



**REPORT**

**Environmental and Social Review for Sun Paper**  
*New Facility in Yanzhou District, Jining City, Shandong Province, China*

Submitted to:

**Mr. Jacky Yang, General Manager**

Shanghai SUMEC Business Consulting Co., Ltd.  
Room 1003, No. 1699 Gubei Road, Minhang District, Shanghai

Submitted by:

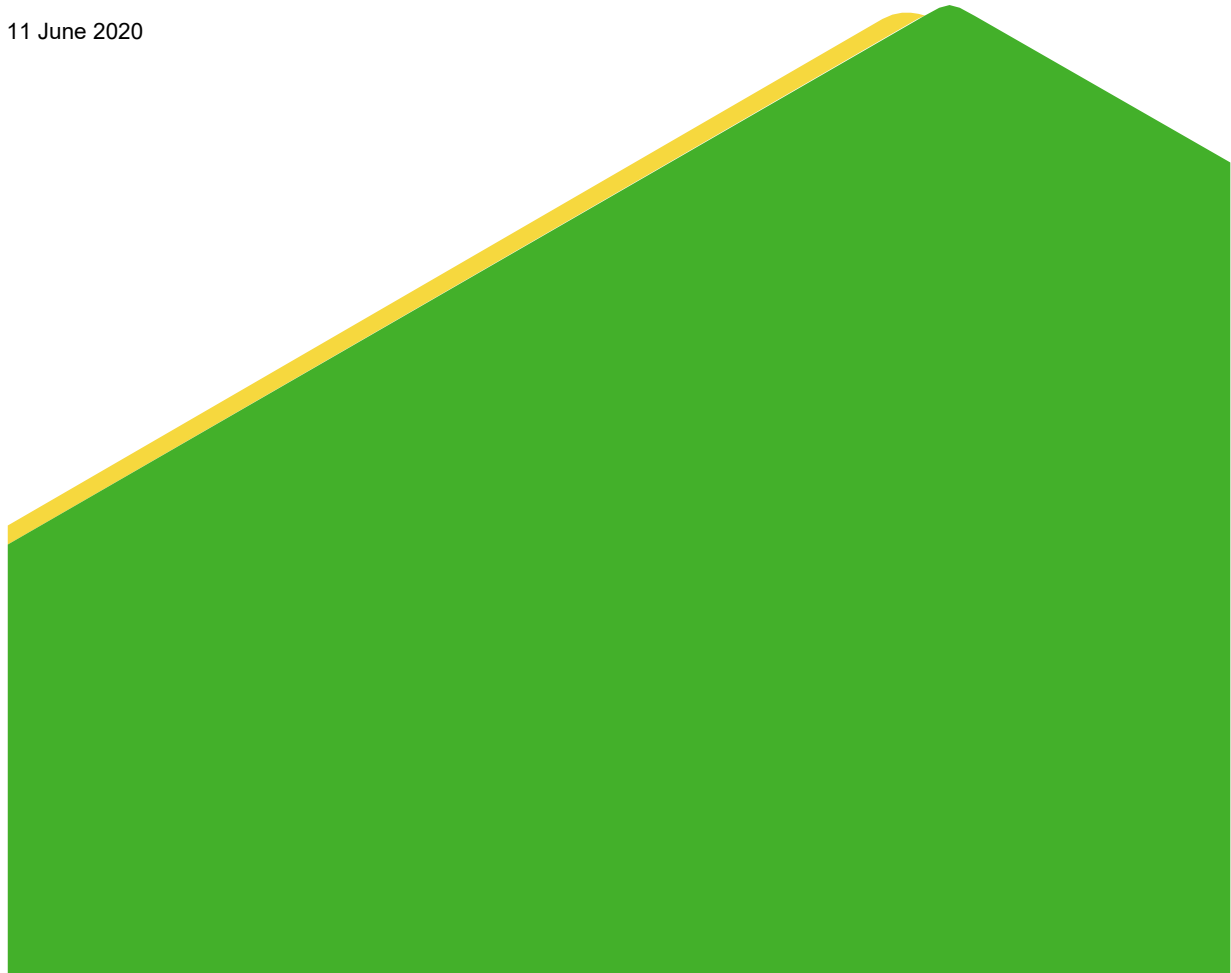
**Golder Associates Consulting Ltd.**

Suite 1201, 555 Building, 555 Nanjing Road (W), Shanghai 200041,  
People's Republic of China

+86 21 6258 5522

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### **APPENDIX B**

List of interviewed Sun Paper personnel

### **APPENDIX C**

Golder site visit photographs (April 14-15, 2020)

## 1.0 INTRODUCTION

Shandong Sun Paper Co., Ltd. (**Sun Paper**) was previously known as *Yanzhou Paper Mill* founded in 1982 and is a subsidiary of *Shandong Sun Holdings Group*. In 1994, *Shandong Sun Paper Group Corporation* was established which later became *Shandong Sun Paper Co., Ltd.* in 1997. After over three decades of development, Sun Paper is a global, advanced paper-making group integrating timberland pulping and paper making. It is China's largest private paper-making enterprise, one of China's top 500 enterprises, and ranks among the world's top 100 paper-making enterprises.

Sun Paper currently produces approximately eight (8) million tons of paper products per year (tpa), across a total of 38 operating production lines and facilities in two locations in Yanzhou District, Jining City, Shandong Province, China.

Sun Paper is developing a new Project consisting of a 180,000 tpa chemical mechanical pulp production line and a 450,000 tpa special printing-and-writing paper production line. These two additional production lines represent an estimated 6% expansion of Sun Paper's total production output and comprise **the Project** which is the subject of this assessment.

The Project is currently under construction with an approved regulatory Environmental Impact Assessment (EIA) report ("local EIA"). A preliminary review of the local EIA report that fulfilled Chinese national requirements showed that it lacked certain elements required for a complete analysis in accordance with the International Finance Corporation's Performance Standards (IFC-PS).

For the Project, Sun Paper intends to seek international financing related to import of paper-making machinery from Germany, requiring an assessment of the Project against the Organisation for Economic Co-operation and Development (OECD) "Common Approaches" (as an officially supported export credit transaction), the IFC-PS and other related standards.

This report presents the Golder's independent review of the Project's compliance to the adopted international standards: (a) OECD Common Approaches, (b) the Equator Principles III, (c) the World Bank Group General Environmental, Health and Safety Guidelines ("General EHS Guidelines") and the sector-specific EHS Guidelines for Pulp and Paper Mills industries ("EHS Guidelines"), and (d) the IFC-PS.

### 1.1 Objectives

After the preliminary review of the local EIA, Golder was engaged to perform an independent review of the Project from an environmental and social due diligence (ESDD) perspective and to carry out a gap analysis against the requirements of the adopted international standards focusing on the OECD and IFC-PS requirements.

From the gap analysis, a draft Environmental and Social Action Plan (ESAP) was developed to identify actions that will close these gaps and enable the Project to meet the requirements in the international standards.

Specifically there was attention to:

- Evaluate and comment on available information pertaining to the current Environmental Management Plan and relationships with the local community.
- Assess the appropriateness and completeness of the following:
  - Environmental and Social Impact Assessment (ESIA)
  - Implementation of an Environmental and Social Management System (ESMS)
  - Avoidance and mitigation measures incorporated into the Project design and construction.



- Environmental and Social Management Plans/Systems including ongoing monitoring of performance against relevant international standards.
  - Workers conditions are in line with Chinese regulations and IFC Performance Standard 2 (such as considerations of worker rights, occupational health and safety, workers' accommodation, etc)
  - Action Plans detailing how the aspects above will be managed and how any gaps will be closed.
  - Grievance mechanisms implemented by management (both for local communities and workers).
  - Stakeholder engagement strategy and implementation plans.
  - Qualitative assessment of the commitment and organisational capacity of Sun Paper management to implement the recommendations of the independent review on an on-going basis.
- Assess the cumulative impacts of this Project and nearby projects.
  - Determine if required environmental permits are in place (including the main Environmental Permit, and the specific permits for water extraction, wastewater discharge, temporary and/or permanent storage of hazardous wastes, and others).

## 1.2 Scope and Methodology

The ESDD consisted of document reviews, a site visit in April 2020, interviews with onsite personnel, and preparing this report.

Based on the findings of the document review and observations during the site visit, a draft ESAP was prepared for the Client's review and acceptance. The draft ESAP (Table 7) comprises of specific actions required to get the Project into compliance with OECD requirements in the Common Approaches and the IFC Performance Standards with the format closely aligned with the requirements set by each of the Performance Standards.

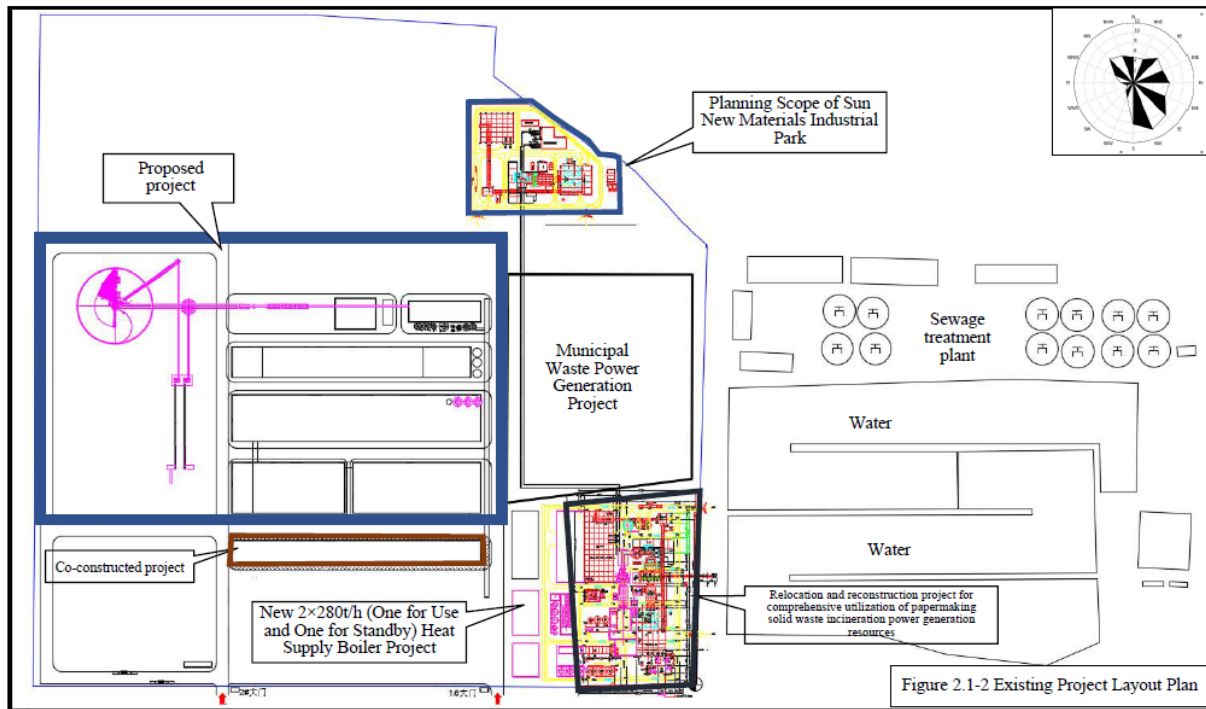
Sun Paper's existing operations are in Yanzhou Town, Jining City, Shandong Province in China and are in two separate locations: (a) the main operation in *Yanzhou Industrial Park* and, (b) a smaller operation at the *Sun Paper New Materials Industrial Park*. The two locations are approximately 9 kms apart.

The new Project is at the "smaller" second location within the *Sun Paper New Materials Industrial Park*. The Project area is a new land development within the *Sun Paper New Materials Industrial Park* which has been reclaimed from former agricultural land, and a portion of a residential community (Wangqiao village to the southwest) that is undergoing relocation.

In defining the ESDD scope, the following definitions are used based on the OECD and IFC definitions:

- Project components – physical elements, activities, aspects and facilities that are likely to generate impacts, environmental and social risks and impacts within the project's area of influence.
- Associated facilities (OECD) – those facilities that are not a component of the Project but that would not be constructed or expanded if the Project did not exist and on whose existence the viability of the Project depends; such facilities may be funded, owned, managed, constructed and operated by the buyer and/or project sponsor or separately from the Project.
- Associated facilities (IFC) – facilities that are not funded as part of the Project and that would not have been constructed or expanded if the Project did not exist and without which the project would not be viable.

The Project components for this ESDD were defined within the boundary of the blue rectangle shown in Figure 2.1-2 (below). The same Project boundary (660 m X 670 m or 442,200 m<sup>2</sup>) is referenced in subsequent figures within this report that have been lifted from the local EIA document.



Sun Paper operates and/or currently improving other existing facilities within the *Sun Paper New Materials Industrial Park* and adjacent to the Project boundary (blue rectangle). Other minor facilities that are expected outside the boundary, but are relevant to the Project during operation phase are presented in Table 1.

**Table 1: Associated Facilities (AF) to the Sun Paper Project**

No.	Title (in Figure 2.1-2)	Description	AF	Rationale
1	'Sewage treatment plant'	To the east, aka WWTP, Sun Paper-owned	No	Normal operation, not expanded, not dedicated to Project
2	'Paper-making solid waste incineration power generation'	To the southeast, feedstock will partially come from Project; Sun Paper-owned	Yes	Reconstruction to accommodate future waste from Project; not dedicated to Project
3	Two new units of heat supply boilers	To the southeast, 1 for use, 1 for standby, Sun Paper-owned	Yes	Likely dedicated for Project (not confirmed by Sun Paper)
4	'Municipal waste power generation project'	To the east; 3 <sup>rd</sup> party owned-operated	No	Normal operation, not captive to Project
5	'Co-constructed' buildings	To the south	No	Construction; Sun Paper-owned
6	Access road (future)	To the south, leading to main road	Yes	South gate future access for Project
7	Effluent/Water pipelines	To the east	Yes	Construction; dedicated (likely)

Whilst some existing facilities are operated by Sun Paper, these are not considered as Project components in this ESDD as these have been excluded by Sun Paper from the project boundary.

As clarified with Sun Paper, Golder understands some facilities are separately operated, pre-date the expansion project, and are economically viable apart from the new Project (WWTP, Paper-making waste incineration power generation). However, the incinerator is being expanded (likely to accommodate future wastes from the Project), the heat supply boilers are being constructed (likely for the Project), and the 'Co-constructed' buildings are likely for future Project expansion (but unconfirmed by Sun Paper).

Based on the OECD and IFC definitions and Golder's current understanding, these have been classified (Table 1) as either "Associated Facilities" or not.

The municipal waste power plant is an institutional facility that caters to domestic solid wastes from the Yanzhou District and is not captive to the new Project (power supply will mainly come from the Yanzhou District power grid via an onsite substation within the site).

The paper-making solid waste incineration power generation unit is undergoing concurrent improvements but is a separate Sun Paper undertaking and will receive biomass feedstock from the entire Sun Paper operations (including the new Project).

These facilities remain as they are currently operating (i.e. supporting Sun Paper's ongoing manufacturing operations) and will capably absorb the added capacity from the new Project. However, the ESDD will point out the cumulative risks that need to be assessed as a result of the additional loads (e.g. additional fuel for power generation, additional greenhouse gasses produced) without carrying out a gap analysis on the entire power plant operation nor the WWTP operation itself.

Golder's environmental and social review involved the following tasks:

- Document reviews – review of the completed EIA Report, Feasibility Report, and other site documents made available during the site visit
- Site visit – reconnaissance of the ongoing construction activities
- Interviews – interaction with Sun Paper personnel at the site during the visit, and
- Report – preparation of this document that compiles the observations, findings and assessment results, including a draft action plan to address the determined gaps.

Golder visited Sun Paper's existing facilities inside the *Sun Paper New Materials Industrial Park* and the ongoing construction site to:

- Inspect the existing Sun Paper facility operations and its current environmental compliance
- Review the environmental and social performance of the existing facility against its current environmental management plan and environmental monitoring program
- Interview the existing facility personnel to evaluate environmental and social performance against IFC-PS, with the basic assumption that the same operator (and therefore management systems) will be applied to the new facility (undergoing construction).

The subsequent sections in this ESDD report presents the results of the documents reviews and site observations (Section 4.0), the compliance and gaps against the IFCS PS (Sections 5.0 and 6.0), and the draft ESAP (Section 7.0).

## 2.0 ASSESSMENT FRAMEWORK

In 2003, the Equator Principles (EP) were developed by financial institutions to initiate a standardised risk management process to better address financier environmental and social risks linked to their potential project lending activities. There are now over a hundred financial institutions in 38 countries voluntarily signed up to the EP, adopting the 10 Principles (P1 to P10) applied to large infrastructure and industrial projects i.e. (P1: Review and Categorization; P2: Environmental and Social Assessment; P3: Applicable E&S Standards; P4: ESMS & EP Management Plan; P5: Stakeholder Engagement; P6: Grievance Mechanism; P7: Independent Review; P8: Covenants; P9: Independent Monitoring and Reporting; and P10: Reporting and Transparency.

The EP endorse the environmental and social policies and guidelines of the World Bank and the International Finance Corporation (IFC), which therefore also requires certain borrower levels and project types to meet the IFC Performance Standards (PS). In 2012 the PSs had a major revision which affected the requirements under all PS, but especially with regards to Biodiversity (PS 6) and Indigenous Peoples (PS 7).

### 2.1 OECD Common Approaches

In 2016, the OECD adopted the Recommendation of the Council on Common Approaches for Officially Supported Export Credits and Environmental and Social Due Diligence (the “Common Approaches”). The OECD Common Approaches promote coherence between the member countries’ policies on officially supported export credits, environment, and social and human rights (among other policies).

The OECD Guidelines for the Environment were developed from, and broadly reflect the principles and objectives of the Rio Declaration of environment and development and Agenda 21. Since 2004, the OECD has been promulgating these eight principles throughout the OECD members and as objectives for aspirant economies and entities. The guidelines are not intended to prescribe a universal legal and organisational model for environmental action, but to provide a sense of common best practice approach endorsed by the OECD member economies.

- Principle 1: Environmental Management Systems - establishing and maintaining a system of environmental management appropriate to the enterprise under review i.e., collection and validation of data; measurable objectives, and regular monitoring and verification of progress.
- Principle 2: Public Information and Stakeholder Consultation - ensuring that affected public communities are in receipt of adequate and timely information on the potential EHS impacts of the Project and engage in adequate and timely communication with affected communities regarding these issues.
- Principle 3: Life Cycle Awareness - requires the enterprise to assess and address in decision making, the foreseeable EHS impacts associated with the goods, services and processes over the full Project life cycle
- Principle 4: Exercising Precaution - requires the enterprise not to use any areas of full scientific uncertainty to justify postponing or not applying cost-effective measures to prevent or minimise EHS damage.
- Principle 5: Emergency Prevention, Preparedness and Response – requires the enterprise to maintain contingency plans for preventing, mitigating and controlling serious environmental and health damage from their operations including accidents and emergencies, and have mechanisms for immediate reporting to the competent Authorities.
- Principle 6: Continual Improvement in Environmental Performance - requires the enterprise to adopt a culture of continual improvement
- Principle 7: Environmental Education and Training - ensuring that the enterprise provides adequate education and training to employees in EHS matters including the handling of hazardous materials and the prevention of environmental accidents.

- Principle 8: Contribution to the Development of Environmental Policy – requires the enterprise to contribute to the development of meaningful and economically efficient public policy by means of partnerships or initiatives that will enhance environmental awareness and protection.

Similar to the EP, the OECD Common Approaches also endorse benchmarking projects against the relevant aspects of the World Bank General EHS Guidelines and all eight IFC Performance Standards (Item 21 of Section V “Environmental and Social Review” of the Common Approaches, *OECD TAD/ECG(2016)3*).

## 2.2 IFC Performance Standards

The following IFC guidelines and Performance Standards (PS) are applicable to the Sun Paper new Project and are more comprehensively referenced in this ESDD (as opposed to the OECD principles 1-8 that majorly overlap with some of the IFC-PS):

- IFC Performance Standard 1: Assessment and Management of Environmental and Social Risks and Impacts (revision 2012). This PS requires that the Project has a working Environmental and Social Management System (ESMS) and ESIA in place.
- *International Finance Corporation: Environmental, Health and Safety General Guidelines, December 2007*. This document provides general guidelines for the management of health, safety and environment risks and impacts of wide range of industries.
- *International Finance Corporation: Environmental, Health and Safety Guidelines for Pulp and Paper Mills, December 2007*. This document provides specific guidelines for the management of health, safety and environment risks and impacts of pulp and paper mills.

For the Physical/Chemical aspects, Golder refers to the 2012 update of the IFC PS 3:

- PS 3: Resource Efficiency and Pollution Prevention

The resource efficiency aspect of PS 3 addresses the consumption efficiency of energy, water, as well as other resources and material inputs. Energy use and water consumption are the two main points in PS 3 related with resource efficiency. Projects are expected to develop energy efficiency and water efficiency plans.

Related to energy efficiency are the requirements regarding greenhouse gas (GHG) emissions. Projects producing more than 25,000 CO<sub>2</sub> equivalents of greenhouse gasses (which include CH<sub>4</sub>) have to establish their GHG baseline and develop a GHG emissions reduction plan.

Pollution prevention aspects of PS 3 not only to address air emission and discharges to surface and groundwater, but also wastes (hazardous and non-hazardous), hazardous materials management, and pesticide use.

For the Social aspects, we refer to the 2012 updates of the following PS:

- PS 2: Labour and Working Conditions

The labour and working conditions requirements focus on employment and working conditions and management of worker relationships, including human resource policies and procedures, working condition and terms of employment, workers' organizations, non-discrimination and equal opportunity, retrenchment, and grievance mechanism.

Other requirements of PS 2 are related to protecting the work force. These requirements include the prevention of child- and forced labour; occupational health and safety, protection of workers engaged by third parties such as contractors, and labour within the supply chain.

- PS 4: Community Health, Safety and Security

The community health, safety and security requirements are on the one hand related to infrastructure of the project (such as roads and dams) where these have the potential to impact the affected communities.

Secondly there are requirements to assess and manage the health and safety risks to the community potentially caused by the workforce, equipment, and hazardous materials the project is introducing to the area (e.g. contagious diseases, spills of hazardous materials).

Projects are required to include community aspects and risk scenarios in their emergency preparedness and response plans.

Lastly, PS 4 addresses the potential of conflicts between the security organisation of the project and local communities. These conflicts should be pro-actively avoided.

#### ■ PS 5: Land Acquisition and Involuntary Resettlement

This PS stipulates that there is to be a fair land compensation process, not only for acquisition of land formally owned, but also for traditionally owned land and land the local community depends on for its livelihood.

If a community needs to be physically resettled, a Resettlement Action Plan needs to be developed in consultation with (or Consent by) the affected community.

In case of economic displacement or if the community will be unable to reach areas important for their livelihood, a Livelihood Restoration Plan needs to be developed.

#### ■ PS 7: Indigenous People

The first step in implementing this PS is assessing whether there are indigenous people that will be affected by the project.

If so this PS requires Free, Prior, and Informed Consent (FPIC) in case one of the following impacts are expected as a result of the project: impacts on lands and natural resources subject to traditional ownership or under customary use, relocation of indigenous peoples from lands and natural resources subject to traditional ownership or under customary use, and critical cultural heritage.

#### ■ PS 8: Cultural Heritage

This PS regulates the protection of cultural heritage in project design and execution, focusing on tangible elements of cultural heritage (such as temples, graveyards etc.) within the footprint of the project. Preventive strategies include: chance finds procedures, consultation, community access, removal of replicable or non-replicable cultural heritage, and critical cultural heritage. It is important to note that this PS not only applies to indigenous peoples, but also non-indigenous communities.

For the Biodiversity aspects, we refer to the 2012 update of PS 6:

#### ■ PS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources

Biodiversity conservation requirements include the identification of modified, natural and critical habitats within the project area. The critical habitat determination follows five criteria: critically endangered and/or endangered species, endemic and/or restricted-range species, migratory and/or congregatory species, highly threatened and/or unique ecosystems, and key evolutionary processes.

If critical habitat is identified within the project area, the project needs to develop a biodiversity management plan. Strategies to be used in this plan include avoidance, minimize habitat fragmentation, restoring habitats during and after operation and biodiversity offsets.

PS 6 also contains requirements with regards to legally protected and internationally recognized areas, invasive alien species, the management of ecosystem services, sustainable management of living natural resources, and biodiversity management within the supply chain.

The ESDD is focused on the new Project (proposed 450,000 tpa facility) and is not a complete project life cycle assessment (the new Project is under construction phase for 12 months until November 2020).

However, the bases for the gap analysis and the draft ESAP (Section 7.0) are the reviewed available documents showing Sun Paper's overall environmental and social (E&S) performance across its ongoing manufacturing operations (8 M tpa current operations), the observed E&S performance of the ongoing construction phase, and the approved local EIA Report and Feasibility Study for the new Project .

Based on the 2012 IFC PSs and the 2007 EHS Guidelines for Pulp and Paper Mills, this ESDD assumes that the new Project will implement the environmental and social commitments in the approved local EIA and that full compliance is achieved during the remaining construction phase (to November 2020) and the future operational phase (shortly after completion of the new Project ).

Based on its own environmental risk assessments and mitigation measures, Sun Paper shows it is able to achieve regulatory compliance in its existing operations i.e. 38 production lines with 8 M tpa output. Based on the local EIA risk assessments and the mitigation measures proposed for this new Project, Sun Paper is also able to demonstrate environmental compliance can be achieved for the additional two (2) production lines in the future.

The construction contractor also applies the same set of mitigation measures (as applicable) for the construction phase and environmental compliance is apparently being met.

If the same company policies and management systems (plans and procedures) are applied by the new Project in the future, then regulatory compliance is likely to be achieved in the future operation phase of these two (2) additional production lines.

However, a review of the local EIA shows some deficiencies to meet the IFC-PS, which were noted by Golder during the site visit of the construction activities and a review of Sun Paper's existing manufacturing operations.

The recommended ESAP (Section 7.0) will enable the new Project to address the gaps and work towards meeting the IFC-PS expectations, with the basic assumption that it will comply with China regulations as a minimum.

Golder reviewed the following main project documents for the new Project:

- Environmental documentation from the construction contractor, Shandong Shengwei Construction Co., Ltd. (SSCCL)
- Environmental Impact Assessment, prepared by Jinxi Environmental Protection Technology Co. Ltd dated September 2019 (bi-lingual version)
- Feasibility Study report prepared Shandong Ya Hua Low Carbon Technology Co. Ltd (山东亚华低碳科技有限公司), dated August 2019 (Chinese version only)

Golder sent a list of documents to be reviewed to Sun Paper and were gradually provided to Golder during this engagement. Sun Paper documents that were made available for review during and after the site visit from April 14-15, 2020 are provided in APPENDIX A.

Golder also interviewed Sun Paper personnel who are responsible for the E&S performance of the existing facilities that are currently operating. A list of these Sun Paper personnel that Golder interacted with are provided in APPENDIX B.



## 3.0 PROJECT DESCRIPTION

### 3.1 Overview

Sun Paper is building a special printing-and-writing paper production line in the *Sun Paper New Materials Industrial Park*, Wangqiao Village, Yandian Town, Yanzhou District, Jining City, Shandong Province.

The proposed new Project is comprised of a 180,000 tpa chemical mechanical pulp production line and a 450,000 tpa special printing-and-writing paper production line, as well as other auxiliary and supporting facilities. Fiber raw materials will be sourced through Sun Paper's existing suppliers (mostly overseas) and will be hauled to the site from the nearest ports of entry into China.

The Project's main environmental protection requirement involves the treatment of wastewater and residues during production. Sewage and wastewater treatment will be directed to the existing Sun Paper treatment facilities.

The Project's main social requirement involves the compensation and relocation of residential houses and agricultural lands belonging to the Wangqiao Village (estimated 260+ households) who are affected and displaced by the Project's land development. The land is classified as industrial and the pulp and paper mills use meet the land use planning and industrial positioning of *Sun Paper New Materials Industrial Park*.

Based on the OECD and the IFC project screening and classification criteria, the Sun Paper Project is a **Category A** project that may have significant environmental impacts, may affect an area broader than the site or facilities subject to physical works, and requires benchmarking with feasible alternatives. Pulp and paper mills are included in the project category lists for IFC (Annex B: Project Categorization) and OECD (Annex I No.15).

**Table 2: Project screening and classification (OECD Annex III)**

Data	Project criteria	Project-specific information
Project information	<ul style="list-style-type: none"> <li>Name of project</li> <li>Project country</li> <li>Project sector</li> <li>Project finance</li> <li>Amount officially supported</li> <li>Brief description of capital goods and services and destination</li> </ul>	<ul style="list-style-type: none"> <li>Sun Paper 450,000 tpa Expansion</li> <li>China</li> <li>Manufacturing</li> <li>(unreported)</li> <li>(unreported)</li> <li>Characteristic 45 cultural paper for international and domestic market</li> </ul>
Classification	<ul style="list-style-type: none"> <li>Category of project</li> <li>Reasons for classification, including project type</li> </ul>	<ul style="list-style-type: none"> <li><b>Category A</b></li> <li>Pulp and paper mills; significant potential environmental impacts; impact area broader than site location</li> </ul>
E&S	Type of information reviewed	<ul style="list-style-type: none"> <li>Local EIA Report and Feasibility Study</li> <li>Environmental monitoring data for pre-existing Sun Paper operations</li> </ul>
Standards	E&S standards applied and additional standards	<ul style="list-style-type: none"> <li>Compliance with local standards</li> <li>IFC PS 1-8 (2012)</li> <li>IFC General EHS Guidelines</li> <li>IFC EHS Guidelines for pulp &amp; paper mills</li> </ul>



### 3.1.1 Current status

The Project is under construction from December 2019 to November 2020, totalling 12 months.

- August 20, 2019 - Sun Paper commissioned the Project's environmental impact assessment
- August 22, 2019 – start of environmental site surveys and technical data collection
- August 23, 2019 - publicized the Project on the company website
- September 10-17, 2019 – baseline environmental monitoring (ambient air quality, noise, regional groundwater, surface drainage, and community surveys)
- October 1-14, 2019 - construction unit carried out the second publicity
- October 16, 2019 – third publicity (before approval) online, meeting the requirements of the *Measures for Public Participation in Environmental Impact Assessment*
- November 2019 – start of construction phase
- January 2020 – majority of the affected residents to be relocated agree to the resettlement terms, proceed with relocation process organized by the local government
- May 2020 – completion of the signing of the relocation agreements (including the remaining opposition)
- November 2020 – completion of the construction phase
- Early 2021 – expected start of operational phase

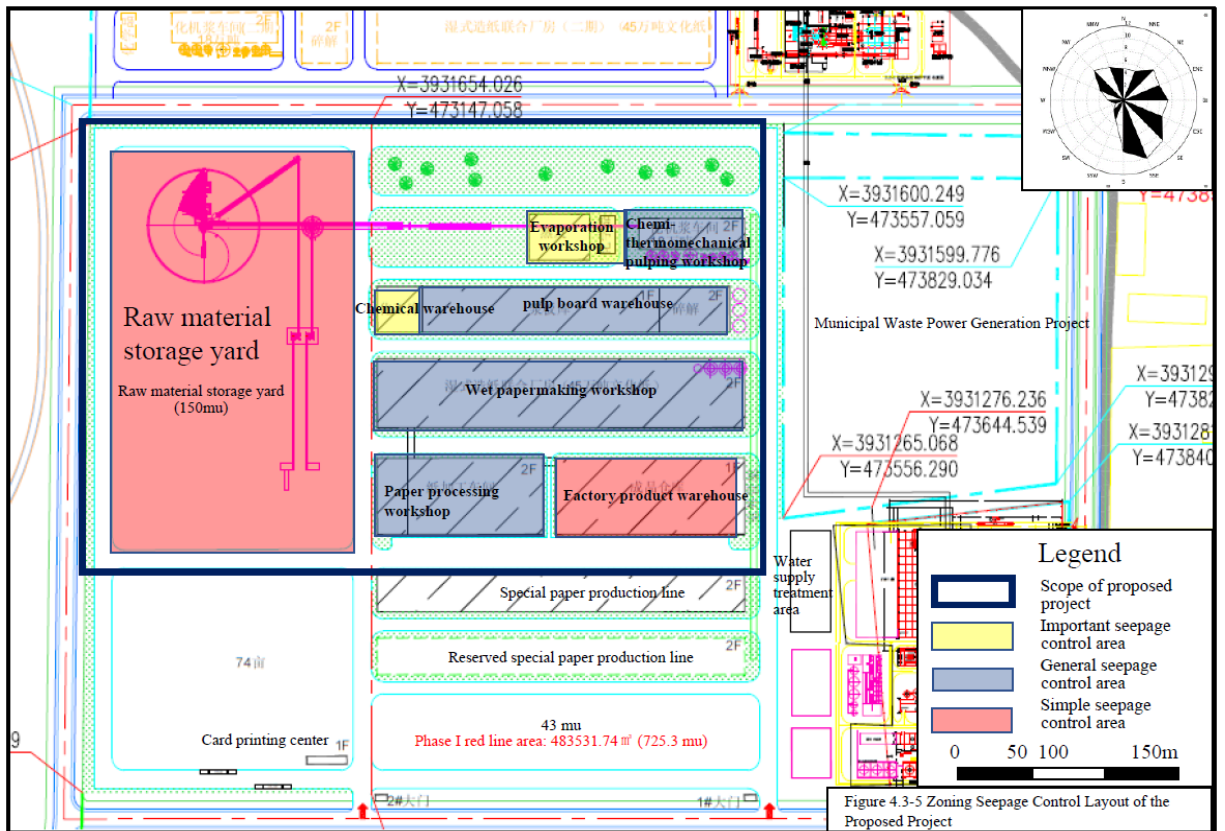
### 3.1.2 Main Project activities

The new Project's main activities include:

- Raw material storage and handling
- Evaporation and chemi-mechanical pulping (83% rate with chlorine-free bleaching technology)
- Pulp board making
- Wet paper making
- Paper processing
- Factory finished product warehousing

The proposed new Project is inside the *Sun Paper New Materials Industrial Park* (below Fig 4.3-5 of the EIA Report).

The Project is bound by the dark blue line, outside of which are supporting facilities (also owned by Sun Paper) that are excluded from the new Project.



The following facilities have activities that support the new Project but are external to the Project boundary. These external facilities have either been considered as 'Associated Facilities' or not based on the OECD and IFC-PS definitions (Table 1).

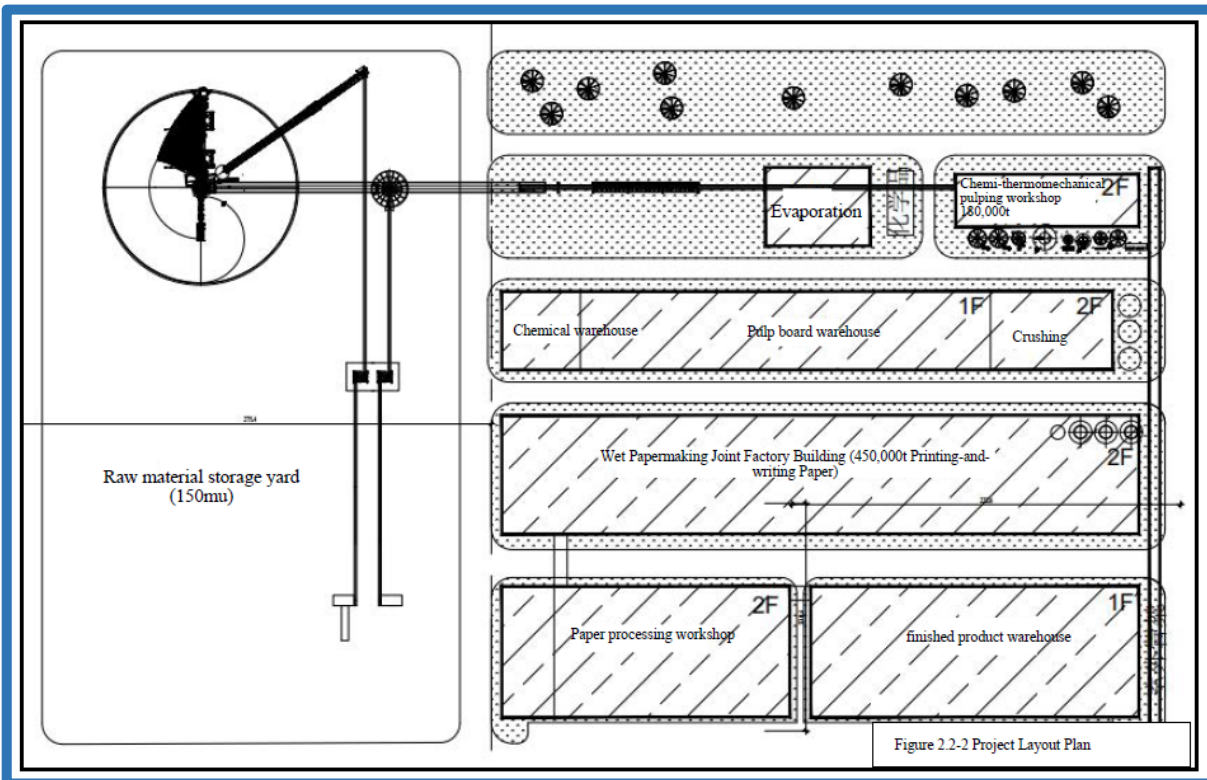
While these facilities serve the entire Sun Paper operations and are economically viable even without the new Project, there are some reconstruction or improvements that may be attributable to the new Project (but cannot be confirmed by Sun Paper at this time):

- Wastewater treatment - captured in *Sun Paper New Materials Industrial Park* discharge, and treated at the existing WWTP (external to Project boundary, normal operations, no expansion, with potential cumulative impact from additional load from new Project)
- Paper-making wastes (slags, sludge, etc.) incineration – biomass feedstock to heat supply generation (external to Project boundary, accommodate wastes from new Project, not dedicated)
- Heat Supply Boiler Project – located to the southeast of the Project site, 2 units x 280 tonnes/hour boiler units (one for use and one for standby, planned for construction, unreported if dedicated to Project).
- Water supply treatment – from treatment and water reuse during the production process + groundwater extraction used as domestic water (external to Project boundary, piped into the Project site from the oxidation ponds to the east)
- Municipal waste power generation – waste to energy plant that accommodates domestic wastes from Yanzhou District (external to Project, not captive)

- Other “co-constructed” buildings to the south – used for future card printing center, special paper production line, reserved for future expansions (external to Project boundary, unclear future use, likely for expansions)
- Access road to the south gate and main road – still undefined but will be necessary, dedicated to Project
- Pipelines – for effluent discharge outgoing from Project toward WWTP; and for reused water supply from oxidation ponds going into Project (groundwater extraction + surface water)

### 3.1.3 Main Project features

The Project footprint and layout plan are shown in Figure 2.2-2 of the local EIA report.



The project covers an area of 442,200 m<sup>2</sup> with a rectangular plot, shorter on the north-south side (660 m) compared to the east-west side (670 m). Both entrance and exit to the plant area are located on the south side.

The facilities and main features in the new Project are described in Table 3 based on the approved local EIA layout plan (Figure 2.2-2 in the EIA Report) which is bound by the rectangular plot.

**Table 3: Main Features in the Expansion Project**

Name of Feature	Floor/s	Dimensions (L x W x H in m)	Construction area (m <sup>2</sup> )	Status
Raw Material Storage Yard	1	239 x 396 x 12	94,852	Construction
Evaporation concentration workshop	1	60 x 45 x 6	2,700	Construction
Chemical mechanical pulp workshop	2	105 x 30 x 6	6,300	Construction

Name of Feature	Floor/s	Dimensions (L x W x H in m)	Construction area (m <sup>2</sup> )	Status
Chemical warehouse	2	45 x 45 x 6	4,050	Construction
Pulp board warehouse	1	235 x 45 x 6	10,575	Construction
Crushing depot	2	70 x 45 x 6	6,300	Construction
Wet Paper-making Joint Factory Building	2	365 x 68 x 6	49,640	Construction
Paper processing workshop	2	165 x 75 x 6	24,750	Construction
Finished product warehouse	1	188 x 75 x 6	14,100	Construction

The photographs of some of these major site features with ongoing construction are shown in APPENDIX C.

Hardstands or concrete pavement will be provided in most of the site, with only the northern portion (near evaporation and pulping workshop) having unpaved areas.

### 3.1.4 Supporting facilities

The supporting facilities described below are outside the Project boundary (rectangular plot) and are considered external to the Project (i.e., not project components or “AFs”).

- Wastewater treatment plant (labelled as “Sewage Treatment Plant” in the EIA Figure, and referred to in this document as WWTP) – located to the east of the Project site, the white water from the paper machine is partially recycled, and the remaining white water from the paper machine and the production waste water are discharged into the reconstruction and expansion project of the proposed WWTP at the same time. The treated wastewater is degraded by Yangjiahe wetland and then transported to Sihe River by pumping station through pipelines, and finally discharged into Nansi Lake.
- Municipal Waste Power Generation – located directly adjacent to the east of the Project site (operating) which caters to municipal domestic wastes coming from the Yanzhou district (not captive to the new Project), and biomass incineration (ongoing relocation and reconstruction project) to the southeast. Biomass will come from the wastes of the paper-making processes from the entire Sun Paper operations, including this new Project.

### 3.1.5 Labour at the Project

According to reviewed documents, the entire Sun Paper group operations directly employs over 4,000 employees, excluding subcontractors and temporary labour.

Sun Paper commissioned Shandong Shengwei Construction Co., Ltd. (SSCCL) for the project construction, and Jining Xingye Construction Supervision Co., Ltd. for the project supervision.

According to the description of the representative of Sun Paper, the number of construction workers changes periodically with civil construction and installation activities. The total number of construction workers is between 200-600 people over the 12-month construction phase for the new Project.

SSCCL is reportedly contractually employing between 200-600 individuals at any time (depending on ongoing tasks) who are expected to be onsite until November 2020 (construction completion). However during the site visit by Golder, only 40-50 construction workers were on site. All workers live outside the construction area, and at nearby villages. SSCCL does not provide or coordinate construction workers’ accommodations.

In the operation phase, the new expansion facility is expected to employ an additional 300 direct employees, roughly 7% increase from the current manpower contingent of the entire Sun Paper group (at present over 4,000 Sun Paper employees).

### 3.1.6 Contractor firms

As the project owner, Sun Paper has engaged the Shandong Shengwei Construction Co., Ltd. (SSCCL, the Contractor) to construct the expansion project. Sun Paper is not directly involved in hiring and managing construction workers, as this has been fully delegated to SSCCL as the contracted construction firm. All construction workers will be demobilized from the site after the planned construction completion in November 2021.

During Golder's site visit, the Contractor has personnel and equipment progressing the construction activities. The main building structures (raw material storage yard, wet paper-making workshop, mechanical pulp warehouse, production warehouse, pulp board warehouse, etc.) are all at the advanced construction stages (APPENDIX C, Photographs 11 to 14).

There were no available information on future contractor firms to be engaged by Sun Paper during the operation phase. However, it is understood that relevant third parties currently providing environmental services (e.g. suppliers, transportation, waste transfer and offsite disposal, etc.) to the wider Sun Paper group operations will be retained by the new Project once fully operational.

## 3.2 Environmental and social setting

The proposed project is located within the Sun Paper New Materials Industrial Park, Wangqiao Village, Yandian Town, Yanzhou District, Jining City.

This area is industrial land, and the Project (pulping and paper-making) meets the land use planning requirements set forth in the Yanzhou Yandian Town Master Plan (2017-2030).

### 3.2.1 Topography, rivers and aquifers

Yanzhou District is on the inclined plains southwest of the Taiyi Mountain in the middle of Shandong Province. Major rivers in the region include: (a) Wenshui River flowing southwest on the west of the mountain, (b) Sishui River also running southwestward on the east; (c) Guangfu River and Yangjia River running parallel in the middle of the province, also flowing southwest.

The Sihe River is the nearest receiving water body for surface runoff and effluent from the Project site. According to the routine monitoring data of Sihe River in Shijiyang during 2017-2019 in Yanzhou District, all monitoring parameters in Sihe River meet the requirements of Class IV water standards of the Environmental Quality Standards for Surface Water (GB3838-2002).

The Project's total land plot area of 442,200 m<sup>2</sup> has a south-north distance of 660 m and an east-west distance of 670 m. Ground elevations in the region are between 38 m to 60 m above sea level (mean altitude 49 m and mean slope 1/5000). Site geology is typical Quaternary alluvial deposits from these large river systems.

The plant area is generally flat but with a slightly lower relief from the northeast to the southwest, in the direction of the wastewater treatment facilities.

The emergency pool is located in the lower terrain of the plant area, designed for the collection (via surface flow) and treatment of any accidentally released wastewater.

The main environmental concern for the Project is the potential impact of wastewater generated by the operation on the surrounding environment.

The centralized wastewater treatment on the southwest of the industrial park receives the effluent through a sewage pipe network. The treated wastewater is then discharged into the Sihe River after treatment by the Xujiaing Oxidation Pond and further treatment by Yangjiahe Wetland, and finally into Nansi Lake.

To meet the water quality requirements for sewage discharge from rivers along the route, the Yanzhou Municipal Government has built "Yangjiahe Wetland" using some sections of the upper reaches of Yangjiahe River. The wastewater treated by Yanzhou Development Zone and Sun Paper is discharged into Yangjiahe Wetland through pipelines and then discharged into Sihe River at Longwan Store on the north side of Yanzhou City.

Based on general topographic relief, the project site is not situated in a watershed or a recharge area for any domestic water supply sources (surface water and/or groundwater).

Regionally, domestic water for households and businesses is provided through piped municipal supply. Therefore the groundwater environment is not sensitive.

### **3.2.2 Sensitive ecology (forest, wetlands)**

The Project site does not overlap with any protected areas or other environmentally sensitive areas. There is little natural vegetation in the area with few woody plants and many herbaceous plants. Main herbaceous communities are distributed on the riverbanks and along the channels and roads in the Yanzhou District. The main plant species in the area are wheat, corn, vegetables and other crops, and a few main wild plants.

The nearest ecological protection ("red line") area to the proposed project is Yanzhou District's water conservation ecological protection red line area (code SD-08-B1-03), at a distance of 3.1 km. The Project construction activities nor the future operations do not overlap with this nearest ecological 'red line'.

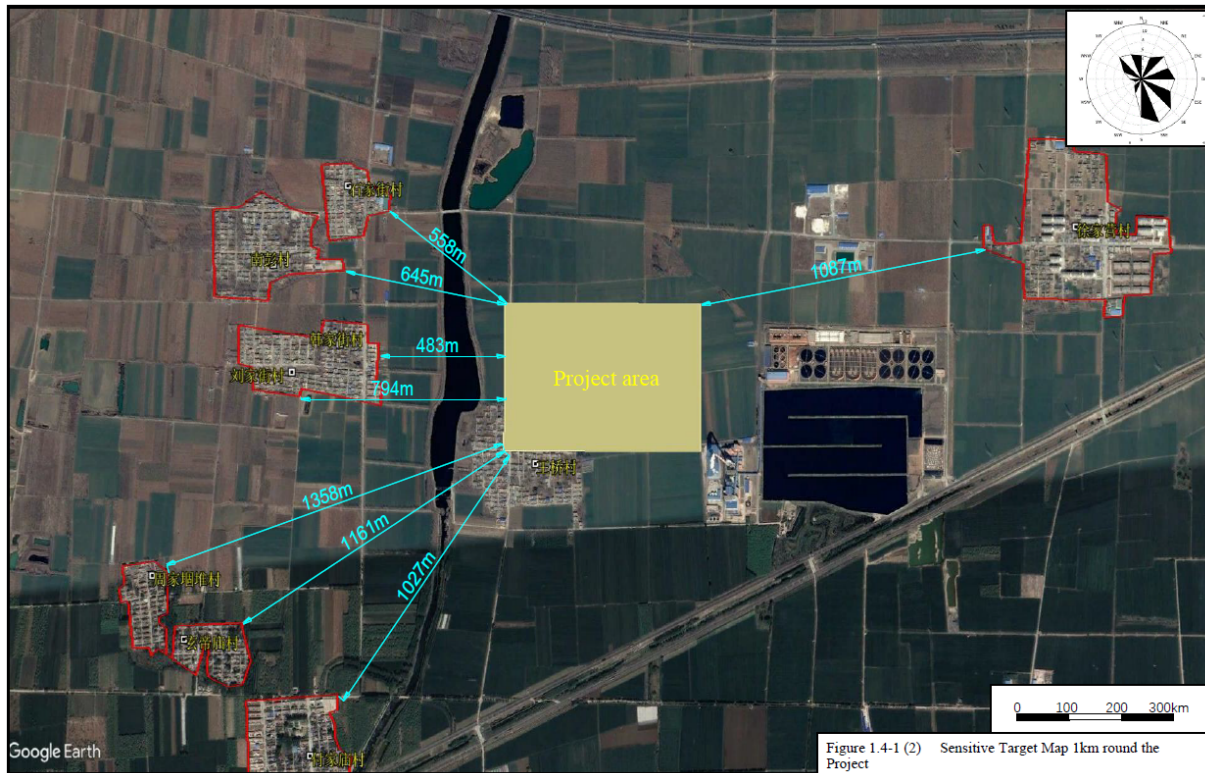
### **3.2.3 Directly affected communities**

Based on the local EIA report, the new Project affects several communities within the environmental risk assessment range of 3 km around the new facility boundary.

Figure 1.4-1 (2) of the local EIA report (below) shows these sensitive receptors of the environmental impacts from the construction and operation of the Project.

There were eight villages included in the social risk assessment in the local EIA within a radius of 3 km from the Project boundary.





### 3.2.4 Overlapping and neighbouring land use

The footprint of the proposed Project overlapped with residential houses belonging to the village of Wangqiao and previous agricultural lands.

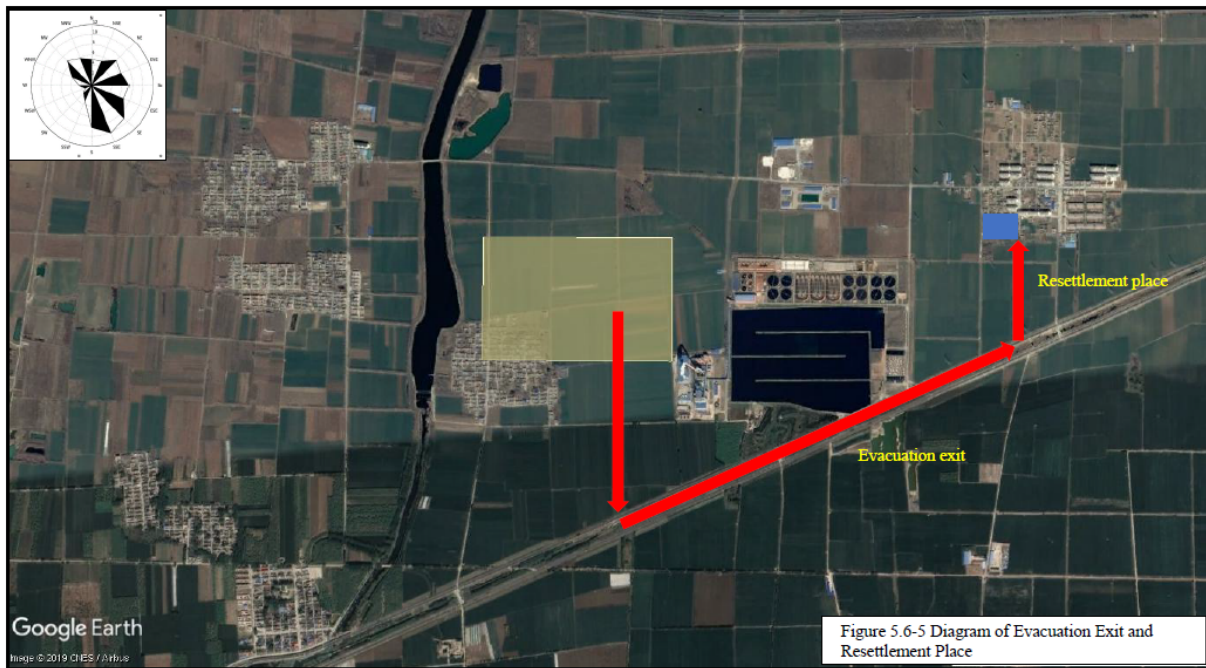
Within the industrial park, there are no overlapping land uses with the proposed Project footprint. The adjacent site features within the Sun Paper New Materials Industrial Park (outside of the rectangular plot) are:

- Municipal Waste Power Generation Project – east (biomass incineration plant relocation and reconstruction from former location on the southeast); sewage/wastewater treatment plant (further east)
- Wangqiao Village – west (ongoing relocation)
- Heat Supply Boiler Project – southeast
- Vacant land included in the planning scope for the industrial park – north (currently open agricultural lands exploited by the nearby villages)
- Vacant land for future expansion and “co-constructed” building for special paper printing – south (external to new Project)

### 3.2.5 Resettlement location

The proposed new Project required the resettlement of households from the Wangqiao Village to a resettlement location approximately 1 km to the west.

Figure 5.6-5 in the local EIA report depicts the resettlement location for the affected community’s households.





## 4.0 ENVIRONMENTAL, SOCIAL, HEALTH AND SAFETY OBSERVATIONS

### 4.1 PS 1 Assessment and Management of Environmental and Social Risks and Impacts

Performance Standard 1 (PS1) sets out the general requirements for good management of the environmental and social impact of a project. These include:

- An Environmental and Social Management System (ESMS)
- An Environmental and Social Impact Assessment (ESIA)
- Stakeholder Identification and Engagement
- A Grievance Mechanism
- An Emergency Preparedness and Response Plan (EPRP)
- Adequate resources within the Project to manage environmental and social aspects

The Sun Paper Project has addressed some of these requirements, but some elements are still underdeveloped, as described in the sections 4.1.1 through 4.1.6 below.

#### 4.1.1 Environmental and Social Management System (ESMS)

PS1 requires a comprehensive Environmental and Social Management System (ESMS) adapted to the nature and scale of the project and its environmental and social risks and impacts, so as to manage and respond to the potential environmental and social risks and impacts in the whole life cycle of the project from construction to operation.

Sun Paper has not developed and implemented such an ESMS for the Project. There is no clear Plan-Do-Check-Act policy cycle to manage the impacts and risks of the Project systematically.

Golder has not received a comprehensive environmental, social and health & safety policy from Sun Paper to determine environmental and social goals and principles for the Project.

No Standard Operating Procedures regarding the management of environmental and social aspects of the Project have been made available.

#### 4.1.2 Environmental and Social Impact Assessment (ESIA)

For large scale and large impact projects it is a requirement that a process of identifying the environmental and social risks and impacts of the project is established and maintained. This process comprises a full-scale Environmental and Social Impact Assessment (ESIA). The ESIA is also the starting point for the development and implementation of an ESMS.

A thorough Environmental Impact Assessment (EIA) to national legislation has been developed for the Project. This EIA addresses the main environmental impacts and risks of a pulp and paper mill, including impacts to air quality, surface and groundwater quality, environmental noise and the risks associated with waste management. Based on the environmental impact assessment an environmental management and monitoring plan has been developed for the Project.

Some elements missing in the EIA (as compared to the requirements for an IFC compliant ESIA) are:

- An assessment of the Greenhouse Gas Emissions from the Project.
- A plan on how to conserve energy and water used by the new production facility.

- An assessment of cumulative impacts, e.g. cumulative with the impacts from the existing Sun Paper factory operating at this location.
- An assessment of ecosystem services, e.g. the Yangjiahe Wetland that receives treated wastewater cumulative with the existing Sun Paper operations.

However, the most important difference between an ESIA to IFC standards and this EIA is that the EIA does not address potential social impacts, such as labour issues, community health, safety and security, impacts associated with the land and livelihood of communities in the footprint of the Project, indigenous communities or cultural heritage.

The EIA does identify a number of villages within a circle of 3 km around the Project and describes the economic benefits for these villages of the development of the Project. No other specific social studies, e.g. describing landownership and livelihood, the community health situation in the affected villages etc. have been made available to Golder either.

The EIA was announced to communities in the direct vicinity of the Project through newspaper publicity, website publicity and on-site posting. However, no reaction from the communities was received. No public consultation meetings have been conducted with regards to the results of the EIA.

There is no social stability risk assessment for the project. The assessment of social stability risks, the control of these risks and community consultation are conducted by the local government.

In conclusion: there is no complete ESIA for the Project as the EIA only covers environmental impacts and risks, but not the social impacts and risks. The national EIA contains a thorough assessment of the environmental aspects of the Project, but it does not seem that Sun Paper has reached the affected communities with the publicity around the EIA.

### 4.1.3 Stakeholder Identification and Engagement

PS1 asks for a process of identification of the relevant stakeholders (especially local stakeholders) of a project and of engagement of these stakeholders. This is normally organised in the form of a Stakeholder Engagement Plan.

The Project should identify the range of stakeholders that may be interested in their actions and consider how external communications might facilitate a dialog with all stakeholders.

For the Sun Paper Project there is no long-term and continuous Stakeholder Engagement Plan, including information disclosure, consultation plan, complaint mechanism, continuous reporting mechanism, etc.

The interests and potential complaints of local stakeholders are managed by the local authorities without involvement of the Project. A good example is the process around land acquisition and resettlement of Wangqiao Village.

Another example: there has been no direct engagement with the affected communities around the results of the EIA. The Project has been announced through different media, but no direct discussion with the affected community about the results of the EIA have been conducted.

In conclusion: The Project does not have a Stakeholder Engagement Plan to manage communication with especially the local stakeholders during the different stages of the Project. Engagement with the affected communities is mostly conducted by the local authorities without any recognisable involvement of the Project or Sun Paper.

#### 4.1.4 Grievance Mechanism

PS1 requires that the Project implements and maintains a procedure for external communications that includes methods to:

- Receive and register external communications from the public
- Screen and assess the issues raised and determine how to address these
- Provide, track, and document responses, if any; and
- Adjust the management programs for environmental and social issues, as appropriate.

No such grievance mechanism seems to be in place at the Sun Paper Project. Dealing with complaints from the affected communities about the Project activities seems to be mostly the responsibility of the local authorities.

#### 4.1.5 Emergency Response and Preparedness

Where the project involves specifically identified physical elements, aspects and facilities that are likely to generate impacts, the ESMS will establish and maintain an Emergency Preparedness and Response Plan so that the Project, in collaboration with appropriate and relevant third parties, is prepared to respond to accidental and emergency situations associated with the Project in a manner appropriate to prevent and mitigate any harm to people and/or the environment.

In the EIA an assessment of potential process risks associated with the Project process installations has been made. Other potential emergency situations, such as earthquakes, floods, social unrest etc. have not been assessed.

Some emergency procedures (in Chinese) for the event of environmental incidents from the Project are in place. However, no complete Emergency Preparedness and Response Plan for the Project, analysing all risk scenarios that the site will face either from natural causes or social unrest, and describing the response from the site for all these scenarios, has been made available.

#### 4.1.6 Organisational Capacity

PS1 expects that the Project will establish, maintain, and strengthen as necessary an organizational structure that defines roles, responsibilities, and authority to implement the ESMS.

According to the EIA document, the Project has an EHS team dealing with the environmental and occupational health & safety aspects of the Project activities.

However, there is no organizational structure and procedure for social development initiatives. Dealing with the community seems to be exclusively the task of the local government.

## 4.2 PS 2 Labour and Working Conditions

Golder observed the ongoing construction activities during the site visit on April 14-14, 2020. Labour and working conditions in the future operation phase will obviously be different, although it is understood that the same Sun Paper conditions of employment in the existing operations will generally apply to the new Project.

### 4.2.1 Construction Phase

All construction workers are contracted by the project builder (Shandong Shengwei Construction Co., Ltd., SSCCL, the Contractor).

The site visit observation, interviews, and document reviews revealed that SSCCL has a relevant management system for the safety risks and impacts of the construction activities. This include policies and procedures related to safety production responsibility, personal protective supplies management, limited (confined) space management, safety education and training, hidden trouble detection and management, special operations management, subcontracted safety management, environmental protection etc.

For the construction phase, Golder's site observations and document reviews and interviews showed that the SSCCL as the contractor:

- Hired most of the construction labour force from the local district.
- Provides for temporary worker facilities, including rest areas, and toilets for male and female personnel.
- Provides hygienic messing facilities through a food hall for construction workers including those that pack their meals, and access to clean drinking water.
- Provide workers with the minimum safety orientation, documented through the employee orientation and certification process.

The contractor is directly responsible for these construction labour and working conditions, with the supervision of the contracted construction supervisor, and the overall management of Sun Paper.

There were no temporary worker accommodations on site during the construction. Workers come in and out of the site to work during the day and live outside of the construction site at night. At the time of Golder's site visit, construction workers were estimated between 40-50 individuals and were all staying outside of the construction site.

### 4.2.2 Operation Phase

In the operation phase, the project owner will hire the ~300 new employees (refer to Sections 3.1.5 and 3.1.6). Sun Paper has not confirmed how this future operation phase manpower will be procured e.g. either these will be new hires or transfers from existing Sun Paper employees from the wider existing operations.

Sun Paper's wider group operations has an existing company employment manual that specify regulations on hiring, benefits, validity period of employment contracts, the scope and place of work, working hours and leave, social insurance for remuneration for labour and other welfare benefits, and the conditions for the termination or renewal of the labor contract.

It is expected the future operation of the expansion project will adopt the same employee manual. Golder was not furnished this employee manual due to confidentiality, hence cannot comment on specific improvements.

For the operation phase (assuming the Sun Paper group policies will apply to the operating unit for the new Project, and that the local EIA commitments are fulfilled) it is noted that the Project owner will:

- Establish a suitable human resources management system, covering the main employment aspects of hiring and termination, education and training, and compensation and benefits, among others.
- Develop an Employee Manual to clarify employee recruitment, contract of service, roles and responsibilities, working hours, attendance and appraisal, minimum wage, overtime pay, salary increases and regulatory deductions, job changes, safety, disciplinary and other employment issues.
- Enable the formation of a trade union, which carries out regular trade union activities and keeps relevant records; in accordance with Chinese laws and regulations expressly prohibiting any form of trade union organizations that are separate from the National Federation of Trade Unions.
- Provide specific guidance on non-discrimination, sexual harassment, equal opportunities, complaint mechanisms, child and forced labour (both for Sun Paper and its suppliers and providers),
- Carry out safety risk assessment, safety and fit-for-work pre-evaluation, and occupational hazard evaluation for the Project operation phase activities; provide personal protective equipment and supplies in a unified procurement and free distribution; train special position employees for specialist tasks to be certified.
- Preferentially hire locally (per the local EIA commitment) for the 300 new job positions for the future operation.

Similar to the construction phase, there are no provisions for worker accommodations (operation phase) in the new Project 's buildings and structures. Golder understands all future operation phase workers (~300 employees) will be hired locally and live outside of the future plant. Those hired from remote areas are expected to individually secure local temporary accommodations in the nearby villages (but will not be under Sun Paper control).

To date, China has only ratified 4 out of 8 International Labor Organization (ILO) "fundamental" conventions, covering subjects that are internationally considered to be basic principles and rights at work. China has not ratified the ILO conventions on organized labor (i.e. freedom of association and right to organize and collective bargaining) and forced labor.

None of these ILO conventions were noted to be grossly violated from Golder's review and site visit during the construction phase. Under the contract agreement with Sun Paper, SSCCL follows the basic labor regulations implemented by Sun Paper who carries out periodic management reviews during the construction phase.

For the future operation phase, it is expected the project owner will adopt the existing Sun Paper employment regulations which covers compliance to these labor aspects (i.e., organized labor and forced labor).

## 4.3 PS 3 Resource Efficiency and Pollution Prevention

### 4.3.1 Water Management

The water supply of Shandong Sun Paper Co., Ltd. is provided by its own wells and surface water from the South-to-North Water Diversion Project. Sun Paper has 12 groundwater extraction wells with a total water supply capacity of 91,200 m<sup>3</sup>/d (31 million m<sup>3</sup>/a) and 17,600 m<sup>3</sup>/a (6 million m<sup>3</sup>/a) from the South-to-North Water Diversion Project. The total water supply capacity at present is therefore 108,800 m<sup>3</sup>/a (37 million m<sup>3</sup>/a).

The total water consumption of the existing facilities is 95,421.91 m<sup>3</sup>/d (31.49 million m<sup>3</sup>/a).

The same water supply sources (groundwater extraction wells and surface water) are expected to provide for the new Project. The projected fresh water consumption for the new facility is 11,941 m<sup>3</sup>/d, accounting for 4.06 million m<sup>3</sup>/a.

Once the new facility comes on line, the total water supply requirement is therefore 35.55 million m<sup>3</sup>/a (or 31.49 million m<sup>3</sup>/a + 4.06 million m<sup>3</sup>/a), or still below the estimated total capacity of 37 million m<sup>3</sup>/a.

During the construction phase, water supply is primarily used in construction activities and manpower domestic needs (toilets, bathrooms, tap water, etc.) and is capably supplied with existing Sun Paper supply.

### 4.3.2 Air Emissions, Noise and Vibrations

#### *Air emissions*

As the new Project is still in construction, Golder reviewed the emission sources of Sun Paper's existing operations (expected to be similar to the new Project and supporting facilities) including waste gas and smoke from boiler and soda recovery furnace with pollutants such as SO<sub>2</sub>, NO<sub>x</sub> and dust emissions. In general, the regulatory standards are being met by Sun Paper i.e. *Shandong Air Pollutants Emission Standard for Thermal Power Plant (DB37/2372-2019)* and *Shandong Regional Air Pollutants Comprehensive Emission Standard (DB/2376-2019)*. The local EIA report identifies the main environmental problem in the existing Sun Paper operations as the particulate matter (PM<sub>10</sub>) emission concentration for the quicklime project that cannot meet the requirements of the applicable standard (DB/2376-2019). For this issue, the EIA prescribes the rectification measures to be taken which are: increasing the first-level dust removal and improving the dust removal efficiency of these Sun Paper emissions (external to the new Project).

The waste gas of the new Project is dust and cooking odor from log loading and unloading and wood chip re-breaking. For the proposed new facility, an air pollutants dispersion modeling using AERSCREEN was carried out in the local EIA, predicting pollutant concentration plumes at various intervals (50m and 200m) away from the site. With the additional pollutant load from the new Project, the PM<sub>10</sub> (and PM<sub>2.5</sub>) issue can only be exacerbated cumulatively if not fully addressed in the future. However, the EIA assessment level states that upon completion of the proposed Project, the dust emission concentration in the waste gas meets the requirements of the key control areas in DB37/2376-2019, including the requirements for "unorganized" emissions (non-point source/s, GB16297-1996), odour pollutants (GB14554-93), and for Volatile Organic Compounds (DB37/2801. 7-2019).

These air pollutants dispersion projections from the AERSCREEN modelling will have to be tested and confirmed against actual emission monitoring performance in the future. Using dust suppression and DNCG closed collection for odor, however, the modelling results show that compliance to China regulations are achievable, which is a minimum expectation in the IFC guidelines.

The IFC guidelines specify emission criteria for the pulp and paper industry based on kilograms of pollutant per 1,000 kgs of air-dried pulp (kg/ADt) depending on the type of mill and production processes involved. For total suspended particulates (TSP), this value ranges from 0.15 kg/ADt (sulfite, integrated and non-integrated mills) to 0.5 kg/ADt (kraft, bleached/unbleached integrated mills).

## Noise and vibrations

The main noise and vibrations sources identified in the local EIA and reported at the existing Sun Paper operations (not this expansion project which is still being constructed) are production equipment of sewage treatment, paper-making solid waste incineration power generation and other projects, as well as water pumps, blowers, induced draft fans, Roots fans, and other moving equipment.

The noise reduction measures currently adopted (in existing Sun Paper operations) and mentioned in the local EIA for the future operations include:

- Overall planning in the overall layout of the plant area: High noise sources are centralized and kept away from the plant boundary and office area,
- Put noise equipment in workshops as far as possible, and add sound insulation covers to high noise equipment not in the workshops,
- Set shock absorption foundation for high noise equipment, especially pumps that can be fixed, to avoid resonance,
- Pay attention to shock prevention and impact prevention in pipeline layout, design and supports and hangers selection,
- Adopt double-layer windows and select wall materials with good sound absorption performance,
- Install high-pressure injection silencer at boiler exhaust port and safety valve blowpipe port; blowing time should be set properly to avoid affecting residents' rest as much as possible, and
- Flexible joints are adopted at the joint of air ducts and compensation joints are set to reduce noise generated by vibration.

The local EIA assessed the noise impacts from the expansion project, adopting these design and operation noise mitigation efforts for the future operation phase.

The local EIA predicts noise at the future plant boundary is expected to meet the regulatory requirements of Class 3 standards: 65 dB(A) in daytime and 55 dB(A) at nighttime.

However, the IFC requirement is to assess noise and vibration impacts at the point of sensitive receptor/s. Since the adjacent Wangqiao village is being relocated, there will not be adjacent receptors at the project boundary to the west during the operation phase. In the future (after relocation of Wangqiao village), the nearest sensitive receptors would be residents of Hanjiajie Village about 460 m to the northwest: which is a considerable distance from the site. The local EIA modelling predicts the noise and vibrations (also emissions) will meet regulations at this closest sensitive receptor area during the operation phase.

However, the air emissions, noise and vibrations exposure during the current construction phase are partially experienced by the residents who are in the process of being relocated. These exposures are also not monitored and are a potential gap to the health risks of the project to the residents.

### 4.3.3 Energy Efficiency and Greenhouse Gas Emissions

During the operational phase, the power supply will be dropped from the transformer station of Sun Paper New Materials Industrial Park, with an annual power consumption of 27 million kilowatt-hour (kWh).

Sun Paper confirms power will mainly come from the municipal grid through a 110 KV substation within the rectangular plot for the expansion project. However, the local EIA layout plans do not yet indicate where this power substation will be exactly located.



The steam for the future production is provided by the heating center of the Sun Paper New Materials Industrial Park, with the total steam consumption of 810,000 t/a.

As in similar pulp and paper mills, the Project is a relatively large energy and steam consumer typically making use of auxiliary boilers for the generation of steam energy. Emissions related to the operation of these steam energy sources usually consists of combustion by-products such as NO<sub>x</sub>, SO<sub>x</sub>, PM, and volatile organic compounds (VOCs), and greenhouse gases. The new Project has not assessed the amount of greenhouse gases (e.g. CO<sub>2</sub> and CH<sub>4</sub>) it will produce, as a portion of the cumulative loads on power and steam generation required by the future operation phase.

Energy for the Project will be from the municipal grid which in Yanzhou is mostly based on combustion of fuels (mainly from existing thermal power plant/s) and the adjacent municipal waste to energy plant. Other GHG sources include heavy equipment moving raw materials and finished products via land-based transportation. Based on the combined heat and power requirements, it is expected that the Project will exceed the threshold produce more than 25,000 tonnes of CO<sub>2</sub> equivalents during the operation phase.

The IFC EHS Guidelines for pulp and paper mills (Table 3, Annex B) prescribe electrical energy consumption of 1,000-4,300 kWh/t and 15-50 cubic meter per ton (m<sup>3</sup>/t) water consumption - for mechanical CTMP pulping operations.

As a first step a baseline assessment of the greenhouse gas emissions expected from project activities will have to be conducted. Subsequently, a management program should be developed to look at options to reduce greenhouse gas emissions. Improving energy efficiency by reducing heat losses and heat consumption, increasing efficiency of steam boiler, increasing high pulp concentration, maintaining a high pulp consistency, etc. are some of the energy efficiency improvements to be considered.

#### 4.3.4 Waste Management

The solid waste of the existing project comes from heavy impurities such as damaged paper, sawdust, pulp slag, and iron nails, as well as waste packaging materials, waste wool cloth, and dry net generated in the pulping and papermaking process, white mud, digestive residue, black liquor impurities, sewage treatment system sludge, thermal power engineering boiler ash and daily living garbage of employees, etc. generated by alkali recovery production line.

The black liquor produced by the chemi-mechanical pulp production line is fed into the alkali recovery production line for combined heat and power, and the waste slag is sent to the existing biomass incinerator, maximizing recycling and reuse to optimize resource use.

Hazardous wastes are expected to be minimal including oil and grease residues, scrap electrical equipment, and other chemical residues (very minor).

All future waste management issues are expected to be handled similar to existing Sun Paper operating procedures i.e., engaging qualified third party providers or using associated incineration facilities.

#### 4.3.5 Hazardous Materials

Some hazardous chemicals expected to be used in the Project include:

- Gases such as reduced sulfur compounds (kraft pulping), oxidized sulfur compounds, mainly sulfur dioxide (kraft and sulfite pulping), chlorine, chlorine dioxide, terpenes and other volatile organic compounds, and oxygen;
- Liquids including sodium hydroxide and other caustics, acids such as sulfuric acid, cooking byproducts such as turpentine, sodium hypochlorite, aqueous solution of chlorine dioxide, hydrogen peroxide, biocides, papermaking additives, solvents, and dyes and inks; and



- Solids including sodium chlorate, sodium sulfate, lime, calcium carbonate, ash, and asbestos (used for insulation).

Recommended measures to prevent, minimize, and control use of these hazardous materials should be considered including: automation of pulping and bleaching operations; and providing engineering controls (automatic valves, negative pressure in boilers enclosures or ventilation systems, gas monitors, material safety data sheets, etc.)

#### 4.3.6 Soil and Groundwater contamination

Based on the local EIA, prevention of soil and groundwater contamination will not be a major point of attention during the construction and operation phase for the Project.

During construction phase, handling of bulk fuel and lubricants for heavy equipment and back-up power generation will be critical as the surface hardstands (concrete pavement) are not yet in place. Surface soils are vulnerable to minor but repetitive releases of hydrocarbons during dispensing or onsite troubleshooting of equipment. Prevention of soil and groundwater contamination during construction will be very much depending on implementation of effective Hydrocarbon Management by the contractor.

During the operation phase, apart from hydrocarbon management, wood materials used as predominant source of cellulose fiber to make pulp can arrive at the mill either as logs, chips or sawdust. Unwanted chemicals from these wood materials (pesticides, resin, fatty acids) can be accidentally released into surface runoff and seep into unpaved areas causing soil and/or groundwater contamination.

As the Project site is a redeveloped land, baseline soil and groundwater quality assessments should have been added in the EIA baseline studies focused within the property. The baseline soil and groundwater quality onsite can provide a benchmark for future monitoring of any contamination issues that may be attributed to Sun Paper's future operations (or even the ongoing construction).

#### 4.3.7 Effluent discharge quality

Most of the wastewater generated during construction is handled mainly by absorption in unpaved areas, evaporation loss, contained within the construction areas and are not discharged offsite, and will not affect the surrounding surface water environment. However, surface excavation and cut-and-fill operations invariably causes additional loads of siltation into existing storm drains and need to be monitored over the construction period, especially during heavy rains that could occur during the 12-month construction period.

The contractor confirms domestic sewage is regularly collected and treated by third party service providers. The effluent discharge quality for the construction area is not separately monitored and any effluent that can cause upset conditions is captured in existing monitoring at the centralized treatment plant.

Wastewater generation attributed to future production activities and domestic sewage during the operational phase is mainly from the pulping section, cold sewage concentrated by evaporation, and domestic sewage. The general approach is to keep drainage lines free from obstruction and maintain separation of wastewater from rain water. Wastewater is still collected and centralized to the sewage treatment plant (shown in the local EIA report as having enough treatment capacity), back into the oxidation pond deep treatment, directed to the Yangjiahe wetland degradation pumping station via a pipeline to the Weihe River, and finally to the Nansi Lake.

The total amount of wastewater generated by each production and living unit of Sun Paper is about 77,000 m<sup>3</sup>/d, which is centrally directed and treated at the wastewater treatment plant via the sewage pipe network. From the central treatment, treated effluent is directed to the Xujiaying Oxidation Pond and discharged into Sihe River. The Sihe River is further treated by the "Yangjiahe Wetland", and finally discharged to the Nansi Lake. The Yangjiahe Wetland was built by the Yanzhou Municipal Government by using some upper sections of the

Yangjiahe River to naturally buffer surface water to meet the water quality requirements for the South-to-North Water Diversion Project.

The total wastewater generation for the entire Sun Paper operations is 28.104 million m<sup>3</sup>/a, translating to a benchmark displacement per unit product of 31.37 t/t pulp. This meets the discharge amount per unit product standard requirement (40 t/t pulp) specified in the China regulations for the pulp and paper industry (GB3544-2008).

The maximum allowable discharge concentrations of major pollutants COD and ammonia nitrogen are 60 mg/L and 2.4 mg/L respectively (based on local effluent criteria and the discharge permits). Existing discharge amounts are 1,686.23 tpa COD and 67.44 tpa ammonia nitrogen and are shown to achieve consistent compliance.

The expected wastewater contribution from the new facility is 10,770 m<sup>3</sup>/d and a portion of this is expected to be reused during the production operations. As this additional load is within the current treatment capacity, compliance to the China effluent criteria is expected to be achieved.

However, the IFC effluent quality requirements for the pulp and paper industry do specify some criteria that could be more stringent, depending on the type of operational activities and pollution prevention techniques. For the critical parameters of COD and nitrogen, IFC criteria represent annual average values that facilities must meet at least 95% of the time without dilution. For COD and Total Nitrogen, these values range from 1.5-30 kg/ADt and 0.05-0.5 kg/ADt, respectively. Future monitoring and assessment in the operational phase should address compliance to these IFC guidance, in addition to the regulatory compliance stated in the local EIA report.

In summary, the local EIA modelling predicts compliance to the applicable China standards will be achieved during the operation phase, the environmental performance (e.g. emissions, effluent, noise) during the construction phase needs to be assessed (until November 2020), the EIA-predicted performance of the new Project need to be confirmed, and the reporting requirements of the applicable IFC EHS Guidelines be met for the future operation phase.

Table 4 is a brief comparison of the pollution control regulatory standards and the PS 3 (Resource Efficiency and Pollution Prevention) requirements to which the Sun Paper performance (future operation phase) needs to be evaluated against.

**Table 4: Pollution Standards and Sun Paper Performance**

Pollution parameters	China standards	Sun Paper performance <sup>1</sup>	Remarks (sampling location, Q1 2020)	IFC Criteria <sup>2</sup>
Air emissions and noise/vibrations <sup>3</sup>				
Particulate Matters	7.630 mg/m <sup>3</sup>	0.426 mg/m <sup>3</sup>	Highest concentration downwind	0.5 kg/ADT (kg pollutant per 1,000 kg of air dried pulp)
Hydrogen nitride	mg/m <sup>3</sup>	0.06 mg/m <sup>3</sup>	Highest concentration downwind	Not specified
Hydrogen sulfide	mg/m <sup>3</sup>	0.002 mg/m <sup>3</sup>	Highest concentration downwind	Not specified
Methane	%	0.00025 %	Highest concentration downwind	Not specified

Pollution parameters	China standards	Sun Paper performance <sup>1</sup>	Remarks (sampling location, Q1 2020)	IFC Criteria <sup>2</sup>
Odor gas concentration	dimensionless	15	Highest concentration downwind	Not specified
Noise- day	65 Dba	58.4 Dba	At west boundary	At receptor impact
Noise- night	55 Dba	54.2 Dba	At west boundary	At receptor impact
NOx		1,445.46 tpa	Total emission load / year	NOx as NO <sub>2</sub> , 1.5-2 kg/ADt
SO <sub>2</sub>		579.58 tpa	Total emission load / year	SO <sub>2</sub> as S, 0.4-1 kg/ADt
Dust		158.52 tpa	Total emission load / year	Total Suspended Particulates, 0.5 kg/ADt
<b>Surface water quality and Discharge criteria<sup>4</sup></b>				
pH	6-9	7.0	Effluent discharge at outlet of 80,000 m <sup>2</sup> oxidation pond	6-9
CODcr	60 mg/L	29 mg/L		5 kg/ADt (COD)
BOD <sub>5</sub>	15 mg/L	13.2 mg/L	Refer to Table 1 (d) of IFC EHS Effluent Guidelines for CTMP facilities	1.0 kg/ADt
Total Phosphorous	0.5 mg/L	0.02 mg/L		0.01 kg/ADt
Total N	12 mg/L	4.72 mg/L		0.2 kg/ADt
Suspended solids	30 mg/L	8 mg/L		1.0 kg/ADt
Total salt	1600 mg/L			Not specified
NH <sub>3</sub> -N	2.5 mg/L	3.70		Not specified
pH	6-9	7.8	Desulfurization wastewater at discharge outlet of Main factory (Yanzhou Industrial Park)	6-9
Total Hg		ND		Not specified
Total Cd		ND		Not specified
Total As		1.8 x 10 <sup>-3</sup> mg/L		Not specified
Total Pb		ND		Not specified

**Notes:**

1 Sun Paper Environmental Monitoring Report 23 March 2020 (excerpts provided to Golder)

2 Environmental, Health and Safety (EHS) Guidelines for Pulp and Paper Mills (IFC, 10 December 2007)

3 Emission Guidelines for Pulp and Paper Facilities (Table 2 Appendix B, EHS Guidelines, Dec 2007)

4 Effluent Guidelines for CTMP Facilities (Table 1 (d) Appendix B, EHS Guidelines, Dec 2007)

## 4.4 PS 4 Community Health, Safety and Security

Performance Standard 4 (PS4) addresses the Project's responsibility to avoid or minimize the risks and impacts to community health, safety, and security that may arise from project related activities, with particular attention to vulnerable groups.

Managing the potential impacts to community health and safety starts with a baseline assessment of:

- The health condition and the prevailing diseases with the communities that will be affected by the Project
- The health care infrastructure: will this be able to deal with the additional demand on medical services from the workforce at the Project?
- An assessment of roads and traffic in the wider Project area.
- The local EIA indicates all the surrounding communities use piped water supply but does not mention other potential water resources these communities may be using (e.g. groundwater extraction from community wells or river water use).

No such assessments (including the impacts of the Project on the groundwater resources that may be used by the community through shallow wells) was made as part of the EIA study.

The potential impact of the Project on the regional groundwater aquifers potentially used as resource for large scale water production was made in the EIA, based on the Chinese Technical Guideline for Environmental Impact Assessment – Groundwater Environment (HJ610-2016). This guideline focusses on protected areas for centralized drinking water sources (which are normally the deep, regional aquifers). This assessment seems to be done adequately and Golder agrees that these centralized drinking water sources do not seem to be at risk from impacts from the Project.

However, in terms of Community Health the main concern would be community drinking water wells in the vicinity of the proposed Project area. The potential impacts on shallow aquifers (from which the community normally takes its water) potentially caused by contamination of the shallow aquifer by Project activities (e.g. spills during construction or operation) have not been adequately assessed in the EIA. It is stated in the ESDD report that the surrounding villages receive piped water, but the community may still additionally take water from their own wells for domestic purposes or for drenching livestock.

However, process risks associated with the Operation stage of the Project and their potential impacts to the nearby communities were assessed in the EIA, especially risks associated with fire at the Project facilities. Also, the Project's potential impacts on air quality were assessed.

The potential for community exposure to hazardous materials as a result of the Project activities are in general related to:

- Air emissions from the process facilities: the potential impacts on air quality of the Project were assessed; however, the cumulative impacts on top of emissions from the existing facilities have not been assessed. A cumulative assessment of air emission of new and existing sources needs to be conducted.
- Spills of hazardous materials resulting in impacts to surface water or groundwater resources. The potential impacts to the shallow groundwater aquifer and the surface water resources in the vicinity of the Project have not been adequately assessed (see above for groundwater impacts, and Section 4.3.7 for potential impacts to the Yangjiahe Wetland which is the receiving water body for the existing WWTP). Such an assessment should be conducted and the scenarios leading to these potential risks should be addressed in the Emergency Preparedness and Response Plan (not made available to Golder).

- Risks of fire or explosion at facilities where large amounts of chemicals are stored or processed. The risks associated with fire at the Project facilities were assessed in the EIA.

A project of this size normally involves the mobilisation of a large work force, especially during the Construction stage (estimated between 200-600 construction workers over the 12-month period). Under PS 4, the risks of vector borne, (sexual) transmittable and infectious diseases associated with the Project workforce should be assessed and managed.

Although the Construction stage partly took place in the middle of the COVID-19 epidemic, there are no signs that the associated health risks to the community of a large external workforce have been assessed and managed.

From the documentation it is clear that the infrastructure in the Project area was relatively simple before the Project. Normally a Transportation/Traffic Management Plan (TMP) would be developed in order to ensure that the additional traffic, especially during the Construction stage would not cause more accidents than in the baseline situation. No documentation regarding the management of traffic and prevention of traffic accidents has been made available.

The existing Sun Paper security personnel (for the WWTP and Power Plant) extend the security for the ongoing construction activities. Sun Paper cannot confirm at this time whether exclusive security detail will be provided for the new Project during the operational phase.

The security personnel are unarmed as guns/ammunitions are banned in China. The security equipment used at the Site are limited to shields, batons, shovels, broken picks, military picks, and explosion proof net guns. The use of lethal and/or armed force for security is not specifically defined by Sun Paper at present.

In conclusion: Sun Paper did not explicitly assess and manage the risks and impacts to the health and safety of the affected communities during the Project cycle.

## 4.5 PS 5 Land Acquisition and Involuntary Resettlement

Performance Standard 5 (PS5) distinguishes between Physical displacement and Economical displacement. As the Project requires the resettlement of part of the village of Wangqiao, which is an agricultural community, both physical displacement (relocation of houses and families) and economical displacement (relocation of agricultural land and/or restoration of livelihood) seem to be applicable.

In China, the resettlement and land acquisition processes are the responsibility of the local authorities (in this case the Yanzhou District People's Government of Jining City for the political decision making and the village committee of Wangqiao Village, Yandian Town for the practical execution). Therefore, we have assessed the process followed by these government institutions against the PS5 requirements.

However, under the Performance Standards Sun Paper still has a responsibility: Performance Standard 1 states that where stakeholder engagement is the responsibility of the host government, the client will collaborate with the responsible government agency, to the extent permitted by the agency, to achieve outcomes that are consistent with the objectives of the Performance Standards. If the process conducted by the government does not meet the relevant requirements of the Performance Standards, the client will conduct a complementary process and, where appropriate, identify supplemental actions.

The total land area involved in the construction of the Project is 442,200 m<sup>2</sup>. At present, 74,841 m<sup>2</sup> of land has been approved for land industrial use (including land transfer contracts, real estate certificates, construction land planning permit). The construction has already started, and the main plant has basically been completed (see Photolog, APPENDIX C).

In the case of physical displacement PS5 requires a Resettlement Action Plan based on Engagement with the Affected Community. The main objectives of the process are: no forced eviction and adequate restoration of the lives of the people that had to be resettled. There should be a Grievance Mechanism (see Section 3.1.4) in place to enable affected community members to challenge decisions on the Resettlement Action Plan.

From June 2019, the village committee of Wangqiao Village carried out the consultation work for the demolition and relocation scheme. After four rounds of consultation, the demolition scheme was finalised in October 2019. The relocation began in December 2019. At present, 223 households out of the 263 households (or some 815 people) that needed to be relocated have signed the relocation and compensation agreement.

The remaining 40 households (some 124 people) are located in the west of Wangqiao village, their houses outside the red line of land that is directly required for the Project. Presumably the land use planning (industrial) and the adjacent households (if they were not to be relocated) will amplify the environmental, health, safety and social risks posed by the future operation of the new facility.

It is expected that the signing of the relocation agreement will be completed in May 2020. It is also expected that 20 to 40 households will still oppose the relocation. At present, the Municipal Propaganda Department, relevant departments of the district and other local government organizations have come forward to actively coordinate and resolve the opposition with further consultation and communication. The office site of the village committee has duty patrol system, dispute investigation and mediation system, location map of relocated households, and clear paper for transitional relocation (including compensation standard, reward policy, resettlement plan, time arrangement, and list of yet unsigned agreements). Notice of relocation is posted on the notice board with the last posting dated 1<sup>st</sup> April 2020.

Conclusion: the local authorities have made a Resettlement Action Plan (without involvement of Sun Paper) that was subject to extensive consultation with the affected community. The majority of the affected households have accepted but 20-40 households are still opposing it. Neither Sun Paper nor the local authorities have a

Grievance Mechanism in place that can accommodate the grievance of these 20-40 households (62-124 people).

The available documentation refers to affected households, and the average family size in China was 3.1 in 2018. No information about the exact number of people to be resettled was provided in the documentation.

In the case of economical displacement PS5 requires Livelihood Restoration Plan. This is not just acquisition or compensation for land or crops lost, but a plan to adequately ensure that the affected community members can have a level of livelihood at least as good as without the Project.

A process of land acquisition has been completed by the local authorities for most of the households in Wangqiao Village. No formal Livelihood Restoration Plan has been developed in consultation with the affected community, either by Sun Paper or by the local community.

However, the local government implemented a number of measures: The farmland of the villagers was replaced or contracted. During the 30 months transition period for the relocation process villagers could temporarily rent houses in the surrounding villages and rental fees were provided by the government.

Golder conducted interviews with villagers from Wangqiao Village. The majority seems to actively support the project construction, which can promote local employment, improve local infrastructure and promote local economic development. The Sun Paper industry provides infrastructure such as electricity, heating and sewage treatment for the surrounding areas of the project through the construction of power plants, paper mills and sewage treatment plants. At the same time, it also absorbs local labour force, increases villagers' income and forms a good interactive development mechanism with the local government.

Sun Paper did not establish a long-term effective communication channel to collect follow-up opinions from the villagers of Wangqiao Village.

In conclusion: although no formal Livelihood Restoration Plan was developed and implemented, some measures were taken by the local government to restore the livelihood of the affected community. The majority of the affected villagers seem to be satisfied with the overall process.

## 4.6 PS 6 Biodiversity Conservation and Sustainable Management of Living Natural Resources

The proposed Project covers a total area of 442,200 m<sup>2</sup>. Based on the local EIA report, there are no rare and endangered species, sensitive natural reserves, protected watersheds or recharge areas, tourist attractions, ecological function reserve, geoparks, social and historical relic protection or other sensitive ecological targets with mild ecological sensitivity.

The IFC biodiversity conservation requirements include the identification of modified, natural and critical habitats within the project area. The critical habitat determination follows five criteria: critically endangered and/or endangered species, endemic and/or restricted-range species, migratory and/or congregatory species, highly threatened and/or unique ecosystems, and key evolutionary processes.

If critical habitat is identified within the project area, the project needs to develop a biodiversity management plan. Strategies to be used in this plan include avoidance, minimize habitat fragmentation, restoring habitats during and after operation and biodiversity offsets.

PS 6 also contains requirements with regards to legally protected and internationally recognized areas, invasive alien species, the management of ecosystem services, sustainable management of living natural resources, and biodiversity management within the supply chain. For Sun Paper, the primarily supply chain involves sources for fiber raw materials i.e., wood pulp.



Golder was provided a fiber raw material procurement plan in 2020 (based on suppliers performance in Sun Paper's 2019 production) for the existing Sun Paper operations, but none specific for the new Project. Sun Paper confirms that no procurement plan for the new Project has been established although it is likely raw material will come from the same set of suppliers.

From the 2020 Procurement Plan and the other documents provided to Golder, it is understood that:

- For 2020, a total of 1,720,400 tons of fiber raw material will be procured: 42.2% bleached chemical broadleaf wood pulp; 32.9% bleached chemical conifer wood pulp; and 24.9% from other materials (mechanical needles and broadleaf, Ecrú and recyclable seriflux)
- The 2020 fiber raw materials lists overseas sources and suppliers but did not include domestic sources of wood pulp.
- Sun Paper has an established importation process of raw materials that includes quality inspections and import product declarations (quantity, certificate of origin, quarantine and fumigation certificates, etc.)
- Sun Paper has a list of accredited suppliers that have to meet qualification criteria on quality, pricing, product specifications (impurities or other contents), environmental protection, and trade compliance (e.g. anti-smuggling). The supplier qualification is based on a scoring system of 100 points, and accreditation is maintained at a score of 65 or above (annual inspections). Out of the total 100 points, only 5 points is attributed to environmental protection. In comparison, wood chip quality "problems" that impact the quality of the final (paper) product is deducted 5 points for every incursion (and three incursions disqualify the supplier).
- The environmental protection criterion is defined as: (a) the raw material supplied should come from regeneration forest/s, (b) not cause damage to ecological environment, and (c) not cause harm to people and animals. The 5 points for environmental protection is a "zero or 5" criterion (either supplier gets all 5 points, or no point at all).

As the PS 6 expectations also apply to the Sun Paper supply chain, the following assessments are made based on the document reviews and interviews conducted in this ESDD:

- It is not clear whether new plantations will be established or existing plantations will be expanded to supply the new Project. Therefore the suppliers (at least those listed in the 2020 Procurement Plan) need to be evaluated for this criterion as these plantations (suppliers) can be considered as Associated Facilities under the IFC definition.
- The "Environmental Protection" criterion in Sun Paper's supplier accreditation process appears low in priority (5 out of 100-point system with a 65-points approval level), and the appraisal system for the requirement is unclear. It is not clear how the supplier audits are conducted (e.g. actual plantation audits, frequency) and whether disqualified suppliers can re-acquire status.
- Moreover, among the countries listed in the Sun Paper 2020 procurement plan, Chile and Indonesia are in regions where significant conversions of natural and/or critical habitats may be occurring. Sun Paper's current supplier evaluation can be strengthened to verify practices for all (or at least the primary) suppliers, with particular focus on the specific suppliers for the new Project during the operational phase.

In conclusion: while none of the PS6 requirements are readily observable in the local EIA baseline studies, particular attention might be given on the Yangjiahe Wetland and how additional loads from the new facility (and the resulting cumulative load from Sun Paper's other activities) are affecting this ecological feature. Although the wetland is built, over the operational phase this ecological feature might evolve into a habitat that attract

and/or host species that have not been identified in the baseline EIA, but that could warrant some efforts toward conservation or sustainable management.

In addition, the supplier accreditation process should be reviewed and improved accordingly to align better with the PS6 requirements on the aspects of natural and/or critical forest conversions for existing and future plantations that will supply for the new Project.

## 4.7 PS 7 Indigenous People

PS7 asks for an assessment by external experts whether Indigenous People are present in the area where the Project will be developed. In case there are Indigenous People they would have the right of Free, Prior and Informed Consent (FPIC) on a number of important aspects of the Project, including Resettlement.

No such assessment by external experts has been conducted (either as part of the EIA or in other documents available). However, it is the general understanding, supported by interviews with the local community, that the affected community in the Project area, especially in Wangqiao Village, should not be identified as Indigenous People, but belong to the majority group of east China, the Han Chinese.

## 4.8 PS 8 Cultural Heritage

Consistent with the Convention Concerning the Protection of the World Cultural and Natural Heritage, this Performance Standard aims to ensure that the Project protects cultural heritage in the course of the project activities, especially during the Construction stage.

In the local EIA no assessment of objects of tangible cultural heritage within the Project area has been made.

From interviews with the community Golder understands that there are no cultural heritage sites within the Project area. However, Golder observed graveyard north of Wangqiao Village (APPENDIX C, Photograph 10), which would normally be considered of cultural value to communities. Based on Golder's observation during the site visit, these graves were outside the red line of the Project. These graves belong to Wangquiao village and no complaints or appeals from residents regarding the possible impact of the Project on the graves were noted in this review.

### 4.8.1 Chance Find Procedure

In order to be prepared for unexpected findings of tangible cultural heritage during land clearing or construction activities a so-called Chance Findings procedure should be in place. This procedure would require the Project activities to be stopped until an expert has determined whether the unexpected finding really involves objects of valuable cultural heritage and a plan has been made how to deal with these objects.

No Chance Findings procedure is in place for the Project. During the construction activities so far no attention seems to have been paid to potential unexpected findings of cultural heritage objects.

## 5.0 COMPLIANCE

In Section 4 the environmental and social management of the Project has been compared to the requirements of the IFC Performance Standards.

In the Table 5 below we provide an overview of how the Project complies with the main elements of the PS.

A qualitative assessment framework allows each element to be assigned a score of 1-4 or NA based on the assessment criteria outlined in Table 6.

**Table 5: Risk scores for compliance with the Framework Assessment Criteria**

Assessment Level	Description
1 = Minimum risk	Leading practice <ul style="list-style-type: none"> <li>■ Good practice or beyond compliance</li> </ul>
2 = Low risk	Good Practice/Compliant <ul style="list-style-type: none"> <li>■ Largely Compliant</li> <li>■ Some areas for further information or development</li> </ul>
3 = Medium risk	Minor Deficiencies <ul style="list-style-type: none"> <li>■ Isolated or sporadic lapse on the content or implementation of procedures or records that could lead to a failure of the management system</li> <li>■ Additional data or systems required to assess and manage risk</li> </ul>
4 = High risk	Major Deficiencies <ul style="list-style-type: none"> <li>■ Absence of, or failure to implement and maintain, an element of the management system</li> <li>■ Major information gaps or documentation required to further assess risk</li> </ul>
NA = Not Applicable	<ul style="list-style-type: none"> <li>■ Not applicable to the operations carried out in the Project or to the Project location</li> </ul>

**Table 6: Compliance IFC Performance Standards**

PS/ item	Review Criteria	Comments	Score
1.1	Environmental and Social Management System	The new Project has not yet implemented an ESMS; no Plan-Do-Check-Act cycle; no plans and procedures for environmental and social management and health & safety have been made available.	4
1.2	Environmental and Social policies	No policies for environment, social, equal opportunities and health & safety have been made available.	4
1.3a	Environmental and Social Impact Assessment (Local EIA)	There is an approved local EIA in place for the Project. Some environmental aspects the IFC PS would require are not covered: Greenhouse Gas Emissions, resource conservation, energy and water efficiency, cumulative impacts, and ecosystems services. Based on this local EIA the Project has received the Environmental Permit and is undergoing construction.	2

PS/ item	Review Criteria	Comments	Score
1.3b	Environmental and Social Impact Assessment (to IFC standards)	The local EIA baseline studies and impact assessment do not address many of the social, biodiversity, and physico-chemical PS requirements such as labour issues (e.g. child and forced labour, equal opportunities) water-borne/vector-borne/transmittable and infectious diseases, soil & groundwater impacts, land acquisition, resettlement and loss of livelihood, critical habitats, ecosystem services, indigenous peoples and tangible cultural heritage. The local EIA should also be expanded to address the associated facilities listed in Table 1.	4
1.4	Organizational capacity	There is an EHS team in charge of environment and health & safety. The Project does seem to have a social or community relations capability. Engagement with the affected communities seems to be the responsibility of the local government. It is unclear how the additional 300 employees will overlap in the bigger Sun Paper organization for various EHS functions.	3
1.5	Stakeholder Engagement	No formal Stakeholder analysis covering the Directly Affected Villages and no related Stakeholder Engagement Plan are in place.	4
1.6	External Grievance Mechanism	The Project has no formal Grievance Mechanism in place to deal with complaints from the community. Dealing with complaints seems to be the responsibility of the local government.	4
1.7	Emergency Response and Preparedness	Some procedures on how to act in case of environmental incidents are in place, but no complete Emergency Preparedness and Response Plan for the Project has been made available.	3
2.1a	Employment and working conditions	Sun Paper has a company regulations handbook covering the requirements regarding employment and working conditions, but without a grievance mechanism ensuring non-reprisal for complainants.	3
2.1b	Employment and working conditions: child labour and forced labour	The Company Regulations Handbook does not provide regulations to avoid child labour and forced labour and does not indicate minimum age of workers.	3
2.2	Occupational health & safety	The construction contractor and Sun Paper adopted the existing operations worker health and safety requirements, and future operations at the Project will be similar to current employee OHS systems.	3
2.3	Contractors	The Project has no formal system in place to manage labour aspects for contractor workers, such as good employment and working conditions, child labour, health & safety and employment of locals. Currently the construction contractor do not meet these requirements, although no evidence of non-compliance was observed.	3
3.1	Water management	The new Project has developed a conceptual water management plan to absorb the additional	3

PS/ item	Review Criteria	Comments	Score
		requirement to the existing surface water and wastewater management plan.	
3.2	Water permits	The 12 groundwater extraction wells and surface water used for the existing operations will absorb the additional requirements from the new facility. The cumulative future demand (35.5 Mm <sup>3</sup> /a) will be close to the permitted 37 Mm <sup>3</sup> /a supply capacity.	3
3.3	Air quality and Noise	Air quality and noise baseline still needs to be established before the start of the construction activities. The air and noise monitoring plan in the local EIA should apply to the construction phase as well. Future operation phase monitoring needs to align with IFC PS requirements (at receptor points, based on production rate).	4
3.4	Greenhouse Gas Emissions	The Project will emit more than 25,000 CO <sub>2</sub> equivalents annually. However, no GHG emissions baseline has been established and no reduction plan or Energy Efficiency plan has been formulated.	4
3.5	Hazardous and Non-hazardous waste	The EIA specifies systems and procedures for the management of hazardous waste, manning waste or domestic waste is in place, but need clarity on the current Project layout.	3
3.6	Hazardous waste permits	Permit for a temporary storage of hazwastes was not observed in the construction. The contractor does not have contracts in place with licensed waste contractors for the hazwaste disposal (e.g., waste oil, batteries etc.) for the 12 month construction period.	3
3.7	Hazardous materials / Hydrocarbons	The Project does not have procedures in place for the management of hydrocarbons and other hazardous materials.	4
4.1	Vector-borne, Water-borne and Communicable Diseases	No community health baseline has been established. The risks of vector-borne, water-borne and transmittable and infectious (e.g. COVID-19) diseases potentially caused by the Project activities and workforce haven't been assessed and no mitigation plan has been developed.	4
4.2	Community and traffic safety on roads around the Project	No baseline assessment of the roads and traffic has been conducted in the EIA. No Traffic Management Plan for the Construction stage and later stages has been made available.	4
5.1	Land Acquisition	Land acquisition has been conducted by the local authorities before the Construction stage of the Project began, but the signed documents of this process have not been made available (target completion May 2020). There are also expected 20-40 households to oppose the agreement.	3

PS/ item	Review Criteria	Comments	Score
5.2	Livelihood restoration	No Livelihood Restoration Plan has been prepared by the Project or by the local authorities. However, measures for farmers to provide land to work on alternative land during the resettlement activities and after resettlement seem to be part of the resettlement process management by the local authorities.	3
5.3	Resettlement	A resettlement process has been conducted by the local authorities before Construction stage of the Project. However, no formal Resettlement Action Plan has been developed and agreed with the affected community. In general, most villagers in Wangqiao seem to agree with the results of the resettlement process, but some 40 households still resist (the houses of these people seem to be outside of the direct Construction area or “red line” area).	3
6.1	Biodiversity Baseline and Management Plan	The flora and fauna baseline study in the local EIA does not provide enough information to assess whether critical habitat is present in the Project area. Additional specialist studies might be needed for the potential impacts to the Yangjiahe Wetland, including a Biodiversity Management Plan if needed.	3
6.2	Assessment Services Eco-system	The Local EIA and the Participatory Rural Appraisal contain some information on the forest products used by the local community. However, a complete assessment of how the Project impacts on Ecosystem services has not been conducted.	3
6.3	Invasive species	The Project does not have a system in place to prevent the introduction of invasive species (e.g. during revegetation of designated green areas).	4
6.4	Supply chain	The Project’s systems and verification practices: (i) identify where the supply is coming from and the habitat type of this area; (ii) provide for an ongoing review of the Sun Paper’s primary supply chains; (iii) improve the supplier scoring system to reflect higher percentage score (better than current 5/100 points) for environmental protection and bias the procurement process to suppliers that demonstrate that they are not contributing to significant conversion of natural and/or critical habitats. Where possible, require actions to shift the new Project’s primary supply chain to suppliers that demonstrate they are not significantly adversely impacting natural and critical habitats.	4
7.1	Indigenous Peoples / Free, Prior and Informed Consent	No identification of potential Indigenous Peoples in the Project area has been conducted by an external expert. However, there seems to be consensus that no Indigenous Peoples live in the Project area and that therefore Free, Prior and Informed Consent is not applicable.	2

PS/ item	Review Criteria	Comments	Score
8.1	Cultural Management Heritage	Baseline studies with regards to cultural heritage have not been conducted as part of the local EIA. Reportedly no tangible cultural heritage within the footprint of the Project has been identified (although there may be some graves north of Wangqiao Village). No Chance Findings procedure has been developed by the Project.	3



## 6.0 CONCLUSIONS AND RECOMMENDATIONS

### 6.1 Conclusions

In the current construction phase of the Project, Sun Paper has a number of environmental and social management elements as required by Chinese regulations in place: the approved EIA, a Feasibility Study, an analysis of the current situation by the Ministry of Environmental Protection and Energy Conservation, land required for the Project is acquired and compensated by the local government (albeit a few remaining opposition with relocation agreement yet to be signed), a certified and functioning Environmental Management System (from China's largest private paper-making enterprise), and a capable construction contractor and project supervisor implementing Sun Paper's EMS and labour policies without issues thus far.

The construction phase is planned for 12 months and targeted completion in November 2020. As this E&S review does not cover the operation phase, some specific environmental permits related to operational activities are not yet in place (e.g. emissions, hazardous waste storage) and will be secured later. However, the wider Sun Paper existing operations provides a structure to the future operation of the Project including shared facilities (wastewater treatment, water supply, power and heat supplies, etc.) and the environmental and social management systems, resources, and experience for the future operator of the Project. This condition augers well for the Project to achieve current and future regulatory compliance (securing permits, meeting local environmental standards, and complying with business operating regulations), as well as enabling the implementation of environmental controls and social engagements that have been committed to in the local EIA.

With regards to the IFC requirements there is some work to be done: there is a locally certified Environmental Management System, but this EMS has to be expanded to cover the social aspects (labour and community) and some environmental elements still need to be developed. Some additional baseline work as well as an updated impact assessment need to be done to develop the local EIA studies into an IFC compliant ESIA.

The specific elements needed to develop an ESMS that meet IFC PS expectations are:

- The Project so far has not yet developed a formal Environmental and Social Management System (ESMS). A Plan-Do-Check-Act policy cycle is yet to be implemented. PS1 requires a comprehensive ESMS adapted to the nature and scale of the project and its environmental and social risks and impacts, so as to manage and respond to the potential environmental and social risks and impacts in the whole life cycle of the project from construction to operation. The existing Sun Paper certified EMS has to be developed and implemented into such an ESMS for the Project.
- Golder has not received a comprehensive environmental, social and health & safety policy from Sun Paper to determine environmental and social goals and principles for the Project.
- No Standard Operating Procedures regarding the management of environmental and social aspects of the Project have been made available. There are policies in place with regards to environment, health & safety, equal opportunities and community relations and some procedures are in place with regards to environmental aspects of the Project, but the majority of the elements and procedures under the ESMS still needs to be developed. This includes the development of environmental and social monitoring, audits and management review.
- There is no complete ESIA for the Project as the EIA only covers environmental impacts and risks, but not the social impacts and risks. The local EIA contains a comprehensive assessment of the environmental aspects of the Project, but it does not seem that Sun Paper has reached the affected communities with the publicity around the EIA.
- With regards to the organizational capacity to manage the environmental and social aspects, there is no draft organization schedule for the future operator unit (estimated 300 new positions) that indicates how

the critical positions of an EHS Manager, a Human Resource Development (HRD) Manager, a Community Relations/CSR officer, among others, are to be filled. It is understood that a significant portion of these roles will be absorbed by the larger Sun Paper organization, either on an ad-hoc capacity or as addendum to existing responsibilities. However, it is perceived that strengthening the EHS team and developing social staff resources should be a priority. As a minimum this would encompass the hiring of an environmental manager and a health and safety manager on full-time basis. The social resource (labour and community relations) can be merged with other positions but are equally essential, especially since liaison with the local government (exclusively tasked with dealing with the community) can be expected.

- The Environmental and Social Impact Assessment (ESIA) of the Project consists primarily of the approved Local EIA. This Chinese ESIA and the related management plans do not clearly address several of the topics from the Performance Standards, such as greenhouse gas emissions, biodiversity, and indigenous peoples. There are also gaps in the baseline studies, such as the assessment of air quality (although an AERSCREEN air dispersion modelling was carried out), stakeholder identification and engagement, sensitive land use, critical habitats, and soil and groundwater contamination.
- The Project has initiated information publication to surrounding communities as part of the Local EIA process. However, no formal engagement with the affected villages has been conducted so far. Informed Consultation and Participation with all directly affected communities is yet to be done for the results of the local EIA and resulting management plans. A more complete stakeholder analysis and a stakeholder engagement plan still need to be developed.
- A formal External Grievance Mechanism to deal with complaints from the communities has still to be developed. Currently there remains only few complaints (20-40 opposing households the signing of resettlement agreements) but are expected to be resolved by May 2020.
- No formal complete Emergency Preparedness and Response Plan or procedure has been developed yet, including response to potential emergency situations such as earthquakes, floods, social unrest and other natural or man-made calamities that the Project can experience during construction and operation.

## **PS2 Labour and Working Conditions**

- Sun Paper commissioned two main contractors for construction and project supervision. Both contractors are responsible for labour working conditions (for 200-600 construction workers) and also environmental issues during the 12-month construction period. Sun Paper's engagement with both contractors apply the company's employment and environmental policies, but is not actively monitored and reported. Despite China not being a signatory to 4 of 8 ILO conventions, Sun Paper's labor policies with respect to child labor, forced labor and worker safety should extend to both construction contractors and its future supply chain, including its main pulp suppliers (plantations) who are based overseas and also in China (if any).
- The existing Sun Paper operations (with over 4,000 employees) has an established human resource management system covering the regulatory aspects hiring and termination, education and training, and compensation and benefits, among others. If the existing Sun Paper employee manual is adopted by the future Project organization, then most aspects (employee contracts, job roles and responsibilities, working hours, performance appraisal, minimum wage, overtime pay, salary increases and regulatory deductions, disciplinary actions, job changes, and occupational safety) will be covered. Additionally, the employee manual should clearly address guidance on organized labour groups (apart from the legally allowed trade unions), non-discrimination, sexual harassment, equal opportunities, complaint/grievance mechanisms, child and forced labour (both for Sun Paper and its future contractors, suppliers and service providers).
- The Project aims to preferentially hire locally for the 300 job positions for the future operation (per the local EIA commitment). This is implicitly implied with the construction phase and Sun Paper has not clearly imposed on both its construction and project supervision contractors. In the operation phase, a contractor

management system or procedure needs to be considered to ensure these local EIA commitments are implemented.

### **PS3 Resource Efficiency and Pollution Prevention**

- The new Project will require approximately 4M m<sup>3</sup>/a water supply. The existing permitted water supply capacity is 37M m<sup>3</sup>/a comprised of its own groundwater extraction and surface water from the local government's South-to-North Water Diversion Project. The existing operations use about 31.5M m<sup>3</sup>/a of this permitted capacity. Cumulatively, the future water demand will use approximately 96% of the available supply. Evidently, a Water Management Plan needs to be developed not only for risk buffering but also for future expansions that are clearly Sun Paper's aspiration.
- Air quality and emissions during the construction phase was observed to be good although the performance attributable to the construction activities alone cannot be ascertained with existing monitoring data (which comes from existing Sun Paper general operations). The local EIA has carried out an air pollutants dispersion modelling that predicts future compliance can be achieved. However, the EIA report also identifies PM<sub>10</sub> for the quicklime project as the "main environmental problem" in the existing Sun Paper operations as this cannot meet the requirements. The predicted air quality concentrations (dust and other parameters) have to be tested and confirmed against actual monitoring performance in the future. Current Project design and applied technology do assume that compliance is achievable but, more than compliance, the IFC PS also specify emission criteria that slightly differs from China parameters e.g. reporting of TSP in kilograms of pollutant per 1,000 kgs of air-dried pulp depending on the type of mill and production processes involved.
- Noise reduction measures in the existing Sun Paper operations are identified in the Local EIA as future mitigation for the future Project. These measures should be vigorously applied to achieve the committed Class 3 standards (65/55 dBA). With the full relocation of Wangqiao Village, these noise standards will be met.
- The Project has not assessed the amount of greenhouse gases (e.g. CO<sub>2</sub> and CH<sub>4</sub>) it will produce. Energy for the Project will be based on combustion of fuels from existing thermal power plant and from land-based equipment. It is expected that the Project will produce more than 25,000 tonnes of CO<sub>2</sub> equivalents during the operation phase therefore a GHG baseline management program should be developed to reduce greenhouse gas emissions.
- As hazardous wastes in future operation are expected to be minimal, waste management should focus on solid wastes from the pulping and papermaking processes, and liquid wastes (e.g. white mud, black liquor impurities, etc.). Existing Sun Paper procedures are expected to capably handle waste issues in the future.
- The effluent contribution from ongoing construction activities should be monitored to avoid any upset conditions, or act if such an incident occurs.
- While the Local EIA predicts additional load from the Project can be readily absorbed by centralized wastewater treatment facilities, additional specialist studies or adjustments in the monitoring program will be needed: (a) determining the cumulative impact of the treated water to the Yangjiahe Wetland, and (b) potentially more stringent IFC criteria for COD and Total Nitrogen represent annual average values that must be met at least 95% of the time without dilution.

### **PS4 Community Health, Safety, and Security**

- Sun Paper did not explicitly assess and manage the risks and impacts to the health and safety of the affected communities during the entire Project cycle. Assessment of community health conditions and

prevailing diseases, health infrastructure, alternative water sources (community wells and river), and roads and traffic in the wider area has not yet been conducted.

- Process risks (fire, air quality) associated with operation phase and impacts to communities were assessed in the Local EIA. However, virtually no risk assessment has been carried out for the construction phase including the risks of vector borne, water borne and transmittable diseases. Although the construction is partly taking place in the middle of the COVID-19 epidemic, there are no indications that the associated health risks to the community of a large external workforce have been assessed and managed.
- Additional traffic movement attributed to future deliveries of raw materials and finished products in future operations, also heavy equipment movement during the construction phase, have not been assessed.

#### **PS5 Land Acquisition and Involuntary Resettlement**

- In China, land is collectively owned and land expropriation and resettlement are the responsibility of the relevant government departments. For this Sun Paper Project, this has been confirmed to be the case.
- The Project has initiated information publication to surrounding communities as part of the Local EIA process. However, Sun Paper did not establish a long-term effective communication channel to collect follow-up opinions from the villagers of Wangqiao Village.
- Although no formal Livelihood Restoration Plan was developed and implemented, some measures were taken by the local government to restore the livelihood of the affected community and the majority of the affected villagers seem to be satisfied with the overall process.

#### **PS6 Biodiversity Conservation and Sustainable Management of Living Natural Resources**

- The flora and fauna baselines in the local EIA contain information on the absence of critically endangered and endemic species in the Project area, although no biodiversity baseline study or assessment of critical habitats has been conducted.
- While none of the PS6 requirements are readily observed some attention should be given on the Yangjiahe Wetland and how additional loads from the new facility (and the resulting cumulative load from Sun Paper's other activities) will be affecting this ecological feature. The wetland is man-made and over the operational phase this ecological feature might evolve into a habitat that attract and/or host species that have not been identified in the baseline EIA. As such species could appear in the future, this could warrant some efforts toward conservation or sustainable management where Sun Paper may be centrally involved.
- The new Project's systems and verification practices for pulp suppliers (plantations) is currently insufficient to enable full and effective compliance with the PS6 requirements on pulp suppliers' environmental performance specifically related to natural and critical habitats conversion.
- Sun Paper has a supplier scoring system for its pulp suppliers that includes "environmental protection" as a criterion (5 out of 100 points, with 65 points as a minimum cut-off for accreditation). The criterion requires that fiber raw material supplied to Sun Paper come from regeneration forests or plantations. It is unclear how this criterion is monitored or enforced by Sun Paper, at what level it influences qualification as Sun Paper supplier, and/or whether it economically benefits the supplier to meet this requirement.

#### **PS7 Indigenous Peoples**

- PS7 asks for an assessment by external experts whether Indigenous People are present in the area where the Project will be developed. In case there are Indigenous People they would have the right of Free, Prior and Informed Consent (FPIC) on a number of important aspects of the Project, including Resettlement.

- No such assessment has been conducted (either as part of the local EIA or in other documents available). It is also generally understood and supported by interviews with the local community that the affected community in Wangqiao Village should not be identified as Indigenous People.

### **PS8 Cultural Heritage**

- In the local EIA no assessment of objects of tangible cultural heritage within the Project area has been made consistent with the Convention Concerning the Protection of the World Cultural and Natural Heritage.
- From interviews with the community Golder understands that there are no cultural heritage sites within the Project area. Golder observed graveyard north of Wangqiao Village which would normally be considered of cultural value to communities. These graves were outside the red line of the Project, belong to Wangqiao village, and no complaints or appeals from residents regarding the possible impact of the Project on the graves were noted in this review.
- Chance Find Procedures are prepared for unexpected findings of tangible cultural heritage during land clearing or construction activities. This procedure would require the Project activities to be stopped until an expert has determined whether the unexpected finding really involves objects of valuable cultural heritage and a plan has been made how to deal with these objects. No Chance Findings procedure is in place for the Project. During the construction activities so far no attention seems to be paid to potential unexpected findings of cultural heritage objects.

## **6.2 Recommendations**

Based on the Conclusions we arrive at the following recommendations for follow-up:

- Ensure that the local EIA commitments are enforced during the construction (by SSCCL) and operation phase (by Sun Paper and contractors and suppliers), including the required environmental permits. The permits include new permits for air emissions, chemicals and hazardous materials, and hazardous and non-hazardous wastes. For some aspects, the existing Sun Paper permits may need to be expanded or upgraded to accommodate the incremental loads from the new Project such as: wastewater or effluent to the WWTP and water supply (from groundwater extraction, surface water and/or water reuse from the oxidation ponds). To organize the Project's environmental permits, an updated permitted register has to be developed for the Project to cover all the permits and regulatory documentation required from Sun Paper.
- It is recommended that the Project implements a formal yet practical and effective environmental, health & safety, and social management system (ESMS) to manage the environmental and social impacts of the Project, including those of current and future contractors' and suppliers' activities. The ESMS should be developed from the existing Sun Paper environmental management system, but must be implemented in line with the requirements of PS1.
- It is recommended that as a minimum the ESMS contains the following elements:
  - A Plan-Do-Check-Act policy-cycle for environmental and social aspects of the Project, including procedures for monitoring, auditing and management reviews.
  - Environmental and Social policies: the existing policies for environment, health & safety, equal opportunities, etc. may need to be updated to align with the PS1 requirements, and can then become part of the ESMS. The Project's standard operating procedures regarding the management of environmental and social (E&S) aspects should be based on these updated E&S policies.

- ESIA: the baseline studies and impact assessments that were conducted as part of the local EIA are to be expanded and upgraded to reflect the requirements of the IFC PS. This is especially applicable to air quality, soil and groundwater contamination, GHG Scope 1 and Scope 2 emissions, community well and water source/use inventory, cumulative impacts to Yangjiahe Wetland, social baseline, stakeholder analysis and engagement, potential impacts to community health, and tangible cultural heritage. Based on these upgraded baseline studies the impacts and risks of the Project activities are to be established as per the IFC PS. Subsequently management and monitoring plans are to be developed for those additional E&S risks (if any) that are deemed to be significant. The ESIA should consider extending the baseline studies and impact assessments to address the associated facilities identified in this report and listed in Table 1. The timing and location of the construction (on-going and planned) should be taken into account in the impact assessments, including making reasonable efforts to benchmark against the international standards used in this ESDD.
- Organizational capacity: starting with the construction phase, the Project needs to strengthen or add to its personnel that can manage environmental, health & safety aspects on the ground (and the construction contractor/s). In Project operation phase, strengthening the EHS team and developing social staff resources should be a priority: hiring of an environmental manager and a health and safety manager on full-time basis; Social resource (labour and community relations) – all positions are either new hires or initially merged with other Sun Paper positions or on ad-hoc basis.
- Stakeholder engagement: the Project to develop a more robust stakeholder identification and analysis to include all Directly Affected Villages (within the social risk assessment range of the Local EIA). Based on this a stakeholder engagement plan can be developed, with special attention to FPIC where required.
- External Grievance Mechanism: the Project needs to develop a practical and effective procedure to receive, assess and close-out community complaints with regards to environmental or social impacts from the Project (construction and operation phases).
- Emergency Preparedness and Response Plan: the Project has to assess the main scenarios for major E&S emergencies and to develop management methods to prevent or mitigate these events (fire, earthquakes, floods, chemical release, air pollutants, social unrest, traffic, vector diseases, etc.). In addition, minor spills of hazardous materials during construction (and in the future operation) can result to impacts to surface water, near surface soils and/or shallow groundwater resources – scenarios leading to these potential occurrences should also be addressed in the emergency plan.

## **PS2 Labour and Working Conditions**

- Employment and working conditions / Child labor, forced labor / Internal Grievance Mechanism: the Sun Paper company regulations already covers most of these issues adequately. A statement prohibiting child labor / forced labor needs to be added to cover all IFC requirements. This could also be a separate policy, and extended to Sun Paper's contractors, suppliers and service providers. A human rights management system should be developed in line with PS2 requirements, especially around aspects such as facility security or government security forces and the use (or threat) of force.
- Occupational Health & Safety: extend the Sun Paper policies and procedures to contractors, suppliers and service providers, to drive consistent E&S implementation across the entire organization. Develop and implement an OHS management system in line with PS2 requirements.
- Contractor management: the Project needs to develop a contractor management procedure to ensure that the employment and working conditions of contractor personnel also meet the IFC requirements. This procedure should also contain criteria to manage the hiring of contractor personnel to facilitate



the introduction of local labor in the Project. A training program may have to be developed to ensure adequate skill levels are maintained. The contractor management system should include adherence to Sun Paper's E&S policies, drive contractors to ensure local EIA commitments are implemented, E&S performance is actively monitored and reported, and influences the contractors' economic partnership with Sun Paper.

### **PS3 Resource Efficiency and Pollution Prevention**

- **Water resources:** the Project should consider developing an overall water management plan to address upset conditions (drought, lack or reduction of piped supply, future demand, options for additional groundwater extraction , river abstraction, etc.) and in view of the estimated 96% usage of permitted capacity once the Project is operational. The potential impacts to shallow groundwater extraction wells in the communities should be verified, assessed and managed as needed.
- **Air quality and Noise:** update the baseline data for air quality and pollutants dispersion modelling to cover IFC parameters, level and criteria for reporting. Enforce the local EIA commitments on air quality and noise limits during construction phase (as well as operation phase). A cumulative assessment of air emission from new and existing sources needs to be conducted.
- **Energy and Greenhouse Gas Emissions:** the Project needs to assess the energy use and greenhouse gas emissions associated with the project activities. Based on this a GHG emission reduction plan can be developed and implemented.
- **Waste:** enforce the local EIA commitments on waste management including identification, handling, storage and offsite disposal of hazardous and non-hazardous wastes during construction phase (as well as operation phase), and the system upgraded to meet the General EHS Guidelines as needed.
- **Hazardous materials/Hydrocarbons:** the Project has to develop a procedure for the management of hydrocarbons and other hazardous materials (e.g. chemicals, fuel, lubricants, etc.). This procedure needs to address the Project's own activities as well as the contractors' activities in construction and operation (e.g. emergency plans for spills, releases, loss of containment, etc.). The recommended measures in the local EIA to prevent, minimize, and control use of hazardous materials should be considered including: automation of pulping and bleaching operations; and providing engineering controls (automatic valves, negative pressure in boilers enclosures or ventilation systems, gas monitors, material safety data sheets, etc.).

### **PS4 Community Health, Safety, and Security**

- **Community health:** the Project needs to assess the risks of vector borne, water borne and transmittable diseases for the community, associated with the construction and future Project operation activities or work force. If required a mitigation plan to manage these health risks needs to be developed (e.g. handling of COVID-19 risks at the construction site). An assessment of local health infrastructure available to construction workers and future operation phase workers should be carried out.
- **Community safety:** assessment of risks and impacts of additional traffic movement on the public roads from future truck deliveries of raw materials and finished products, as well as heavy equipment movement during the current construction phase. The Project should develop a Transportation and Traffic Management Plan for the main road addressing the joint use of the road by large trucks (for hauling raw materials) and the communities during the operation phase. The plan should also include the construction phase while heavy equipment is used and measures to reduce dust (e.g. by water spraying) and noise (e.g. limited operation at night) subject to consultation with the community.



### PS5 Land Acquisition and Involuntary Resettlement

- Land acquisition / Livelihood restoration: Although most of the land acquisition for the Project has already been conducted (by the local government whose responsible for the process), it is still useful to develop and document the procedure to handle future land acquisitions and land claims. This procedure should address the restoration of livelihood of community members lost as a consequence of land being used by project activities (e.g. agricultural lands transformed to industrial use).
- The specific gaps between the land expropriation and resettlement process that has been carried out (and to be completed in May 2020 for remaining opposition) for Wangqiao village and PS5 requirements must be identified. If there are any gaps, a supplemental resettlement plan should be developed and implemented by Sun Paper, in so far as local regulations would allow.

### PS6 Biodiversity Conservation and Sustainable Management of Living Natural Resources

- Biodiversity management: for future consideration, assess the cumulative impact to the Yangjiahe Wetland during operation of the Project and check if it evolves into a critical habitat that warrant some efforts toward conservation or sustainable management where Sun Paper may be involved.
- Invasive species: a process should be in place to avoid the introduction of invasive species through the Project activities (e.g. revegetation of the unpaved areas to the north).
- Natural and critical habitats: evaluate the cumulative impact of future additional treated effluent the new Project contributes to the Sun Paper WWTP which is eventually discharged to the Yangjiahe Wetland. If the extended baseline study to this wetland indicates critical habitats or ecosystem services that are impacted by the Project, a biodiversity management plan will need to be developed.
- Management plans must be developed and implemented in line with the requirements of PS 6 in the event that extended baseline studies identify critical habitats or ecosystem services that are impacted by the Project.
- In general, the gaps with PS6 related to an assessment of the supply chain, specifically the plantations that will supply raw materials to the Project, need to be evaluated for this criteria as these plantations (suppliers) can be considered as Associated Facilities under this ESDD assessment framework. The "Environmental Protection" criterion in Sun Paper's supplier accreditation process should be improved to be more relevant (i.e. increasing from the current 5 out of 100 points) and clarifying the appraisal system, how the supplier audits are conducted (e.g. actual plantation audits, frequency) and whether disqualified suppliers can re-acquire status (if failing the 65/100 points cut-off for suppliers).
- Moreover, among the countries listed in the Sun Paper 2020 procurement plan, Chile and Indonesia are in regions where significant conversions of natural and/or critical habitats may be occurring. Sun Paper's current supplier evaluation can be strengthened to verify practices for all (or at least the primary) suppliers, with particular focus on the specific suppliers for the new Project during the operational phase.
- Strengthen the supplier accreditation and evaluation process with respect to environmental protection performance including the potential conversion of natural and critical habitats for plantation expansions attributable to the Project's future pulp suppliers (both domestic and overseas).

### PS7 Indigenous Peoples

- Indigenous Peoples / FPIC: the Project has not identified community residents as Indigenous Peoples therefore does not trigger a process of Free, Prior and Informed Consent required in PS 7.

**PS8 Cultural Heritage**

- Cultural Heritage / Chance finds: Although not much tangible cultural heritage has been identified in the Project area so far, a procedure needs to be developed how to identify and manage cultural heritage. The graveyard to the north belonging to the Wangqiao village is regarded as a cultural heritage and although outside of the Project red line, should be covered in the future environmental monitoring plan to ensure no negative impacts (e.g. dust, pollutants, odour, noise, etc.) are imparted to this community feature. The upgraded baseline studies should include documented consultation with the nearest communities (Wangqiao and Hanjiajie villages) for any similar cultural heritage sites (if any) so that these features are properly identified in the impact assessments and protected in the management and monitoring plans (if needed). Finally, a “chance find” mechanism for tangible cultural heritage potentially encountered during the remaining months in the construction activities should be implemented by the contractors.

To manage the process of developing and implementing the ESMS a draft Environmental and Social Action Plan has been developed as presented in Section 7.0.

## 7.0 ENVIRONMENTAL AND SOCIAL ACTION PLAN

Table 7 represents the draft ESAP for the new Project as it is proposed by the E&S consultant and submitted to the clients: Sun Paper and its lenders. The ESAP compiles all gaps identified in the narrative sections in this report and presents the recommendations in the form of actions, responsible action party, timing, and specific deliverables and/or key performance indices (KPIs). The schedule and timing are based on the planned construction completion November 2020 and start of operation phase shortly thereafter (early 2021).

**Table 7: Environmental and Social Action Plan**

PS/nr	Requirement	Required Action	Schedule/ Timing	Action Party	Deliverable/KPI
Local	Permits Process – the Project is under construction until Nov 2020 and operating permits will only be secured on or shortly before this date.	<p>Ensure specific environmental permits related to operational activities are in place (e.g. emissions, hazardous waste storage and disposal).</p> <p>Other permits covered in the wider Sun Paper existing operations including shared facilities (wastewater treatment, water supply, power and heat supplies, etc.) are upgraded to include the new Project. Enable the implementation of environmental measures and social commitments in the local EIA.</p>	Q4 2020 / prior to operation	Sun Paper	<p>Up to date Permit Register</p> <p>(KPI: complete prior to operation)</p>
1.1	ESMS structure	<p>Sun Paper to engage a consultant experienced in the development and implementation of an ESMS to IFC standards.</p> <p>- Agree on a framework for the ESMS (if possible, a framework that fits as much as possible to existing management systems in the Sun Paper organisation).</p> <p>- Gap-analysis: what procedures and other system elements are already in-place in the Sun Paper organisation.</p>	Q3 2020 / ASAP	Consultant, Sun Paper management	<p>Draft ESMS with identified gaps between the existing Sun Paper EMS and the PS requirements</p> <p>(KPI: Workshop 1 in Q1 2021)</p>

PS/nr	Requirement	Required Action	Schedule/ Timing	Action Party	Deliverable/KPI
		- Develop the missing system elements in Workshop/s with participation of Sun Paper senior management and middle management representatives, including the critical hires for the new Project (if possible).			
1.2	Environmental & Social policies	Update the existing policies for environment, health & safety, equal opportunities and community relations to be aligned with the IFC PS 1 requirements, which can become part of the ESMS and will be the basis for Project's SOPs for E&S management.	Q2 2020	Sun Paper management	Draft E&S Policies
1.3a	ESIA baseline studies	<p>Complete the expanded baseline studies in so far as the Local EIA baseline studies do not meet the IFC requirements:</p> <ul style="list-style-type: none"> <li>- Expand the air quality impact studies and/or pollutant dispersion modelling in the local EIA to predict concentrations at Hanjiajie village about 460 m to the northwest</li> <li>- Air quality monitoring downwind of construction at point of nearest sensitive receptors i.e. Wangqiao village (un-relocated residential houses during construction phase) and Hanjiajie Village (closest receptors during the operation phase when Wangqiao village has been fully relocated).</li> <li>- Groundwater extraction well/s and use inventory around the villages included in the local EIA risk assessment (to assess impacts to shallow aquifers, if any, being tapped by villages)</li> <li>- GHG baseline assessment for entire Sun Paper operation and cumulative impact from new Project Social Baseline Study (independent of what the local government has done) on the relocated Wangqiao villagers and the other villages within the 3 km social risk assessment range in the local EIA for long-term</li> </ul>	Q4 2020	Consultant	<p>ESIA Document from upgraded local EIA with expanded:</p> <ul style="list-style-type: none"> <li>- Air Quality Study</li> <li>- Groundwater Study</li> <li>- GHG for Scope 1 &amp; Scope 2 emissions</li> <li>- Soil &amp; groundwater baseline</li> <li>- Social baseline</li> <li>- Stakeholder analysis</li> </ul>

PS/nr	Requirement	Required Action	Schedule/ Timing	Action Party	Deliverable/KPI
		<p>monitoring of operational impacts, tracking of grievances, and supporting future community development and CSR initiatives.</p> <ul style="list-style-type: none"> <li>- Consider expanding flora and fauna baseline study in local EIA to assess whether the Yangjiahe Wetland is critical habitat and potential cumulative impacts from the Project; develop conservation or sustainability management plan to manage the impacts (if any)</li> <li>- Expand the social baseline to enable stakeholder analysis and engagement, including cultural heritage identification</li> <li>- Community health baseline, including local health infrastructure</li> </ul> <p>Consider extending the baseline studies and impact assessments to address the associated facilities identified in this report and listed in Table 1. The timing and location of ongoing and planned constructions should be taken into account in the impact assessments, including making reasonable efforts to benchmark against the international standards used in this ESDD.</p>			KPI: Appoint consultant by Q2 2020, Scoping session by Q3 2020
1.3b	ESIA and ESMMP	<p>Develop the ESIA and the Environmental and Social Management and Monitoring Plans, addressing the significant risks and impacts identified in the ESIA (if any) and following the EHS Guidelines on parameters, reporting levels, and minimum frequencies:</p> <ul style="list-style-type: none"> <li>- Air Quality monitoring plan (quarterly)</li> <li>- Groundwater monitoring plan (annual)</li> <li>- GHG reduction and monitoring plan (annual)</li> <li>- Stakeholder engagement plan (continuous)</li> <li>- Biodiversity management plan for Yangjiahe Wetland</li> <li>- Community emergency response plan</li> <li>- Chance find procedures</li> </ul>	Q3 2020	Consultant, Sun Paper	Draft ESMMP (to include the applicable plans (listed in Required Action column).

PS/nr	Requirement	Required Action	Schedule/ Timing	Action Party	Deliverable/KPI
1.4a	Organizational capacity	<p>Strengthen the Project organization with strategic hires for the following key positions (operation phase) or ad-hoc staff assignments (during construction phase):</p> <ul style="list-style-type: none"> <li>- Environmental Manager,</li> <li>- Health &amp; Safety Manager,</li> <li>- Social Resource or Community Development (ComDev) Officer (prior to the start of operation)</li> <li>- Define planned personnel overlaps with existing Sun Paper organization, if any.</li> </ul>	Q4 2020/ prior to operation	Sun Paper	<p>Organization plan (for proposed 300 new employees) to include key EHSS positions</p> <p>KPI: Hire the Top 3 key hires prior to start of operation phase</p>
1.4b	Organizational capacity	<p>Sun Paper to implement a training Program (potentially involving external experts) for its EHSS team to ensure the team appreciates the changes required to meet the Lender requirements and has the knowledge and skills to implement these changes, including implementing the recommendations in this ESDD report.</p> <p>Primary importance to strengthen the Sun Paper team with one or more community relations officers.</p>	Q4 2020/ prior to operation	Sun Paper	Training program for the EHSS team
1.5	Stakeholder engagement	<p>Conduct a complete stakeholder analysis and develop a stakeholder engagement plan (SEP), based on upgraded social baseline and stakeholder analysis. Irrespective of the local government's responsibility for the relocation efforts, Sun Paper needs to provide their SEP or at least those portions of the SEP dealing with local communities and the local government representatives (full list of names). The SEP needs to clarify how Sun Paper records and tracks any engagements with third parties (government, communities, etc.), which subjects are discussed and with what frequency. The SEP should include identifying and addressing gaps between local government's relocation of Wangqiao village and PS requirements, to enable developing a supplemental resettlement plan (if needed).</p>	Q3 2020/ prior to operation	Consultant, Sun Paper, ComDev officer	SEP documentation demonstrating these aspects are addressed; Supplemental Resettlement Plan (if needed)

PS/nr	Requirement	Required Action	Schedule/ Timing	Action Party	Deliverable/KPI
1.6	External Grievance mechanism	Develop a practical and effective procedure to receive, assess and close-out community complaints. This mechanism should document all potential grievances received, provide for a free and unobstructed communication to the Sun Paper person in charge, and record how such grievances have been handled or resolved.	Q3 2020/ prior to operation	Consultant, Sun Paper, ComDev officer	External grievance mechanism or complaint procedure
1.7	Emergency Response	Assess the main scenarios of emergency threats for the Project and develop an Emergency Preparedness and Response Plan relating to traffic management which include additional transportation risks from the construction phase (heavy equipment coming in and out of Site) and operation phase (hauling of raw material from port or local plantation to Site) and achieve the goal of zero traffic accident for Sun Paper. Other scenarios to be considered are natural calamities (earthquakes, floods, etc.), hazardous materials impacts to air/surface water/groundwater, social unrest, and epidemics/pandemics.	Q3 2020/ prior to operation	Consultant, Sun Paper Security manager	Emergency Preparedness and Response Plan
2.1	Child labor forced labor and organized labor	Develop policies with regards to child labor, forced labor, and organized labor that meet the Chinese regulations. As China has not ratified the ILO conventions on organized labor (i.e. freedom of association and right to organize and collective bargaining) and forced labor (and as such are not necessarily points of compliance), Sun Paper should adopt policies ensuring these conventions are not violated during the construction phase (by SSCCL) and future operation phase.	Q2 2020/ ASAP	Sun Paper HR manager	Child labor, forced labor, and organized labor policies



PS/nr	Requirement	Required Action	Schedule/ Timing	Action Party	Deliverable/KPI
2.2	Occupational Health & Safety	<p>Develop and implement occupational health and safety (OHS) management system (or define overlap with existing Sun Paper management system) that must be implemented in line with PS2 requirements; include coverage to contractors, suppliers, providers.</p> <ul style="list-style-type: none"> <li>- Sun Paper needs to include guidelines regarding employment and H&amp;S management of the business partners such as child labor, forced labor, organized labor, and worker safety.</li> <li>- Sun Paper to provide (or develop if needed) detailed OHS statistics for its own workforce, contractors including leading and lagging indicators such as: <ul style="list-style-type: none"> <li>o Leading H&amp;S indicators- task observations, H&amp;S walkover surveys, Site meetings, H&amp;S campaigns, drug tests and alcohol tests</li> <li>o Lagging H&amp;S indicators- LTIs, MTI, property damage, near misses, occupational illness, drug/alcohol positive cases</li> </ul> </li> <li>- H&amp;S statistics should be rolling and not started annually</li> <li>- For the remaining Construction phase, currently taking place in the middle of the COVID-19 epidemic, develop an action plan for ensuring associated health risks of the construction workforce have been assessed and managed.</li> <li>- For the Operation phase, ensure that standard operating procedures (e.g. social distancing, hygiene procedures, use of PPEs, etc.) are in place to protect workers' health from infectious diseases prior to start of operation during pandemics/epidemics.</li> </ul>	Q4 2020/ prior to operation	Consultant, Sun Paper H&S manager	<p>OHS Management Plan (applicable to Sun Paper and contractors and suppliers) aligned with PS2 requirements and detailing H&amp;S statistics for all operations and present leading &amp; lagging KPIs in a rolling format.</p> <p>Action plan ensuring associated health risks to COVID-19 of the construction and future operations workforce have been assessed and managed (ASAP).</p> <p>KPI: no COVID-19 infections during construction please.</p>

PS/nr	Requirement	Required Action	Schedule/ Timing	Action Party	Deliverable/KPI
2.3	Contractor Management	<p>Develop a contractor management system (CMS) with procedures to ensure that contracts cover employment, working conditions, health &amp; safety and local hiring; and follows Sun Paper's policies on:</p> <ul style="list-style-type: none"> <li>- Child labor, forced labor, and organized labor that align with PS2 requirements.</li> <li>- Human rights management that align with PS2 requirements</li> <li>- Training requirements to ensure adequate skills are maintained, local labor is prioritized (and drive other local EIA commitments)</li> <li>- Sun Paper to provide documentation on audit program it will implement to assess and support compliance of these employment and H&amp;S requirements within its business partners (contractors, suppliers, and providers)</li> <li>- Implementing local EIA commitments (e.g. hiring local labor, prioritizing local small businesses and providers)</li> </ul>	Q3 2020	Consultant, Sun Paper management, contractor firms	<p>Draft CMS aligned to PS2 requirements</p> <p>Assessment of child, forced, and organized labor in the primary supply chain (including major overseas and domestic raw material suppliers)</p> <p>Guidelines that Sun Paper will require business partners to adopt to continue partnerships; audit program to assess compliance and where improvements are needed.</p>

PS/nr	Requirement	Required Action	Schedule/ Timing	Action Party	Deliverable/KPI
3.1	Water management	<p>Develop a water management plan (WMP), addressing water capacity limits, usage and conservation, and water discharges</p> <ul style="list-style-type: none"> <li>- Sun Paper to provide details on the incremental use of groundwater, surface water or recovered water from the oxidation pond for the new Project (as opposed to the general Sun Paper operations)</li> <li>- Consider setting targets for water efficiency improvements after establishing the baseline for the new Project</li> <li>- Assess the wastewater pollution load from future operation phase (as opposed to Sun Paper total) on the existing WWTP and the incremental impact to the Yangjiahe Wetland</li> <li>- Assess and monitor effluent contribution (siltation) from ongoing construction activities to avoid any upset conditions, or act if such an incident occurs; include construction-related excavation activities done during heavy rains in the remaining construction months.</li> </ul>	Q4 2020	Consultant, Sun Paper management	<p>Draft WMP including agreed set of resource efficiency and water reuse from the oxidation pond</p> <p>Monitor the effluent or sediment loads from the construction activities that can cause upset conditions, and define action/s if such incident occurs.</p>
3.2	Water permits	<p>Ensure the water extraction permit and the wastewater discharge permit are in place</p> <ul style="list-style-type: none"> <li>- Sun Paper to provide details on the water use for the new Project to show it is within the permitted usage volume allocated for the new Project, enabling management interventions as needed, and meeting the IFC EHS Guidelines on water use per annual product volumes based on the technology used.</li> </ul>	Q4 2020	Sun Paper management	Valid water use and wastewater discharge permits in place that comply with local regulations and approved local EIA

PS/nr	Requirement	Required Action	Schedule/ Timing	Action Party	Deliverable/KPI
3.3a	Air quality and noise	Expand the baseline assessment of air quality and monitoring program <ul style="list-style-type: none"> <li>- Sun Paper to ensure emissions from the air pollution abatement equipment consistently meets the China regulations and the IFC EHS Guidelines for pulp and paper mills (based on the local EIA modelling, these international standards are achievable with the current technology (and ongoing improvements in the waste gas treatment for boilers and similar equipment)</li> </ul>	Q4 2020	Consultant	Air quality and emissions monitoring program that comply with local standards and meet PS3 requirements
3.3b	Air quality and noise	Implement a system of air quality and noise monitoring for the Project areas and measures to manage dust concentrations and noise Sun Paper to ensure air emissions and noise from the new Project meet the IFC EHS Guidelines, and reported to align with the IFC requirements i.e., based on annual loads over production rates. Confirm that future environmental performance monitoring provides readings not at Project boundaries but at exposure points for sensitive receptors (e.g. Hanjiajie village once Wangqiao is fully relocated). Ensure unrelocated households in Wangqiao are not exposed to unacceptable levels of emissions and noise during the construction phase.	Q4 2020	Sun Paper management	Air quality and emissions monitoring program that comply with local standards and meet PS3 requirements
3.4a	Greenhouse Gas Emissions	Assess the energy use and greenhouse gas emissions associated with the new Project activities and develop a GHG emissions (Scope 1 & Scope 2) reduction plan. Develop an accurate estimate of the new Project's annual carbon emissions (as opposed to the Sun Paper total) and develop a KPI for carbon emissions per ton of pulp or paper produced.	Q4 2020	Consultant, Sun Paper management	GHG Emissions Baseline and Reduction Plan based on PS3 requirements  KPI: achieve reduction target after one year operation

PS/nr	Requirement	Required Action	Schedule/ Timing	Action Party	Deliverable/KPI
3.5	Hazardous and Non-hazardous waste	Develop an integrated waste management system for pulping and paper-making wastes, domestic waste and hazardous wastes that enforce local EIA commitments and meet the EHS Guidelines.	Q4 2020	Consultant, Sun Paper management	Waste Management System that comply with China regulations and PS3 requirements
3.6	Hazardous waste permits	Ensure a hazardous waste license is in place for the temporary storage of hazardous wastes and that the Project has engaged licensed waste contractors for the disposal of hazardous wastes	Q4 2020/ prior to operation	Sun Paper management	Valid hazardous waste permits
3.7	Hazardous materials/ Hydrocarbons	Develop a procedure for the management of hydrocarbons and other hazardous materials (chemicals, fuels, lubricants) that strengthens the local EIA commitments on handling, storage and offsite disposal- during construction phase and operation phase, as well as meet the EHS Guidelines.  Recommended measures in the local EIA to prevent, minimize, and control use of hazardous materials should be considered including: automation of pulping and bleaching operations; and providing engineering controls (automatic valves, negative pressure in boilers enclosures or ventilation systems, gas monitors, material safety data sheets, etc.).	Q4 2020	Consultant, Sun Paper management, Contractors	Hazardous materials and hydrocarbons management procedure
3.8	Environmental monitoring program	Review the local EIA monitoring program and upgrade to meet the PS3 requirements on parameters, reporting levels, and minimum frequencies. During the operational phase, direct air emissions from the Project, ambient air quality and noise levels at nearby sensitive receptors (Hanjiajie village), emission levels, and wastewater discharge need to be continually monitored (at least quarterly for air quality, emissions and effluent discharge; annual for groundwater and GHG) once the project is online to ensure compliance with the relevant thresholds given in the applicable EHS Guidelines. In case	Q1 2021/ At start of operations	Sun Paper	Quarterly Environmental Monitoring Reports to include compliance with thresholds, upset incidents, corrective actions (if any)

PS/nr	Requirement	Required Action	Schedule/ Timing	Action Party	Deliverable/KPI
		emissions levels are not in compliance with the relevant thresholds, steps must be taken to bring them in to compliance as soon as possible.			KPI: all regulatory monitoring reports submitted on time
3.9	Resource efficiency assessment	The Project needs to address the gap in assessing and optimizing resource efficiency, energy consumption, and raw materials consumption. The local EIA mentions energy efficiency optimization measures (e.g. reducing heat losses and heat consumption, increasing efficiency of steam boiler, increasing high pulp concentration, maintaining a high pulp consistency, etc.) but these measures need to be reviewed and monitored if implemented in the operation phase.	Q1 2021/ At start of operations	Sun Paper	Resource Efficiency Assessment to confirm that local EIA measures are implemented, and the Project's resource efficiency measures aligned with PS3 requirements.
4.1	Vector borne, water borne and communicable diseases	Assess the risks of vector borne, water borne and communicable diseases for the community and if required develop a mitigation plan. <ul style="list-style-type: none"> <li>- For the remaining Construction phase, currently taking place in the middle of the COVID-19 epidemic, develop an action plan for ensuring associated health risks to the community of a large external workforce have been assessed and managed.</li> <li>- For the operation phase, ensure that standard operating procedures (e.g. social distancing, hygiene procedures, use of PPEs, etc.) are in place to protect workers' health and community safety prior to start of operation.</li> </ul>	Q2 2020	Consultant, Sun Paper H&S Manager	Assess risks from communicable diseases and develop procedures for worker and community safety (focus on COVID-19 and similar epidemics during construction and operation phases)

PS/nr	Requirement	Required Action	Schedule/ Timing	Action Party	Deliverable/KPI
4.2	Community safety on main road	<p>Develop a Transportation/Traffic Management Plan (TMP) for heavy equipment (construction phase) and the raw material haul route (e.g. hauling trucks from port of importation to Site, plantation to Site), addressing the joint use of hauling trucks with general community and city traffic.</p> <ul style="list-style-type: none"> <li>- See Item 1.7 for additional transportation risks from the construction and operation phases and achieve the goal of zero traffic accident for Sun Paper.</li> </ul>	Q3 2020/ ASAP	Consultant, Sun Paper Security and Community Relations	<p>TMP to address the Project's construction phase and operation phase activities on public roads.</p> <p>KPI: Zero accident plan for haul routes</p>
4.3	Project life cycle assessment of risks and impacts to communities	<p>Assess the risks and impacts to Wangqiao and Hanjiajie villages (closest sensitive receptors) were not fully assessed for the construction phase. Residents in these villages partially experience air emissions, noise, vibrations, potential hazardous materials and wastes spills, and additional traffic from heavy equipment that were not explicitly assessed in the local EIA nor are managed during the construction phase.</p> <p>The scenarios leading to these potential temporary exposures should be assessed, monitored and mitigated (either by Sun Paper or SSCCL) until the scheduled construction completion in November 2020.</p>	Q3 2020/ prior to operation	Consultant, Sun Paper, EHS Manager, Security manager	Emergency Preparedness and Response Plan addressing the potential temporary exposure risks to communities during the construction phase. At a minimum, monitor air quality and noise in remaining Wangqiao and Hanjiajie villages and mitigate if needed.
4.4.	Ecosystem services	Specific to the incremental load to the existing WWTP and discharge to Yangjiahe Wetland (to be addressed in the expanded biodiversity baseline study), an assessment of ecosystem services to identify, avoid and mitigate impacts (if needed) in line with the requirements of PS 4	Q2 2020/ ASAP	Sun Paper Security manager	Expanded ESIA baseline studies for the Yangjiahe Wetland which includes ecosystem services assessment



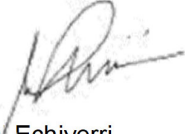
PS/nr	Requirement	Required Action	Schedule/ Timing	Action Party	Deliverable/KPI
4.5	Security personnel	<p>Security services must be assessed and a training and monitoring program developed and implemented to ensure adherence to an appropriate code of conduct in line with the requirements of PS 4.</p> <p>Sun Paper to consider signing up for Voluntary Principles on Security and Human Rights and ensure this is referenced in the security management plan, and that security firms for Sun Paper or its contractors agree to abide by this plan. Establish coordination with local public security department in the community.</p>	Q3 2020	Sun Paper Security and Community Relations	Documentation on rules of engagement and potential use of force in applying the security management plan for the Project.
5.1	Land acquisition / Livelihood restoration	<p>Document concluded land acquisition process and develop a written procedure to handle future land acquisitions and land claims, also addressing livelihood restoration for affected community members.</p> <ul style="list-style-type: none"> <li>- Sun Paper to make available the commitments, if any, made by the local government to the Wangqiao village people who have been relocated. Ensure a mechanism for receiving and tracking any future complaints is in place, and proper resources are available to resolve such issues.</li> </ul>	Q3 2020	Consultant, Sun Paper and Community Relations	Documentation of land acquisition and compensation carried out by the local government; identify gaps with the PS5 requirements
5.2	Land compensation and resettlement process	<p>The specific gaps between the land expropriation and resettlement process that has been carried out (and to be completed in May 2020 for remaining opposition) for Wangqiao village and PS5 requirements must be identified.</p> <p>If there are any gaps, a supplemental resettlement plan should be developed and implemented by Sun Paper, in so far as local regulations would allow.</p>	Q3 2020	Consultant, Sun Paper and Community Relations	Once gaps between the land expropriation and resettlement process by the local government and PS5 requirements are identified: assessment of the supplemental actions that can be performed by Sun

PS/nr	Requirement	Required Action	Schedule/ Timing	Action Party	Deliverable/KPI
					<p>Paper that will be allowed under China law.</p> <p>Supplemental Resettlement Plan to address gaps (if any)</p>
6.1	Biodiversity management	Consider expanding flora and fauna baseline study in local EIA to assess the Yangjiahe Wetland as critical habitat and potential cumulative impacts from Project; develop conservation or sustainability management plan to manage the impacts (if any)	2021	Consultant, Sun Paper Environmenta l Manager	Expanded biodiversity baseline; cumulative impacts from Project; mitigation plan to avoid impacts to biodiversity, critical habitats (if any), and ecosystems services (if any).
6.2	Invasive species	Develop a process to avoid the introduction of invasive species by the Project	Q4 2020	Consultant, Sun Paper Environmenta l Manager	Prevention Plan for introduction of invasive species
6.3	Supply chain	<p>Improve the new Project 's systems and verification practices for pulp suppliers (plantations):</p> <ul style="list-style-type: none"> <li>- identify where the supply is coming from and the habitat type of this area;</li> </ul>	Q2 2021	Consultant, Sun Paper Environmenta l Manager, Procurement	Supply chain audit for Sun Paper's existing environmental protection criterion (supplier accreditation) bot for domestic and

PS/nr	Requirement	Required Action	Schedule/ Timing	Action Party	Deliverable/KPI
		<ul style="list-style-type: none"> <li>- provide for an ongoing review of the Sun Paper's primary supply chains; and</li> <li>- improve the supplier scoring system to reflect higher percentage score (better than the current 5/100 points) for environmental protection and include in the procurement process that suppliers must demonstrate that they are not contributing to significant conversion of natural and/or critical habitats. Where possible, require actions to shift the new Project's primary supply chain to suppliers that demonstrate they are not significantly adversely impacting natural and critical habitats.</li> </ul>			<p>overseas raw materials sources.</p> <p>KPI: Audit of top 5 primary suppliers in 2019 that provided over 60% of the total imported raw materials for Sun Paper.</p>
8.1	Management of Cultural Heritage / Chance finds	<p>Develop a procedure to manage the identification and protection of cultural heritage in the Project area, including a Chance finds procedure</p> <p>Include the graveyard to the north belonging to the Wangqiao village regarded as a cultural heritage (although outside of the Project red line) in the future environmental monitoring plan (i.e. dust, pollutants, odour, noise, and vibrations). Prepare mitigation measures (method adjustments, work-hours adjustment, coordination with community) for upset conditions and/or when complaints are received.</p> <p>Upgrade the social baseline studies to include documented consultation with the nearest communities (Wangqiao and Hanjiajie villages) for any similar cultural heritage sites (if any) so that these features are properly identified in the impact assessments and protected in the management and monitoring plans (if needed).</p>	Q2 2020	Consultant, Sun Paper Community Relations	<p>Upgraded Social Baseline Study to include cultural heritage identification.</p> <p>Inclusion of cultural heritage location (graveyard north of Wangqiao village), and others that may be identified, in the environmental monitoring plan and emergency response plan.</p>

## Signature Page

### **Golder Associates Consulting Ltd.**



Ernan Echiverri  
*Environmental Consultant*



Oliver Liu  
*Managing Director*

EE/PC/ee

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**APPENDIX A**

List of reviewed documents

调查日期 Date of investigation	文件夹名称 Folder name	证明文件清单 List of supporting documents
2020/4/14	环境管理体系 Environmental management system	管理手册 Environmental management manual
2020/4/14		2019 年外排废水各污染物数据汇总 Data summary of discharged sewage pollutants in 2019
2020/4/14		环境管理体系认证证书 Environmental management system certification
2020/4/14	环保节能部现状分析 Analysis of the current situation of the Ministry of environmental protection and energy conservation	环保节能部现状以及所处环境分析 Analysis of the current situation of the Ministry of environmental protection and energy conservation
2020/4/14	管理评审计划 Management review plan	管理评审报告 Review Report
2020/4/14		2020 年管理评审计划 Management review plan in 2020
2020/4/14		2019 年股份公司内审实施计划 Internal audit plan of joint stock company in 2019
2020/4/14		2020 年内审计划 Internal audit plan in 2020
2020/4/14	公司应急小组组织架构 Organizational structure of emergency response team	公司应急小组组织架构 External emergency organization of the company
2020/4/14	风险识别 Risk identification	作业活动风险分级管控汇总清单 Summary of work activity risk level control list
2020/4/14		重大风险点汇总 Summary of major risk points
2020/4/14		风险和机遇识别分析评价表 Risk identification
2020/4/14		环境风险评估报告（造纸和制浆部分） Environmental risk assessment report（papermaking and pulping）
2020/4/14	SGS 认证 authentication	SGS SGS Authentication

调查日期 Date of investigation	文件夹名称 Folder name	证明文件清单 List of supporting documents
2020/4/14	2019 年环境合规性评价报告 Environmental compliance evaluation report in 2019	2019 年环境合规性评价报告 Environmental compliance evaluation report in 2019
2020/4/14	环境事件应急预案 Emergency plan for environmental events	突发环境事件应急预案表 Emergency plan for environmental events
2020/4/14	利益相关方 Stakeholders	利益相关方要求 Stakeholder requirements
2020/4/14		年产 14 万吨特种纸项目环境影响评价公众参与说明 140000t / a special paper project---Description of public participation in EIA
2020/4/14	能源管理系统证书 Energy management system certificate	能源管理体系认证证书 Energy management system certification certificate
2020/4/14	全国工业产品生产许可证 National industrial product production license	全国工业产品生产许可证 National industrial product production license
2020/4/14	食品安全管理体系认证 Food safety management system certification	食品安全管理体系认证证书 Food safety management system certification
2020/4/14	双重管理体系工作方案（红头文件） (Work plan of dual management system (government confidential document))	《关于 2019 年“双重管理体系”工作方案》 Work plan of dual prevention system in 2019
2020/4/14	外协施工管理条例 Regulations on management of outsourcing construction	外协施工环保管理条例 Regulations on management of outsourcing construction
2020/4/14	消防安全部 Fire safety department	关于成立消防安全领导小组报批文件 Approval document of fire safety leading group
2020/4/14		火情处置预案 Fire disposal plan
2020/4/14		消防巡查记录 Fire patrol record
2020/4/14		2019 年消防安全部培训计划 Fire patrol record in 2019
2020/4/14		消防安全培训记录 Fire safety department training record

调查日期 Date of investigation	文件夹名称 Folder name	证明文件清单 List of supporting documents
2020/4/14		消防安全领导小组 Fire safety leading group
2020/4/14		消防安全责任人任命书 Letter of appointment of fire safety management personnel
2020/4/14		消防工作管理办法 Management measures for fire protection work
2020/4/14		消防保卫部组织架构图 Organization chart of fire safety department
2020/4/14		消防保卫部工作职责 Responsibilities of fire safety department
2020/4/14		安全检查记录 Safety inspection record
2020/4/14	职业健康安全管理认证 Occupational health and safety management certification	职业健康风险分级管控汇总清单 Summary of occupational health risk classification list
2020/4/14		职业健康安全管理体系认证证书 Occupational health and safety management system certificate
2020/4/14		2019年职业健康安全总目标完成情况 Completion of general occupational health goals in 2019
2020/4/14	质量管理体系认证证书 Quality management system certification	质量管理体系认证证书 Quality management system certificate
2020/4/14	拆迁 Demolition documents	王桥村村委会 Wangqiao village committee
2020/4/14		矛盾纠纷解决制度 Solutions to conflicts and disputes
2020/4/14		王桥村拆迁范围图 Chart of scope of demolition in Wangqiao village
2020/4/14		王桥村未签订协议名单 List of agreements not signed in Wangqiao Village
2020/4/14		王桥村网格化服务管理 Grid service management center in Wangqiao village



调查日期 Date of investigation	文件夹名称 Folder name	证明文件清单 List of supporting documents
2020/4/14		王桥村拆迁告示 Demolition notice of Wangqiao Village
2020/4/14		王桥村拆迁户图纸 Chart of demolition households of Wangqiao Village
2020/4/14		王桥村综治中心 Comprehensive Management Center of Wangqiao Village
2020/4/15	供应链 Supply chain	供应链安全告供应商书 Supply chain safety notification to suppliers
2020/4/15		供应商评分办法 Supplier scoring method
2020/4/15		2019 年纤维原料采购计划 Fiber raw material procurement plan in 2019
2020/4/15		纤维原料合格供方名录 List of qualified suppliers of fiber raw materials
2020/4/15		采供中心木片部进口单据/活动控制流程 Import document / activity control process of wood chip Department of purchase and supply center
2020/4/15	物资发放记录 Material distribution records	电子测温仪发放记录 Distribution record of electronic thermometer
2020/4/15		防疫物资发放记录 Distribution record of epidemic prevention materials
2020/4/15		2019 年防暑物资发放记录 Distribution record of heatstroke prevention materials
2020/4/15		2019 年劳保鞋发放记录 Distribution record of labour protection shoes in 2019
2020/4/15		口罩发放记录 Distribution record of masks
2020/4/15		物资丢失记录 Material loss record
2020/4/15		2019 年 4 月新队员服装发放记录 New clothing distribution record in April 2019
2020/4/15		2019 年 8 月新队员服装发放记录 New clothing distribution record in August 2019

**APPENDIX B**

List of interviewed Sun Paper  
personnel

调查日期 Date of investigation	被调查人员姓名 Names	职务 Designation	工作年限 Length of Employment with Sun Paper
2020/4/14	杨国政 Yang Guozheng	体系主管 System Supervisor	18年 18 years
	王伟 WangWei	环保节能部经理 Manager of environmental protection and Energy Conservation Department	15年 15 years
	张泉林 Zhang Quanlin	副经理 Deputy Manager	13年 13 years
	贺泽刚 He Zegang	证券部经理 Manager of Securities Department	12年 12 years
	李化军 Li Huajun	颜店镇人大主席 Chairman of the people's Congress of Yandian town	28年 28 years
	蒋亚琴 Jiang Yaqin	采购中心供应商管理人员 Personnel of Purchasing center supplier management	13年 13 years
2020/4/15	任现强 Ren Xianqiang	采供中心进口木片跟单员 Imported veneer Merchandiser of purchase and supply center	15年 15 years
	郭银恩 Guo Yinen	采供中心采供木浆部管理人员 Management personnel of the wood pulp Department of the procurement and supply center	16年 16 years
	张敏 Zhang Min	人力资源中心管理人员 Management personnel of Human Resource Center	20年 20 years
	张虎 Zhang Hu	工会干事 Trade Union Secretary	5年 5 years


**APPENDIX C**

**Golder site visit photographs  
(April 14-15, 2020)**


Site Name:		Site Location:	Project No.:
Shandong Sun Paper Co., Ltd.		Sun Paper New Materials Industrial Park, Wangqiao Village, Yandian Town, Yanzhou District, Jining City	208515007 Task01
Photo No.: 1	Date: 4/14/2020		
Photo Direction: South			
Photo Description: A view of the east boundary of the Site, unnamed road and the municipal waste generation project to the further east.			

Site Name:		Site Location:	Project No.:
Shandong Sun Paper Co., Ltd.		Sun Paper New Materials Industrial Park, Wangqiao Village, Yandian Town, Yanzhou District, Jining City	208515007Task01
Photo No.: 2	Date: 4/14/2020		
Photo Direction: West			
Photo Description: A view of the north boundary of the Site, unnamed road and farmland to the further north.			

Site Name:		Site Location:	Project No.:
Shandong Sun Paper Co., Ltd.		Sun Paper New Materials Industrial Park, Wangqiao Village, Yandian Town, Yanzhou District, Jining City	208515007Task01
Photo No.: 3	Date: 4/14/2020		
Photo Direction: South			
Photo Description: A view of the east boundary of the raw material yard. The raw material storage yard was under construction, so the western boundary of the Site could not be reached during Site investigation.			


Site Name:		Site Location:	Project No.:
Shandong Sun Paper Co., Ltd.		Sun Paper New Materials Industrial Park, Wangqiao Village, Yandian Town, Yanzhou District, Jining City	208515007Task01
Photo No.: 4	Date: 4/14/2020		
Photo Direction: West			
Photo Description: A view of the north boundary of the product warehouse. The product warehouse was under construction, so the southern boundary of the Site could not be reached during Site investigation.			

Site Name:		Site Location:	Project No.:
Shandong Sun Paper Co., Ltd.		Sun Paper New Materials Industrial Park, Wangqiao Village, Yandian Town, Yanzhou District, Jining City	208515007Task01
Photo No.: 5	Date: 4/14/2020		
Photo Direction: Northwest			
Photo Description: A view of the wet paper making workshop in the Site.			


Site Name:		Site Location:	Project No.:
Shandong Sun Paper Co., Ltd.		Sun Paper New Materials Industrial Park, Wangqiao Village, Yandian Town, Yanzhou District, Jining City	208515007Task01
Photo No.: 6	Date: 4/14/2020		
Photo Direction: Southwest			
Photo Description: A view of the wet paper making workshop in the Site.			




Site Name:		Site Location:	Project No.:
Shandong Sun Paper Co., Ltd.		Sun Paper New Materials Industrial Park, Wangqiao Village, Yandian Town, Yanzhou District, Jining City	208515007Task01
Photo No.: 7	Date: 4/14/2020		
Photo Direction: Northwest			
Photo Description: A view of pulp board warehouse in the middle of the Site.			

Site Name:		Site Location:	Project No.:
Shandong Sun Paper Co., Ltd.		Sun Paper New Materials Industrial Park, Wangqiao Village, Yandian Town, Yanzhou District, Jining City	208515007Task01
Photo No.: 8	Date: 4/14/2020		
Photo Direction: Northeast			
Photo Description: A view of the chemical mechanical pulp workshop in the northeast portion of the Site.			



Site Name:		Site Location:	Project No.:
Shandong Sun Paper Co., Ltd.		Sun Paper New Materials Industrial Park, Wangqiao Village, Yandian Town, Yanzhou District, Jining City	208515007Task01
Photo No.: 9	Date: 4/14/2020		
Photo Direction: Southeast			
Photo Description: A view of product warehouse along the south boundary of the Site.			

Site Name:		Site Location:	Project No.:
Shandong Sun Paper Co., Ltd.		Sun Paper New Materials Industrial Park, Wangqiao Village, Yandian Town, Yanzhou District, Jining City	208515007Task01
Photo No.: 10	Date: 4/14/2020		
Photo Direction: North			
Photo Description: A view of some graves belonging to Wangqiao Village to the north boundary of the Site.			

Site Name:		Site Location:	Project No.:
Shandong Sun Paper Co., Ltd.		Sun Paper New Materials Industrial Park, Wangqiao Village, Yandian Town, Yanzhou District, Jining City	208515007Task01
Photo No.: 11	Date: 4/14/2020		
Photo Direction: Southeast			
Photo Description: A view of the heating boiler project to the southeast portion of the Site.			

Site Name:		Site Location:	Project No.:
Shandong Sun Paper Co., Ltd.		Sun Paper New Materials Industrial Park, Wangqiao Village, Yandian Town, Yanzhou District, Jining City	208515007Task01
Photo No.: 12	Date: 4/14/2020		
Photo Direction: Southeast			
Photo Description: A view of water supply treatment area to the southeast portion of the Site.			

Site Name:		Site Location:	Project No.:
Shandong Sun Paper Co., Ltd.		Sun Paper New Materials Industrial Park, Wangqiao Village, Yandian Town, Yanzhou District, Jining City	208515007Task01
Photo No.: 13	Date: 4/14/2020		
Photo Direction: Northwest			
Photo Description: A view of Wangqiao Village to the southwest portion of the Site.			

Site Name:		Site Location:	Project No.:
Shandong Sun Paper Co., Ltd.		Sun Paper New Materials Industrial Park, Wangqiao Village, Yandian Town, Yanzhou District, Jining City	208515007Task01
Photo No.: 14	Date: 4/14/2020		
Photo Direction: Southwest			
Photo Description: A view of sewage treatment station to the east boundary of the Site.			



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