

**Mongolia Employment Support Project (P159215)**

**Environmental and Social Management Framework**

**Ministry of Labor and Social Protection  
Mongolia**

**Final draft: November 30, 2016**

## **1. Introduction**

### **1.1. Project Development Objective**

1. The Mongolia Employment Support Project (MESP) will be implemented by the Ministry of Labor and Social Protection (MLSP) with support from the World Bank. The project development objective is to improve the employment outcomes of unemployed and self-employed jobseekers in Mongolia. This will be achieved by supporting client-centric public employment services, strengthening select active labor market programs and facilitating labor market monitoring and analysis.

### **1.2. Project Components**

2. The MESP consists of three components. Component 1 supports a major realignment of the current public employment service system to serve greater numbers of employers and job-seekers in a more client-driven service with greater collaboration with private intermediation services. Component 2 strengthens the design, relevance and demand-orientation of select active labor market programs. Component 3 improves the quality of and access to labor market reporting and analysis to help institutional and non-institutional clients make more informed decisions and provides support for strengthening monitoring and evaluation and project management.

### **1.3. Geographical Coverage and Intended Beneficiaries**

3. Mongolia is a landlocked country in Northern Asia. It has a surface area of 1.6 million square kilometers and about three million inhabitants, 1.3 million of whom live in Ulaanbaatar, the country's capital. With a population density of around 1.9 inhabitants per square kilometer, Mongolia is the world's least densely populated country. Administratively, Mongolia is divided into Ulaanbaatar and 21 *aimags* (provinces). Ulaanbaatar is further divided into districts and *khoroos* (city wards). *Aimags* are further divided into *soums* (counties) and *baghs* (villages).

4. Beneficiaries of the project will be jobseekers and micro-entrepreneurs in Mongolia. The project will finance activities in the entire territory of Mongolia with a focus on urban areas. Project activities will not be restricted to any particular groups and will aim to improve the broader functioning of Mongolia's labor market.

5. Sub-components 2.1 and 2.2 will support specific employment promotion programs and will be implemented in all nine districts of Ulaanbaatar and all 21 *aimag* centers. Though activities will be open to beneficiaries from outside of Ulaanbaatar and *aimag* centers there will be no direct implementation in the countryside due to the different nature of labor market challenges. The target beneficiaries of the sub-component 2.1 are registered unemployed job-seekers, particularly (i) "citizens having difficulty finding employment" as defined in the Employment Promotion Law, (ii) young people aged 18 to 34, (iii) those that are not college or university graduates, and (iv) poverty status (as for instance measured by PMT scores). The target beneficiaries of the sub-component 2.2 are either registered unemployed jobseekers or self-employed micro-entrepreneurs who want to start or grow a micro-enterprise, particularly (i) "citizens having difficulty finding employment" as defined in the Employment Promotion Law, (ii) young people aged 18 to 34, (iii) TVET, college or university graduates, and (iv) poverty status (as for instance measured by PMT scores). The sub-component 2.3 will support the implementation of a new employment promotion-piloting program by labor and social welfare offices at relatively small scale. In doing so, the labor and social welfare offices will be encouraged to extend existing nation-wide em-

ployment promotion programs to particularly vulnerable groups in a specific locality; i.e. proposals can be focused on extending the outreach of the current programs. Equal representation of genders will be targeted as well.

6. The supports of these specific employment promotion programs will be focused on the following core groups of beneficiaries as illustrated in the table below:

Table 1: Target beneficiaries, by core groups

#	Group	Note	Geographic coverage
1	<b>Citizens having difficulty finding employment</b>	<ul style="list-style-type: none"> <li>• In need of additional employment services and assistance;</li> <li>• With disabilities;</li> <li>• Just released from prison;</li> <li>• Just left an orphanage due to reaching working age; or</li> <li>• Been searching for job for more than 6 months.</li> </ul>	9 districts of Ulaanbaatar and 21 aimag/provincial centers.
2	<b>Young people aged 18 to 34</b>	<ul style="list-style-type: none"> <li>• Not college or university graduates (for sub-component 2.1.)</li> <li>• TVET, college or university graduates (for sub-component 2.2.)</li> </ul>	
3	<b>Poor households</b>	(as for instance measured by PMT scores)	

#### 1.4. Environmental and Social Safeguards Management Approach

7. This Environmental and Social Management Framework (ESMF) will contribute to realizing the improvement of employment outcomes of unemployed and self-employed jobseekers in Mongolia and concurrently promoting environmentally and socially sound project implementation. It is designed to be consistent with Mongolian regulations and relevant World Bank requirements.<sup>1</sup> If there are differences between the Mongolian regulations and relevant World Bank requirements, the stricter of the two must be followed (e.g. if Mongolian noise standards are stricter than the World Bank's, Mongolian standards would prevail and *vice versa*). In the case of inconsistencies, the MLSP should consult with the World Bank for a resolution.

8. This ESMF is considered a living document and can be modified if the situation on the ground or scope of project activities change. Close consultation with the World Bank and clearance of modifications to the ESMF will be necessary. The MLSP will be responsible for the implementation of the project, including overall coordination, results monitoring and communicating with the World Bank on all fiduciary and safeguard aspects. It will be supported by the PIU, which will carry out the day-to-day implementation of the project. The PIU staff should be appropriately trained in order to effectively supervise the implementation of the ESMF. During the project implementation, implementation of the ESMF will

be selectively monitored by the PIU (including with regard to the monitoring of the screening and selection of micro-enterprises by labor and social welfare offices), if appropriate with support from relevant departments of the General Office for Labor and Social Welfare Services (GOLSWS). The World Bank will also undertake selective monitoring as part of the project implementation support and supervision missions.

### 1.5. World Bank Safeguards Policies and Mongolian Regulations

9. The major Mongolian regulations on environmental safeguards include (1) the Law of Environmental Impact Assessment (LEIA, updated in May 2012); (2) the Law on Environmental Protection; (3) the Law on Labor Safety and Hygiene; and (4) relevant government regulations and national standards on environment, health and safety matters. The Law on Environmental Protection envisages an Environmental audit mechanism while the LEIA requires the undertaking of environmental screenings (identified as “General Environmental Assessments”) for each proposed project. The Law on Labor Safety and Hygiene determines the state policy and principles on labor safety and hygiene, and regulates relationship with respect to management and monitoring system.

10. The list of World Bank safeguard policies is as follows: (1) OP 4.01: Environmental Assessment; (2) OP 4.04: Natural Habitats; (3) OP 4.09: Pest Management; (4) OP 4.10: Indigenous Peoples; (5) OP 4.11: Physical Cultural Resources (6) OP 4.12: Involuntary Resettlement; (7) OP 4.36: Forestry; (8) OP 4.37: Safety of Dams; (9) OP 7.50: Projects on International Waterways; (10) OP 7.60: Projects in Disputed Areas.

11. *World Bank Safeguard Policies relevant to the Project.* The relevant safeguards policies of the World Bank were reviewed in the preparation of this ESMF. Below is the summary of relevant policies.

- (i) Environmental Assessment (EA) (OP4.01) – In the context of this project, OP 4.01 is triggered and the MESP has received a provisional environmental category rating of “B”. This policy requires (i) detailed qualitative and quantitative analysis to determine project environmental and social impacts (including special attention to vulnerable and disadvantaged groups as per Interim Guidance Note on Assessing Social Impacts and Risk under OP/BP 4.01), (ii) determination of tangible measures to prevent, minimize, mitigate or compensate for these adverse impacts, (iii) public consultation and disclosure as part of the EA process and (iv) this ESMF to address set of mitigation, monitoring and institutional measures to be taken during design, implementation, operation of maintenance phases of the project.
- (ii) Indigenous Peoples (OP4.10): This policy is not triggered. During preparation of the project document, screening was carried-out but did not confirm the presence of indigenous peoples in project areas. Indigenous people are located in Tsagaanuur *soum* of Khuvsgul *aimag* where Tsaatan (reindeer herders) people reside. Planned activities under project sub-components, in particular the sub-components 2.1 and 2.2 will not be extended to the countryside or remote *soum* where the indigenous peoples’ territory is located.

## 2. Key Obligations in Relation to the Safeguard Policies

### 2.1. Small-Scale Interior Remodeling under Component 1

12. *Activities.* Under Component 1, the MESP will finance physical upgrades of existing labor and social and welfare offices.<sup>2</sup> Physical upgrades will include small-scale interior remodeling to improve on-site self-registry (e.g. through a bank of computers), immediate attention to clients (e.g. through receptionist work places) and space to conduct job search trainings and counselling sessions (e.g. through glass partitions between offices).

13. *Potential environmental impacts.* Potential environmental impacts during short remodeling periods include noise, dust and solid waste generation that are sometimes associated with minor civil work activities. These impacts are expected to be small, localized and can be mitigated by incorporating good civil work practices, including proper housekeeping measures, proper material storage, temporary closure of facilities and disposal of solid waste and pollution control. In case existing labor buildings to be repaired and renovated under the project have asbestos-containing materials, asbestos hazards should be identified and a risk management plan should be adopted that includes disposal techniques. In addition, to ensure environmental sanitation and safety during operation, the design of physical upgrades should consider applicable quality standards including appropriate ventilation, trash bins, lighting, fire extinguishers, toilet facilities, ramps for disable people, etc. The intention of the remodeling is to improve and upgrade facilities, that is, environmental standards should be at least as high after construction than before and ideally higher.

14. *Mitigation strategy.* To minimize, as far as reasonably practicable, any adverse environmental impact of the remodeling, Contractors will be required to follow relevant national policies, regulations and standards, and the World Bank Group's Environment, Health and Safety (EHS) Guidelines, if applicable. Appropriate requirements should be included in the bidding documents and construction contracts for Contractors in the form of environmental code of practices (ECOPs), as appropriate. The website [www.ifc.org/ehsguidelines](http://www.ifc.org/ehsguidelines) contains the most updated versions of the World Bank Group's EHS Guidelines. Exemplary ECOPs to be included in the bidding documents and construction contracts are summarized in Table A2.1. For asbestos risk management, the ESMF refers to the WBG Good Practice Note on Asbestos: Occupational and Community Health Issues dated May 2009 (see Appendix 1). The Note outlines the health risks related to exposure to asbestos, lists resources on international good practices to minimize these risks, and describes some of the available alternatives to asbestos-containing products. This Note complements the guidance in the World Bank Group's EHS Guidelines by providing background and context. More general practices regarding asbestos that are normally considered acceptable by the World Bank Group in projects supported through its lending or other instruments are addressed in the EHS Guidelines.

### 2.2. Micro-Entrepreneurship Support under Component 2

15. *Activities.* Under component 2, the project will provide financial support (in the form mainly of micro-loans but also of interest rate relief and rental support) and a range of non-financial services to

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<sup>2</sup> Labor and social and welfare offices are the MLSP's local offices. They exist in all *aimag* centers (provincial capitals) and districts of Ulaanbaatar. There is also a capital city labor department in Ulaanbaatar. In this ESMF, the term "labor and social welfare office" always includes the capital city labor department.

micro-entrepreneurs. Beneficiaries will be concentrated mainly in the commerce, service and small-scale manufacturing sectors, such as tailoring, carpentry, shoe-making, vehicle repair/maintenance, internet cafés/IT services, hair salons, food and produce vendors. The MLSP's labor and social welfare offices will manage the beneficiary screening and selection process, which will be overseen by a multi-stakeholder Selection Panel. The project will not have direct investment to construct, expand or modernize the premises of existing or new micro-enterprise. It is not expected to finance micro-enterprises that pose substantial environmental risks. No significant, irreversible or major environmental impacts are anticipated.

16. Screening and selection will include three phases:

- (i) First, the labor and social welfare office's official in charge of the micro-entrepreneurship support program will screen applications according to whether they belong to the target population and, if yes, how many points they score according to priority criteria.<sup>3</sup> Applicants with scores above a cut-off will be longlisted and permitted to attend the relevant pre-loan training. The official will also provide or facilitate counselling to longlisted applicants.
- (ii) On completion of the relevant pre-loan training, longlisted applicants are referred to the Selection Panel which will shortlist applications based on additional selection criteria.<sup>4</sup> At this stage, the official in charge of the program will also screen applications with regard to their compliance with appropriate environmental safeguards.
- (iii) Shortlisted applicants will be referred to participating financial institutions that will evaluate the credit-worthiness of shortlisted applicants and decide whether micro-loans can be supplied. Micro-loans will be approved solely for business purposes, typically funding the purchase or repair of equipment, the purchase of materials, investing in quantity or quality of employment or entering new markets.

17. *Potential environmental impacts.* Most urban micro-enterprises in the commerce, service and small-scale manufacturing sectors pose no or only minimal environmental risks. Yet depending on the exact sector, some may produce noise, congestion, and litter. In areas where there is poor waste management infrastructure, refuse and litter from small businesses can be an environmental concern. Some urban businesses may encroach on and convert urban greenspaces (e.g. parks) and bodies of water for their own use. Safeguarding the well-being of workers and family members might also be a concern.<sup>5</sup>

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<sup>3</sup> The program will be open to all those who are either registered unemployed jobseekers or self-employed micro-entrepreneurs and want to start or grow a micro-enterprise. According to Mongolia's Employment Promotion Law, micro-enterprises are business entities with invested capital and annual sales of up to MNT 50 million (USD 22,000 at current exchange rates), and most project beneficiaries are expected to run micro-enterprises much smaller still. Within the target population, priority selection criteria will be (i) "citizens having difficulty finding employment" as defined in the Employment Promotion Law, (ii) young people aged 18 to 34, (iii) TVET, college or university graduates, and (iv) poverty status (as for instance measured by PMT scores).

<sup>4</sup> Additional selection criteria will be (i) entrepreneurial aptitude and (ii) job creation potential.

<sup>5</sup> In rural areas, some small-scale farmers engage in unsustainable resource use patterns. The result can be a loss of soil fertility on the farm plot and the elevated sedimentation of nearby streams, rivers, lakes and dams due to high rates of water runoff and attendant soil erosion. Inappropriate use, storage, and disposal of chemicals and fertilizers by small-scale farmers can also have negative impacts. Excessive nutrients can run off into water bodies, which might degrade water quality for downstream users and negatively affect some forms of aquatic life. Another possible impact is the improper use of agricultural pesticides, which may lead to the contamination of drinking water.

18. *Mitigation strategy.* The potential environmental impacts by micro-enterprises are seen to be site specific and readily managed with good practices during the implementation of the MESP. Applicable environmental safeguards requirements should be highlighted in the invitations to apply for micro-entrepreneurship support and should be integrated into the screening and selection process.

As part of the screening and selection process, labor and social welfare offices should perform an environmental due diligence and screening of long-listed applicants. This due diligence and screening should be used to determine if a proposal (i) is in a pollution-intensive sector that poses substantial environmental risks (as listed in Table A2.2), involves prohibited activities (as listed in Table A2.4) or is otherwise not eligible (“Not Eligible”); (ii) poses moderate environmental risks and is eligible subject to abidance to applicable general and sector-specific EHS guidelines and/or the implementation of a site-specific mitigation plan (“Moderate Impacts”); or (iii) poses minimal or no environmental risks and is eligible subject to abidance to applicable general EHS guidelines (“Minor or No Impacts”).<sup>6</sup> The categorization of micro-enterprises is based on relevant Mongolian regulations and World Bank safeguard operational policies.

19. The due diligence and screening process should utilize two environmental screening templates (Table A2.2 and A2.3) to categorize applications into “Not Eligible”, “Moderate Impacts” or “Minor or No Impacts.” The process should also utilize Tables A2.4, A2.5 and A2.6, to assist potential beneficiaries in avoiding prohibited activities and following applicable general and sector-specific EHS guidelines. It should consist of the following steps:

- (i) Applicants should complete a first environmental screening template. This should include:
  - a. a concise description of the micro-business proposal,
  - b. a question whether the applicant certifies that the proposed micro-business does not involve any of a list of prohibited activities,
  - c. a question whether the applicant certifies either to have already obtained necessary permits, if any, or to obtain them before commencing the operation of the proposed micro-business,
  - d. a question whether the applicant certifies to abide by applicable general EHS guidelines, the proposed micro-loan amount,
  - e. the proposed sector,
  - f. a question whether the applicant certifies to abide by applicable sector-specific EHS guidelines (only for the category of “Moderate Impacts”),
  - g. a question whether the applicant proposes a site-specific mitigation plan (only for the category of “Moderate Impacts”).

The appropriate templates should be based on the one in Table A2.2 as well as on the list of prohibited activities in Table A2.4, the general EHS guidelines for micro-enterprises in Table A2.5 and selected sector-specific EHS guidelines in Table A2.6. The template will be completed by the applicants, if necessary with help from the officials in charge of the micro-entrepreneurship support program.

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<sup>6</sup> Giving applicants the choice between following applicable sector-specific EHS guidelines or formulating site-specific mitigation plans reduces transaction cost but also allows for site- and operation- specific measures.

- (ii) The officials in charge should complete a second environmental screening template based on review of the first template. This should determine if:
  - a. based on the sector, the proposed micro-business is ineligible,
  - b. the applicant certifies that the proposed micro-business does not involve prohibited activities,
  - c. the applicant certifies that necessary permits have been obtained or will be obtained,
  - d. the applicant certifies abidance to applicable general EHS guidelines,
  - e. the proposed micro-loan amount is below MNT 12,000,000,
  - f. the indicated sector is consistent with the project description and indicates that the proposed micro-business poses minimal or no environmental risks,
  - g. the applicant certifies to abide to applicable sector-specific EHS guidelines or presented a credible site-specific mitigation plan.

The appropriate template should be based on the one in Table A2.3.<sup>7</sup>

20. Labor and social welfare offices should provide shortlisted applicants with copies of the list of prohibited activities and general EHS guidelines and if relevant sector-specific EHS guidelines. They should also inform applicants that false statements in the environmental screening or non-compliance with applicable general or sector-specific EHS guidelines or site-specific mitigation plans will result in exclusion from the micro-entrepreneurship support program and place the completed templates based on Tables A2.2 and A2.3 in the appropriate files.

21. To avoid duplication and minimize transaction costs, the MLSP will be free to alter the layout and formatting of the templates based on the ones in Tables A2.2 and A2.3 and to integrate them into more comprehensive templates for applicants or officials. However, any substantial modification of the content of the templates as described in paragraph 19 of this ESMF would necessitate an update to the ESMF.

22. As part of regular supervision activities, labor and social welfare offices should make random spot checks among approved project beneficiaries in the category of “Moderate Impacts” to verify that operations on the ground are in compliance with applicable general and sector-specific EHS guidelines and/or proposed site-specific mitigation plans. Labor and social welfare offices should document the supervision activities and place documentation in the appropriate files.<sup>8</sup>

### **2.3. Potential Social Impact of the Project**

23. The project is expected to have positive social impacts by enabling intended beneficiaries, including citizens having difficulty finding employment, particularly youth aged 18 to 34 and poor households to access secure employment or create job places for themselves, leading to a reduction in the number of unemployed persons and unemployment rate in Mongolia. Furthermore, the project will in-

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<sup>7</sup> To economize on transaction costs for proposals with moderate environmental risk, a cutoff loan amount of MNT 12,000,000 will be set based on typical loan demand patterns and the level of economic development in Mongolia.

<sup>8</sup> Many urban micro-enterprises in the commerce, service and small-scale manufacturing sectors are located close to other such enterprises, often in semi-public or overlapping spaces. During random spot checks, labor and social welfare offices should verify that project beneficiaries’ own activities are in compliance with applicable general and sector-specific EHS guidelines and/or proposed site-specific mitigation plans. Project beneficiaries should not be held responsible for environmental impacts resulting from other, unrelated micro-businesses located close-by.



directly contribute in addressing social issues related to poverty and youth unemployment such as crime occurrence, alcohol dependency and depression.

24. The project will not result in significant adverse social impacts, such as physical relocation of people or acquisition of private lands. Likewise, restriction of access to national parks or losses of income, are also not expected.

25. However, a potential risk of exclusion may exist for rural-to-urban migrants who resettled in the urban areas and vulnerable groups (e.g. female and male heads of households and marginalized youth). A World Bank study on urban service delivery in Ulaanbaatar found out that the administrative procedures to integrate the incoming residents have not kept up despite strong waves of rural-to-urban migration in the past years.<sup>9</sup> Lack of understanding of formal procedures, or lengthy administrative requirements that require time off work, has resulted in denied access to social services, loss of wages and even other economic costs, such as the inability to use registration and residency documentation as guarantee for a loan.<sup>10</sup> Another World Bank commissioned study on urban poverty profile of Ulaanbaatar city highlights that exclusionary mechanisms such as residency-based access to social services and lack of proper identification documents and residency registration may impede rural-to-urban migrants and vulnerable groups' access to basic services.<sup>11</sup> Access to social services including public employment support services are tied to residency status and provided at the respective districts and *khoroos* in Ulaanbaatar city and *aimag* centers and *soums* in 21 provinces. In order words, the residency registration or registration to a specific *soum* in an *aimag* or *khoroos* in a district is essential to access the social services.

26. More generally, persistent inequality in economic opportunities exist for women due to the burden of caretaking responsibilities and lack of institutional support among others. Hence, outreach efforts will be designed in way to reach, inform and involve these target beneficiaries in the employment support programs. Following measures are proposed to facilitate improved participation of rural-to-urban migrants and vulnerable groups in the employment promotion programs:

Table 2: Proposed measures for improved participation of urban-to-rural migrants and vulnerable groups

No.	Target group	Constraints to participation	Measures to overcome constraints
1	Rural-to-urban migrants	<ul style="list-style-type: none"> <li>• Lack of understanding of formal procedures or lengthy administrative requirements;</li> <li>• Lack of residency registration;</li> <li>• Lack of proper ID documents;</li> </ul>	<ul style="list-style-type: none"> <li>• To organize outreach efforts to inform and to raise awareness of employment promotion programs for target groups;</li> <li>• To provide food and transportation allowance to make up the income loss for target groups taking part in the employment promotion activities of Subcomponent 2.1;</li> <li>• To encourage pilot employment pro-</li> </ul>
2	Female/male heads of households		
3	Marginalized youth (both unemployed and self-employed)		

<sup>9</sup> World Bank. Towards Inclusive Urban Service Delivery in Ulaanbaatar, Mongolia. Unpublished World Bank report (2016)

<sup>10</sup> Ibid.

<sup>11</sup> World Bank. Social and Community Dynamics of Vulnerability in Ulaanbaatar City: Two Groups Living on the Edge. Unpublished manuscript (2016)

		<ul style="list-style-type: none"> <li>• Loss of wages and other economic costs</li> </ul>	<p>motion programs enabling reach young people and the most vulnerable to benefit from the employment supports.</p>
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### 3. Institutional Arrangement to Implement Environmental and Social Management Framework

27. As the project-implementing agency, the MLSP will be responsible for overall project implementation coordination and results monitoring. The offices of MSLP, namely, LSPGO, LSPRI and labor and social welfare offices will be involved in the implementation of the project subcomponents. The LSPGO will be involved in the implementation of all components and in particular Subcomponent 1.2 and Subcomponent 2.3. Labor and social welfare offices will be responsible for implementing Subcomponents 1.1, 2.1, 2.2 and 2.3 on the ground. The LSPRI will be the primary implementing agency for Subcomponent 3.1.

28. The Project Implementation Unit (PIU) to be established by the MLSP has committed to following the environmental and social safeguards approach outlined in this ESMF, including though the selective monitoring of the screening and selection of micro-enterprises by labor and social welfare offices, if appropriate with support from the GOLSWs. As part of the IDA financing of the MESP, a budget allocation will be provided to the PIU for the purpose of overseeing the adherence to environmental and social safeguards policies. This allocation should in particular be used for the following activities:

- (i) Conduct public awareness activities or trainings to help beneficiaries of micro-entrepreneurship support improve environmental, health and safety performance;
- (ii) Support, train and mentor staff of labor and social welfare offices on environmental safeguards in order to be able to manage the beneficiary screening and monitoring efficiently and effectively;
- (iii) In cooperation with the Department of Occupational Safety and Health under the MLSP, develop sector-specific guidelines for sectors that are common among micro-enterprises and pose moderate environmental risks, as needed;
- (iv) Maintain contact and communication with appropriate officials from the competent environmental, health and safety authorities in the cities and regions of project implementation.

### 4. Public Consultation and Information Disclosure

29. Following World Bank policies, public consultation with key grassroots stakeholders, such as micro-enterprises, and residents who might be affected by the microenterprises' activities in local communities were arranged by the MLSP in the Nalaikh district of Ulaanbaatar and Tuv aimag on November 18, 2016. The purpose of the public consultation was to inform local population groups which might be affected by the project and provide them with an opportunity to express their views regarding any adverse environmental risks that, in their view, might arise. In terms of program agenda, the consultation included a presentation on the MESP following the structure of this ESMF (project design, potential environmental safeguards issues, and steps to address these) and an open discussion including questions and answers. The participants of the consultation meetings welcomed the process of informing the public about the project during its design stage and having such consultation meetings. Overall, the planned project activities are seen as appropriate. The project intention to help especially the unemployed youth

is appreciated. The issues raised during the consultations included selection of the project beneficiaries, loan size (to be not too small), high requirements by participating banks, the possibility of disbursing loans through non-banking financial institutions, the need for non-financial supports such as training on book keeping and financial reporting as well as developing market links, the possibility of applying for subsequent loans as well as the need for training of labor officers. Discussions also covered the environmental and social management framework issues and highlighted that all activities under the project must have no adverse effects on environment and the indigenous population. The required standards for safety at work places, waste disposal and transportation, dust and noise etc have been also discussed. Overall, the requirements to pay more attention to the safety of workers and the community as well as potential risks and mitigation actions are seen as a good practice to be reinforced.

30. The World Bank procedures also require this ESMF to be publicly disclosed prior to project appraisal. This will allow all relevant stakeholders to comment on possible environmental and social impacts. It will also give the MLSP and the World Bank an opportunity to revise and strengthen this ESMF, as appropriate. This version of this ESMF will be publicly disclosed on the website <http://www.khun.gov.mn/> and through the World Bank's InfoShop.

31. Outreach efforts will ensure that poor and vulnerable groups (such as long-term unemployed, social welfare recipients, households with low PMT scores, rural-to-urban migrants, and women) are aware of the employment promotion programs. Communication and information dissemination strategies will be developed to inform intended beneficiary about the employment promotion programs that the project will implement. Also, the relevant information dissemination documents including this ESMF will be easily accessible to the public on a website operated by the MLSP.

32. This strategy will require the local labor and social welfare offices in all 9 districts and 21 provincial centers to inform the intended beneficiaries in their jurisdictions about the project in general and employment promotion programs in particular (e.g. how they may participate).

## **5. Grievance Redress Mechanism**

### **5.1. National Grievance Redress Mechanism**

33. The Law on the Resolution of Petitions and Complaints from the Citizens to State Bodies and Office-holders (1995) regulates the national grievance redress mechanism. A citizen of Mongolia is entitled to submit a petition or complaint individually or collectively to a state body and/or office-holder and obtain a response for the submitted petition or complaint.<sup>12</sup> In case a citizen is not in agreement with the response provided to his or her petition or complaint, he or she is entitled to submit a complaint to a higher level of office-holder. On the other hand, the state bodies and office-holders are obliged to review the measures taken by the affiliated or lower level of entities on grievances redressed and regularly publicize the information on grievances redressed through media outlets. A petition or complaint may be lodged in written or verbal formats or through online system. Every state body is required to have a

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<sup>12</sup> Legal timeline for petition and complaint resolution is 30 calendar days, which can be extended for another 30 days by a state body to which a petition or complaint is lodged to. The Cabinet Secretariat is responsible for management and organization of grievance redressing activities at state administrative and local administrative bodies while the ministers and governors of capital city and provinces may provide final responses to the petition or complaints on matters concerning their respective functions under the law.

website under the law. The project will rely on this existing national grievance redress mechanism to address the complaints that may arise in relation to the project implementation.

## **5.2. World Bank Grievance Redress Mechanism**

34. Communities and individuals who believe that they are adversely affected by a World Bank supported project may submit complaints to existing project-level grievance redress mechanisms or the World Bank's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the World Bank's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of World Bank's non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit [www.worldbank.org/grs](http://www.worldbank.org/grs). For information on how to submit complaints to the World Bank Inspection Panel, please visit [www.inspectionpanel.org](http://www.inspectionpanel.org).

## **6. Supervision and Monitoring**

35. Supervision and monitoring of this ESMF will include internal and external monitoring activities. Specific activities under internal monitoring include regular monitoring and review of implementation progress on the ESMF, keeping records of grievances and carrying out follow-up checks to ensure that appropriate actions have been undertaken and that the outcomes are satisfactory. For the external monitoring, independent review will be included in the general project reviews at mid-term and at completion of the project. The mid-term review will identify any necessary measures to improve the implementation of and compliance to the ESMF. In addition, the World Bank may conduct review missions to support the PIU in overseeing and monitoring the implementation of the ESMF as part of regular project implementation support.

## **7. Training and Capacity Building**

36. Given the limited capacity of the implementing agency and its PIU, the capacity building and training program on implementation and monitoring of ESMF should be established, as mentioned in Section 3. As the project pace will pick up and knowledge and capacity of the local labor officers will increase, the implementation of the ESMF will depend more and more on labor and social welfare offices. It is advisable to prepare a simple note on how to implement the ESMF with format that easily understandable by beneficiaries as well as local labor officers.

## **Appendix 1: World Bank Group Good Practice Note “Asbestos – Occupational and Community Health Issues”**

### **A1.1. Summary**

The purpose of this Good Practice Note is to increase the awareness of the health risks related to occupational asbestos exposure, provide a list of resources on international good practices available to minimize these risks, and present an overview of some of the available product alternatives on the market. The need to address asbestos-containing materials (ACM) as a hazard is no longer under debate but a widely accepted fact.

Practices regarding asbestos that are normally considered acceptable by the World Bank Group (WBG) in projects supported through its lending or other instruments are addressed in the WBG’s General Environmental, Health and Safety (EHS) Guidelines.<sup>13</sup> This Good Practice Note provide background and context for the guidance in the WBG EHS Guidelines.

Good practice is to minimize the health risks associated with ACM by avoiding their use in new construction and renovation, and, if installed asbestos-containing materials are encountered, by using internationally recognized standards and best practices (such as those presented in Appendix 3 at <https://siteresources.worldbank.org/EXTPOPS/Resources/AsbestosGuidanceNoteFinal.pdf>) to mitigate their impact. In all cases, the Bank expects borrowers and other clients of World Bank funding to use alternative materials wherever feasible.

ACM should be avoided in new construction, including construction for disaster relief. In reconstruction, demolition, and removal of damaged infrastructure, asbestos hazards should be identified and a risk management plan adopted that includes disposal techniques and end-of-life sites.

### **A1.2. Asbestos and Health Risks**

#### **A1.2.1 What is Asbestos, and Why are We Concerned with its Use**

Asbestos is a group of naturally occurring fibrous silicate minerals. It was once used widely in the production of many industrial and household products because of its useful properties, including fire retardation, electrical and thermal insulation, chemical and thermal stability, and high tensile strength. Today, however, asbestos is recognized as a cause of various diseases and cancers and is considered a health hazard if inhaled.<sup>14</sup> The ILO estimates that over the last several decades 100,000 deaths globally have been due to asbestos exposure,<sup>15</sup> and the WHO states that 90,000 people die a year globally because of occupational asbestos exposure.<sup>16</sup>

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<sup>13</sup> [http://www.ifc.org/ifcext/enviro.nsf/AttachmentsByTitle/gui\\_EHSGuidelines2007\\_GeneralEHS/\\$FILE/Final+-General+EHS+Guidelines.pdf](http://www.ifc.org/ifcext/enviro.nsf/AttachmentsByTitle/gui_EHSGuidelines2007_GeneralEHS/$FILE/Final+-General+EHS+Guidelines.pdf) (pp. 71, 91, 94).

<sup>14</sup> [http://www.who.int/occupational\\_health/publications/draft.WHO.policy.paper.on.asbestos.related.diseases.pdf](http://www.who.int/occupational_health/publications/draft.WHO.policy.paper.on.asbestos.related.diseases.pdf). See also Stayner L, et al., “Exposure-Response Analysis of Risk of Respiratory Disease Associated with

<sup>15</sup> [http://www.ilo.org/wow/Articles/lang--en/WCMS\\_081341](http://www.ilo.org/wow/Articles/lang--en/WCMS_081341)

<sup>16</sup> [http://www.who.int/occupational\\_health/publications/asbestosrelateddiseases.pdf](http://www.who.int/occupational_health/publications/asbestosrelateddiseases.pdf)

Over 90% of asbestos<sup>17</sup> fiber produced today is chrysotile, which is used in asbestos-cement (A-C) construction materials: A-C flat and corrugated sheet, A-C pipe, and A-C water storage tanks. Other products still being manufactured with asbestos content include vehicle brake and clutch pads, roofing, and gaskets. Though today asbestos is hardly used in construction materials other than asbestos-cement products, it is still found in older buildings in the form of friable surfacing materials, thermal system insulation, non-friable flooring materials, and other applications. The maintenance and removal of these materials warrant special attention.

Because the health risks associated with exposure to asbestos area now widely recognized, global health and worker organizations, research institutes, and some governments have enacted bans on the commercial use of asbestos (See Box 1 at <https://siteresources.worldbank.org/EXTPOPS/Resources/AsbestosGuidanceNoteFinal.pdf>), and they urge the enforcement of national standards to protect the health of workers, their families, and communities exposed to asbestos through an International Convention.<sup>18</sup>

### **A1.2.2. Health Concerns Linked to Asbestos-Containing Products**

Health hazards from breathing asbestos dust include asbestosis, a lung scarring disease, and various forms of cancer (including lung cancer and mesothelioma of the pleura and peritoneum).<sup>19</sup> These diseases usually arise decades after the onset of asbestos exposure. Mesothelioma, a signal tumor for asbestos exposure, occurs among workers' family members from dust on the workers' clothes and among neighbors of asbestos air pollution point sources.<sup>20</sup> Some experimental animal studies show that high inhalation exposures to all forms of asbestos for only hours can cause cancer.<sup>21</sup> Very high levels of airborne asbestos have been recorded where power tools are used to cut A-C products and grind brake shoes. For chrysotile asbestos, the most common variety, there is no threshold (non-zero) of exposure that has been shown to be free from carcinogenic risks. Construction materials are of particular concern, because of the large number of workers in construction trades, the difficulty of instituting control measures, and the continuing threat posed by in-place materials that eventually require alterations, repair, and disposal.<sup>22</sup> Renovations and repairs in buildings containing A-C materials can also endanger building occupants. In addition to the problems from products made with commercial asbestos, asbestos also occurs as a contaminant in some deposits of stone, talc, vermiculite, iron ore, and other minerals. This can create health hazards for workers and residents at the site of excavation and in some cases in the manufacture and use of consumer products the materials are used to make. While asbestos is a known carcinogen when inhaled, it is not known to be carcinogenic when ingested, as through drinking

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<sup>17</sup> Asbestos defined in Castleman, B. *Asbestos: Medical and Legal Aspects* 5<sup>th</sup> Ed. New York: Aspen, 2005, 894 pp.

<sup>18</sup> ILO Asbestos Convention No. 162, (see <http://www.ilo.org/ilolex> or [http://www.itcilo.it/actrav/osh\\_es/m%F3dulos/legis/c162.htm](http://www.itcilo.it/actrav/osh_es/m%F3dulos/legis/c162.htm))

<sup>19</sup> [http://www.euro.who.int/document/aiq/6\\_2\\_asbestos.pdf](http://www.euro.who.int/document/aiq/6_2_asbestos.pdf)

<sup>20</sup> "Asbestos." *World Health Organization IARC Monographs on the Evaluation of Carcinogenic Risks to Humans/ Overall Evaluations of Carcinogenicity: An Updating of IARC Monographs 1 to 42, Suppl. 7*. Lyon: International Agency for Research on Cancer, 1987, pp. 106-116.

<sup>21</sup> Wagner JC, Berry G, Skidmore JW, Timbrell V. "The Effects of the Inhalation of Asbestos in Rats." *Br. J. Cancer* 29: 252-269 (1974).

<sup>22</sup> International Program on Chemical Safety, "Conclusions and Recommendations for Protection of Human Health," *Chrysotile Asbestos*, Environmental Health Criteria 203. Geneva: World Health Organization, 1998, p. 144.

water,<sup>23</sup> although pipe standards have been issued for asbestos-cement pipes conducting “aggressive” water.<sup>24</sup>

From the industrial hygiene viewpoint, asbestos creates a chain of exposure from the time it is mined until it returns to the earth at landfill or unauthorized disposal site. At each link in the chain, occupational and community exposures coexist. Workers in the mines are exposed to the fibers while extracting the ore; their families breathe fibers brought home on work clothes; workers in the mills and factories process the fiber and manufacture products with it; and their families are also secondarily exposed. Communities around the mines, mills, and factories are contaminated with their wastes; children play on tailings piles and in contaminated schoolyards; transportation of fiber and products contaminates roads and rights-of-way.<sup>25</sup> Tradesmen who install, repair and remove ACM are exposed in the course of their work, as are bystanders in the absence of proper controls. Disposal of asbestos wastes from any step in this sequence not only exposes the workers handling the wastes but also local residents when fibers become airborne because of insufficient covering and erosion control. Finally, in the absence of measures to remove ACM from the waste stream and dispose of them properly, the cycle is often repeated when discarded material is scavenged and reused.<sup>26</sup>

### **A1.2.3. Increasing Use of Asbestos Fiber**

There is evidence that, after a decline in the 1990s, the use of asbestos fiber is increasing globally. A recent study<sup>27</sup> shows that a 59% increase in metric tons was consumed in 12 countries from 2000 to 2004.

## **A1.3. International Convention and Standards for Working with Asbestos**

### **A1.3.1. International Convention**

The International Labor Organization (ILO) established an Asbestos Convention (C162) in 1986 to promote national laws and regulations for the “prevention and control of, and protection of workers against, health hazards due to occupational exposure to asbestos.”<sup>28</sup> The convention outlines aspects of best practice: Scope and Definitions, General Principles, Protective and Preventive Measures, Surveillance of the Working Environment, and Workers’ Health. As of March 4, 2008, 31 countries had ratified the Convention;<sup>29</sup> 17 of them have banned asbestos.

Some of the ILO asbestos convention requirements:

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<sup>23</sup> [http://whqlibdoc.who.int/hq/2000/a68673\\_guidelines\\_3.pdf](http://whqlibdoc.who.int/hq/2000/a68673_guidelines_3.pdf)

<sup>24</sup> [http://whqlibdoc.who.int/hq/2000/a68673\\_tech\\_aspects\\_4.pdf](http://whqlibdoc.who.int/hq/2000/a68673_tech_aspects_4.pdf)

<sup>25</sup> Jones, Robert “Living in the Shadow of the Asbestos Hills (The Need for Risk Based Cleanup Strategies for Environmental Asbestos Contamination in South Africa).” Environmental Exposure, Crisis Preparedness and Risk Communication, Global Asbestos Congress, Tokyo, Japan, November 19 - 21, 2004. [http://park3.wakwak.com/~gac2004/en/index\\_abstract\\_e.html](http://park3.wakwak.com/~gac2004/en/index_abstract_e.html). See also Oberta, AF “Case Study: An Asbestos Cement Plant in Israel -- Contamination, Clean-up and Dismantling.” Hellenic Asbestos Conference, Athens, Greece, October 29 - 31, 2002. [http://www.ibas.btinternet.co.uk/Frames/f\\_lka\\_hellen\\_asb\\_conf\\_rep.htm](http://www.ibas.btinternet.co.uk/Frames/f_lka_hellen_asb_conf_rep.htm)

<sup>26</sup> Boer, A.M., L.A. Daal, J.L.A. de Groot, J.G. Cuperus “The Combination of the Mechanical Separator and the Extraction Cleaner Can Process the Complete Asbestos-containing Waste-stream and Make it Suitable for Reuse.” European Conference on Asbestos Risks and Management, Rome, Italy, December 4 -6, 2006. <http://venus.unive.it/fall/menu/Boer.pdf>

<sup>27</sup> R. Virta, US Geological Survey, 2007.

<sup>28</sup> [www.ilo.org/ilolex](http://www.ilo.org/ilolex)

<sup>29</sup> <http://www.ilo.org/ilolex/english/convdisp1.htm>



- work clothing to be provided by employers;
- double changing rooms and wash facilities to prevent dust from going home on street clothes;
- training of workers about the health hazards to themselves and their families;
- periodic medical examinations of workers,
- periodic air monitoring of the work environment, with records retained for 30 years;
- development of a work plan prior to demolition work, to protect workers and provide for proper waste disposal; and
- protection from “retaliatory and disciplinary measures” of workers who remove themselves from work that they are justified in believing presents a serious danger to health.

Standard considerations for working with and procuring ACM are common to most projects. An overview of some basic ones is provided in Appendix 5 at <https://siteresources.worldbank.org/EXTPOPS/Resources/AsbestosGuidanceNoteFinal.pdf>.

### A1.3.2. International Standards and National Regulations

Standards and regulations for work involving ACM have been published by nongovernmental organizations and government agencies. Appendix 3 at <https://siteresources.worldbank.org/EXTPOPS/Resources/AsbestosGuidanceNoteFinal.pdf> provides a listing of some resources, including international organizations (e.g., WHO, ISO, ASTM) and national governments (e.g., UK, US, Canada, South Africa). The resources range from manuals to individual standards and cover a variety of work guidelines, including surveys, identification, inspection, maintenance, renovation, repair, removal, and disposal. Some of the key issues discussed in these standards and regulations are as follows:

- **The scale of occupational hazards.** The health risk is not simply a function of the properties of the ACM, but also reflects the type of work being done and the controls used. Although A-C products, for example, may seem to intrinsically present less of a risk than fire-proofing, air monitoring has shown that cutting dry A-C sheet with a power saw can release far greater amounts of airborne fibers than scraping wet, saturated fireproofing off a beam. The relationship between the nature of A-C products, the work being done and the controls used to control the release of fibers and debris is important (as discussed in ASTM E2394 and HSG189/2<sup>30</sup>).
- **Controlling exposure to airborne fibers.** Because asbestos fibers are primarily an inhalation hazard, the basic purpose of the regulations and standards is to control the concentration of asbestos fibers in the air inhaled by workers or others. Concentration limits have been set by regulations in numerous countries for workers whose duties involve contact with ACM; however, they do not purport to totally eliminate the risk of asbestos disease, but only to reduce it. Exposure limits for individuals other than workers, including occupants of buildings and facilities and the community, are lower than those for workers in deference to the very young and old as well as the physically compromised.
- **Measuring exposure to airborne fibers.** Compliance with exposure limits is demonstrated by air sampling in workers’ breathing zone or in the space occupied by the affected individuals, with analysis of the sample by optical or electron microscopy, as explained in Appendix 3 at

<sup>30</sup> See Appendix 3 at <https://siteresources.worldbank.org/EXTPOPS/Resources/AsbestosGuidanceNoteFinal.pdf>.

<https://siteresources.worldbank.org/EXTPOPS/Resources/AsbestosGuidanceNoteFinal.pdf>.

Abatement protocols determine whether a building can be reoccupied after asbestos abatement.

- **Proper disposal.** Proper disposal of ACM is important not only to protect the community and environment but also to prevent scavenging and reuse of removed material. ACM should be transported in leak-tight containers to a secure landfill operated in a manner that precludes air and water contamination that could result from ruptured containers. Similar requirements apply to remediation of sites such as mines, mills, and factories where asbestos fiber was processed and products manufactured. (See EPA NESHAP regulations, Appendix 3 at <https://siteresources.worldbank.org/EXTPOPS/Resources/AsbestosGuidanceNoteFinal.pdf>.)
- **Transboundary movement of waste.** Waste asbestos (dust and fibers) is considered a hazardous waste under the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal. The Basel Convention imposes use of a prior informed consent procedure for movement of such wastes across international borders. Shipments made without consent are illegal. Parties have to ensure that hazardous waste is disposed of in an environmentally sound manner (ESM. Strong controls have to be applied from the moment of generation, to its storage, transport, treatment, reuse, recycling, recovery and final disposal<sup>31</sup>)
- **Identifying asbestos products.** A-C products include flat panels, corrugated panels used for roofing, water storage tanks, and pressure, water, and sewer pipes. In some countries asbestos may still be used in making wallboard, heat-resistant gloves and clothes for industrial use, and brake and clutch friction elements and gaskets used in vehicles.<sup>32</sup> Thermal insulation containing asbestos and sprayed asbestos for insulation and acoustic damping were widely used through the 1970s and should be looked for in any project involving boilers and insulated pipes. Insulation dating from before 1980 should be presumed to contain asbestos unless analyzed and found not to. The microscopic methodology for analyzing bulk samples for the presence of asbestos is widely available in industrialized countries and is not expensive; it is less available in developing countries. In a developing country samples may have to be mailed out for testing; alternatively, training may be available for a laboratory in the country.
- **Training.** It is impossible to overemphasize the importance of training for working with ACM in any capacity—whether it involves inspections, maintenance, removal, or laboratory analysis. The duration of the training as well as the course content depends on the type of work the individual will be doing. Quality control and proficiency testing for laboratories and individual analysts are also important.

#### **A1.4. Alternatives to Asbestos-Containing Materials**

##### **A1.4.1. Growing Marketplace**

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<sup>31</sup> See Basel Convention Secretariat <http://www.basel.int/>

<sup>32</sup> In 2004, Russia, China, India, Kazakhstan, Thailand, and Ukraine together accounted for about three-quarters of world asbestos consumption. Other major consumers of asbestos are Iran, Brazil, Vietnam, and Indonesia.

Safer substitutes for asbestos products of all kinds are increasingly available (see Appendix 4 at <https://siteresources.worldbank.org/EXTPOPS/Resources/AsbestosGuidanceNoteFinal.pdf>). These include fiber-cement products using combinations of local vegetable fibers and synthetic fibers, as well as other products that serve the same purposes.<sup>33</sup> The WHO is actively involved in evaluating alternatives.<sup>34</sup>

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<sup>33</sup> 7. The U.K. Health and Safety Executive commissioned a report that concluded that the main replacement fibrous materials for asbestos in fiber-cement products and brakes are less hazardous than chrysotile asbestos. See Harrison PTC, *et al.* "Comparative Hazards of Chrysotile Asbestos and Its Substitutes: A European Perspective." *Envir. Health Persp.* 107: 607-611 (1999). <http://www.ehponline.org/members/1999/107p607-611harrison/harrison-full.html>

<sup>34</sup> <http://www.who.int/ipcs/assessment/asbestos/en/>

#### **A1.4.2. Cost and Performance Issues**

Fiber-cement roof panels using polyvinyl alcohol (PVA) or polypropylene combined with cellulose now cost 10-15% more to manufacture than A-C sheets. Polypropylene-cellulose-cement roofing, a new product, is made at a cost of about 12 percent more than A-C roofing and has superior impact resistance. The non-asbestos fiber-cement panels are lighter, less brittle, and have improved nailability over A-C. The increase in the overall cost of building construction that such products represent is to some degree offset by the obviation of special hygiene measures in installation/maintenance/renovation, the lack of a continuing hazard to building workers and occupants, and reduced costs of waste removal and disposal. Micro concrete tiles are cheaper than A-C to produce, and can be made in a basic workshop near the building site with locally available small contractors and materials, lowering transport costs. Compared with A-C pipes, iron pipes can be transported and installed with less difficulty and breakage, take greater compression loading and last longer.

#### **A1.4.5. WORLD BANK GROUP APPROACH TO ASBESTOS HEALTH RISK**

The WBG EHS Guidelines are technical reference documents with general and industry-specific examples of Good International Industry Practice (GIIP).<sup>35</sup> When one or more members of the WBG are involved in a project, the EHS Guidelines are applied as required by their respective policies and standards.

The WBG's EHS Guidelines<sup>36</sup> specify that the use of ACM should be avoided in new buildings and construction or as a new material in remodeling or renovation activities. Existing facilities with ACM should develop an asbestos management plan that clearly identifies the locations where the ACM is present, its condition (e.g., whether it is in friable form or has the potential to release fibers), procedures for monitoring its condition, procedures to access the locations where ACM is present to avoid damage, and training of staff who can potentially come into contact with the material to avoid damage and prevent exposure. The plan should be made available to all persons involved in operations and maintenance activities. Repair or removal and disposal of existing ACM in buildings should be performed only by specially trained personnel<sup>37</sup> following host country requirements or, if the country does not have its own requirements, internationally recognized procedures.<sup>38</sup> Decommissioning sites may also pose a risk of exposure to asbestos that should be prevented by using specially trained personnel to identify and carefully remove asbestos insulation and structural building elements before dismantling or demolition.<sup>39</sup>

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<sup>35</sup> Defined as the exercise of professional skill, diligence, prudence, and foresight that would be reasonably expected from skilled and experienced professionals engaged in the same type of undertaking under the same or similar circumstances globally. The circumstances that skilled and experienced professionals may find when evaluating the range of pollution prevention and control techniques available to a project may include, but are not limited to, varying levels of environmental degradation and environmental assimilative capacity as well as varying levels of financial and technical feasibility

<sup>36</sup> [http://www.ifc.org/ifcext/enviro.nsf/AttachmentsByTitle/gui\\_EHSGuidelines2007\\_GeneralEHS/\\$FILE/Final+-General+EHS+Guidelines.pdf](http://www.ifc.org/ifcext/enviro.nsf/AttachmentsByTitle/gui_EHSGuidelines2007_GeneralEHS/$FILE/Final+-General+EHS+Guidelines.pdf) (pp. 71, 91, 94)

<sup>37</sup> Training of specialized personnel and the maintenance and removal methods applied should be equivalent to those required under applicable regulations in the United States and Europe (examples of North American training standards are available at: <http://www.osha.gov/SLTC/asbestos/training.html>)

<sup>38</sup> Examples include the ASTM International E1368 - Standard Practice for Visual Inspection of Asbestos Abatement Projects; E2356 - Standard Practice for Comprehensive Building Asbestos Surveys; and E2394 - Standard Practice for Maintenance, Renovation and Repair of Installed Asbestos Cement Products.

<sup>39</sup> [http://www.ifc.org/ifcext/enviro.nsf/AttachmentsByTitle/gui\\_EHSGuidelines2007\\_GeneralEHS/\\$FILE/Final+-General+EHS+Guidelines.pdf](http://www.ifc.org/ifcext/enviro.nsf/AttachmentsByTitle/gui_EHSGuidelines2007_GeneralEHS/$FILE/Final+-General+EHS+Guidelines.pdf) (pp. 71, 91, 94)

## Appendix 2: Tables

**Table A2.1: Exemplary ECOPs**

<b>Items</b>	<b>Mitigation measures</b>
<b><i>Prohibitions</i></b>	The following activities are prohibited on or near construction sites: (1) Cutting of trees for any reason outside the approved construction area; (2) Illegal dumping of demolition material and debris; (3) Use of unapproved toxic materials, including lead-based paints, asbestos, etc.; (4) Disturbance to anything with architectural or historical value; (5) Burning of waste;
<b><i>Working hours</i></b>	Core working hours should be from 0800 to 1800 on weekdays and 0800 to 1300 on weekend. Noisy operations shall not take place outside these hours without prior approval from the PIU and relevant authorities. Individual construction site requirements which differ from the above should be considered on a site-by-site basis.
<b><i>Good house-keeping</i></b>	The Contractor should follow a ‘good housekeeping’ policy at all times. This should include, but not necessarily be limited to the following: (1) Ensure considerate behavior of the Contractor’s staff; (2) Prohibit open fires; (3) Ensure that appropriate provisions for dust control and road cleanliness are implemented; (4) Remove rubbish at frequent intervals, leaving the construction sites clean and tidy; (5) Remove food waste; (6) Frequently inspect, repair and re-paint as necessary all construction site hoardings (7) Remove all flying posts/boards as soon as reasonably practicable and within 24 hours of notice; (8) Maintain toilet facilities and other welfare facilities for staff;
<b><i>Public information and site access</i></b>	Any un-authorized entry to or exit from the construction sites should be restricted as much as possible. Upon request, the Contractor should provide public information on the construction program (start and finish dates), plus a telephone number for public contacts and/or requests.
<b><i>Construction Site layout and facilities</i></b>	Any huts, office accommodations, toilets and welfare facilities should be accommodated within the boundaries of the construction sites

<p><b>Nuisance, Dust and Noise Control</b></p>	<p>To limit nuisance, dust and noise on construction sites, the Contractor should:</p> <ol style="list-style-type: none"> <li>(1) Plan activities in consultation with the PIU or delegated agencies and authorities, building owners, and/or local communities so that activities with a great potential to generate noise are planned during the periods of the day that should result in least disturbance</li> <li>(2) Use noise control devices, such as temporary noise barriers and deflectors for impact and blasting activities, and exhaust muffling devices for combustion engines.</li> <li>(3) Avoid or minimize heavy project transportation through community areas</li> <li>(4) To the extent possible, maintain noise levels associated with all machinery and equipment at or below 90 db.</li> <li>(5) Apply proper measures to minimize disruptions from vibration or noise coming from construction activities.</li> <li>(6) Implement particularly strict measures to prevent undesirable noise levels in sensitive areas (including in residential neighborhoods, near hospitals, etc.). In such areas, minimize the production of dust and particulate materials at all times, to avoid impacts on vulnerable people (children, elders).</li> <li>(7) Selectively remove potential hazardous air pollutants, such as asbestos, from existing infrastructure prior to demolition.</li> <li>(8) Place dust screens around construction areas, provide fencing along the boundary so that emissions do not affect immediate neighbors, pay particular attention to areas close to housing, commercial areas, and recreational areas.</li> <li>(9) Spray water periodically as needed on construction areas, especially at site located near residential area</li> </ol>
<p><b>Management of Construction Waste</b></p>	<p><i>Waste management planning.</i> Possible construction wastes should be characterized according to composition, source, types of wastes produced, generation rates, or according to local regulatory requirements. Processes should be designed and operated as much as possible to prevent or minimize the quantities of wastes generated and hazards associated with the wastes generated. For example:</p> <ol style="list-style-type: none"> <li>(1) Substitute raw materials or inputs with less hazardous or toxic materials;</li> <li>(2) Institute good housekeeping and operating practices</li> <li>(3) Institute procurement measures that recognize opportunities to return usable materials such as containers;</li> <li>(4) Minimize hazardous waste generation by implementing stringent waste segregation to prevent the commingling of non-hazardous and hazardous waste.</li> </ol> <p><i>Recycling planning.</i> The total amount of waste may be significantly reduced through the implementation of recycling plans. This may for example include the evaluation of waste production processes and the identification of potentially recyclable materials.</p> <p><i>Clean-up procedures.</i> The Contractor shall establish and enforce daily site clean-up procedures, including maintenance of adequate storage and treatment/disposal facilities for construction wastes to avoid potential impacts to human health and the environment. Management approaches should be consistent with the characteristics of the waste and local regulations, and may include one or more of the following principles:</p> <ol style="list-style-type: none"> <li>(1) On-site or off-site biological, chemical, or physical waste material should either be treated to render it nonhazardous prior to final disposal or treated or disposed at permitted facilities specially designed to receive the waste.</li> <li>(2) Debris generated due to the demolition of existing structures shall be suitably re-</li> </ol>

	<p>used, to the extent feasible. The disposal of remaining debris shall be carried out only at sites identified and approved by local authorities.</p> <p>(3) Under no circumstances shall the contractor dispose of any material in environmentally sensitive areas.</p> <p>(4) All garbage, metals, used oils, and excess material generated during construction should be disposed in authorized areas incorporating recycling systems and the separation of materials.</p> <p>(5) In the event any debris or silt from the sites is deposited on adjacent land, the Contractor shall immediately remove such debris and restore the affected area to its original state to the satisfaction of the PIU or delegated agencies and authorities.</p>
<p><b><i>Small Quantities of Hazardous Materials</i></b></p>	<p>Construction and decommissioning activities may pose the potential for release of small quantities of hazardous materials. The contractor should screen and assess the presence and contents of hazardous materials and petroleum-based products in building systems (e.g. PCB containing electrical equipment, asbestos-containing building materials, lamps or lamp ballasts, used batteries, empty paint cans) and process equipment and remove them prior to initiation of decommissioning activities, and manage their treatment and disposal according to Sections 1.5 and 1.6 on Hazardous Materials and Hazardous Waste Management, respectively in the World Bank Group’s General EHS guidelines (<a href="http://www.ifc.org/ehsguidelines">www.ifc.org/ehsguidelines</a>). In particular, hazardous wastes should always be segregated from nonhazardous wastes. If generation of hazardous waste cannot be prevented through the implementation of the above general waste management practices, its management should focus on the prevention of harm to health, safety, and the environment, according to the following additional principles:</p> <p>(1) Understand potential impacts and risks associated with the management of the hazardous waste during its complete life cycle</p> <p>(2) Ensure that Contractors responsible for the handling, treating, and disposing of hazardous waste are reputable and legitimate enterprises, licensed by the relevant regulatory agencies and following good international industry practice for the waste being handled</p> <p>(3) Ensure compliance with applicable local and international regulations. International requirements may include host-country commitments under the Basel Convention on the Control of Transboundary Movements of Hazardous Waste and their disposal (<a href="http://www.basel.int/">http://www.basel.int/</a>) and the Rotterdam Convention on the prior Inform Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade (<a href="http://www.pic.int/">http://www.pic.int/</a>)</p> <p>(4) If asbestos-containing materials are identified, the WBG Good Practice Note on Asbestos: Occupational and Community Health Issues dated May 2009 (Appendix 1) should be followed.</p>

<p><b>Wastewater discharges</b></p>	<p>The Contractor must take all the efforts to prevent wastes (solid and liquid) discharge into all rivers and canals and to protect surface and groundwater from pollution and other adverse impacts including changes to water levels, flows and general water quality. Whenever possible, the Contractor must minimize the amounts of wastewater that need to be discharged and find alternative means of disposal. Liquid spills of lubricant, fuel and oil within the site should be attended at the earliest in order to minimize land and groundwater contamination. The Contractor must ensure that any seepage and wastewater arising from the works must be collected and discharged via a settlement tank. Water drainage must be designed to avoid stagnant conditions that could create bad smell and unsanitary condition in the construction area and surrounding environment.</p>
<p><b>Construction safety</b></p>	<p><i>Emergency Procedures:</i> The Contractor must ensure that emergency procedures are developed to facilitate effective actions in case of medical/fire emergency as well as environmental pollution (major spillage of gasoline, used oil, and/or toxic chemicals, etc.). The emergency procedure must contain emergency phone numbers and the method of notifying the statutory authorities. Contact numbers for the key staff of the contractor must also be included.</p> <p><i>Fire Prevention and Control:</i> All construction sites and associated accommodation or welfare facilities must have appropriate plans and management controls to prevent fires in place. The site fire plans must be prepared and must have due regard to government regulations. During operation and maintenance of equipment and vehicles, the Contractor must ensure that its workers are well aware of the procedures and have enough knowledge to comply with them. The specification of non-combustible materials, products and packaging should be pursued wherever reasonably practicable. The Contractor must also comply with government requirements as may be appropriate at specific sites.</p> <p><i>Operation of equipment:</i> The Contractor must take all reasonable precautions to ensure that equipment is operated in a manner so as not to cause safety risk and/or nuisance to surrounding residents and occupiers. Operations of cranes and other large equipment must be closely supervised. Permission may be required.</p> <p><i>Accident prevention.</i> The Contractor's responsibilities include the protection of every person and nearby property from construction accidents. The Contractor shall be responsible for complying with all government safety requirements and any other measures necessary to avoid accidents, including the following:</p> <ol style="list-style-type: none"> <li>(1) Properly install notice signs/board at construction sites</li> <li>(2) If school children are in the vicinity, include traffic safety personnel to direct traffic during school hours;</li> <li>(3) Conduct safety training for construction workers prior to beginning work;</li> <li>(4) Provide necessary personal protective equipment and clothing (goggles, gloves, respirators, dust masks, hard hats, steel-toed and -shanked boots, etc.,) for construction workers and enforce their use;</li> <li>(5) Ensure that the removal of asbestos-containing materials or other toxic substances be performed and disposed of by specially trained workers;</li> <li>(6) During emergencies of any kind, suspend all work.</li> </ol>



<b>Workforce and Workers sanitation</b>	<ul style="list-style-type: none"> <li>(1) The Contractor should whenever possible locally recruit the majority of the workforce and shall provide appropriate training as necessary.</li> <li>(2) The Contractor shall not allow the use of fuel wood for cooking or heating at the construction site or surrounding area.</li> <li>(3) The Contractor shall ensure that site offices, depots, and workshops are located in appropriate areas. Clean and well-maintained toilets should be made available.</li> <li>(4) The Contractor shall adequately provide workers with necessary tools.</li> </ul>
<b>Community Relations</b>	<p>To enhance adequate community relations the Contractor shall:</p> <ul style="list-style-type: none"> <li>(1) Inform the local authorities and community about construction and work schedules, interruption of services, traffic detour routes and provisional bus routes, as appropriate.;</li> <li>(2) Limit No construction activities at night.</li> </ul>
<b>Physical Cultural Property Chance-finds Procedures</b>	<p>In the unlikely event that physical cultural property chance-finds occur, responsible local authorities would be in charge of protecting and preserving any archeological sites, historical sites, remains and objects before deciding on subsequent appropriate procedures. The significance and importance of the findings should be assessed according to the various criteria relevant to cultural heritage; those include the aesthetic, historic, scientific or research, social and economic values. Decisions on how to handle the finding shall be taken by the responsible authorities. This could include changes in the layout (such as when finding an irremovable remain of cultural or archeological importance) conservation, preservation, restoration and salvage. If the Contractor discovers archeological sites, historical sites, remains and objects the Contractor shall:</p> <ul style="list-style-type: none"> <li>(1) Stop the construction activities in the area of the chance find;</li> <li>(2) Delineate the discovered site or area;</li> <li>(3) Secure the site to prevent any damage or loss of removable objects. In cases of removable antiquities or sensitive remains, a night guard shall be arranged until the responsible local authorities take over;</li> <li>(4) Notify the supervisory Engineer who in turn should notify the responsible local authorities immediately (within 24 hours or less);</li> <li>(5) Resume construction work after permission is given from the responsible local authorities concerning safeguard of the heritage.</li> </ul>
<b>Clearance the construction site after completion</b>	<p>On completion of the works the Contractor should clear away and remove all materials and rubbish and temporary works of every kind. Construction sites should be left clean and in a condition to the satisfaction of the PIU or delegated agencies and authorities.</p>

**Table A2.2: Environmental and Social Screening template for applicants**

<b>Step</b>	<b>Item</b>	<b>Response</b>
1	Concise description of micro-business proposal	

2	Prohibited activities	Do you certify that the proposed micro-business does not involve any prohibited activities (cf. Table A2.4)?	YES	NO
3	Necessary permits, if any	Do you certify that you have either already obtained the necessary permits, if any, or will obtain them before commencing the operation of your proposed micro-business?	YES	NO
4	General EHS guidelines	Do you certify that you will abide by all applicable general EHS guidelines (cf. Table A2.5)?	YES	NO
5	Micro-loan amount	Please indicate the proposed micro-loan amount		
6	Sector	<p>Please indicate the proposed sector</p> <p>“Not Eligible”</p> <input type="checkbox"/> Forestry and logging <input type="checkbox"/> Mining and quarrying <input type="checkbox"/> Manufacture of tobacco products <input type="checkbox"/> Manufacture of military hardware <input type="checkbox"/> Manufacture of coke, chemicals, plastics or pharmaceutical products <p>“Moderate Impacts”</p> <input type="checkbox"/> Crop and animal production <input type="checkbox"/> Fishing and aquaculture <input type="checkbox"/> Mining support service activities <input type="checkbox"/> Manufacture of food products or beverages <input type="checkbox"/> Manufacture of paper or wood <input type="checkbox"/> Printing <input type="checkbox"/> Other manufacturing <input type="checkbox"/> Electricity, gas, steam, air conditioning or water supply <input type="checkbox"/> Construction <input type="checkbox"/> Repair of motor vehicles <input type="checkbox"/> Food and beverage service activities <p>“Minor or No Impacts”</p> <input type="checkbox"/> Wholesale and retail trade <input type="checkbox"/> Accommodation <input type="checkbox"/> Information and communication <input type="checkbox"/> Education, human health and social work <input type="checkbox"/> Arts, entertainment and recreation <input type="checkbox"/> Other service activities <input type="checkbox"/> Manufacture of textiles, wearing apparel and leather products <input type="checkbox"/> Manufacture of products of wood <input type="checkbox"/> Repair and installation of machinery and equipment		
7	Sector-specific EHS guidelines (only for “Moderate Impacts”)	Do you certify that you will abide by all applicable sector-specific EHS guidelines (cf. Table A2.6)?	YES	NO
8	Mitigation plan (only for “Moderate Impacts”)	In addition to or instead of abiding to all applicable sector-specific guidelines, do you propose your own site-specific mitigation plan which contains both potential EHS impacts and proposed mitigation measures?	YES	NO
			If yes, please attach proposed mitigation plan.	

**Table A2.3: Environmental screening template for labor and social welfare offices**

Step	Question	Answer				Remarks or justifications
		YES	If yes	NO	If no	

<b>1</b>	Is the proposed micro-business on the negative list of ineligible sectors as listed in Table A2.2 (also check consistency of project description with sector)?		Application not eligible (“Not Eligible”)		Move to step 2	
<b>2</b>	Is the applicant unwilling or unable to certify that the proposed micro-business does not involve prohibited activities as listed in Table A2.4?		Application not eligible (“Not Eligible”)		Move to step 3	
<b>3</b>	Is the applicant unwilling or unable to certify that the necessary permits, if any, have already been obtained or will be obtained?		Application not eligible (“Not Eligible”)		Move to step 4	
<b>4</b>	Is the applicant unwilling or unable to certify abidance to applicable general EHS guidelines as listed in Table A2.5?		Application not eligible (“Not Eligible”)		Move to step 5	
<b>5</b>	Is the proposed micro-loan amount below MNT 12,000,000?		Application eligible subject to abidance to applicable general EHS guidelines (“Minor or No Impacts”)		Move to step 6	

6	Based on the sector as listed in Table 2, is the proposed micro-business likely to pose minimal or no environmental risks?		Application eligible subject to abidance to applicable general EHS guidelines (“Minor or No Impacts”)		Move to step 7	
7	Has the applicant certified to abide to applicable sector-specific EHS guidelines as listed in Table A2.6 or presented a credible site-specific mitigation plan?		Application eligible subject to abidance to applicable general and sector-specific EHS guidelines or implementation of credible site-specific mitigation plan (“Moderate Impacts”)		Application not eligible (“Not Eligible”)	

Note: Shaded fields are to be completed by the official in charge of the micro-entrepreneurship support program.

**Table A2.4: List of prohibited activities**

<b>Prohibited activities</b>	
Any activity with the potential for significant conversion or degradation of critical natural forests or other natural habitats	Any activity that involves radioactive products or parts of nuclear reactors
Any activity situated within municipality-designated green areas	Any activity that involves hazardous waste storage, treatment or disposal
Any activity implemented in disputed land or international waterways	Any activity that involves manufacturing of equipment or appliances containing Chloro-fluorocarbons (CFCs), halons or other substances regulated under the Montreal Protocol
Any activity that would result in the displacement of people or require resettlement	Any activity that involves the manufacturing of electrical equipment containing polychlorinated biphenyls (PCBs) in excess of 0.005 percent by weight
Any activity with the potential for significant damages to cultural property	Any activity where minors with an age below Mongolia’s legal employment age are employed
Any activity that involves the manufacturing, procurement distribution or sale of banned pesticides and herbicides	Any activity where minors are engaged in jobs and occupations prohibited to them, according to the list enacted 2008

Any activity that is illegal under Mongolian law	Any activity that involves any land acquisition or demolition of residential or private commercial buildings
Any activity that is not compliant with the international conventions that Mongolia has ratified	Any activity that involves trade in wildlife or wildlife products prohibited under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) convention
Any activity that involves hazardous waste storage, treatment and disposal	Any activity that involves the release of genetically altered organisms into the natural environment

**Table A2.5: General EHS guidelines**

<b>Impacts or risks</b>	<b>Considering factors</b>
<b>Location: the slow decay of the urban landscape, contribute to congestion, high noise levels, impede the circulation of traffic especially for pedestrians, encroach on green space or other spaces with aesthetic and functional appeal, can cause accidents and pose other health and safety risks</b>	<p>In choosing a site ensure that:</p> <ol style="list-style-type: none"> <li>(1) Water and sanitation services are adequate to absorb the micro-enterprise.</li> <li>(2) The micro-enterprise is not located close to tanneries, electroplating operations or other highly polluting micro-enterprises.</li> <li>(3) The enterprise is not contributing to displacement of people</li> <li>(4) The enterprise is not significantly contributing to congestion, obstruction of sidewalks or other pathways, or road traffic.</li> <li>(5) The enterprise is separated from sensitive land-uses such as housing and agriculture</li> <li>(6) Unless already used for housing or agriculture, the land is unsuited or poorly-suited for housing or agriculture</li> <li>(7) The land is of little aesthetic or cultural importance, or is not valued as green space.</li> <li>(8) Consulting the local population regarding any disagreements there may be regarding the siting, or activities, of the new micro-enterprise.</li> <li>(9) Taking steps to ensure that the most efficient and non-polluting sources of energy are used.</li> </ol>
<b>Habitat and wildlife</b>	<ol style="list-style-type: none"> <li>(1) Minimal physical alteration of the landscape</li> <li>(2) The natural drainage of the project area should remain unaltered and intact</li> <li>(3) No destruction of wildlife or its habitat if the vicinity is known or suspected to contain rare or endangered plant or animal species.</li> <li>(4) Design adjustments for saving maximum trees</li> <li>(5) Plan for tree planting</li> </ol>
<b>Natural resource use</b>	<ol style="list-style-type: none"> <li>(1) Minimize inputs</li> <li>(2) Aim to use alternative energy sources</li> <li>(3) Foster re-use and recycling</li> <li>(4) Protect groundwater</li> </ol>

<p><b>Waste management/contamination from spills</b></p>	<ol style="list-style-type: none"> <li>(1) Identify possible waste</li> <li>(2) Minimize wastes</li> <li>(3) Alternative uses</li> <li>(4) Prepare waste recycling plans</li> <li>(5) Environmental sound storage and treatment</li> <li>(6) Safe disposal, as per national regulations and Environmental, Health and Safety (EHS) Guidelines of the World Bank</li> <li>(7) An accident clearance contingency plan should be prepared</li> <li>(8) Controls should be made against all types of toxic emissions.</li> <li>(9) Untreated, raw &amp; contaminated water should not be allowed to be disposed in perennial, non-perennial water channels or close to any water source &amp; reservoirs.</li> <li>(10) Ensure minimal operational waste impact of the facilities on the environment.</li> <li>(11) Designate locations for handling and storage of effluents and waste materials.</li> <li>(12) keep work area clean, remove all rubbish from the work space and situate receptacles for waste and debris in convenient locations.</li> <li>(13) Never throw away, or bury, wastes in or around abandoned wells.</li> <li>(14) Set aside special areas for storage of raw materials, finished products, tools and accessories.</li> <li>(15) Use pans and screens to prevent deposits of oil, liquid wastes or water on the surrounding floors.</li> </ol>
<p><b>Occupational Health and Safety</b></p>	<ol style="list-style-type: none"> <li>(1) Assess any occupational health and safety risks to workers as a result of dust, fumes, noise, odors, or pollutants and propose mitigation measures, in compliance with relevant national occupational health and safety standards and the WB's EHS guidelines</li> <li>(2) Sufficient drainage &amp; waste disposal facilities should be provided at work places with protocols for handling toxic and hazardous waste.</li> <li>(3) Rearrange work space to reduce risks and facilitate order and cleanliness and improve efficiency.</li> <li>(4) Ensure proper ventilation of indoor operations.</li> <li>(5) Ban smoking and drinking alcoholic beverages.</li> <li>(6) Reduce length of work periods to eliminate accidents caused by fatigue and health risks and annoyances caused by excessive noise and vibration of machinery; provide for rest breaks.</li> <li>(7) Install proper lighting</li> <li>(8) Wash thoroughly after handling injurious or poisonous substances and wash before eating, drinking, smoking or using the toilet.</li> <li>(9) Never use gasoline for cleaning purposes.</li> <li>(10) Many injuries are caused by differences in the physical makeup of workers. Account for people of different heights, strengths, and ability to handle mental stress</li> <li>(11) Ensure the use of proper protective equipment when toxic substances are involved.</li> <li>(12) To prepare for possible poisoning, keep clean water nearby and tell co-workers what sort of pesticide you are using and where the label is.</li> <li>(13) If pesticides are inhaled, get workers to fresh air immediately.</li> </ol>

	(14) Avoid using newspapers and other flammable material for packing.
<b>Community Health and Safety</b>	(1) In compliance with relevant national standards and the WB’s EHS General Guidelines – Community Health and Safety
<b>Working conditions</b>	<ul style="list-style-type: none"> <li>(1) Adhere to national labor standards with regard to labor and working conditions</li> <li>(2) Adhere to national labor standards with regard to labor representation</li> <li>(3) Foster good relations with local communities</li> <li>(4) Do not employ minors with an age below Mongolia’s legal employment age</li> <li>(5) Do not engage minors in jobs and occupations prohibited to them, according to the list enacted 2008</li> </ul>

**Table A2.6: Sector-specific EHS guidelines**

Sector	Potential EHS impacts	Recommended mitigation options
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<p><b>Repair of motor vehicles</b></p>	<ul style="list-style-type: none"> <li>(1) Pollutants entering waterways or storm water drains. This can be caused by spills of liquids such as oil, coolant, solvent and other cleaning fluids.</li> <li>(2) Soil and groundwater pollution caused by waste oil and other liquids leaking from Underground Storage Tanks (UST).</li> <li>(3) Air pollution (including odours) from the release of refrigerants, solvents, LPG and exhaust emissions.</li> <li>(4) Greenhouse gas emissions caused by energy use in the workshop and modification to client vehicles.</li> <li>(5) Air pollution caused by tampering with vehicle emission or anti-pollution controls and exhaust systems.</li> <li>(6) Noise impacting on staff and neighbors.</li> <li>(7) Health and safety risks of workers</li> </ul>	<p><u>Water Quality</u></p> <ul style="list-style-type: none"> <li>(1) Regularly check and clean storm water drains near your workshop to ensure they are free of debris.</li> <li>(2) Mop the workshop floor rather than hosing. Avoid hosing driveways or yards.</li> <li>(3) Keep a spill kit close to where spills are likely and ensure all staff know how to use it.</li> <li>(4) Keep your premises and equipment clean and well maintained.</li> </ul> <p><i>Hazardous substance and liquid waste</i></p> <ul style="list-style-type: none"> <li>(1) Store oils, chemicals, paints and solvents in areas that will not allow spills to escape to the environment: <ul style="list-style-type: none"> <li>a. in a bunded area of the workshop</li> <li>b. on bunded pallets or trays in a covered area</li> <li>c. in a chemical storage unit</li> </ul> </li> <li>(2) Regularly check that containers are not leaking</li> <li>(3) Treat liquids collected in bunded areas or the wash bay in an oil water separator</li> <li>(4) Never dispose of chemicals into storm water drains</li> <li>(5) Keep lids on your bins or store them in a covered area to prevent the wind blowing waste away</li> <li>(6) Use a liquid waste contractor to dispose of spent chemicals and other liquid waste. Don't put liquid wastes, such as oily rags or filters, into your waste bins</li> <li>(7) Avoid storing waste bins on footpaths or property belonging to others</li> <li>(8) If possible, separate different kinds of waste for easy collection and recycling</li> </ul> <p><u>Air quality</u></p> <ul style="list-style-type: none"> <li>(1) Ensure staff keep engine run-time to a minimum</li> <li>(2) Keep lids on containers of solvent-based chemicals to reduce evaporation</li> <li>(3) Extract and recycle refrigerants from air-conditioning systems and dispose of item legally. They cannot be released to the atmosphere</li> <li>(4) Use a damp cloth, mist spray or vacuum device to clean brakes not compressed air</li> <li>(5) Never modify or tamper with vehicle emission systems</li> </ul> <p><i>Noise</i></p>
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		<ul style="list-style-type: none"> <li>(1)Conduct all work inside the workshop to limit noise emissions</li> <li>(2)Maintain equipment, such as air compressors, to prevent noise</li> <li>(3)Do not modify vehicles in a manner that might increase noise</li> <li>(4)Locate noisy equipment away from doors and openings</li> </ul>
<p><b>Manufac- ture of food products or beverages; food and beverage service ac-</b></p>	<p><i>Risk from processing food</i></p> <ul style="list-style-type: none"> <li>(1)Perishable ingredients (especially meat, poultry and fish) are not kept fresh and cool</li> <li>(2)Basic hygienic practices are not enforced (washing hands, clean tools, clean water)</li> </ul>	<ul style="list-style-type: none"> <li>(1)Keep the working area clean</li> <li>(2)Wash hands and tools at all times</li> <li>(3)Use clean water only</li> <li>(4)Have first aid kit available</li> </ul>

<b>tivities</b>	<i>Risk from using machines</i> (1)Accidents (2)Leakages, disposals, liquid waste or wastewater drains to stream/river/ pond/soil	(1)Position machines on a safe spot and cover dangerous moving parts (2)Take up maintenance routine, follow strict maintenance and lubrication practices for the moving parts of equipment (3)Keep machines in good shape and clean (4)Experience operators only (5)Provide and use safeguards goggles, gloves, masks (6)Re-use scrap/disposals (7)Stop leakages and draining liquid waste (8)Establish contingency plans for accidents (9)Have firefighting equipment and first aid kit available
	Emission of smoke from burning of fuel	A minimum of 10-15 feet height of chimney should be installed
	Waste water from processing will generate organic load	The waste should be separated for composting or to be converted as animal/poultry feed and fish meal.
	Limited solid waste generation	Proper waste collection and disposal
	Workers are likely to suffer from health hazards due to long hours of exposure to high ambient temperature specially during summer	Provisions for temperature control through adequate ventilation
	Employees/workers having contagious or infectious diseases will contaminate the food stuff	Regular health check-up of the employees/workers should be ensured