (phase 1, through a completed service contract with Tractebel), followed by the full ESIA for the preferred option, once the FS is underway (phase 2, which is the subject of these terms of reference).

Based on the draft MOS it has been determined to split the rehabilitation project into a Series of Projects (SOP) including two projects prepared in sequence with separate Government and WB approval processes. Project 1 includes rehabilitation of Agus IV, V, VI and VII (419.3MW), and Project 2 includes rehabilitation of Agus I, II and Pulangi HPPs (515MW).

Please refer to Appendix 4 for key aspects to be included in the ESIA.

1.14. Panels of experts (POE/ESP)

For a hydropower/dam project, typically there is a need for two panels (which may be combined): a technical panel known only as Panel of Experts (POE) or Project Review Panel; and an Environmental and Social Panel (ESP):

- Panel of Experts (POE): The World Bank's ESF requires a POE for large dams (defined to be, among others, higher than 15 m). Some of the APHC dams are large dams, but they have been operational for many years. For such operational dams (and for dams under construction), the World Bank requires the government to arrange for one or more independent dam specialist to inspect/evaluate the safety status of the existing dam, review/evaluate operation and maintenance (O&M) procedures, and provide a report on findings and recommendations for any remedial work or safety measures. The recommendation may include the need for the government to mobilise a full POE. As such, initially, for APHC preparation, there is a need to contract the independent dam specialist.

- Environmental and Social Panel (ESP): The World Bank's ESF requires for projects that are high risk or contentious, or that involve serious multidimensional environmental or social risks or impacts, the government may be required to engage one or more internationally recognised independent experts, who, depending on the project, form part of an advisory panel. For APHC preparation, given that the gravity of the impacts will only be known once the MOS and ESIA are underway, the ESP will be considered at a later stage. The ESP may be mobilised subject to the

outcome of the screening and scoping phase of the ESIA, independently from the contractor conducting the ESIA.

1.15. Owner's Engineer (OE)

Once the FS and ESIA are completed for the optimum option, NPC will need to recruit an OE to (1) prepare the tender design and tender documents; (2) provide tendering support to NPC; and (3) supervise the implementation. Tasks (1) and (2) are regarded as part of the preparation and are to be funded through the RETF component of the MDTF contributed by DFAT. Task (3) is part of the implementation phase, and, therefore, is expected to be financed out of the financing for the project.

2 OBJECTIVE, PURPOSE & EXPECTED RESULTS

2.1. Global objective

The overall objective of the project of which this contract will be a part is as follows:

The strategy for the rehabilitation of the Agus-Pulangi Hydropower Complex is defined in coordination with all the relevant project stakeholders through the appropriate project preparation activities, to the standard required for the potential project to be considered for World Bank and other donors financing.

It must be noted that all actions carried out to meet this objective must promote the cross-cutting objectives of the EC: environment and climate change, rights based approach, persons with disability, indigenous peoples and gender equality.

2.2. Specific objective[1]

The specific objective of this contract is as follows:

The full Environmental and Social Impact Assessment (ESIA) of the preferred option for the rehabilitation of the Agus-Pulangi Hydropower Complex Project 2 is carried out in accordance with the relevant World Bank guidelines and Philippine laws.

It must be noted that all actions carried out to meet this objective must promote the cross-cutting objectives of the EC: environment and climate change, rights based approach, persons with disability, indigenous peoples and gender equality.

2.3. Requested Services, including suggested methodology[2]

- In case of an expenditure verification is required, the contractor shall include the name of the proposed auditor in its methodology

Consultancy services are requested to meet the global and specific objectives defined on sections 2.1 and 2.2 of these Terms of Reference. Specifically, the contractor shall identify all services and activities that are necessary to complete the ESIA for the potential Project 2 to be considered for World Bank financing, including related to the collection and drafting of all data and documentation that may be required to assess the cumulative effects associated with the design, construction, operation and eventual decommissioning of the APHC plants and ancillary facilities. This will be done in alignment with the MOS/FS, and following the environmental and social screening of the various options under Scoping Phase 1.

Please refer to Appendix 4 for key aspects to be included in the ESIA.

[1] The global and specific objectives shall clarify that all EU funded actions must promote the cross-cutting objectives of the EC: environment and climate change, rights based approach, persons with disability, indigenous peoples and gender equality.

[2] Contractors should describe how the action will contribute to the all cross cutting issues mentioned above and notably to the gender equality and the empowerment of women. This will include the communication action messages, materials and management structures.

2.3.1. Methodology to be applied by the contractor

The ESIA should be based on the technical solutions recommended by the MOS/FS for the rehabilitation project, including their interim recommendations, and the ESIA for Project 1. The analysis and the drafting will be conducted in accordance or consistent with the World Bank Environmental and Social Framework (ESF) and all the other relevant guidance applicable to this project listed in Appendix 2. In particular, the contractor should apply the ten environmental and social standards (ESS) of the ESF. The ESF specifically will be used to assess the different alternatives options, identify the appropriate risks to consider, and determine the World Bank Environmental and Social Standards (ESS) that may be relevant for the planned project activities.

2.3.1.1. Philippine EIA legal basis:

The contractor shall also ensure that the assignment is carried out in accordance with the legal and technical requirements of the Government of the Philippines, including the Philippine Environmental Impact Assessment (EIA) requirements based on the risk category of the project, which is likely to be designated as an Environmentally Critical Project (Category A), subject to confirmation by NPC and the Department of Environment and Natural Resources (DENR) – Environmental Management Bureau (EMB). The applicable regulations for a Category A project are listed in Appendix 3.

As an existing project under Category A, it will be subject to the highest level of regulatory environmental assessment, requiring an Environmental Performance Report and Management Plan (EPRMP) that addresses potential environmental and social impacts and benefits as well as an Environmental and Social Management Plan (ESMP) outlining mitigation and monitoring measures for the project. The project will need to obtain an Environmental Compliance Certificate (ECC) before being implemented. (Category A projects include infrastructure projects: major dams, major power plants—fossil-fuelled, nuclear-fuelled, hydroelectric or geothermal—major reclamation projects, major roads and bridges.) Based on NPC level confirmations, Agus HEPPs belong to Category A; Pulangi 4 HEP belongs to Category A, but requirements used for ECC approval was only an Initial Environmental Examination Checklist (IEEC). The ECC of Agus I, II, IV, V, VI and VII, issued on 14 January 1992, has an Environmental Impact Statement (EIS). The ECC of Pulangi IV, issued on 10 July 2015, has an IEEC. Separate EIS shall be prepared, one for the Agus HEPPs and one for Pulangi IV HEP (the contractor may also check why DENR qualifies Pulangi IV to have IEEC only, instead of EIS).

The ESIA and ESMPs shall be prepared to satisfy requirements of the World Bank's ESF as well as the other performance standards adopted for the project. The ESIA shall also be referred to and structured into the EPRMP to comply with the DENR-EMB (DENR Administrative Order No. 2003-30) in securing the Environmental Compliance Certificate (ECC) for the Project 2 plants. Following the requirements of the DENR-EMB, information education campaign (IEC), focused group discussions and initial consultations are conducted prior to the public scoping and technical scoping and preparation of the EPRMP. These initial stakeholder consultations and information disclosure aim to gather comments and opinions from stakeholders. Scoping is done with the local community through public scoping and with a third-party EIA Review Committee (EIARC) through technical scoping, both with the participation of the DENR-EMB. The process results in a signed formal technical scoping checklist by the proponent, consultant and DENR review team, with final approval by the EMB Chief. The overall approach will generally follow the process described in Figure 3. The ESIA for Project 2 will also be carried out in accordance with other relevant legislation, including RA 10752 Right of Way Law.

2.3.1.2. EU communication and visibility guidelines:

The contractor must comply with the latest Communication and Visibility Manual for EU External Actions concerning acknowledgement of EU financing. The contractor should propose mechanisms to ensure the sustainability and dissemination of the results.

2.3.1.3. Detailed scope of the full ESIA for the preferred option:

The preferred option for the rehabilitation has been decided based on the MOS and ESIA screening and scoping. For Project 2 ESIA, the full ESIA report will summarise the results of the MOS, FS and E&S

screening of the various alternative options that lead to the preferred option, and present the E&S risks and impacts of the preferred option, together with respective recommendations on how to avoid, reduce or mitigate risks and impacts, including the preparation of plans for Project 2. The key issues of relevance for the full ESIA report and related studies are detailed in Appendix 4.

The full Project 2 ESIA report shall cover the selected/preferred rehabilitation option, including any new or upgraded access roads, transmission lines, substations and any ancillary works, associated activities (as per the definition of associated facilities in the World Bank's ESF). The analysis will include an assessment of the potential impacts on the physical, biological, and social environment, and development of mitigation, enhancement, management, and monitoring measures for the different stages of the project life, including the construction and operation, decommissioning and closure phases. The analysis of operation phase would consider the activities covered under Project 2 as well as the overall activities which are of relevance for the plant operations. Such an assessment will be in the context of current institutional mechanism for the operation. It will be based on desk research and baseline information collected in the field, and on technical studies relating to key areas of impact considered in light of the available project design and operation information, for each of the different project life stages. The decommissioning phase assessment will be high-level only. (NPC has no existing decommissioning/closure plans for Agus-Pulangi HEPPs. The contractor will produce a high-level, comparative E&S assessment of decommissioning options.) The analysis will rely on cross-country experiences and international best practices. Environmental and social issues requiring mitigation and the cost of recommended mitigation measures will be assessed.

The ESIA report and the resulting series of Environmental and Social Management Plans (ESMPs), for both the construction phase and operational phase of the project, shall be prepared with a level of detail which will be amenable to be updated with limited effort for incorporation into the tender package for the rehabilitation works, in order to form part of the successful bidder's works contract, with a view to fostering on-the-ground implementation of effective environmental and social safeguard measures during the project execution and operation of Project 2 plants.

With the current understanding that options 1 or 2 would not require any land acquisition for the civil works or access roads, it is not expected that a Resettlement Plan will be required. However, this would need to be assessed as part of the ESIA. Some land acquisition may be needed during the construction period and a Resettlement Policy Framework (RPF) will be prepared. As Project 2 areas, particularly the Pulangi side, have presence of indigenous peoples based on ESS7 and the government's Indigenous Peoples Rights Act (IPRA), measures will be developed to ensure that indigenous peoples would receive culturally appropriate benefits and are not adversely affected or that appropriate mitigation measures are developed. This necessitates the need for proper IP assessment, conduct of a Free, Prior and Informed Consent (FPIC) process and the development of an IP Plan, as part of the Project 2 ESIA process.

2.4. Required outputs

Output 1: Environmental and social impact assessment of the preferred option completed.

Progress towards achieving the results shall be measured by the specific performance indicators defined in the chapter on Monitoring and Evaluation, section 8.1., of these terms of reference. The contractor must report against the indicators and targets, where relevant.

Please refer to Appendixes 4 for more detailed information of the specific deliverables to be submitted.

Project 2 ESIA will concern the full environmental and social impact assessment and planning for the preferred option. The ESIA process should include the key activities outlined below and be carried out in accordance with World Bank requirements and the ESF, as well as the Philippine EIA requirements, IPRA and other relevant laws. The preparation of the EPRMP for DENR-EMB will commence once the approved Technical Scoping Checklist has been received from DENR-EMB.

In addition to the detailed assessment of environmental and social impacts for Project 2, the ESIA will also present the potential environmental and social risks for the combined Project 1 and Project 2 based on the Scoping Reports and Project 1 ESIA. This includes potential legacy issues.

In addition to the environmental aspects, the full ESIA report and related studies shall incorporate a social baseline, impact assessment, and management information, such that the final deliverables present an integrated assessment of both environmental and social aspects of the project, as well as include a chapter addressing cumulative impact assessment. For specific social aspects which are expected to produce their own stand-alone planning documents, the integrated ESIA shall summarise relevant aspects of these more detailed studies. Any other relevant studies identified in the final, approved Scoping Report/Checklist (developed and agreed during phase 1) should be undertaken and covered in the ESIA report.

The contractor's multi-disciplinary team is expected to work collaboratively to ensure a holistic analysis of social and environmental project impacts (for example, in assigning significance to environmental impacts in light of the socio-economic or cultural value of the affected resource) as well as to capture and assess potential secondary effects of proposed mitigation measures (such as environmental impacts associated with project resettlement, if applicable) or socioeconomic impacts associated with proposed environmental conservation and offset programmes, etc.

Activity 1.1.	**Conduct full environmental and social baseline studies, impact analysis and planning.**
1.1.1	Conduct all relevant baseline studies identified in the Scoping Report/Checklist developed and agreed during phase 1. To underpin the ESIA and associated studies, the contractor shall assemble, evaluate, and present baseline data on all relevant environmental and social characteristics of the full area of influence, including data collected from primary (field) and secondary sources, spanning physical, biological (both aquatic and terrestrial), socioeconomic, health, political, ethnic, and cultural aspects. Some information may already be available from previous feasibility and environmental studies but may need to be updated. The contractor should evaluate the methodologies used as well as geographic and temporal coverage of past fieldwork and, where deemed insufficient to meet international standards, should carry out additional fieldwork to fill in the gaps. While the full scoping of the baseline studies will be formulated during the screening and scoping phase of the assignment (with a view to focusing on the most relevant and important aspects), the key aspects are presumed likely to encompass those outlined in Box 1 of Appendix 4 (for hydropower component, access roads and transmission lines, and other ancillary facilities and associated activities).
1.1.2	Assess all direct, indirect, and induced impacts and risks, in both the short-term and the long-term, resulting from both construction and operation stage activities of the project, and propose mitigation measures for each (impact analysis). The analysis should follow an internationally-recognised methodology to assign significance levels to each identified impact, both before applying recommended mitigation measures and afterwards (e.g., residual impact). The analysis should also include an inventory of communities that are likely to be affected and differentiate the types and levels of impacts upon different communities. While the full scope of coverage of the impact analysis will be verified during the screening and scoping stage to reflect the highest priority issues, the issues summarised in Box 2 (Appendix 4) are considered likely to be relevant. The assessment of construction and operational stage assessment will be in the context of current institutional setup and at best the proposed institutional changes and/or updates expected under the proposed project.

1.1.3	Perform a Cumulative Impact Assessment for the overall project, focusing on identified Valued Environmental (and Social) Components (VECs) which may be affected by the project and other development activities planned or underway throughout the Agus and Pulangi watersheds. The scope of the CIA will focus on proposed Option 1 and 2 and is expected to include project-level, as well as strategic planning level recommendations, for minimising negative impacts and maximizing positive impacts associated with hydropower development within the Agus-Pulangi basins. The specific sub-activities shall include those described in Box 3 (Appendix 4). The CIA should be presented as a separate chapter in the ESIA report.
1.1.4	Develop the Environmental and Social Management Plan (ESMP) for the preferred rehabilitation option's design, construction and operations. The ESMP shall include details on all recommended measures to be taken during design, construction and operation of the project to avoid, eliminate, minimise, mitigate, compensate and/or offset the identified adverse environmental and social impacts, as well as the recommended specific actions, indicators for monitoring and evaluation, institutional responsibilities, reporting arrangements, and budget needed to implement these measures. Specific sub-plans shall be developed to manage identified issues, including but not limited to the elements outlined in Box 4 of Appendix 4 (some of which may be combined, where appropriate), to incorporate site-specific and phase-specific mitigation measures that are identified through the impact assessment process, as well as generic environmental, health and safety codes of practice based on international good practices for construction management and project operation, which can be annexed to construction, operation and maintenance contracts, where appropriate and/or required. In case of O&M contracts, the consultants will consider the prevailing arrangements or at best, as per the available information, the proposed arrangements under the project. Based on local regulatory requirements, EHS guidelines and good industry practice, the OHS management plan should include specifications for the elements summarised in Box 5. The arrangements for the monitoring and implementation of the ESMP and the related institutional capacity-building shall also be developed as detailed in Box 6.
Output 1.1.	**Draft full ESIA report for the preferred rehabilitation option, including:** - Cumulative impact assessment - Environmental and social audits/due diligence assessment that identifies environmental and social liabilities and legacy issues, status of environmental regulatory compliance, and proposed mitigation/remedial measures for such issues - Relevant technical discipline-specific studies such as on dam safety, water quality, air quality, terrestrial or aquatic ecosystems, fisheries, watershed, hydrology, climate change, geology and seismic hazards. - Environmental and social management plans (ESMPs) for all rehabilitation, engineering and civil works, including plans for waste and pollution, management of polychlorinated biphenyls (PCBs), asbestos, and other hazardous materials and wastes, community health and safety, warning and emergency response systems for flood surges and dam failure, traffic safety, occupational health and safety (OHS), labor management, and grievance redress mechanism - Social Assessment on risks and potential impacts concerning indigenous peoples and vulnerable groups - Resettlement Policy Framework, Indigenous Peoples Plan and other social plans developed under Output 2.2, - Stand-alone Executive Summary in English and Filipino, - Local-language summary materials for public consultation, including for e.g., slide deck, brochures and other visuals, factsheets, etc., - All the studies, documentation and plans collected, - Any other elements identified as necessary during the screening and scoping.

Output 1.2.	**Environmental Performance Report and Management Plan (EPRMP) for the preferred rehabilitation option, including:** - Description of the proposed rehabilitation project - Performance of the existing plants and status of compliance with ECC conditions and DENR regulatory requirements - Environmental baseline data from compliance monitoring reports and self-monitoring reports - Updated environmental management plan and environmental monitoring plan The EPRMP will be prepared following the DENR-prescribed template as required in securing the Environmental Compliance Certificate (ECC)

The following activity covers the social aspects of the project planning and design in more detail. The social aspects relate to potential land acquisition, involuntary resettlement and access restrictions, indigenous peoples and cultural property, downstream impacts, gender (including sexual orientation and gender identity and gender-based violence), community health and safety, conflict, stakeholder engagement, labour and labour influx, as well as legacy issues for the respective dams. It is expected to be carried out in a coordinated manner with the environmental assessment and planning aspects of the assignment, to ensure a holistic and integrated analysis. The findings of the outputs described below should also be integrated in summary format into the full ESIA report and overall Executive Summary.

Activity 1.2.	**Conduct detailed social assessment and planning to feed into the ESIA process.**
1.2.1	Conduct social assessment and impact analysis for the chosen rehabilitation option, consistent with overall project impact analysis under activity 1.2, including: development of a socio-economic baseline; stakeholder analysis, especially regarding the identification and consultation with vulnerable and IP communities; conflict analysis concerning how the chosen rehabilitation option may affect existing conflict. Social audits will be conducted for the respective dams to identify liabilities and legacy issues concerning land acquisition, relocation, access restrictions and IP issues, including FPIC agreements and benefit-sharing arrangements. The requirements for the social assessment are detailed in Box 7 (Appendix 4). The analysis will incorporate dimensions related to gender, disadvantaged groups, "deep poverty," conflict, etc.
1.2.2	Develop a consultation strategy and conduct consultations on impact mitigation and benefit sharing based on this strategy in order to produce all the relevant social plans according to the specifications laid out in Box 8 (Appendix 4) and in accordance with World Bank ESF and Philippine EIA requirements.
1.2.3	Develop a Resettlement Policy Framework, and if needed Resettlement Plan. Depending on the extent of rehabilitation and on which rehabilitation option is chosen, involuntary resettlement may ensue. The result of the ESIA for each of the rehabilitation options should be to advise on the extent of resettlement and the appropriate instrument to be prepared. See Box 9 for the aspects to be covered.

Output 1.3.	**Social Assessment Report and detailed social plans or measures, as required based on the assessment. This may include:** - Vulnerable and Indigenous Peoples Plan - Resettlement Policy Framework (required), and Resettlement Plan, if required - Downstream Impacts Management Plan - Cultural Heritage Plan, - Gender Action Plan, - Benefit-Sharing Plan, - Community Health and Safety Plan, - Labour Management Procedures and Labour Influx Plan, - Stakeholder Engagement Plan, - Communication Strategy and Action Plan, - Institutional Assessment and Strengthening Plan, - Grievance Redress Mechanism, - Any other study or action plan identified in the Scoping Report/Checklist.

The ESIA report and the resulting series of ESMPs and social plans as needed, for both the construction phase and operational phase of the project, shall be prepared with a level of detail which will be amenable to be updated with limited effort for incorporation into the tender package for the rehabilitation works, in order to form part of the successful bidder's works contract, with a view to fostering on-the-ground implementation of effective environmental and social safeguard measures during the project execution and operation.

Activity 2.	**Organise consultations and disclosure on the draft ESIA report.**
2.1	Support NPC in carrying out and fully documenting at least one additional round of consultations (to include a minimum of two workshops at district and central levels and one public hearing), once the draft environmental assessment and planning materials are available. The consultations should consist of public scoping and public hearing(s) as and where required under national legislation (at municipality of project site(s) as well as additional public meetings, focus groups, interviews and/or other consultation techniques as deemed appropriate to ensure that all project affected groups and other stakeholders have the opportunity to learn about the project and its impacts and to have their views considered in finalising the study). Consultations should follow international good practices on stakeholder engagement consistent with or exceeding World Bank and Philippine requirements, with detailed records kept including locations and dates of all consultation events, participants' names and affiliations, a summary of topics discussed, a summary of comments received and ensuing discussion, and how the comments will be addressed by the project. The reports of public scoping and public hearing shall be submitted to DENR-EMB and posted at its website. Community level consultations should be conducted in the relevant local language (in addition to Filipino). Prior to carrying out consultations, the draft versions of the studies must be made available at a public place, accessible to project-affected groups and local NGOs.
2.2	Finalise the full ESIA report, EPRMP (for DENR-EMB), and all related studies and plans based on feedback received during the consultations, as well as from NPC, DENR-EMB, World Bank, and the Panel of Experts. The contractor will organise the debriefing and presentation of the report, including to DENR-EMB, and facilitate its approval by the relevant government agencies.
2.3	Provide inputs or revisions during the compulsory disclosure period. Depending on the nature of the proposed project option and its impact, the World Bank may be required to disclose the ESIA report for 120 days. The contractor should be available at short notice to answer any questions and to provide the required inputs or adjustments.

Output 2.1	**Final EPRMP approved[3] by DENR-EMB for the preferred option, including:** - Updated EMP and EMoP
Output 2.2	**Final ESIA report for the preferred rehabilitation option including:** - Relevant technical discipline-specific appendices and corresponding ESMPs, - Social Assessment Report, and the detailed social plans developed under Output 1.2, as required (e.g. Resettlement Policy Framework, Indigenous Peoples Plan), - Stand-alone Executive Summary in English and Filipino, - Local-language summary materials for public consultation, including for e.g., slide deck, brochures and other visuals, factsheets, etc., - All the studies, documentation and plans collected, - Any other elements identified as necessary during the screening and scoping. Copy of NPC letter of endorsement and of DENR-EMB approval.

2.5. Language of the Specific Contract

English

2.6. Management team member presence required or not for briefing and/or debriefing

Not required

3 LOGISTICS AND TIMING

Please refer to Part B of the Terms of Reference.

4 REQUIREMENTS

Please refer to Part B of the Terms of Reference.

5 REPORTS

Please refer to Part B of the Terms of Reference.

6 MONITORING AND EVALUATION

Definition of indicators:

	INDICATOR	TARGET/ ACHIEVEMENT	JUSTIFICATION & SOURCES OF VERIFICATION

[3] While the process and logistics of submission of necessary applications and coordination to go through the approval process will be managed by NPC, the necessary documentation DENR-EMB approval will be prepared by the consultant.

1.	All positive and adverse impacts associated with construction and operation of the project, including legacy issues and all associated/ancillary works and linked activities if any, have been considered.	Yes/No	*To be completed by the contractor*
2.	A social audit has been conducted in order to identify potential liabilities and legacy issues concerning environmental and social issues particularly concerning land acquisition/relocation, access restrictions, and IP issues including whether FPIC agreements and benefit-sharing arrangements are in place.	Yes/No	…
3.	Site investigations have been carried out to collect primary data and all relevant available secondary data has been reviewed in order to establish a comprehensive environmental and social baseline (including physical, biological, social, cultural and economic environments) for the project area of influence.	Yes/No	…
4.	The potential positive and adverse environmental and social impacts have been screened, identified, and assessed, including direct, indirect, and induced, and environmental and social impacts associated with all project activities, as well as cumulative impacts of the project when taken together with impacts associated with other past, current, and reasonably foreseeable projects and activities within the project area.	Yes/No	…
5.	Measures have been developed to avoid, reduce, mitigate, manage and/or compensate for such impacts, including the institutional arrangements and required capacity building to implement all such measures and monitor their effectiveness.	Yes/No	…
6.	Potential opportunities have been identified, and appropriate measures have been designed, to maximise the complementary economic, financial, environmental and social benefits of the project.	Yes/No	…

7.	Steps have been taken to ensure that all affected people will receive assistance to enable them to improve or retain their pre-project living standards and to be able to participate and share the benefits of the development.	Yes/No	…
8.	The impacts on vulnerable and indigenous communities have been identified, avoided, minimised, mitigated and/or compensated, and mechanisms are designed to ensure their meaningful participation during project planning and implementation, and that they receive culturally appropriate benefits under the project.	Yes/No	…
9.	The project enjoys broad support from indigenous communities through meaningful consultations or free, prior and informed consent, if required.	Yes/No	…
10.	A public consultation process has been conducted that ensures that project-affected people and other stakeholders are informed about the project and its possible impacts, as well as offered the opportunity to share their opinions and feedback so as to input into the environmental and social assessment, planning and design studies and their implementation.	Yes/No	…
11.	All of the above-mentioned mitigation and development interventions have been documented in appropriate forms and formats, as agreed with government stakeholders and in line with World Bank standards.	Yes/No	…

7 PRACTICAL INFORMATION

Please address any request for clarification and other communication to the following address: DELEGATION-PHILIPPINES-CRIS-FWC-OFFERS@eeas.europa.eu

APPENDIX 1 – TABLES AND FIGURES

Table 1. National installed capacity at the end of 2017

Generation Type	Installed Capacity (MW)	Installed Capacity (%)
Coal	8,049	35
Oil	4,153	18
Natural Gas	3,447	15
Hydropower	3,627	16
Geothermal	1,916	8
Solar	885	4
Wind	427	2
Biomass	224	1
Total	**22,728**	**100**

Source: World Bank

Table 2. Mindanao installed capacity at the end of 2017

Generation Type	Installed Capacity (MW)	Installed Capacity (%)
Coal	1370	38
Oil	906	25
Natural Gas	0	0
Hydropower	1,080	30
Geothermal	108	3
Solar	59	2
Wind	0	0
Biomass	36	1
Total	**3,559**	**100**

Source: World Bank

Table 3. APHC capacity and commissioning dates

Plant	Current Installed Capacity	Year Commissioned
Agus I	2x40 MW	1992 & 1994
Agus II	3x60 MW	1979
Agus IV	3x52.7 MW	1985
Agus V	2x27.5 MW	1985
Agus VI	2x34.5 + 3x50 MW	1969, 1971 & 1977
Agus VII	2x27 MW	1983 & 1982
Pulangi IV	3x85 MW	1985 to 1986

Source: World Bank

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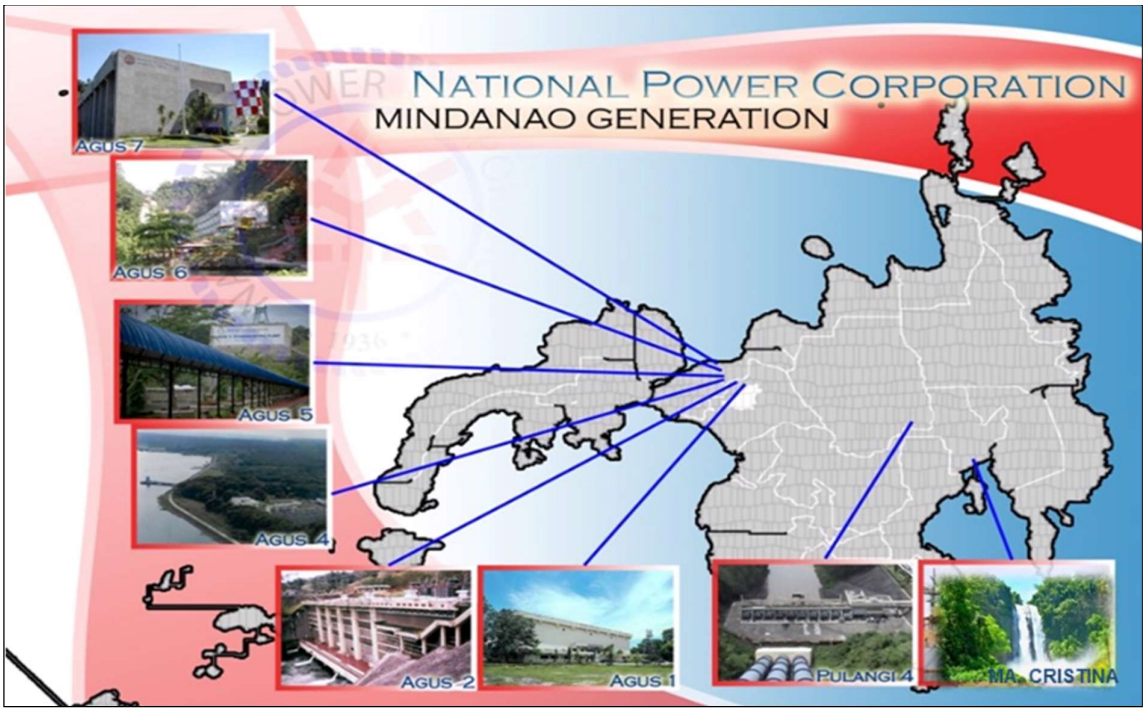
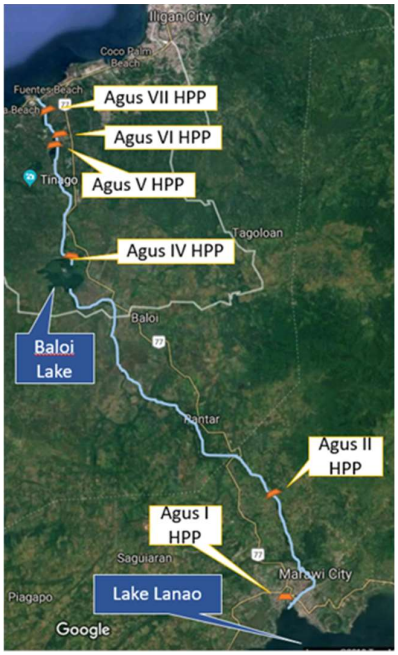
Figure 1. Agus and Pulangi hydropower plants in Mindanao



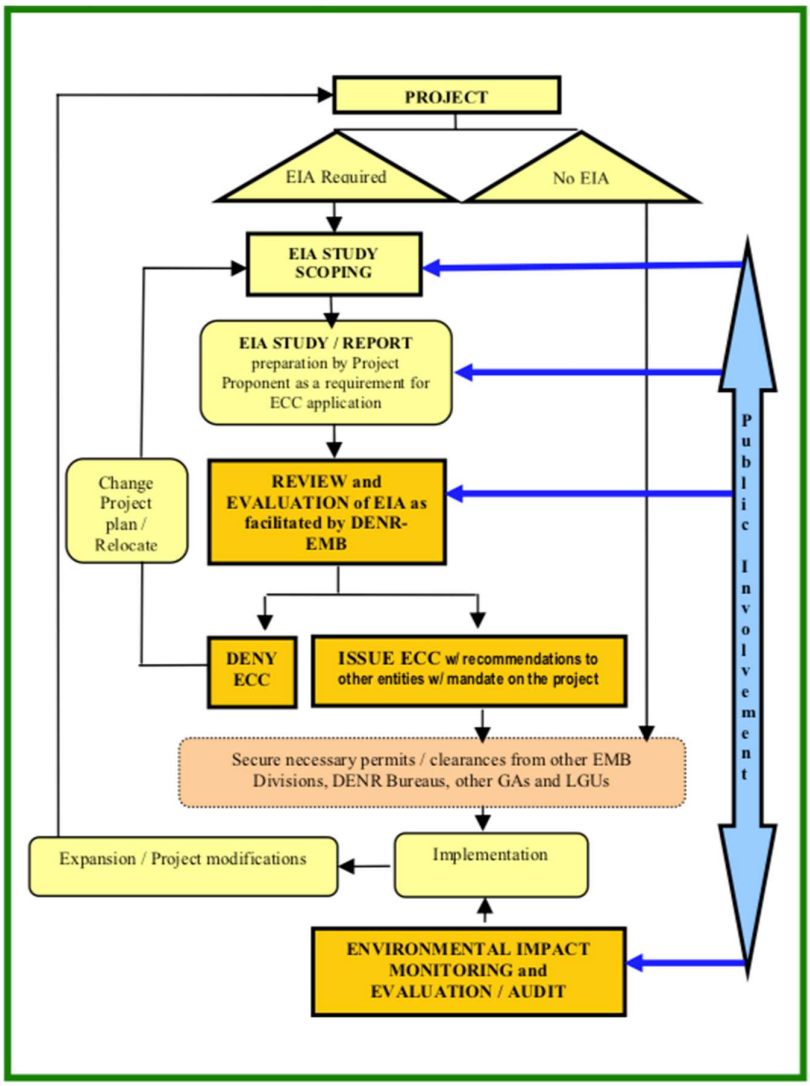
Source: National Power Corporation

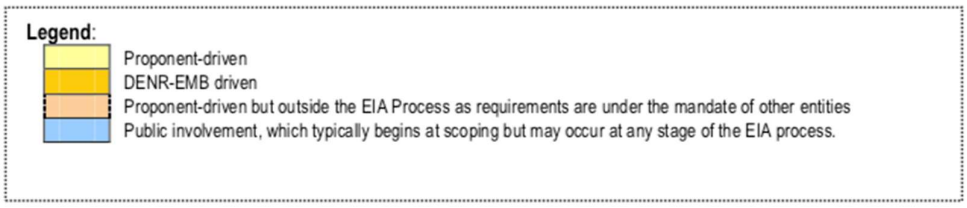
Figure 2. Agus hydropower plants in Mindanao



Source: World Bank

Figure 3. Flowchart of the Philippine EIA process





APPENDIX 2 – WORLD BANK ESF AND APPLICABLE GUIDANCE

- World Bank Environmental and Social Framework (ESF), comprised of:
    - The 10 Environmental and Social Standards (ESS)
    - Vision for Sustainable Development
    - Environmental and Social Policy for Investment Project Financing (IPF)
    - Bank Directive: Environmental and Social Directive for Investment Project Financing
    - Bank Directive on Addressing Risks and Impacts on Disadvantaged or Vulnerable Individuals or Groups
- World Bank Group Environmental, Health, and Safety Guidelines ("EHS Guidelines")
- IFC Good Practice Handbook on Cumulative Impact Assessment and Management: Guidance for the Private Sector in Emerging Markets
- IFC Good Practice Note: Environmental, Health, and Safety Approaches for Hydropower Projects
- IFC Good Practice Handbook on Environmental Flows for Hydropower Projects
- Hegmann, G., C. Cocklin, R. Creasey, S. Dupuis, A. Kennedy, L. Kingsley, W. Ross, H. Spaling and D. Stalker. 1999. Cumulative Effects Assessment Practitioners Guide. Prepared by AXYS Environmental Consulting Ltd. and the CEA Working Group for the Canadian Environmental Assessment Agency, Hull, Quebec.

APPENDIX 3 – PHILIPPINE EIA LEGAL BASIS

- The Philippines Presidential Proclamation (PP) 2146
- The Philippines's 1978 law Establishing an Environmental Impact Statement System Including Other Environmental Management Related Measures and for Other Purposes
- Presidential Decree No. 1586 Establishing an Environmental Impact Statement System Including Other Environmental Management Related Measures and for Other Purposes (1978)
- DENR Administrative Order (DAO) No. 2003-30: Revised Procedures Manual (Implementing Rules and Regulations of Presidential Decree 1586 Establishing the Philippine Environmental Impact Statement (EIS) System, 2007)

APPENDIX 4 – KEY ASPECTS OF THE FULL ESIA REPORT (PHASE 2)

The consultant will be required, but not limited, to produce all studies described in boxes 1 through 9 of this appendix.

Box 1. Baseline studies

PHYSICAL CONTEXT:

Hydrology:	Describe the extent and characteristics of the catchment area of the project in relation to the larger watershed. Map the surface hydrology and the current flow regimes of the Agus-Pulangi system, its tributaries and other water bodies as applicable in the area of influence, showing its context within the full watershed. Include characterisation of groundwater in the region. The baseline should provide information on discharge (mean monthly, maximum, minimum) at the proposed dam sites along with locations upstream and downstream, and capture seasonal variations in flow, based on at minimum one full year's worth of field monitoring results (and more if available). Include estimated flood stream-flows for annual average and highest historic flows at dam sites and at townships and other populated areas along the river. Also include probable maximum flood (PMF) flows, clearly describing assumptions made in the estimation, at the proposed dam sites and the powerhouse sites. The flow parameters (discharge/velocity/water depth) in reduced flow section associated with minimum monthly average flow and downstream release regimes shall be provided.
Soils, sediment movement, sedimentation, and erosion:	Include a characterisation of soil types, locations and qualities. Characterise erosion rates in the project area, noting the corresponding geological conditions, slope steepness, vegetation type, and present land-use conditions. Describe the dynamics of sediment movement in the watershed, along with seasonal variations in the estimated amounts of suspended sediments and bedload presently transported past the dam sites. Also include a baseline for any potential "pollutant" in sediments resulting from construction and operational phases associated with preferred rehabilitation option(s) of the project.
Water quality:	Describe the baseline water quality of the Agus-Pulangi system, including main stem rivers, tributaries, and other water bodies in the project area of influence in terms of parameters relevant to public health and aquatic resources (e.g. biota, biodiversity, and habitat). Include seasonal variations in water quality and relationships to flow and other controlling factors. Water quality parameters of the mainstem rivers shall be measured at least for headworks, reduced flow zone and powerhouse tailrace area.
Geology, geomorphology, and seismology:	Cover, in particular, the presence or absence of sulfides or heavy metals in subsurface and surface rock in the areas where blasting and tunnel drilling will occur (which could result in acid rock drainage or other waste management issues associated with waste rock disposal); and characterise faults and overall seismic activity in the region which could affect or influence design, construction and maintenance aspects of any proposed dam rehabilitation and other project infrastructure. Characteristics of discontinuities and weathering patterns of the rock mass in which critical infrastructure is present or will be rehabilitated shall be provided.

Landslide and other natural hazard propensity:	Describe the natural phenomena that pose potential risk to the project, including, Landside Dambreak Failure Floods (LDFFs), very high river flows which result from sustained rainfall in the watershed upstream of the site, incremental "mass wasting," as well as possible extreme events. Include also a characterization of landslide risks along transmission line corridor, access roads, identification of high-risk spots, etc.
Climate change and vulnerability:	Characterise anticipated climate change effects to the region (based on the full range of estimates as developed from multiple sources) and their expected impacts to river hydrology and flow rates, flood profiles and LDFFs, changes to the probable maximum flood profile, as well as their potential ecological effects. Include discussion of climate change impacts on upstream water supply to the basin; on water demand relative to supply in the area of influence; on soil movement and mass wasting; on dam/power house safety; as well as on forest, pasture, and agricultural land composition and use.
Physical cultural resources/cultural heritage:	Carry out field reconnaissance, review of literature, and interviews/ questionnaires with key stakeholders (including relevant government bodies, academics, NGOs, local religious leaders and elders, etc.) to identify and characterise any sites, structures, or natural features and landscapes in the project area of influence – above ground, underground, or underwater – that are of archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural significance. Indicate whether any identified cultural resources are subject to special treatment under national law. Indicate the likelihood of "chance finds" during project construction, and the presumed typologies of such finds.
BIOLOGICAL CONTEXT:	
Aquatic ecology:	A detailed characterisation of aquatic flora, fauna and natural habitats based on full seasonal field data, secondary information, as well as interviews with local residents. This would include, in particular: migratory and endemic species (including any applicable conservation or protection status, and IUCN Red List status), economically or culturally important species, and others which play important ecological functions as food sources or sustainers of the habitat of identified key species. Characterisation of migratory patterns, including length and season of migrations (in both tributaries and mainstream rivers, as applicable), as well as spawning locations and habits should be included. The study should cover not just the Agus and Pulangi rivers, but also tributaries and other water bodies in the area of influence.

Terrestrial ecology:	A detailed characterisation of terrestrial flora, fauna and natural habitats based on full seasonal field data, secondary information, as well as interviews with local residents. This would include, in particular: migratory and endemic species (including any applicable conservation or protection status, and IUCN Red List status), economically or culturally important species, and others which play important ecological functions as food sources or sustainers of the habitat of identified key species. The multiple bio-climatic zones along the slopes of the river valleys should be characterised, including the interaction of species within the various zones, and areas of importance as corridors for wildlife movement throughout the region. For avifauna, the baseline should in particular make note of any migratory flyways or Important Bird Areas (IBAs), and also characterise species which may be particularly susceptible to impacts from project activities and infrastructure (due to, for example, their propensity for perching, roosting, and/or nesting on power transmission lines, poles, or towers; physical characteristics or behaviours which could increase risk of collision, etc.).
Natural habitats:	Identify the extent to which the overall area of influence of the project overlaps with or abuts national or regional parks, ecological reserves, conservation or protected areas, etc., as well as potential areas currently set aside as 'buffer zones'. For both aquatic and terrestrial habitat, the baseline should include a determination on the presence of critical natural habitat as defined in the Bank's ESF. All areas of critical natural habitat identified should be fully characterised, including their legal conservation status and administration and any relevant land or resource use restrictions. For legally protected areas, the capacity of entities responsible for its management should be assessed. The assessment will also screen for potential habitat fragmentation due to potential project activities. Critical natural habitats are defined by World Bank ESF ESS6 (#23) as: as areas with high bio- diversity importance or value, including: (a) habitat of significant importance to Critically Endangered or Endangered species, as listed in the IUCN Red List of threatened species or equivalent national approaches; (b) habitat of significant importance to endemic or restricted-range species; (c) habitat supporting globally or nationally significant concentrations of migratory or congregatory species; (d) highly threatened or unique ecosystems; and (e) ecological functions or characteristics that are needed to maintain the viability of the biodiversity values described above in (a) to (d).
SOCIOECONOMIC, CULTURAL AND HEALTH CONTEXT	
Upstream and downstream water use and users:	Identify all existing water uses, including both permitted and non-permitted, for the Agus-Pulangi system, its tributaries, and other water bodies in the project area of influence, including downstream, such as for irrigation, domestic consumption, industry (if any), recreation, etc. Identify the user groups for each.
Land use:	Characterise current land uses in the project area and indicate major trends in land use change which are taking place irrespective of the proposed project. This process should include remote sensing through current satellite imagery and ground verification for preparation of thematic forest-cover and land-use maps. Land-use change trends should also be considered to understand the dynamics of land-use and recent forest-cover change trends.

Land tenure:	Characterise types of land tenure (e.g., titles, customary), formal and informal institutions related to land tenure, and modes of land transactions in the project area (a full land and asset registry for any individuals and households that may be displaced, will be prepared separately as part of a Resettlement Action Plan, if land acquisition or displacement will be required).
Demography and ethnicity:	Develop a demographic and ethnic profile of the population in the project area. For communities specifically affected by the project, describe in detail their history, physical spread, social clustering, cultural and traditional characteristics, interactions and relations among various groups.
Livelihood activities:	Characterise economic and subsistence-oriented livelihood activities, both for communities residing within the project area of influence as well as for individuals or industries which depend on resources in the project area of influence. Discuss in particular those activities related to fisheries, forestry or forest products, or other natural resources, as well as agriculture and industry (if any). Discuss gender-related workload sharing and family economy; dependency and use of local and external resources; and production and marketing systems and patterns.
Socioeconomic development status:	Map out the socio-economic development status of the project area, including resource conditions, economic activities, employment sources and trends, infrastructure and service provision (education, transport, extension services etc.), as well as local development needs, priorities, challenges, and planned or ongoing development interventions. Include baseline poverty mapping, along with discussion of causes thereof. Develop a socio-economic baseline for affected communities covering indicators specific to living standard and well-being.
Community health:	Provide an overview of key health issues, focusing on the presence of any disease vectors which may become more prevalent in the area due to the project (for example, waterborne vectors who inhabit slow-moving or standing water; HIV/AIDS or other sexually-transmitted diseases which may become more prevalent due to worker influx, etc.), as well as the coverage and quality of health services available in the project area.
Indigenous and vulnerable peoples:	Identify the presence of vulnerable and indigenous peoples residing in the project area and compile information on their demographics, socio-cultural features, ancestral domains, livelihood and employment patterns, use of natural resources, formal and information institutions, and interactions with other ethnic groups. Discuss social cohesion and leadership institutions. Provide gender-specific information where possible. Any contact or interviews for preparation of baselines or social assessment should be planned and carried out in a culturally appropriate manner, in a language acceptable and used by the communities and in coordination with any other preparation work being carried out with regard to Indigenous Peoples and minorities. Refer to World Bank ESF ESS7 (Indigenous Peoples / Sub-Saharan Africa Historically Underserved Traditional Local Communities), for the criteria to be used in identifying indigenous peoples and determining the scope of applicability of the World Bank policy.
Religion and culture:	Provide relevant information on community festivals and rituals, in particular those involving the river system, or its tributaries, or other key resources to be affected by the project.

Box 2. Impact analysis

Changes to flow rates and patterns, velocities, water depth and water quality of the Agus-Pulangi system and tributaries and to groundwater characteristics in the region	This should also contribute to the analysis of project alternatives, considering factors such as environmental residual flows, inundation areas (if it is likely that the project would affect any of these), cascade operation and flood management protocols.
Loss of river connectivity and impacts to migratory fish and other aquatic biodiversity	
Environmental flow analysis	Determine the required minimum flows to be released from each dam at all times to sustain the valued river functions identified in the baseline assessment, based on the IFC good practice handbook on environmental flows for hydropower projects. Relevant valued river functions to consider span both ecological (including downstream aquatic biodiversity and habitats, fish migration pathways, etc.) as well as socio-economic (to sustain fisheries, irrigation needs, domestic use, or other river-dependent livelihood activities), recreational, religious and cultural functions. The flexibility in varied seasonal environmental flows should also be considered. Any potential effects of the environmental flow requirements on power generation should also be explicitly identified and flagged to the design consultant team.
Forest loss	In terms of area, type of forest and species with details of the loss of listed species. The forest loss shall be calculated for each project component and facilities, especially considering the temporary camp sites for construction yards and labour facilities.
Impact due to quarry site selection, site management, and spoil disposal	Where applicable.
Landslide and soil erosion impacts and slope stability	
Quantification of the degree of degradation or loss of natural habitat and critical natural habitat (both aquatic and terrestrial) from direct construction and operation as well as induced from increased use or demand on forests and associated wildlife (timber and non-timber)	This should include, in particular, a discussion of impacts to any parks or other designated conservation areas (which should also be presented in a specific/separate chapter of the final assessment, along with any corresponding mitigation measures). Assessment of any loss of terrestrial biological connectivity. Destruction of critical natural habitat will be explicitly identified and quantified.

Construction impacts:	Such as impacts from blasting activities (noise and vibration) on both natural and human receptors; borrow materials extraction, spoil use/disposal, erosion, construction camps.
Change of ecosystem services	
Climate change risk and vulnerability	
Impacts related to upstream and downstream changes to sediment movement, sediment deposition, sediment composition, and erosion	
Downstream impacts related to peaking pond flushing	
Impacts of water impoundment on river bed levels and reservoir bank stability	
Impacts of permanent and temporary land acquisition on land use patterns, topography, geology, and slope stability	
Impacts of underground excavation and construction works on ground water recharge dynamics, and subsequent effects on any existing spring water sources for local communities	
Changes in drainage patterns and resulting effects due to construction of project components and access roads	
Impacts to public health via potential water logging and degradation of land and water quality	
Impacts related to disposal of used lubricants and toxic chemicals, solid and liquid waste from camps	
Potential deterioration in air quality and increased noise pollution due to construction and operation activities	
Dam safety risks and issues	Including analysis of the impacts to human life and livelihood, natural and built environment in the event of dam failure; and emergency preparedness and response planning.
Impacts on traffic safety due to increased flow of heavy vehicles carrying construction material, workers etc.	

Both beneficial and adverse impacts related to access roads	Including increased economic connectivity for local communities, as well as various negative impacts associated with construction and ongoing use of the roads, such as, in particular, slope stability and erosion, land acquisition and involuntary displacement of households or economic activities, impacts to surface water sources, noise and air pollution from vehicle use, dust generation, risks and impacts associated with tunnelling (where applicable), changes in land use induced by improved road access and influx, etc.
Gender-specific impacts on household activities, employment at project site, illegal trafficking, etc.	
Induced impacts from project-related influx	Including increased stress on natural resources (especially forests), pollution and waste management issues, strain on local services and infrastructure, safety issues for the local community, etc.
Summary of all other social impacts covered by the assignment	See the related activities under these terms of reference.

Box 3. Cumulative Impact Assessment

River basin planning and management framework:	Compile information on the legal and institutional framework of water resources management in the Philippines, as well as information on the main actors and current activities related to river basin management for the Agus-Pulangi Basin with a particular focus on other planned hydropower or irrigation investments both upstream and downstream.
Identification of stressors:	Conduct a desk study to identify and describe all existing or reasonably foreseeable investments, facilities or activities ("stressors") which have impacts on the operating regime of the APHC (including connectivity, if migratory fish species which depend on such connectivity are present), water demand, or water quality in the Agus and Pulangi rivers and tributaries throughout the watershed (including any significant upstream uses and planned or ongoing investments). This will include a preliminary estimation, based on previous studies and aerial information, of natural and regulated flows as a result of existing or planned hydropower plants and abstraction for other purposes. It will also include a preliminary identification of possible sources of sediment or contaminants that may potentially alter water quality within the project's direct areas of influence.

Preliminary identification of VECs:	Based on thematic data and previous studies, identify the potential receptors which could be significantly adversely (or also positively) affected by the identified stressors – i.e., the Valued Environmental (and social) Components. The prioritised VECs should consist mostly of receptors most vulnerable to hydrological or water quality changes that affect the flow regime, aquatic and riverine ecosystems and economic activities and livelihoods depending on water from the Agus and Pulangi rivers and tributaries (e.g. fisheries, irrigated agriculture). Priority VECs might also include key receptors of the major expected on-land impacts associated with the cumulative effects of improved access to the project area, from both the access roads of the proposed project as well as other hydropower project access roads and road/highway projects that may be planned for the area. The nature of the impacts will be described and their scale assessed in a qualitative manner. The VECs will also be finalised through consultations with local project-affected people.
Site visits and consultations to prioritise VECs:	Guided by the results of the desk study, visit the major existing and planned hydropower plant sites and other essential interventions in the basin that may affect water flow and quality, or other environmental aspects important to the VECs. Investigate impacts such as flow regulations, increased erosion or possible contaminant sources, and characterise impacts in terms of their effects on the VECs. During site visits, carry out consultations with local communities, government actors, developers, and other relevant stakeholders including NGOs, irrigation associations, academics, etc. Conduct standard water quality measurements (pH, conductivity, DO, suspended sediments) along the river during site visits, and visit and evaluate existing river flow gauging and water quality monitoring stations. Based on the findings of the site visits, update and qualify the desk study results and conclusions.
Assessment of cumulative impacts on VECs:	In light of prioritised VECs, identify and assess potential aggregate environmental and social impacts and risks from the combined stressors in terms of the potential change in condition of the VEC (i.e., viability, sustainability). Additionally, identify any potential additive, countervailing, masking, and/or synergistic effects to describe if and how project-associated impacts and risks interact with one another.
Determining significance of predicted cumulative impacts:	Define appropriate indicators and thresholds for acceptable VEC conditions. Describe impact and risk magnitude and significance in the context of past, present, and future actions to determine whether the above assessed impacts affect the sustainability and/or viability of the particular resource or VEC. Identify consequences and trade-offs of implementing versus not implementing the project.
Decision support and identification of potential mitigation measures:	Propose mitigation and management strategies to address significant cumulative impacts on VECs. Suggest informed adaptive management strategies to manage uncertainties. Identify and engage together with NPC, wherever appropriate, other parties needed for effective mitigation and management plans (for both construction and operational phases), to explore opportunities for collaboration on managing cumulative effects and to propose workable coordination mechanisms. Propose monitoring programs to determine effectiveness of proposed management measures. Link results and recommendations of CIA with ESMPs.

Box 4. Environmental and Social Management Plans, as needed

A specific ESMP for all contractor/subcontractors obligations associated with access road construction

Land clearing, wildlife relocation and peaking pond first-filling management

Ecological/environmental flow specification and management

Aquatic ecology management, including fish and fisheries restoration measures (potentially to include a fish ladder, fish hatchery, protection and/or restoration of spawning areas, etc.)

Measures to minimise and mitigate natural habitat degradation and loss, and development and implementation of conservation offsets as per the World Bank's ESF ESS1

Reforestation/afforestation programmes (including management of tree nurseries and plantations, if applicable, taking into consideration the requirements of Philippine national regulations)

Terrestrial ecology management

Contractors/subcontractors management plan

Erosion prevention and sediment management programme, including upper watershed management and restoration activities as well as sediment flushing management measures

Construction camps management

Quarry and course aggregates management

Construction waste and trash management

Pollution abatement

Muck/spoil management plan with spoil destination

Topsoil saving management

Watershed management

Buffer zone management

Cultural heritage management

Hazardous materials and explosives management

Occupational Health and Safety (OHS) management plan (see Box 5).

Environmental, health and safety training

Emergency preparedness and response

Dam safety plan (to be developed in detail by the Engineering Design Consultant; the ESMP should focus on summarising the key elements of relevance to local communities and stakeholders)

Traffic safety plans to minimize hazards to highway vehicular flow and to local inhabitants

Mitigation measures for long-term and cumulative social and environmental impacts

A summary of the specific social plans to be produced under this assignment (see related activities under these terms of reference).

Box 5. Occupational Health and Safety (OHS) management plan

Management commitment, OHS roles and responsibilities

OHS support unit and staff

Training requirements

Permit required activities (entering in confined spaces, excavations, working at heights)

Disciplinary policy

Monitoring and oversight

Treatment of non-compliance and deviations

Emergency preparedness and response

Accident investigation

Health surveillance program

Safety procedures and specifications for:

- Hazard identification/job hazard analysis
- Working at heights and fall prevention
- Working in confided spaces and tunneling
- Excavations
- Cranes, derricks and rigging
- Heavy equipment
- Ladders and scaffolding
- Hazardous energies control, lock out tag out
- Electrical hazards
- Concrete and masonry
- Silica and asbestos exposure

- Welding and cutting
- Respiratory protection
- Hearing protection
- Hand and power tools
- Steel erection
- Fire safety
- Selection and use of PPE
- Hazard communication
- Material handling and storage
- Ergonomic
- Working over and around water surface
- Diving and underwater work
- Transport of heavy equipment
- Traffic safety
- Blasting and use of explosives
- Access roads design and safety (including landslide management)

Box 6. Monitoring and implementation of ESMP

Monitoring plan:	Details of the key parameters to be monitored, monitoring locations and frequencies, monitoring methodologies, required budgets, and responsible entities to carry out monitoring for each of the above-mentioned sub-plans as well as to follow-up on monitoring outcomes, including to identify root causes and correct non-compliances (including through remedial measures if required), as well as to enable continuous evaluation of overall performance and adjustments to management measures and arrangements as needed to enhance overall project sustainability. Independent auditing arrangements, as well as incentive schemes and/or penalties to enhance compliance, should also be proposed.
Detailed organogram:	Showing the project EHS organisational structure to be established and involved in ESMP implementation, monitoring, reporting, independent supervision and auditing, their relationship to overall project construction and operational management teams and contractors, and points of interface with independent oversight entities. Organogram should indicate entry points for local citizen engagement and NGO participation in monitoring and reporting.

Outline of minimum qualifications required for each institution or actor involved in ESMP implementation:	In order to carry out their responsibilities, including with respect to project management, implementation of mitigation and management measures, execution of monitoring programs, reporting and evaluation, public engagement and grievance redress, etc.
Training and capacity-building needs to ensure satisfactory implementation of the ESMP:	The proposed measures for each actor involved in implementation should also be specified, based on an assessment of the organisational capacity of each to fulfil their proposed functions. The core content of training programmes for contractors and other key actors involved in implementing the ESMP should be outlined, as well as the responsibilities, timelines, and budget for their implementation.

Box 7. Social assessment report

SOCIO-ECONOMIC BASELINE:	
Develop a demographic and ethnic profile of the population in the project area of influence:	Bringing out its key social, ethnic, cultural, political and economic characteristics and zooming in specifically on the people and communities in the social impact zones, covering their history, physical spread, social clustering, cultural and traditional characteristics, interactions and relations among various groups. The socio-economic profile should include a differentiated analysis related to gender, disadvantaged groups, and "deep poverty" dimensions.
Map out the socioeconomic development status of the project area:	Including resources conditions, economic development status, employment sources and patterns, livelihood patterns, infrastructure and service provision (health, education, employment, extension services etc.), as well as local development needs, priorities and challenges, and development interventions.
Develop a socioeconomic baseline for the affected communities and population: Identify current labour practices in the project area.	Covering basic indicators particularly related to their living standard and well-being.
Analyse land tenure systems:	Titles vs. customary, access to natural resources and their significance to local communities and livelihoods, formal and informal institutions and their functioning, development needs, challenges and status.
Identify presence of vulnerable and indigenous peoples' communities residing in the project area:	If they are identified: collection of information on their demographics, socio-cultural features, livelihood and employment patterns, use of natural resources, formal and informal institutions and interactions with other ethnic groups.

STAKEHOLDER ANALYSIS:

Map key stakeholders at national and local levels:	Including project-affected people, affected communities, local government bodies, NPC, NGOs/CSOs, media and key individuals, etc., and following up from the preliminary stakeholder analysis conducted during the screening and scoping.
Analyse the conflict situation and the social risks associated with it:	The stakeholder analysis will incorporate dimensions related to gender, disadvantaged groups, "deep poverty," and conflict.
Consult stakeholders:	To bring out their views, concerns and expectations associated with the project.
Analyse stakeholder consultation feedback:	Including their roles and possible interventions in project preparation and design.
Propose recommendations for consideration in the project's design:	In order to inform the design of the project, particularly in developing the project consultation and communication strategy.

Box 8. Social plans, as needed

VULNERABLE AND INDIGENOUS PEOPLES PLAN

It is estimated that roughly 10% to 20% of the Philippine population belongs to indigenous communities. Project 2 areas, the Pulangi IV areas in particular, are inhabited by several indigenous communities that could be affected, both positively and adversely. On the Agus HPP side, internally displaced persons (IDP) abound. The ESIA should be able to do a comprehensive assessment of these groups and a Vulnerable and IP Plan prepared. The plan will aim to identify vulnerable groups and Indigenous Peoples groups within the project area and identify negative impacts and enhance positive impacts. If indigenous peoples are adversely impacted by the project, free prior and informed consent (FPIC) under ESS7 and IPRA must be obtained from indigenous communities. Planning activities in this regard include, but are not limited to, the following, and will be detailed in the Scoping Report/Checklist:

Identify vulnerable and indigenous communities in the project area	
Gather baseline information:	On the demographic, social, cultural and political characteristics of the vulnerable and indigenous peoples' communities in the project area.
Review of the land tenure system:	Use of, access, and attachment (physical, spiritual and cultural) to natural resources by different indigenous communities, including their customary rights and occupation, both individual and collective.

Review of Philippine legal and institutional framework:	Regarding vulnerable and indigenous communities, including relevant laws and policies of the Philippines (e.g. IPRA), any ratified international conventions (ILO 169 and UNDRIP), and the World Bank's ESF ESS7 policy on indigenous peoples.
Identification and mapping of indigenous organisations	Including public institutions and civil society organisations.
Assessment of project impacts:	Both positive and adverse, on vulnerable and indigenous communities, particularly impacts specific to ethnic characteristics (e.g. impacts on livelihood activities if unique from the general use of resources, both individual and common; impacts on use of cultural resources such as sacred religious or cultural historical sites) as well as security risks and impacts related to in and out migration of people in connection with the project. Critical to this assessment is an analysis of the relative vulnerability of, and risks to, the affected indigenous peoples' communities given their distinct circumstances and close ties to land and natural resources, as well as their lack of access to opportunities relative to other social groups in the communities, regions, or national societies in which they live.
Consult indigenous communities:	Following a meaningful consultation, and if needed a free, prior, and informed consent, process at each stage of the project, particularly during project preparation, to fully identify their views, concerns, requests and recommendations for the project and, if needed, confirm their consent to the implementation of the project.
Provide project information in a fashion, method and language that are appropriate to the indigenous communities	
Propose, based on meaningful consultations, and if needed free, prior, and informed consent, with the affected indigenous peoples' communities, necessary measures	To avoid, minimise, mitigate, or compensate for such effects, and to ensure that the indigenous peoples receive culturally appropriate benefits under the project. All steps will be documented.

DOWNSTREAM IMPACTS MANAGEMENT PLAN

The project will have impacts on downstream social, economic and cultural activities with the damming of the river and altered water flow patterns. Impacted activities could include fishery activities and possible other uses of the river, such as domestic water use and irrigation as well as local/national tourism activities. The contractor shall carry out the following activities to plan for mitigating downstream impacts and enhancing benefits for downstream communities, in a closely coordinated/ integrated fashion with the environmental assessment and planning process:

Identification and assessment of possible impacts downstream of dams

Identification and inventory of communities that are likely to be affected

Detailed analysis of the type and levels of impacts upon different populations

Development of a socio-economic profile of the potentially affected communities

Development of necessary mitigation strategy and intervention measures based on the above impact analysis

CULTURAL HERITAGE PLAN

Determine the applicability of the World Bank ESF ESS 8: "Cultural Heritage".

Develop a Cultural Heritage Management Plan, if needed.

GENDER ACTION PLAN

Women are important stakeholders in hydropower development, falling among both the affected and the beneficiaries. It is important to understand the gender dimensions of the project and the differential impacts on women so as to maximise project benefits and minimise dis-benefits. The gender assessment and action plan will cover gender, sexual orientation and gender identity, and gender-based violence. It include, but not limited to, the following:

Review of the legal and policy framework in the Philippines relevant to gender

Review of formal and informal institutional structures and processes that affect gender outcomes in the project and under the project setup

Review of setup, capacity and constraints within relevant institutions to address gender concerns and considerations

Analysis of local culture, particularly among different indigenous groups, regarding gender and women, focusing particularly on the informal institutions, cultural norms, behaviour, and customs

Review of traditional roles and current status of women in the social, economic, cultural, political and institutional contexts of the communities in the project areas

Analysis of potential project impacts, both positive and negative, on women

Analysis of barriers, challenges, constraints to women's participation, including an assessment of women's capacity to participate

Identification of potential entry points and interventions to enhance gender sensitivity, mitigate adverse impacts, promote women participation, maximise project benefits for women

Advice to the project planning and implementation teams on approaching and addressing gender issues under the project

Existence of support facilities including government offices and NGOs where survivors of gender-based violence can seek help

Recommendations for approaches and interventions to promote project benefits to women and their participation in the project

BENEFIT-SHARING PLAN

Benefit-sharing is an increasingly used mechanism in hydropower investment operations to build local support and promote local area development. This mechanism has been used in the Philippines as well as elsewhere around the world. The contractor will work with NPC and its engineering consultant to carry out the following in this regard:

Review and summarise Philippine laws, policies, and international conventions endorsed by the Philippines relevant to benefit-sharing, particularly those on use of natural resources and indigenous communities.

Review of benefit-sharing experiences in hydropower sector in the Philippines.

Carry out consultations with local stakeholders, in particular with local indigenous communities, over their expectations concerning the project.

Review any benefit-sharing proposals that may have been put forward as part of project feasibility studies.

Define “benefit-sharing,” design, and propose a benefit-sharing scheme for the project.

Include differential benefit analysis for those whose livelihoods and land values will be disproportionately enhanced by road provisioning/improvements.

COMMUNITY HEALTH AND SAFETY PLAN

Determine the applicability of the World Bank’s ESF ESS 4 "Community Health and Safety" and pay particular attention to the provisions under the safety of dams. Aspects to consider include:

Infrastructure and equipment design and safety

Safety of services

Ecosystem services

Community exposure to health issues

Management and safety of hazardous materials

Emergency preparedness and response

Security personnel

Dam safety assessment

LABOUR AND LABOUR INFLUX PLAN

Determine the applicability of the World Bank’s ESF ES 2: "Labour and Working Conditions". Aspects to consider include:

Assess risks associated with labour, including child and forced labour.

Determine possible labour influx issues during construction.

Identify if a separate grievance redress mechanism for workers is in place and determine its effectiveness in accepting and addressing concerns.

Assess risks related to occupational health and safety.

STAKEHOLDER ENGAGEMENT PLAN

Drawing from the stakeholder consultation strategy developed during the screening and scoping, develop a full Stakeholder Engagement Plan based on the World Bank's ESF ESS 10: "Stakeholder Engagement and Information". The following should be included:

Describe stakeholders and their interests in the project and outline the specific activities, logistics and schedule for the consultation and inter-agency coordination processes to take place throughout the environmental and social assessment and planning stage, ensuring that consultations are coordinated and executed together with different entities and at different levels (government, municipality, NGOs, local communities etc.) to capture a range of participants, and also to ensure the stakeholder consultation is continuous throughout the project.

Identify possible avenues of public interaction, in addition to interviews and public meetings, especially through proactive use of social media and newer communication technology.

Identify points of entry for engaging local people as active participants (rather than simply respondents) in consultations.

Map out a strategy and required actions, including implementation arrangements, responsibilities and budget, for ongoing engagement, consultations, and grievance/dispute resolution activities throughout the life of the project.

COMMUNICATION STRATEGY AND ACTION PLAN

Given the remote location of the project, the profile of hydropower development, and the history of hydropower development in the Agus and Pulangi river valleys, it is important to develop a communication strategy for continuous communication between the project implementation authorities and all other stakeholders throughout the life of the project. The objectives are to: help strengthen public understanding and support for the project and create an enabling environment for its implementation; enable public communication and continuous flow of information on project activities, impacts, and benefits; manage relationships with key external stakeholder constituencies; and facilitate dispute resolution and public monitoring of project implementation. The communication strategy must suit existing social, economic, and cultural conditions, as well as the complex and sensitive issues related to large hydropower projects. This assignment will include a detailed review of secondary information, but will primarily depend upon field visits and direct consultations/ interactions with stakeholders at the local and national levels. The following will be carried out:

Desk review of past history and experiences in hydropower development in the Philippines and the Agus and Pulangi river valleys, particularly its social, environment and political aspects

Identification of key stakeholders (individuals, groups, and institutions) and their specific interests, concerns and expectations, roles and relationships vis-a-vis the project, with particular focus on the benefits of hydropower projects and management of adverse impacts

Assessment of communication needs to map stakeholders' perception and attitudes concerning the project, including modes and media of communications to be adopted during project implementation

Assessment of existing communication and engagement initiatives, and capacities of the NPC to conduct public communications and to engage stakeholders

Identification of gaps in NPC's institutional set-up (in terms of staffing, procedures, budgets, etc.)

Media-mapping at the national and local levels, including a detailed mapping exercise of key relevant NGOs, civil society organisations and individuals

Identification of opportunities and platforms for effective dissemination of key messages over the course of project implementation

Preparation of a draft communication and engagement strategy for the overall project, taking into consideration current practices and experience of NPC and the Philippine government

INSTITUTIONAL ASSESSMENT AND STRENGTHENING PLAN

The contractor will carry out an assessment of the current institutional capacity in place in view of implementing the environmental and social interventions, including for handling gender-based violence, IP and community engagement, management measures and programmes related to the project. This assessment should cover all key institutions involved, including NPC, and local administrations. The contractor will propose a set of interventions, including institutions, staffing, and budget requirements, to build up the capacity of these institutions to implement the designed programmes.

GRIEVANCE REDRESS MECHANISM

The contractor will propose a grievance redress mechanism that will respond in a timely manner to concerns and grievances of project-affected parties related to the environment and social performance of the project. This mechanism can also take grievances from displaced persons or indigenous peoples but is different from the grievance redress mechanism for workers.

Box 9. Resettlement Action Plan/Framework (RAP)

Resettlement planning will identify the extent to which any land acquisition and resettlement is required, review relevant legal and policy requirements of the Philippines and the World Bank, and develop a project entitlement policy and mitigation measures to address these impacts in a locally-appropriate manner. Leading to the preparation of the RAP, the activity will generate a database of physical and livelihood impacts and affected individuals and households. Depending on whether any access roads will need to be constructed, and any involuntary resettlement is required as a result, a resettlement action plan process may or may not need to be completed before construction of the rest of the project components can commence. If either or both of these activities (access road construction; involuntary resettlement) are confirmed, then the ESIA, ESMP and RAP (or RPF if a RAP is not required) components specific for access roads will need to be completed first. All access road related assessments and action plans will be subsequently merged into the final consolidated ESIA and RAP report(s). Planning activities include, but not limited to, the following:

Inventory survey of physical impacts	This survey will cover the project's impact zones (e.g. zones in which use of or access to land, assets, and/or sources of livelihood or subsistence, including natural resources, are to be restricted as a result of land acquisition for the project) and be conducted according to legal procedures under relevant Philippine laws. This survey will lock in the physical quantity of impacts and lay down the basis for developing the entitlement policy and compensation package. It should be kept in mind that not all impacts can necessarily be quantified and enumerated upfront on a household basis.

	More suitable methods of assessment and documentation will be evaluated and employed in such situations.
Census survey of affected populations	The survey will cover all affected populations, recorded by households or communal groups, and record types of potential impacts. It will establish the cut-off date for eligibility for resettlement entitlement.
Review of relevant legal policies	This review will cover relevant policies of the Philippines and the World Bank, identify any gaps, and propose measures to fill these gaps under the project.
Development of a project resettlement policy	On the basis of the above review, a project resettlement policy will be produced, including a resettlement entitlement matrix for the project. This will form the policy basis and chapter of the RAP, and will also be elaborated into a free-standing project Resettlement Policy Framework (RPF) for any future unanticipated resettlement impacts.
Development of resettlement strategy and measures	The project is expected to have limited impacts in terms of physical relocation. Nonetheless, a relocation strategy and action plan should be developed, including identification and development of relocation sites, to be planned in consultation with the communities and relocating households.
Development of livelihood restoration and development strategy and measures	An in-depth impact analysis should be conducted for effects on livelihood patterns in the project's impact zones. Such an analysis will assess the needs for livelihood restoration and provide the basis for designing appropriate interventions. In designing the livelihood development strategy and plan, the contractor should consider support for long-term sustainable development of affected areas as well as support for development of the project areas beyond the adversely affected households and communities.
Development of implementation arrangements	
Development of grievance redress and monitoring mechanisms	The grievance redress mechanism should be a project mechanism, open to all issues related to the project, including resettlement issues. The mechanism should build in elements of neutrality to ensure fair, transparent and independent deliberations.
Development of a Process Framework for restrictions of access	If needed, in case the project environmental mitigation measures result in restrictive impacts on access to natural resources resulting in livelihood impacts of the associated population.

APPENDIX 5 -ASSUMPTIONS & RISKS

Assumptions underlying the project

- Continuous government involvement and interest in the rehabilitation of APHC.
- The preferred option that is the subject of Project 2 has been decided by NPC and by the Government.
- All other strands of work for the project preparation are on track according to the timeline set by the Government and by the World Bank, including the Feasibility Study to be launched and managed by NPC.
- The rehabilitation may require the highest level of scrutiny and approval of the DENR-EMB concerning the ESIA reports.

Risks

- Delays in the results of the FS being made available to the contractor's team.
- Lack of coordination between the various contractors/teams working on the project preparation.
- Intermittent access to project areas due to security issues, climatic conditions or the COVID-19 crisis.
- Public concern over the rehabilitation, if not well managed, may affect the conduct of the ESIA.

TERMS OF REFERENCE – PART B

BACKGROUND INFORMATION

1. Benefitting Zone

Philippines

2. Contracting authority

The European Union, represented by the European Commission, B-1049 Brussels, Belgium.

3. Contract language

English

LOCATION AND DURATION

4. Location

- **Senior Hydrology/water resources specialist:**
    - Normal place of posting of the specific assignment: Manila
    - Mission(s) outside the normal place of posting and duration(s): 1 local mission to Mindanao (local flight), estimated duration 15 overnights
- **Environmental Specialist:**
    - Normal place of posting of the specific assignment: Manila
    - Mission(s) outside the normal place of posting and duration(s): 6 local missions to Mindanao (local flight), estimated duration 5 overnights each
- **Senior Social Development Specialist 1 (Team Leader):**
    - Normal place of posting of the specific assignment: Manila
    - Mission(s) outside the normal place of posting and duration(s): 1 local mission to Mindanao (local flight), estimated duration 28 overnights
- **Social and Gender Specialist:**
    - Normal place of posting of the specific assignment: Manila
    - Mission(s) outside the normal place of posting and duration(s): 6 local missions to Mindanao (local flight), estimated duration 5 overnights each
- **Senior Biodiversity, Natural Habitat specialist:**
    - Normal place of posting of the specific assignment: Manila
    - Mission(s) outside the normal place of posting and duration(s): 4 local missions to Mindanao (local flight), estimated duration 5 overnights each

- **Senior Social Development Specialist 2:**
    - Normal place of posting of the specific assignment: Manila
    - Mission(s) outside the normal place of posting and duration(s): 6 local missions to Mindanao (local flight), estimated duration 5 overnights each
- **Senior Environmental Specialist:**
    - Normal place of posting of the specific assignment: Manila
    - Mission(s) outside the normal place of posting and duration(s): 1 local mission to Mindanao (local flight), estimated duration 28 overnights

5. Start date and period of implementation

The indicative start date is 21/06/2022 and the period of implementation of the contract will be 175 days from this date (indicative end date: 13/12/2022).

REQUIREMENTS

6. Expertise

For this assignment, one individual expert must be proposed for each position.

The expertise required for the implementation of the specific contract is detailed below.

- **Senior Hydrology/water resources specialist:**
    - General description of the position:
    - Expert category: Cat. I (>12 years of experience)
    - Qualifications and skills required: Master's degree in a relevant discipline (e.g. hydrogeological engineer), or in its absence, at least 5 years of experience in addition to the minimum general professional experience.
    - General professional experience: At least 12 years of experience conducting technical field surveys on hydrology, soil sediments, water quality, etc.
    - Specific professional experience: Relevant experience in sediment management and erosion control programs, river basin modelling, water resources management, flood forecasting, reservoir operation studies, reservoir management for hydropower operations.
    - Language skills: Excellent verbal communication and drafting skills in English are required.
    - Number of working days: **20** days
- **Environmental Specialist:**
    - General description of the position:

- Expert category: Cat. II (>6 years of experience)
- Qualifications and skills required: Master's degree in a relevant discipline (e.g. environmental sciences or engineering, geosciences, social sciences) or in its absence, at least 3 years of experience in addition to the minimum general professional experience.
- General professional experience: At least 6 years of experience in conducting environmental impact assessments, including experience in hydropower projects and including construction and operation of access roads, tunnels, large dams, large construction camps, quarry sites, spoil disposal sites, etc.
- Specific professional experience: Knowledge and experience of World Bank safeguards is required. Experience integrating social and environmental aspects with project infrastructure aspects. Experience with Philippine legal requirements and experience with other multinational requirements is required.
- Language skills: Excellent verbal communication and drafting skills in English are required.
- Number of working days: **48** days

- **Senior Social Development Specialist 1 (Team Leader):**
  - General description of the position:
  - Expert category: Cat. I (>12 years of experience)
  - Qualifications and skills required: Master's degree in a relevant discipline (e.g. social sciences/development studies, anthropology, sociology, economics, human geography) or in its absence, at least 5 years of experience in addition to the minimum general professional experience.
  - General professional experience: At least 12 years of experience working on social assessment and development issues for hydro and other large infrastructure projects.
  - Specific professional experience: Experience applying World Bank safeguards policies and Philippine policies on indigenous peoples and community engagement. Excellent knowledge of, or work experience on Mindanao, including indigenous issues, is an asset. Experience working in fragility, conflict and violence situations is an asset.
  - Language skills: Excellent verbal communication and drafting skills in English are required.
  - Number of working days: **40** days
- **Social and Gender Specialist:**
  - General description of the position:
  - Expert category: Cat. II (>6 years of experience)
  - Qualifications and skills required: At least a Bachelor’s degree in a relevant discipline (e.g. social sciences/development studies, anthropology, sociology, economics, human

geography) or in its absence, at least 3 years of experience in addition to the minimum general professional experience.

- General professional experience: At least 6 years of experience working on social development issues and stakeholder engagement for hydro or other large infrastructure projects.

- Specific professional experience: Excellent knowledge of, or work experience on Mindanao indigenous issues is an asset. Experience working in fragility, conflict and violence situations is an asset. Possessing knowledge of World Bank safeguards and Philippine policies on gender and work experience carrying out similar assignments in internationally financed operations. Work experience on gender equality and social inclusion, including disability issues in project contexts, especially in Mindanao, is an advantage.

- Language skills: Relevant linguistic skills in relation to the communities in the project-affected area.

- Number of working days: **70** days

- **Senior Biodiversity, Natural Habitat specialist:**

  - General description of the position:

  - Expert category: Cat. I (>12 years of experience)

  - Qualifications and skills required: Master's degree in a relevant discipline (e.g. biology, ecology), or in its absence, at least two years of experience in addition to the minimum general professional experience.

  - General professional experience: At least 12 years of international experience in biodiversity and aquatic ecology impact assessment and management in Philippine contexts. Ability to work as part of a multi-disciplinary team.

  - Specific professional experience: Excellent knowledge of, or work experience on Philippine freshwater fish species. Fieldwork experience, and experience developing and/or implementing fisheries and aquatic biodiversity mitigation programmes related to hydropower projects—for example, fish hatcheries, fish ladders, etc.

  - Language skills: Relevant linguistic skills in relation to the communities in the project-affected area are an asset.

  - Number of working days: **25** days

- **Senior Social Development Specialist 2:**

  - General description of the position:

  - Expert category: Cat. I (>12 years of experience)

  - Qualifications and skills required: Master's degree in a relevant discipline (e.g. social sciences/development studies, anthropology, sociology, economics, human geography)

or in its absence, at least 5 years of experience in addition to the minimum general professional experience.

- General professional experience: At least 12 years of experience working on social development issues and stakeholder engagement for hydro and other large infrastructure projects.
- Specific professional experience: Experience applying World Bank safeguards policies and Philippine policies on indigenous peoples and involuntary resettlement. Excellent knowledge of, or work experience in Mindanao, including issues affecting indigenous peoples and other ethnic groups, is an asset. Experience working in fragility, conflict and violence situations is an asset.
- Language skills: Relevant linguistic skills in relation to the communities in the project-affected area are an asset.
- Number of working days: **60** days

- **Senior Environmental Specialist:**
  - General description of the position:
  - Expert category: Cat. I (>12 years of experience)
  - Qualifications and skills required: Master's degree in a relevant discipline (e.g. environmental sciences or engineering, geosciences, social sciences) or in its absence, at least 5 years of experience in addition to the minimum general professional experience.
  - General professional experience: At least 12 years of experience in conducting environmental impact assessments, including experience in hydropower projects.
  - Specific professional experience: Knowledge and experience of World Bank safeguards is required. Experience integrating social and environmental aspects with project infrastructure aspects. Experience with Philippine legal requirements and experience with other multinational requirements is an asset.
  - Language skills: Excellent verbal communication and drafting skills in English are required.
  - Number of working days: **40** days

7. Incidental expenditure

The provision for incidental expenditure covers ancillary and exceptional eligible expenditure incurred under this contract. It cannot be used for costs that should be covered by the contractor as part of its fee rates, as defined above. Its use covers:

1 - Other limitatively identified reimbursable cost - Translation/interpretation costs

Translation/interpretation costs

2 - Other limitatively identified reimbursable cost - Workshops/trainings/seminars

Meetings or workshop-type event (if needed)

3 - Per diem - Per diem as per foreseen missions to Mindanao

Per diems during missions outside normal place of posting

4 - Travel cost - International travel

Mobilisation and de-mobilisation travel costs Home Base - Manila

5 - Travel cost - Local travel (25 flights to Mindanao)

Local air travel within the Philippines

6 - Other limitatively identified reimbursable cost - Vehicle rent

Vehicle rent for missions to Mindanao

If applicable, see part A of the Terms of Reference for more details on the use of the incidental expenditure.

8. Lump sums

No lump sums provided for in this contract.

9. Expenditure verification

An expenditure verification report is required for final payment only.

The provision for expenditure verification covers the fees of the auditor charged with verifying the expenditure of this contract in order for the contracting authority to check that the invoices submitted are due.

Tenderers are required to indicate, in their "Organisation and Methodology", the name and address of the proposed auditor or audit firm that will be in charge of producing the expenditure verification report(s).

The provision for expenditure verification for this contract is EUR 4500. This amount must be included unchanged in the budget breakdown.

10. Other details

No other details provided for in this contract.

REPORTS AND DELIVERABLES

11. Reports and deliverables requirements

Title	Content	Language	Submission timing or deadline
Draft final report	Draft final report, comprising: - Short overall progress report, presenting the results of the work (including as	English	Within 18 Week(s) After the project start

Title	Content	Language	Submission timing or deadline
	measured by the specific performance indicators defined in section 8.1 of the terms of reference, where applicable), and any issues; - Draft full ESIA report and ESMP for the preferred rehabilitation option, as described under Output 1.1 of the terms of reference, resulting from Activity 1.1; - EPRMP for the preferred rehabilitation option, as described under Output 1.2 of the terms of reference, resulting from Activity 1.1 - Social Assessment Report and the detailed social plans, as described under Output 1.3 of the terms of reference, resulting from Activity 1.2.		
Final Environmental Performance Report and Management Plan (EPRMP)	Final Environmental Performance Report and Management Plan (EPRMP) approved by DENR-EMB for the preferred rehabilitation option, as described under Output 2 of the terms of reference, resulting from Activity 2.	English	Within 20 Week(s) After the project start
Final report	Final report, incorporating any comments received on the draft report, comprising: - Short overall progress	English	Within 24 Week(s) After the project end

Title	Content	Language	Submission timing or deadline
	report, presenting the results of the work (including as measured by the specific performance indicators defined in section 8.1 of the terms of reference, where applicable), and any issues; - Final, ESIA report and ESMP for the preferred rehabilitation option, as described under Output 2 of the terms of reference, resulting from Activity 2. - The final report must be provided along with the corresponding invoice.		