

## Appendix 2

# Outline for Environmental and Social Management Plan

Chapter number	Name	Contents and requirements
Chapter 1	<b>Project description</b>	A detailed map should be provided to clearly show the geographical location of the project as well as the social and environmental conditions of the surroundings, especially the information of sensitive points, such as name, distance, etc.
1.1	Project background	The background and objectives of the project should be briefly described. Relevant policies, government action plans, and corresponding relationship with the present project should be provided.
1.2	Project description	The geographical location and contents of the project should be briefly introduced, which include activities funded and not funded by the World Bank, technical assistance and associated facilities, and temporary facilities or works that may be required. Similar information is suggested to be summarized in the form of tables.
1.3	Environmental assessment level and scope	The assessment level and scope of each environmental factor as well as the sensitive points should be determined according to the domestic requirements.
Chapter 2	<b>Environmental and social background</b>	Relevant information regarding the environmental and social background should be provided: it is suggested that the overall situation of the whole province should be firstly provided, and then the specific information of the counties involved in the present project should be summarized through the form of tables. All the information must be brief and clear.
2.1	Environmental profile	The overall situation of the whole province and the specific situation of counties involved in the first stage of the project should be given at the same time. Firstly, a brief description of the overall situation of the whole province should be provided, and then the specific situation of the each county involved in the project should be provided. Note that the specific situation must be brief and clear. The locations of the counties involved in the project should be marked in the same map. The map should contain at least the following information: Geographical Position Climate Meteorology

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		Topographic Features Geology Hydrology and Water Conservancy Current situation of ecological environment Animals and plants Soil Soil erosion
2.2	Socioeconomic profile	Society (Demographically) Industrial economy Transportation Cultural relics and Tourism
2.3	Current situation of environmental quality	Ambient air condition Surface water Groundwater Noise Waste residue Soil erosion If sensitive points are involved, they shall be monitored.
Chapter 3	<b>Laws, regulations and institutional framework</b>	
3.1	Relevant domestic laws, regulations and policies	Applicable domestic laws, regulations, policies and relevant standards as well as evaluation guidelines should be listed. The main contents of related laws and regulations should be described (Objectives and main contents).
3.2	World Bank environment, health and safety guidelines (EHSGs)	Relevant guidelines and requirements in EHSGs should be identified: General EHS guidelines and relevant guidelines <sup>1</sup> of agricultural industry. Carefully read the contents regarding the environmental impact, occupational health, safety risks and community risks. They are helpful to the identification of the environmental and safety risks of the present project. If there is biomass power generation involved in the first stage of the project, relevant requirements for “environmental air quality” in EHSGs should be applied, unless the domestic requirements are more stringent. Attention should be paid to the occupational health and safety of the booster station (It is still unclear whether there is one), gas tank safety and steam turbine noise. Although there isn’t much environmental impact analysis required in the environmental management plan, some

<sup>1</sup> Different industries are divided, including the identification and reduction of performance level and impact.

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		<p>in-depth analysis is still required for the following activities:            Animal husbandry (whether it is just manure treatment and reuse) should refer to "livestock feeding" in the World Bank's EHSs; For the waste treatment of animal husbandry, attention should be paid to the establishment of water balance to ensure that the waste water can be collected, treated and applied without causing discharge. If manure is composted, heavy metal indicators should be proposed in the environmental monitoring plan. If the treated wastewater is reused for farmland application, it should be accounted for whether there is enough farmland to absorb the wastewater; Calculate the capacity of the lagoon and whether it is sufficient to contain the sewage (according to the maximum number of days between two irrigations); If problems are found in one aspect, remedial measures and cost estimates should be proposed and included in the project investment (unless the company covers its own cost). Attention should be paid to propose the requirements of anti-seepage inspection of sewage pool and the treatment of dead livestock corpse. Animal welfare standards and good animal welfare management methods proposed in the <i>Good Practice Guidelines for Improving Animal Welfare in Livestock Industry</i>, etc.</p>
3.3	Relevant planning and environmental functional areas	According to the usual domestic practice.
3.4	Applicable standard	<p>Stricter standards should be applied after comparing the relevant domestic standards with the World Bank's EHSs standards, unless the stricter standards will damage the economic feasibility of the project, especially for small devices. While a less strict standard is applied, it should be proved that standard will not cause harm to people and the environment.</p>
Chapter 4	<b>Due diligence</b>	<p>Due diligence investigation shall be carried out for existing projects (to be reconstructed and/or expanded) and associated projects<sup>2</sup>, including 1) whether they conform to domestic laws and regulations and approval procedures; 2) whether there are any remaining environmental issues, if there are, propose</p>

<sup>2</sup> Associated project refers to the off-site facilities that have significant impact on the project activities and ensure the realization of the project objectives, which is not the content of the project. For example, the power plant project, the transmission and transformation line built by a third party for its operation, although the construction of transmission and transformation line is not not the power plant activity, it has a significant impact on the project objectives, so it should be evaluated as an associated project.

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		<p>suggestions; special attention shall be paid to the breeding industry. Communication with local environmental protection department should be established; for projects that are not approved to be built in advance or are built in violation of the approved content, be careful and try to exclude them.</p>
Chapter 5	<p><b>Project impact analysis and mitigation measures</b></p>	<p>According to different types of construction activities, the environmental impact and risk should be analyzed and summarized. Risks during construction and operation shall include:</p> <ul style="list-style-type: none"> <li>Sound environment;</li> <li>Water environment;</li> <li>Ambient air;</li> <li>Ecological environment;</li> <li>Solid waste;</li> <li>Community safety: traffic safety, construction personnel</li> <li>Social impact: traffic congestion, land requisition and ethnic minorities (from the social assessment unit);</li> <li>Occupational health and safety.</li> </ul> <p>And measures should be formulated for these risks and impacts, see Annex 1 and 2.</p> <p>Try to avoid the impact on sensitive points, especially on ecological sensitive points and social sensitive points (material cultural resources).</p> <p>Attention should be paid to heavy metal issues when concerning livestock waste reuse as fertilizer. The ratio of the amount of compost used as fertilizer to the field area should be given based on the calculating formula regarding different heavy metals and planting varieties.</p> <p>Recommendations on management of animal welfare.</p> <p>For “environmental management regulations”, attention should be paid to how these regulations are applied in these counties. It is suggested that enterprises of the counties involved in the project should be listed in a table, and then the applicability of these different types of regulations should be determined for specific enterprise.</p>
Chapter 6	<p><b>Organization arrangement, strengthening and training program</b></p>	

<b>Chapter number</b>	<b>Name</b>	<b>Contents and requirements</b>
6.1	Organization setting	Organizations shall be set up for coordination, supervision, monitoring and implementation for the project; appraisal of the organizations shall be carried out.
6.2	Capacity enhancement and training	Develop specific training programs for relevant organizations, especially for project enterprises, contractors and project offices.
Chapter 7	<b>Environmental monitoring plan</b>	According to the domestic requirements, especially for the monitoring of sensitive points.
Chapter 8	<b>Representations mechanism</b>	Refer to other project files.
Chapter 9	<b>File management and reporting system</b>	Refer to other project files.
Chapter 10	<b>Public consultation and information release</b>	According to the requirements of OP4.01, publicity and public participation shall be carried out immediately after the completion of the draft of the “environmental and social management plan”, together with “environmental and social management framework”
Annex 1	Environmental code of practice (ECOP)	It is only applied in the construction period, formulated for different types of projects, including: small civil works; land field facilities; roads; economic forest planting (only for soil and water conservation); ecological isolation zone; land leveling.
Annex 2	Environmental management plan (EMP)	Refer to the sample file. Written separately by element and project county. And measures should be proposed respectively for the construction period and the operation period.
Annex 3	Checklist	Refer to the sample file.
Annex 4	Pest management plan	Pest management plans should be developed for the following activities: purchase of pesticides and application equipment, changes in planting patterns, and changes in pest management models. The development of pest management plan should be assisted by experts from local plant protection station.