INTEGRATED SAFEGUARDS DATA SHEET
CONCEPT STAGE

Report No.: ISDSC908

Date ISDS Prepared/Updated: 12-Jun-2012
Date ISDS Approved/Disclosed: 21-Apr-2013

I. BASIC INFORMATION

A. Basic Project Data

<table>
<thead>
<tr>
<th>Country</th>
<th>Project ID:</th>
<th>Project Name:</th>
<th>Task Team Leader:</th>
<th>Estimated Appraisal Date:</th>
<th>Estimated Board Date:</th>
<th>Managing Unit:</th>
<th>Lending Instrument:</th>
<th>Sector(s):</th>
<th>Theme(s):</th>
<th>Financing (In USD Million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indonesia</td>
<td>P115763</td>
<td>HCFC Phase-out in the PU Foam Sector Project (P115763)</td>
<td>Johannes Heister</td>
<td>20-Jan-2013</td>
<td>24-May-2013</td>
<td>EASIS</td>
<td>Specific Investment Loan</td>
<td>Other industry (90%), Central government administration (10%)</td>
<td>Pollution management and environmental health (50%), Environmental policies and institutions (50%)</td>
<td>Total Project Cost: 3.63 Total Bank Financing: 0.00 Total Cofinancing:</td>
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<td>Financing Source</td>
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<td>Borrower 0.92</td>
<td>Montreal Protocol Investment Fund 2.71</td>
<td>Total 3.63</td>
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<td>Environmental Category: B - Partial Assessment</td>
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<td>Is this a Repeater project? No</td>
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</table>

B. Project Objectives

27. The PDO is to reduce the consumption of HCFC-141b in the foam sector in Indonesia in order to contribute to the government’s efforts to comply with its phase-out obligations for HCFCs under the Montreal Protocol.

C. Project Description

Priority Sectors: In accordance with the proposed national HCFC phase-out target of 133 ODP tons
by 2015, GoI selected three major sectors – the air-conditioning sector, the refrigerator sector, and the foam sector – as the priority sectors that will enable achievement of this target. The fire protection and solvent sectors, which consume a small quantity of HCFCs, will be addressed in the subsequent phases of the HPMP.

As per the decision of the 64th ExCom meeting, the phase-out target for Indonesia for the first phase is 134.97 ODP tons by 2018. The agreement includes TA for refrigerant management from the Government of Australia with a calculated ODP phased-out of 3.67 ODP tons. The ExCom approval reflects the GoI’s strategy to meet its overall HCFC freeze in 2013, and to reduce HCFCs consumption by 20% of the baseline by 2018.

PU Foam Sector: In the foam sector, the target is a reduction of HCFC-141b consumption by 10% by 2015, and an additional reduction of 10% of the baseline by 2018. The current foam sector plan covers 34.1 ODP tons from the starting point for a sustained aggregate reduction in HCFC consumption. By 2015, the foam sector is targeted to phase out a minimum of 18.9 ODP tons, which represents about 55% of the targeted reduction of 34.1 ODP tones. The remaining phase-out of 15.2 ODP tons is to be delivered by 2018.

The overall HCFC-141b phase-out strategy in the PU foam sector is to adopt a sectoral phase-out schedule following the MP’s HCFC phase-out schedule, except for the 2015 reduction target for which an advanced reduction is required to make up for the slower rate of consumption reduction in the service sector. Phase-out priority will be given to the sub-sectors where market incentives and phase-out capacity exist.

Taking into account the feasibility of alternative technologies, market competition, technical and financial capacity of foam enterprises, management capacity of the executing agency, and funding availability from the MLF, it is strategically important that phase-out activities be limited to a select group of sub-sectors. Criteria for selection of prioritized sub-sectors for HCFC-141b phase-out under the Phase I PU Foam Sector Plan include:

a) Successful experience in implementing the selected alternatives;
b) Technical, financial and management capacity of targeted enterprises; and
c) Availability of cost-effective options.

Technology and climate impact: In response to Decision XIX/6, the Phase I PU Foam Sector Plan promotes the adoption of hydrocarbon technology wherever possible in order to yield maximum climate benefits. However, for those enterprises for which hydrocarbon technology is not a viable option other technologies with higher GWP will be considered.

In the Indonesian context, higher GWP alternatives are required as most foam enterprises are small and medium size enterprises, for which hydrocarbon technology is not financially viable. Moreover, due to domestic regulations on safety, hydrocarbon technology cannot be used at existing facilities of most small and medium size enterprises. Relocation of the production facilities would require a longer project implementation timeframe. Therefore, higher GWP alternatives are required in order to ensure that Indonesia will meet its freeze and 10% consumption reduction obligations in 2013 and 2015.

Regarding the overall climate impact, the proposed 50% reduced HFC-245fa formulation will indeed result in climate benefits in comparison with the HCFC-141b technology. Since HCFC-141b has a GWP of 780 in comparison with GWP of 520 for 50% reduced HFC-245fa, the climate benefit per
MT of HCFC-141b phase-out is 260 tCO2 equivalent.

Sustainability: To ensure sustainability of the phase-out and a level-playing field for enterprises in the respective sub-sectors targeted by the Phase I HPMP, GoI will put policies and regulatory measures in place to ensure a complete phase-out in these sub-sectors. Moreover, import control and restriction of imported HCFC-141b pre-blended polyol, including a further investigation into the downstream use of imported pre-blended polyol will be carried out during the implementation of the Phase I HPMP.

The proposed project can be considered a continuation of the ODS I Project as it will employ the infrastructure and capacity established under ODS I to deliver the required assistance to beneficiaries and stakeholders. Due to the similar nature of the proposed activities and those under ODS I, it is proposed to replicate the project arrangements in ODS I. The project will therefore include a combination of investment, TA, and policy and regulatory interventions, which will be carried out in tandem in order to ensure timely achievement of project objectives.

Component 1: Investment in HCFC consumption reductions (US$ 2,514,187)

In accordance with the above criteria and a recommendation by the Foam Technical Working Group (TWG), GoI has selected 26 eligible enterprises operating in the five priority sub-sectors shown in Table 4.

The project will support phase-out in these enterprises by introducing an alternative, non-HCFC consuming production technology. The project will achieve this through TA and a grant that will cover a part of the enterprises’ conversion costs. The scope of this component will include the selected 26 enterprises, which will be revalidated at the start of the project, and possibly additional enterprises, to ensure a total phase-out of 34.12 ODP tons of HCFC 141-b by 2018.

Component 2: Technical assistance, supporting policies and regulations (US$ 110,000)

The project will finance TA activities supporting HCFC phase-out. The activities will include, among others, (i) training, (ii) identification and testing of low carbon blowing agents, (iii) development of guidelines for use of hydrocarbons in the different foam applications, (iv) revision of existing foam standards to remove any barriers for HCFC-141b phase-out, and (v) introduction of new low-carbon blowing agents. A list of TA activities with objectives, scope of work and costs for the first two years of the project will be developed during the project preparation stage. Additional TA activities beyond 2013 will be identified during project implementation. This flexibility will allow the project to adapt to evolving technological needs and circumstances and take advantage of the experience gained from the early phase of project implementation.

Policies and regulations at the national, provincial and sector levels will be established to support the phase-out of HCFC-141b. Based on experiences from previous ODS activities, sustainable HCFC phase-out in each sub-sector will best be achieved through a complete ban on the use of HCFC in that particular sub-sector.

(i) Policies preventing establishment of new foam manufacturing facilities using HCFC-141b and expansion of existing HCFC-based production facilities will be developed and implemented under the project.

(ii) A complete ban of HCFC-141b usage in 3 out of 12 existing applications, or subsectors, will be part of this component. Specific applications that will be subject to a complete ban will be
determined through the project.

(iii) A HCFC import quota system will be introduced in 2013 to ensure that reduction targets will be achieved and consumption levels stay below the agreed limits.

Component 3: Capacity building and project management (US$ 90,000)

A Project Management Office (PMO) with full responsibility to implement the Phase I PU Foam Sector Plan will be established. The PMO will support all sectors and phase-out projects regardless of implementing agency. To maintain expertise and continuity, staff and experts of the PMO for the CFC Phase-out Plan will be assigned to this new Office.

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

The project covers 26 foam companies, which have been identified and which are domiciled in different locations throughout Indonesia. It is expected that these companies will participate in the project with their production facilities at their current location and no relocation will occur due to or coincidental with the project. However, this will be confirmed during project preparation.

E. Borrowers Institutional Capacity for Safeguard Policies

The Ministry of Environment (MoE) will serve as the executing agency for the Project. The NOU in MoE has accumulated extensive experience with World Bank policies, including on safeguards, through the successful execution of the CFC Phase-out Project.

Of the 26 beneficiary enterprises, 20 enterprises were converted to the use of HCFC-141b from CFC during the 15 plus-year history of MLF foam projects in Indonesia. Since the same implementation modality will be used as for the previous CFC phase-out ODS project, these companies already have relevant experience with Bank procedures.

F. Environmental and Social Safeguards Specialists on the Team

Isono Sadoko (EASID)
Andrew Daniel Sembel (EASIS)

II. SAFEGUARD POLICIES THAT MIGHT APPLY

<table>
<thead>
<tr>
<th>Safeguard Policies</th>
<th>Triggered?</th>
<th>Explanation (Optional)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Assessment OP/ BP 4.01</td>
<td>Yes</td>
<td>The project will include a series of investment activities in 26 foam companies at their current production locations. No relocation is expected due to or coincidental with the project. However, this will be confirmed during project preparation. The project will have a positive impact on the global environment by reducing the use of HCFCs - ozone-depleting substances. HCFCs are also greenhouse gases with a global warming potential (GWP) ranging from several hundred to several thousand times that of CO2. While HCFCs have an impact on the global</td>
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</table>
environment, they have no adverse local impacts as these chemicals are stable and not considered toxic or otherwise dangerous for the environment.

The project will promote the adoption of hydrocarbon technology, where possible, in order to yield maximum climate benefits. However, for those enterprises for which hydrocarbon technology is not a viable option other technologies with higher GWP will be considered. In the Indonesian context, higher GWP alternatives are required as most foam enterprises are small and medium size enterprises, for which hydrocarbon technology is not financially viable. Moreover, due to domestic regulations on safety, hydrocarbon technology cannot be used at existing facilities of most small and medium size enterprises. Relocation of the production facilities would require a longer project implementation timeframe. Therefore, higher GWP alternatives are required in order to ensure that Indonesia will meet its freeze and 10% consumption reduction obligations in 2013 and 2015.

Regarding the overall climate impact, the proposed 50% reduced HFC-245fa formulation will indeed result in climate benefits in comparison with the HCFC-141b technology. Since HCFC-141b has a GWP of 780 in comparison with GWP of 520 for 50% reduced HFC-245fa, the climate benefit per Mt of HCFC-141b phase-out is 260 tCO2equivalent.

Hydrocarbon has a Global Warming Potential of less than 25. Hydrocarbon (cyclopentane) is classified as a Volatile Organic Compound (VOC), but its use results in very low levels of emissions of about 2-3% of the blowing agent, which is minuscule for instance compared to emissions from motorcycle traffic. Therefore, there is no significant environmental impact from the chemical Hydrocarbon itself.

The other chemicals involved in the foam production are MDI, amine catalysts and fire
retardants. Foam enterprises normally purchase pre-formulated polyol (blended with or without HCFC-141b) and polymeric MDI (isocyanates) for their rigid foam production. The probability that a spill of polymeric MDI (PMDI) – a liquid at room temperature – contaminates the soil and water is very low, because the floor of the foam production areas normally consists of cement coated with an anti-leakage low permeability chemical layer such as epoxy. In the case that PMDI leaks into the soil, it will react with the moisture/water, and the reaction would result in CO2 and insoluble polyurea compounds, which are not biodegradable but chemically inert. Fire retardant and amine catalysts (very limited amount) are mixed/pre-formulated in the polyol at the System Houses (pre-blended polyol suppliers), from which the foam enterprises normally purchase pre-blended polyol and MDI, so the foam enterprises will not handle these toxic chemicals directly. Fire retardant and amine catalysts will remain in the final foam products and are not likely to be emitted to the environment during the foam production or later. Therefore, there is no legacy environmental contamination issue associated with the foam production.

However, safety requirements associated with hydrocarbons due to its flammability may still present operational challenges for those enterprises that will use them. For all operating sites, occupational health and safety (OHS) measures (such as prevention from inhalation of MDI vapors which may cause skin irritation); spill prevention, control, and countermeasures; and fire risks (particularly due to the presence of flammable chemicals) will be identified and appropriate emergency preparedness and response measures will be prescribed as identified in The World Bank Group EHS (Environment, Health and Safety) Guidelines. Staff will be trained as needed.

If a due diligence review confirms the environmental, health and safety issues noted above, an environmental management
Framework (EMF) will be prepared for the project before appraisal, which will require that environmental management plans (EMP) be drawn up by each company with site-specific mitigation measures. Each participating enterprise will be required to follow the provisions of their EMP in order to participate in the project activities and receive access to any funding. The EMP will include requirements for appropriate handling of other chemicals used in minor amounts for the foam production. The World Bank Group EHS Guidelines will be followed when preparing the EMPs.

<table>
<thead>
<tr>
<th>Natural Habitats OP/BP 4.04</th>
<th>No</th>
<th>As the project will take place in existing industrial facilities, protected areas, known natural habitats, or established or proposed critical natural habitats will not be affected.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forests OP/BP 4.36</td>
<td>No</td>
<td>The project will not include activities that would involve significant conversion or degradation of critical forest areas or related critical natural habitats as defined under this policy.</td>
</tr>
<tr>
<td>Pest Management OP 4.09</td>
<td>No</td>
<td>The policy is not triggered since the project (a) will not procure any pesticides, nor (b) will the use of pesticides increase as a result of the project.</td>
</tr>
<tr>
<td>Physical Cultural Resources OP/BP 4.11</td>
<td>No</td>
<td>The project will take place in existing enterprises. As such, the project will not adversely affect sites with archeological, paleontological, historical, religious, or unique natural values.</td>
</tr>
<tr>
<td>Indigenous Peoples OP/BP 4.10</td>
<td>No</td>
<td>All project activities will take place be in urban or industrial areas with no ethnic minorities as defined under the Bank’s policy. Therefore, OP 4.10 on Indigenous People is not triggered.</td>
</tr>
<tr>
<td>Involuntary Resettlement OP/BP 4.12</td>
<td>TBD</td>
<td>None of the covered enterprises is expected to relocate the location of foam production that will participate in the project. Should contrary information become known during the project preparation phase, the task team will review when and how the land was or is being acquired and the enterprise’ relocation plan, including any involuntary resettlement issues, and a Resettlement Policy Framework will be prepared.</td>
</tr>
<tr>
<td>Safety of Dams OP/BP 4.37</td>
<td>No</td>
<td>The project will not finance construction or rehabilitation of any dams.</td>
</tr>
</tbody>
</table>
III. SAFEGUARD PREPARATION PLAN

A. Tentative target date for preparing the PAD Stage ISDS: 31-Jul-2012

B. Time frame for launching and completing the safeguard-related studies that may be needed.
   The specific studies and their timing\(^1\) should be specified in the PAD-stage ISDS:
   No specific safeguard-related studies are expected to be conducted.

   If required, project information including environmental management framework and plans will be disclosed locally. If any population is affected by the project’s activities, they will be invited to participate in the identification and assessment of impacts as well as in the development and implementation of the mitigation measures. The environment and social safeguard documents (summarized versions) will be distributed among affected people (if any), placed in local public libraries and in the Bank InfoShop. The safeguards instrument (EMF) will be disclosed locally (in local languages) and in the World Bank’s InfoShop prior to appraisal.

IV. APPROVALS

| Task Team Leader: | Name: Johannes Heister |
| Approved By: |
| Regional Safeguards Coordinator: | Name: Peter Leonard (RSA) | Date: 11-Apr-2013 |
| Sector Manager: | Name: Fook Chuan Eng (SM) | Date: 21-Apr-2013 |

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\(^1\) Reminder: The Bank’s Disclosure Policy requires that safeguard-related documents be disclosed before appraisal (i) at the InfoShop and (ii) in country, at publicly accessible locations and in a form and language that are accessible to potentially affected persons.