



# Appraisal Environmental and Social Review Summary

## Appraisal Stage

### **(ESRS Appraisal Stage)**

Date Prepared/Updated: 04/29/2019 | Report No: ESRSA00150



**BASIC INFORMATION**

**A. Basic Project Data**

Country	Region	Project ID	Parent Project ID (if any)
Lao People's Democratic Republic	EAST ASIA AND PACIFIC	P169538	
Project Name	Lao PDR Clean Cook Stove Initiative		
Practice Area (Lead)	Financing Instrument	Estimated Appraisal Date	Estimated Board Date
Energy & Extractives	Investment Project Financing	5/6/2019	6/17/2019
Borrower(s)	Implementing Agency(ies)		
Ministry of Finance	The Ministry of Energy and Mines (MEM)		

Proposed Development Objective(s)

Generate environment and gender benefits for target households through a switch to clean energy efficient gasifier cookstoves using biomass pellets across selected provinces.

Financing (in USD Million)	Amount
<b>Total Project Cost</b>	<b>6.44</b>

**B. Is the project being prepared in a Situation of Urgent Need of Assistance or Capacity Constraints, as per Bank IPF Policy, para. 12?**

No

**C. Summary Description of Proposed Project [including overview of Country, Sectoral & Institutional Contexts and Relationship to CPF]**

The project will distribute 50,000 forced draft gasifier cookstoves across eight to eleven districts in three different provinces: Vientiane Capital, Savannakhet Province, and Champasack Province. They were chosen in collaboration with the Institute of Renewable Energy Promotion (IREP) at the Ministry of Energy and Mines (MEM) based on their high charcoal consumption, carbon emission reduction potential, and the characteristics of the charcoal market. The main criteria for household identification are: (1) household must be willing to pay for the stove, (2) the households' source of fuel has to be charcoal, (3) the household must commit to use the stove 75 percent of the time for cooking and heating, and (4) the household must agree to the rigorous monitoring during the project implementation period.



**D. Environmental and Social Overview**

D.1. Project location(s) and salient characteristics relevant to the ES assessment [geographic, environmental, social] The project activities will be implemented across eight to ten districts of Vientiane Capital, Savannakhet and Champasack provinces which have a total of 2.5 million people. The Institute for Renewable Energy Promotion (IREP) at the Ministry of Energy and Mines (MEM) chose the three urban to peri-urban areas based on their high charcoal consumption, carbon emission reduction potential, and the characteristics of the charcoal market.

The project area is culturally diverse. The common ethnic groups in Savannakhet Province are Lao, Phou Thay, Angkham Brou (Makong, Mangkong), Tri, Chali, Katang, Pacoh, Ta Oi, or Souay. Ethnic groups in Champasak are Lao, Khmer, Brao (Lavè), Katè, Nya Hoeñ, Jru (Loven), Souay. The ethnic groups from these two provinces fall in Lao-Tai or Mon-Khmer ethno-linguistic group.

**D. 2. Borrower’s Institutional Capacity**

The World Bank has been engaged in the cookstove sector in Lao PDR since 2012, working closely with IREP to lay a foundation that can spur cleaner cooking solutions to save energy and lower GHG emissions. The project builds on: the previous Lao PDR cookstove initiative project; and the technical assistance provided to the Government of Lao PDR on improving the cookstove sector under the Lao PDR Health Governance Nutrition Development Program (HGNDP). Under the HGNDP, the World Bank also guided the World Food Program (WFP) and the Lao PDR Government’s Poverty Reduction Fund (PRF) with the roll-out of 200 forced-draft gasifier cookstoves in the North of Lao PDR to pilot. The engagement with PRF will continue as the project will support the PRF in their continued cookstove work under PRFIII AF.

In terms of environmental and social capacity, a focal point at IREP and the same will be required of the Implementing Entity for the Project. The Implementing Entity will be hired in accordance with procurement procedures in World Bank’s Regulation for IPF Borrowers. The Entity together with both oversight and support will implement the social and environmental risk assessment, mitigation and enhancement measures. Training requirements are being identified by IREP, and IREP will also assess capacity and training requirements for the Implementing Entity staff. The training will ensure adequate capacity to implement and monitor on all relevant environmental and social requirements.

**II. SUMMARY OF ENVIRONMENTAL AND SOCIAL (ES) RISKS AND IMPACTS**

**A. Environmental and Social Risk Classification (ESRC)**

Moderate

**Environmental Risk Rating**

Moderate

A - type, location, sensitivity and scale of the Project including the physical considerations of the Project. This type of risk / impact is rated Low. The project activities will be implemented across eight to ten districts of Vientiane Capital, Savannakhet and Champasack provinces. Project activities are straight forward by providing 50,000 cookstoves and pellets to target local communities. The environmental conditions in the areas where project activities are planned not sensitive or vulnerable, and the project will not pose any footprint and/or negative impact on local environment rather will provide positive impact by reducing carbon emission and improve health condition of local community by minimizing the use of traditional cookstove.

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B - nature and magnitude of the potential environmental risks and impacts, the nature of the potential risks and impacts (e.g. whether they are irreversible, unprecedented or complex). This type of risk / impact is rated Moderate. The project will not provide direct support on pellet production but will likely to create a future market for private sector investment. It is important that the IREP coordinates with MoNRE and MOIC to make sure that those future pellets production facilities and process meet national and international environmental and social standards. The project will import cookstoves and pellets throughout the project period for its beneficiaries, its is important to ensure that the cookstoves and pellets are produced from sustainable source. The cookstove will contain a component with battery and small solar panel which can be last for 3 to 5 years, where after turned into hazardous waste and may increase gradually if the demand is high for more cookstove to be imported. The waste management system in Lao PDR is very weak currently and may take few years to improve, particularly, the collection and disposing of hazardous waste. During project period, the management of hazardous waste induced from the used battery and solar panel has to be introduced considering the arising in amount beyond the project life. MOIC has initiated the management procedure and a separate landfill will be developed in Vientiane capital for hazardous waste. A waste management plan will be developed and implemented by IREP in collaboration with MIOC and concerned agencies to ensure that the used battery and solar panel are well managed and disposed until the system is in place for hazardous waste management in the country. Another issue is concerning the community's health and safety, the project will transport at least two times for cookstove (16,000 units for first batch and second batch for the rest) and at least once a year for the pellets. IREP and project entity will develop and implement a transportation and storage plan to ensure road safety during the transportation and safety at the warehouse during the storage of cookstoves and pellets until they are distributed.

C - capacity and commitment of the Borrower to manage risks and impacts in a manner consistent with ESF. This type of risk / impact is rated as Low. Amongst the project management team, one staff was assigned by IREP to work on the safeguard during project preparation and toward the implementation, IREP staff will continue to receive additional trainings to ensure adequate capacity to implement all relevant Environmental and Social Standards (ESSs) under the new World Bank Environmental and Social Framework (ESF),

D - other areas of risk that may be relevant.  
No other relevant risks were identified.

**Social Risk Rating** Low

The social risk is categorized as "Low". The pellets and stoves will be imported. The project is not expected to involve significant adverse or irreversible social impacts as a result of the procurement, storage, distribution and use of 50,000 stoves and associated pellets. The anticipated risks of labour and working conditions, and community health and safety can be effectively mitigated.

Positive health impacts are expected for those households benefitting from the clean stoves. Households from all communities in the project area are expected to benefit. Enhancement measures, as part of project design and effective stakeholder engagement, are planned to enable inclusive approaches to ethnic minority groups, low-income household as well as vulnerable groups.

**B. Environment and Social Standards (ESSs) that Apply to the Activities Being Considered**

**B.1. General Assessment**



## ESS1 Assessment and Management of Environmental and Social Risks and Impacts

### **Overview of the relevance of the Standard for the Project:**

The project will comprise the following components:

1. Technical Assistance and Supervision aimed at supporting IREP/MEM in implementation and monitoring of the initiative including recruitment of the Implementation Entity; oversight of the achievement of emission reductions; and, social and environmental risk monitoring and management.
2. Household identification, procurement, management and distribution of stoves in target districts in the three provinces. It will also include technical assistance for the Carbon Development Mechanism (CDM) process.
3. Monitoring and reporting of project implementation.

Additionally the project will also include a gender-focused impact evaluation, which is supported by the World Bank executed funding from the East Asia Pacific - Gender Innovation Lab (EAP-GIL). The evaluation will support on going work on Evaluating the Impacts of Clean Cooking Technology on Women's Domestic Burden in Laos. Furthermore, the evaluation will support the monitoring of the cookstoves' effects on the daily lives of members of the households receiving them across the three provinces.

Potential environmental risks and impact: The project will import cookstoves and pellets throughout the project period for its beneficiaries, its is important to ensure that the cookstoves and pellets are produced from sustainable source. A review procedure will be developed and carried out by IREP to ensure that the cookstoves and pellets are produced from sustainable source. A review will be carried out each time after the cookstove and pellet arrive in the country to ensure that the products are certified by International Organization for Standardization (ISO).

The cookstove will contain a component with battery and small solar panel which can be last for 3 to 5 years, where after turned into hazardous waste and may increase gradually if the demand is high for more cookstoves to be imported. A waste management plan will be developed and implemented by IREP in collaboration with MIOC and concerned agencies to ensure that the used battery and solar panel are well managed and disposed.

The project will transport at least two times for the cookstove (16,000 units for first batch and second batch for the rest) and at least once a year for the pellets. IREP and project entity will develop and implement a transportation and storage plan to ensure road safety during the transportation and safety at the warehouse during the storage of cookstoves and pellets until they are distributed.

Potential social risks and impacts include: Pellets are expected to be sourced from Indonesia and if not sustainably sourced there is potential for labour, safety and working conditions related risks with the production, transportation and distribution of the imported cookstoves and the pellets; potential health and safety risks related with storage of the cookstoves and the pellets and their use; potential impacts on small local markets and sellers of other fuel such as that of wood and charcoal as a result of the introduction of the new biomass pellets; potential for low-income households including low-income ethnic groups in project areas to be excluded from accessing project benefits, if cookstove and the necessary pellets are unaffordable or would create short term hardship; potential for risk and benefits not achieved for all groups if engagement and communications materials do not take into account the needs



(language, culture, literacy, access) on those expected to benefit; and potential risks if the criteria of the phased selection of the 50,000 beneficiary households of the project, particularly those receiving vouchers for free or lower price stoves, are not well understood. To address some of above-mentioned risks and impacts, the development and effective implementation engagement measures and communication materials, as part of stakeholder engagement plan, will be key. To address some of these risks measures are being developed, and arrangements are being made as part of project design, to ensure that imports of pellets and stoves meet international procurement standards such as IOS 20400 or Bank's own sustainable procurement guidelines. The scope of the planned Impact Evaluation has already been revised to cover inclusion and the needs of different groups, including any disadvantaged and vulnerable groups and ethnic groups, and which will enable addressing risks related to equity in benefits. To address health and safety risks to project beneficiaries a Community Health and Safety Management Plan (CHSMP) will need to be developed taking into account the diverse needs of the communities including at household level. The commitment plan has been developed and defines the measures, timeframes and resources needed in order to avoid and minimize identified potential adverse impacts and enhance benefits as a result of project activities.

### **ESS10 Stakeholder Engagement and Information Disclosure**

The project will involve different stakeholder groups: private investment sectors, government officials from central, provincial, district levels and village level, communities and households of Vientiane Capital, Savannakhet and Champasak Provinces. Stakeholder engagement is understood as an activity that takes place throughout the life of the project. IREP has put in place a draft Stakeholder Engagement Plan (SEP) ensure engagement with all interests and affected stakeholders on the project design and has undertaken engagement as part of the project development process, including through sharing of project related information. The Plan shows an initial consideration of affected and interested stakeholders and which will be kept updated. The approach to engagement activities will need to take into account of the needs of ethnic groups, vulnerability, language and literacy to ensure not only risks are managed but benefits are accessible to all. This initial Plan will be updated based on information gathered through the continues engagement on the project and strategies to address key risks and impacts as well for supporting measures to enhance benefits. The revised plan will also include expand on the communication and engagement strategies and include communication materials. A project specific Grievance Mechanism (GM), proportionate to the potential risks and impacts of the project, is still to be established. Activities included in the plan and complaints received and resolved under the project's GM will be reviewed during the implementation support missions.

### **B.2. Specific Risks and Impacts**

**A brief description of the potential environmental and social risks and impacts relevant to the Project.**

#### **ESS2 Labor and Working Conditions**

The risks related to this standard are expected to relate to the provisioning of stoves and pellets including transportation of these. The pellets are expected to be imported from Indonesia. To manage these risks measures will be developed, and arrangements will be made, as part of project design, to ensure that these imports meet international procurement standards such as FSC certification and IOS 20400 or Bank's own sustainable procurement guidelines. In addition to environmental protections of GHG, sustainable forest management, soil, water and air, the social protections that would need to be met include: health and safety and labour and working conditions. If the



above is not possible then it is expected that a due-diligence against national requirement and that of ESS2 will be needed of suppliers providing pellets and stoves. A Labour Management Plan (LMP) and associated procedures will need to be prepared to set out the way in which all categories of project workers (direct, contracted, and community workers) , where applicable, will be managed in accordance with the requirements of national law and ESS2. A worker grievance mechanism will also need to be in place.

### **ESS3 Resource Efficiency and Pollution Prevention and Management**

The project will import cookstoves and pellets throughout the project period for its beneficiaries, its is important to ensure that the cookstoves and pellets are produced from sustainable source. The cookstove will contain a component with battery and small solar panel which can be last for 3 to 5 years, where after turned into hazardous waste and may increase gradually if the demand is high for more cookstove to be imported. The waste management system in Lao PDR is very weak currently and may take few years to improve, particularly, the collection and disposing of hazardous waste. During project period, the management of hazardous waste induced from the used battery and solar panel has to be introduced considering the arising in amount beyond the project life. MOIC has initiated the management procedure and a separate landfill will be developed in Vientiane capital for hazardous waste. A waste management plan will be developed and implemented by IREP in collaboration with MIOC and concerned agencies to ensure that the used battery and solar panel are well managed and disposed until the system is in place for hazardous waste management in the country.

### **ESS4 Community Health and Safety**

The project will not support in country a production of pellets. However, the project will transport at least two times for the cookstove (16,000 units for first batch and second batch for the rest) and at least once a year for the pellets. IREP and project entity will develop and implement a transportation and storage plan to ensure road safety during the transportation and safety at the warehouse during the storage of cookstoves and pellets until they are distributed.

In preparing the CHSMP there will be a need to assess potential health and safety risks related with the use and storage of the cookstoves and the pellets, including risks of fires, explosions, burn safety, among others. For any risks identified the plan will have to present measures. These risks and mitigation will need to be communicated and the strategies on communication with materials to be used should also be included in the Plan. Any materials for engaging will need to be accessible to all groups in terms of language, literacy and cultural appropriateness. The Plan will be prepared once the Implementing Entity is in place and prior to the purchase and distribution of cookstoves. The project will result in positive health impacts for those households who will benefit from clean stoves and pellets designed for those stoves.

### **ESS5 Land Acquisition, Restrictions on Land Use and Involuntary Resettlement**

The production, storage and distribution of 50,000 stoves, together with pellets to be used with the stoves, are not expected to require land acquisition, conversion of land nor restrict access to land or other resources. The stoves and pellets are expected to be sourced from outside of Lao PDR. The stoves and pellets will be sustainably procured for



this project, in line with GIIP which also protects against the taking of land, restrictions to land-use and ecosystems services and livelihoods dependent on those.

**ESS6 Biodiversity Conservation and Sustainable Management of Living Natural Resources**

The project will not support pellet production in country, therefore, the ESS6 is not relevant.

**ESS7 Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities**

The project area is culturally diverse: common ethnic groups in Savannakhet province are Lao, Phou Thay, Angkham Brou (Makong, Mangkong), Tri, Chali, Katang, Pacoh, Ta Oi, or Souay. Ethnic groups in Champasak are Lao, Khmer, Brao (Lavè), Katè, Nya Hoeñ, Jru (Loven), Souay. The ethnic groups from these two provinces fall in Lao-Tai or Mon-Khmer ethno-linguistic group. The project is not expected to result in adverse impacts on ethnic groups. Project benefits should benefit all groups with no one group excluded. The Impact Evaluation, which will be a key component of the project, has been designed such that it informs on inclusion based on socio-demographics and which in turn informs project design. The baseline, end line and final evaluations will present findings based on socio-demographics including for ethnic minority groups. The study can also inform accessible and inclusive strategies for engaging interested and affected stakeholders. All engagement and communication activities including materials to support these will be tailored to enable participation of the different resident ethnic groups and their representatives in the project’s activities at all levels from household ,village to central level.

**ESS8 Cultural Heritage**

The procurement and distribution of 50,000 stoves together with pellets to be used with the stoves is not expected to adversely impact on tangible or intangible cultural heritage.

**ESS9 Financial Intermediaries**

The procurement and distribution of 50,000 stoves together with pellets to be used with the stoves is not expected to make use of Financial Intermediary.

**B.3 Other Relevant Project Risks**

All the potential risks have been described against the standards.

**C. Legal Operational Policies that Apply**

**OP 7.50 Projects on International Waterways**

No

This policy is not relevant to the project as it will not impact on any water resources.

**OP 7.60 Projects in Disputed Areas**

No

The project will not be located in an area under legal or international dispute nor competing territorial claims.

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III. BORROWER’S ENVIRONMENTAL AND SOCIAL COMMITMENT PLAN (ESCP)

DELIVERABLES against MEASURES AND ACTIONs IDENTIFIED	TIMELINE
<b>ESS 1 Assessment and Management of Environmental and Social Risks and Impacts</b>	
<p><b>ORGANIZATIONAL STRUCTURE:</b>            Establish an organizational structure with qualified staff to support management of E&amp;S risks including E&amp;S focal points in MEM/IREP and Implementing Entity. embedded in the PIUs.            Maintain as necessary throughout Project implementation.</p>	05/2019
<p><b>SOCIAL ASSESSMENT:</b>            Social: Incorporate findings from the impact evaluation undertaken by World bank in the first year (end line) into project design and updating of engagement plan and materials. Undertake impact evaluation in Year 5.</p>	09/2019
<p><b>ENVIRONMENTAL ASSESSMENT:</b>            No further assessment is required after the screening, however, the Compliance review procedure is designed and carried out ensuring:</p> <ol style="list-style-type: none"> <li>1. Cookstoves and pellets are coming from sustainable sources</li> <li>2. Transportations and storage plan are developed and properly implemented</li> <li>3. Waste management plan is developed and properly implemented, and acceptable to the WB</li> </ol>	09/2019
<p><b>MANAGEMENT TOOLS AND INSTRUMENTS:</b></p> <ol style="list-style-type: none"> <li>1. Compliance review form to check the cookstove and pellets are from the sustainable source</li> <li>2. Transportation and storage plan</li> <li>3. Waste management plan</li> </ol>	09/2019
<p><b>WORKER COMMUNITY INTERACTIONS:</b>            Develop and implement Code of Conduct that describes the standards of conduct, behavior and attitude that the public and people who engage and benefit from the project activities should expect.</p>	05/2019
<p><b>PERMIT, CONSENTS AND AUTHORIZATIONS:</b>            Obtain or assist in obtaining, as appropriate, the permits, consents and authorizations that are applicable to the Project from relevant national authorities.            Comply or cause to comply, as appropriate, with the conditions established in these permits, consents and authorizations throughout Project implementation.            Develop the procedures for ensuring permits consents, and authorization is obtained in line with the Government of Lao and World Bank requirements.</p>	05/2019
<b>ESS 10 Stakeholder Engagement and Information Disclosure</b>	
<p><b>SEP PREPARATION:</b>            Prepare and disclose an Initial Stakeholder Engagement Plan (SEP).</p>	04/2019

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SEP REVISION AND UPDATE: Revise the Initial Stakeholder Engagement Plan (SEP) to address engagement on risk, impacts and project benefits and update to reflect changes to project design and changing risks, impacts and benefits.	05/2019
SEP IMPLEMENTATION: Implement the SEP.	07/2019
PROJECT GRIEVANCE MECHANISM: Develop and implement the arrangements for the grievance mechanism.	09/2019
<b>ESS 2 Labor and Working Conditions</b>	
LABOR MANAGEMENT PROCEDURES: Develop labour management plan and associated procedures for any direct, contract and community project workers in line with Government of Lao requirements and World Bank ESS2 requirements.	05/2019
GRIEVANCE MECHANISM FOR PROJECT WORKERS: Develop, communicate and operationalize a grievance mechanism for any direct, contract and community project workers.	05/2019
OHS MEASURES: Develop and implement occupational, health and safety (OHS) measures.	09/2019
EMERGENCY PREPAREDNESS AND RESPONSE: As part of the OHS measures specified in 2.3 (client ESCP) include measures on emergency preparedness and response, and ensure coordination with measures under 4.5 (client ESCP).	09/2019
<b>ESS 3 Resource Efficiency and Pollution Prevention and Management</b>	
MANAGEMENT OF WASTE AND HAZARDOUS MATERIALS: Develop and implement measures and actions to manage waste and hazardous materials.	09/2020
<b>ESS 4 Community Health and Safety</b>	
TRAFFIC AND ROAD SAFETY: Develop and implement measures and actions to assess and manage traffic and road safety risks.	09/2019
COMMUNITY HEALTH AND SAFETY: Prepare a community health and safety management plan that identifies risks, impacts and measures related to the safe storage and use of cookstoves and pellets. The plan should also address engagement requirement.	09/2019



<p><b>TRAINING FOR THE COMMUNITY:</b>          Conduct training for the community designed to increase awareness of risks and to mitigate impacts specified in this section.</p>	09/2019
<b>ESS 5 Land Acquisition, Restrictions on Land Use and Involuntary Resettlement</b>	
<b>ESS 6 Biodiversity Conservation and Sustainable Management of Living Natural Resources</b>	
<b>ESS 7 Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities</b>	
<p><b>INDIGENOUS PEOPLES PRESENT OR COLLECTIVELY ATTACHED TO PROJECT AREA:</b>          Assess the nature and degree of the expected direct and indirect economic, social, cultural and environmental impacts on Indigenous Peoples the project area (1.2. client ESCP).</p>	05/2019
<b>ESS 8 Cultural Heritage</b>	
<b>ESS 9 Financial Intermediaries</b>	

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**B.3. Reliance on Borrower’s policy, legal and institutional framework, relevant to the Project risks and impacts**

**Is this project being prepared for use of Borrower Framework?** No

**Areas where “Use of Borrower Framework” is being considered:**

The client's E&S Framework is not proposed to be relied on for the Project, in whole or in part.

**IV. CONTACT POINTS**

**World Bank**

Contact:	Rutu Dave	Title:	Energy Specialist
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**Borrower/Client/Recipient**

Borrower: Ministry of Finance

**Implementing Agency(ies)**



Implementing Agency: The Ministry of Energy and Mines (MEM)

#### **V. FOR MORE INFORMATION CONTACT**

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#### **VI. APPROVAL**

Task Team Leader(s): Rutu Dave

Practice Manager (ENR/Social) Susan S. Shen Cleared on 28-Apr-2019 at 04:17:19 EDT