

Environmental and Social Audit (Draft)

**Yunnan Kunming Changshui Green Airport
Development Project**

Submitted to

Asian Infrastructure Investment Bank

Yunnan Airport Group Co., Ltd

Prepared by



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01	First draft for AIIB review and comment
02	Incorporated comments from YAG
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List of Acronyms

AIIB	Asian Infrastructure Investment Bank
APU	Auxiliary power unit
CAAC	Civil Aviation Administration of China
CAP	Corrective Action Plan
CHMP	Cultural Heritage Management Plan
CHMMP	Cultural Heritage Management and Monitoring Plan
CSR	Corporate Social Responsibility
EHS	Environment, Health and Safety
EIA	Environmental Impact Assessment
ES	Environmental and Social
ESAP	Environmental and Social Action Plan
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
ESMS	Environmental and Social Management System
ESA	Environmental and Social Audit
ERP	Emergency Response Plan
GHG	Greenhouse Gas
H&S	Health and Safety
HR	Human Resource
JV	Joint Venture
KPI	Key Performance Indicator
YAG	Yunan Airport Group

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1. EXECUTIVE SUMMARY

1.1 Objective

The Asian Infrastructure Investment Bank (AIIB) is considering providing financing to the Province of Yunnan for the expansion of the Kunming Changshui Green Airport Development Project. As this Project involves the significant expansion of an existing facility, an environmental and social audit is needed to review the current operation in Kunming Airport and the capacity of existing government systems to implement effective measures for environmental and social impact management and to determine if any measures would be required to strengthen them. Such measures will be spelled out in an Environmental and Social Action Plan (ESAP).

The specific objectives of the audit are to:

- a) Determine the nature and extent of all environmental and social areas of concern at the existing Kunming Changshui International Airport;
- b) Identify and justify appropriate measures to mitigate the areas of concern and recommends a schedule for implementing these measures.

1.2 Approach and Methodology

1.3 Audit Process

The various steps undertaken in the audit process were as follows:

a) **Safety Briefing/ Opening Meeting**

The opening meeting was conducted on the November 29, 2022 intended to concisely present the goals of the audit to the airport representatives, to describe the audit process, and to create a cooperative atmosphere for the performance of the audit. Other objectives of the opening meeting include becoming acquainted with management team and airport operations/ activities and gaining an understanding of the perspective of the environmental and social performance of the airport

b) **Field Reviews and Study:**

A visual on-site walk-through were conducted by the Greenworld auditors during November 29 ~ December 2. Due to Covid restriction, no site visit could be arranged for some areas during this period. The health and safety auditor had another site tour on December 14 and 15 to complete the field audit.

c) **Interviews with Airport Management**

Interviews were conducted with key personnel at the airport to help understand the management systems in place to ensure compliance, which helps to ascertain the level of knowledge individuals at each location have relative to the environmental and social aspects of their job functions.

d) **Questionnaire survey**

Because of COVID restriction, no employee interview could be arranged during the audit. Instead, a questionnaire survey was contributed to 50 sampled employees, 40

of which were answered and returned for review. Among the 50 employees, it covered almost each department of the Kunming Airport.

The questions in the survey cover but not limited to the following aspects:

- General information of the worker including age, work position, educational background, gender, years of service, hiring method
 - Working conditions including terms of labor contracts, health check, company policies, working hours etc.
 - Wage information including basic wage, overtime compensation, benefits and deductions
 - Grievance channel and process
 - Satisfactory investigation
- e) Consultation with stakeholders. The draft ESA report has been circulated within the Kunming Changshui International Airport Co., Ltd during January-February 2023. A stakeholder workshop was hold in March 2023 to confirm the environmental and social action plan.

Extensive discussions and interviews with the communities in the surrounding of the airport were conducted during February 2023 and the key findings were documented in the environmental and social impact assessment report for the Project.

1.4 Overall Initial Conclusions

This report summarizes the environmental and social review for the current operation of Kunming Airport in China. Greenworld was engaged as the Environmental and Social Consultant and presents this environmental and social review report as the findings from the assessment of the compliance with the Lender's environmental and social performance standards, requirements and policies.

The review findings where compliance with the Lender's environmental and social criteria or regulatory requirements has not been fully demonstrated are summarized below.

Organization Capacity

- No evidence was available to proof that the roles of responsibilities for Environmental and Social Management are clearly defined. No Organization Chart for Environmental and Social Management was available for review.
- There was no designated ESMS officer, or Environmental/Social Coordinator, Community Liaison Officer assigned in Kunming Airport.

ENVIRONMENT

Management System

- The quality and EHS systems had not been updated to keep up its progress with applicable laws and regulations associated with environmental management, energy use, greenhouse gas emission, etc.
- Energy efficiency, GHG emission are tracked by the Power and Energy Center, wastewater recycling and waste recycling are tracked by environmental service providers, but the airport did not have a specific environmental KPI tracking system to manage their performance.

Environmental Permits

-
- EIA information has been disclosed online for publication since June 2022, and the Post-EIA had not been registered with local environmental authority as of the audit.

Pollution Prevention

- No evidence of cooking fume from onsite canteens was provided for review to confirm its compliance status.
- The treated wastewater is monitored on a monthly basis to ensure water quality for reuse. However, no evidence of wastewater discharge from the reclaimed wastewater treatment plant was provided for review to confirm its compliance status, prior to being discharged into the KAEZ wastewater treatment plant for further treatment under some circumstances (e.g., rainy season).
- According to the monitoring data of 2019-2021, aircraft noise level of Lwecpn was detected at some levels which were higher than applicable limit of ≤ 75 dB in the Standard of Aircraft Noise for Environment around Airport (GB9660-88) at some of sensitive receptors (e.g., Changpo Viliage, Yunnan Policy Officer College, Fuxing Viliage, Changshui Aviation City, Wuxi Village). Also, based on the CAI monitoring report there were 6 of sensitive receptors with higher levels of aircraft noise, including Changshui Aviation City, Changpo Village, Yuanyichang Hosplital, Hanluo Village, Da Village and Huaqing Village. It was obvious that noise emission generated from operation of Kunming Airport have some impact on the surrounding areas, especially for sensitive receptors
- The hazardous wastes of spent lamps and scrapped X-ray devices were kept onsite which have not been disposed of.

Soil and Groundwater Impact

- No evidence of soil / groundwater investigation was provided for review to confirm its compliance status beneath the property. After completion of site reconnaissance, the potential risk associated with soil and groundwater impact at the Kunming Airport were identified, which included
 - o One underground oil transport pipeline which was owned by China Petrochemical Corporation and goes through along western portion of the airport;
 - o The filling stations and underground pipeline; and
 - o Waste station operated by CSSC Environmental Technology Co., Ltd.

Emergency Preparedness and Response

- Based on review of the emergency plan, most of the external stakeholders were identified and included in this emergency response plan. However, the KAEZ wastewater treatment plant, the CSSC waste station and sensitive receptors (e.g., neighbouring villages/hospitals/schools) with high levels of aircraft noise in the surrounding areas were not included in the emergency response plan.
- As per review of the emergency response plan, the emergency response plan had not been updated and re-registered when change of contact persons and organizational charts. In addition, site representative confirmed that no drill of environmental incidents had been performed since June 2012, though the drill plan had been developed at the Kunming Airport.

Resources Efficiency

- No material issue related to resource efficiency was identified.

Climate Change and Greenhouse Gas Emission

- None of material issue related to GHG emission at the airport identified.

LABOUR & SOCIAL

Contract and Supplier Management

- CSR has not fully incorporated into the contractor and supplier chain management system, such as the areas of ethics and environmental activities.
- Due to COVID-19 restriction, no staff from the onsite third party was interviewed at the time of the audit. Therefore, no records including business license, labor agent qualification, labor contracts, working hours, wages and social insurance records were provided for review to verify the compliance.

Human Resources Policies and Procedures

- Based on document review, it is required to provide safety and health training according to the regulatory requirements. The policies and agreements were communicated to all employees. According to the collective agreement, training should be conducted according to the specific training management policy.
- However, the policy was not provided for review. In addition, no training plan, training records or training performance review records were available to review to ensure the training effectiveness and employees keep up with the dynamics of airport management.

Labor Relations - Employment Contract

- No issue was identified regarding employment contract.

Working hour, wage and benefits

- The severance wage is paid on regular wage issuance date instead of upon termination, which did not meet Article 9 of Provisional Regulations for the Payment of Wages (1995)
- Because the staff who is responsible for record keeping was not available during the site visit, no clock-in clock-out records (timecard records) were provided for review. Therefore, the compliance of working hours, overtime and the compliance of comprehensive work hour system would not be fully verified.
- According to policy and KPI records, monetary penalties will be deducted from workers' wages as a disciplinary measure, but there was no document provided to proof that deductions met regulatory requirements or the deduction was authorized by the worker.

Workers' Organizations

- Because the staff who is responsible for record keeping was not available during the site visit, the license of the labor union was not provided for review.

Non-Discrimination and Equal Opportunity

- The job advertisement posted in the hiring website had a limit on age (25 to 35 years old) without any test or evaluation for inherent job requirements regarding age.
- Because the staff who is responsible for record keeping was not available during the site visit, payroll records, promotion records, training records or disciplinary records etc. were not provided for review to further confirm no instances of discrimination.

Anti-Harassment & Abuse

- The group developed policy to define the forms of sexual harassment. However, no evidence was available to proof that specific anti-harassment training was provided for all staff or security personnel. Based on the interview with management and the questionnaire survey, the employees had insufficient knowledge of harassment, sexual harassment or abuse of authority.

Retrenchment

- No issue was identified

Grievance Mechanism

- The Kunming Airport did not have a specific grievance mechanism to include whistle-blower policies, reporting mechanisms for issues such as sexual harassment and etc.

Child labor, Forced Labor

- No issue identified.

Information Disclosure and Stakeholder Engagement

- There was no designated Community Liaison Officer (CLO) assigned in Kunming Airport.
- No list of stakeholders for operation in Kunming Airport was provided for review.

HEALTH AND SAFETY

Health and Safety Management System

- No issue was identified

Health and Safety Performance Indicator and Monitoring

- Airport safety performance indicator did not specify work-related accident indicator of airport employees.
- The safety performance of stakeholders closely related to the safety of airport operations is not specified in the safety performance monitoring. These stakeholders include airlines, aircraft maintenance companies, catering and food providers, fuel providers, etc.

Fire Safety

- No issue was identified

Equipment Safety

- No issue was identified

Medical care and First aid

- The safety management manual of the Power Energy Center indicated that the occupational disease hazards of the Power Energy Center include noise, but noise is not included in the airport's occupational health check plan.

Emergency Response

- No issue was identified

Wildlife Strikes Management

- No issue was identified

Airport Security

- No issue was identified

Traffic Safety

- No issue was identified

Hazardous Substance Management

- No issue was identified

2. INTRODUCTION

2.1 Project Introduction

The Kunming Airport is operated by Yunnan Airport Group Co.,Ltd. (hereinafter “Yunnan Airport Group”, or “YAG”), which was established in 2004. Kunming Changshui International Airport (Kunming Airport) is the primary airport serving Kunming, the capital of Yunnan Province, China. The airport is located 24.5 km (15.2 mi) northeast of the city center in a graded mountainous area about 2,100 m (6,900 ft) above sea level. The airport opened in June 2012, replacing the old Kunming Wujiaaba International Airport, which was later demolished. As a gateway to Southeast and South Asia, Changshui Airport is a hub for China Eastern Airlines, Kunming Airlines, Lucky Air, Sichuan Airlines and Ruili Airlines.

The Asian Infrastructure Investment Bank (AIIB) is considering providing financing to the Province of Yunnan for the expansion of the Kunming Changshui Green Airport Project to support the development of a gateway airport in the southwest of China, improving the air traffic connectivity in the region and demonstrating a green airport model. Guangzhou Greenworld Consulting Co., Ltd (hereinafter “Greenworld”) was contracted by the YAG as environmental and consultant for the Project to carry out an Environmental and Social Impact Assessment (ESIA) of the project and Environmental and Social Audit (ESA) for the existing operations.

Terminal

The main 548,300 m² (5,902,000 sq ft) terminal of Changshui International Airport is the second largest terminal building in China. The terminal has 66 gates with jet bridges. Total number of 88 gates are available.

Runways

Kunming Changshui International Airport now has two runways. East runway is 4,500 metres (14,800 ft) long while west runway is 4,000 metres (13,000 ft) long.

A-CDM

In July 2014, Kunming Airport signed an agreement with the aviation data service company VariFlight regarding the Airport Collaborative Decision-Making system (A-CDM) installation in order to improve the efficiency of its operations, reduce fuel consumption and other expenses. Kunming Airport became the first aviation hub in China to implement such an information system.

Kunming Airport Expansion Project

The major components proposed to be funded by AIIB loan will comprise:

- Component 1: Construction of Eastern Runway #2 and its associated taxiway and system.
- Component 2: Construction of Aprons around Terminal 2 (78 aircraft stands).
- Component 3: Construction of cargo terminal of the airport, including cargo aprons (16 aircraft stands).
- Component 4: Support building a green airport, including provision of electrified service vehicles in airfield area; and design and construction of small scale of photovoltaic and energy storage at airport.
- Component 5: Support the uplift of 'smart elements' of the airport, to enhance the quality, security and efficiency of the airport (to be further developed in the preparation).

- Component 6: Implementation Support including the ES monitoring and evaluation and capacity building with focus on 'Green' aspect.

Note: This audit is focus on the current operation of Kunming Airport, and not including the expansion project.

2.2 Scope of Work

The scope of the assignment mainly included the review the environmental and social performance of the current operation of Kunming Airport, to check its compliance with AIIB Environmental and Social Standards (ESSs) and applicable national, IFC EHS Guidelines, laws and regulations through document review and interview with the airport representatives to be able to reflect the existing condition of the current operation of the airport.

As part of the ESA, Greenworld has:

- Inspected the following areas during the site assessment: terminals office area, power and energy centre office building, airport office building, heating & refrigerating supply centre, wastewater treatment plant, and waste storage & disposal site. (Pictures are presented in Appendix B)
- Reviewed the relevant documentation provided by YAG (see Appendix A);
- Conducted onsite interviews with relevant representatives of YAG;
- Phone interview with representative of Trade Union and First Aid Centre.
- Assessed the environmental and social performance of the Kunming Airport;
- Assessed the status of the Project against AIIB ESSs, IFC EHS Guidelines and relevant national and local laws and regulations;
- Questionnaire survey; and
- Prepared an ESA report and ESAP.

An opening meeting was performed with the representatives from the Project team of YAG on 29 November 2022. Onsite assessment was conducted for 4 days by 3 auditors from November 29 to December 2, and another 2 days by one auditor from December 14 to 15.

2.3 Report Structure

The ESA report was prepared based on the site visit, interview with airport representatives, and review of documentation made available by the YAG. The reviewed documents, as needed, are referred to in the relevant chapters. This ESA report is structured as follows:

- Chapter 1. Executive Summary
- Chapter 2. Introduction
- Chapter 3. Applicable National Laws, regulations and relevant AIIB standards: provides an overview of the applicable national laws and regulations and relevant AIIB EESs.
- Chapter 4. ESA and Findings, his chapter summarizes the findings of institutional arrangements, ES management, social, health and safety, labour issues and working conditions.
- Chapter 5. ES Action Plan, provides gaps identified in the ESA and recommendations of corrective actions.
- The documents provided for review are listed in Appendix A.
- Site map and layout are provided in Appendix B.
- Site photos taken during site visit in December 2022 are presented in Appendix C.

2.4 Methodology

The purpose of the Environmental and Social Review is to assess the compliance between the current practices in the operation of the airport and AIIB ESSs, the relevant national and international legislation and good practices, and evacuate the organisational capacity; Review

of the performance on the related matters; based on the information acquired as the result of the site visit, interviews with the relevant employees, management and contractors, and reviewing the documents provided. The reviewed documents are listed in Appendix A.

The general steps followed during the assessment were as follows:

- Environmental scoping that provided the key environmental issues.
- Desktop studies
- Interviews
- Physical inspection of the site and surrounding areas
- Questionnaires survey
- Reporting

2.5 Assumptions and Limitations

The principal assumptions that have been made, and any limitations that have been identified in undertaking the ESA are set out below.

- The findings and observations detailed in this report are based upon visual inspections by the auditor, onsite interviews, phone interview, and documents provided by the development management. It is assumed that information received from third parties is accurate, complete and up to date;
- Due to Covid restriction, interview was only conducted with management of different departments in Kunming Airport. No interview could be arranged for staff or other stakeholders, such as third-party employment agency, onsite subcontractors, tenants, fuel suppliers, fire facilities operators, maintenance personnel.
- Because some airport staff had to quarantined and restriction, all not relevant management personnel was available to provide information or documents during the audits. Therefore, some documents, records would not be provided for review, for example, training records, time card records, permit to work, maintenance and inspection records, etc.
- No access was provided for following important areas on terms of safety, including but not limited to fire-fighting facilities control room, fire station, terminal medical emergency room, fuel tank farm, gas station, emergency response material storage, flight area control area and key equipment, facility operation control area, etc.
- Where detailed information has not been available, reasonable assumptions have been made, and have been clearly set out, based on experience of operation activities of similar type and scale to enable assessment of likely significant effects.
- Due to the dynamic nature of certain aspects of the environment, conditions at the site and onsite service provider/sub-contractors may change.
- No physical testing was performed as part of this audit.

3. POLICY, INSTITUTIONAL AND LEGAL FRAMEWORK

3.1 International Performance standards

It should be noted that the AIIB ESSs are used as the core standard for the assessment.

3.1.1 AIIB Environmental and Social Standards (2021)

The following three standards, which set out more detailed mandatory environmental and social requirements to be implemented by the Client, depending on the nature of the Project. These standards cover the following:

ESS 1: Environmental and Social Assessment and Management (ESS 1), which includes the items as follows below:

- Conduct an environmental and social assessment to identify direct, indirect, cumulative and induced Project-related risks to and impacts on physical, biological, socioeconomic and cultural resources in the Project’s area of influence. These include risks to and impacts on air and water quality, including: (a) environmental health; (b) natural resources, including land, water and ecosystems; (c) livelihoods; (d) vulnerable groups; (e) gender; (f) worker and community health and safety; and (g) cultural resources.
- Prepare an Environmental and Social Action Plan (ESAP) setting out (a) commitments to implement corrective actions to address these gaps in accordance with an appropriate time-bound action plan, in conformity with the ESP, ESEL and applicable ESSs; (b) estimates of the resources required; and (c) responsibilities for implementation of the actions.

To be specific, the scope of work under ESS 1 includes the items as tabulated below:

Organization Capacity	Environmental	Social and Labor	Health and Safety
	<ul style="list-style-type: none"> - Management System - Environmental Permits - Pollution Prevention - Soil and Groundwater Impact - Emergency Preparedness and Response - Climate Change and Greenhouse Gas Emission - Biodiversity Consideration 	<ul style="list-style-type: none"> - Contract and Supplier Management - Human Resources Policies and Procedures - Labor Relations - Employment Contract - Working hour, wage and benefits - Workers’ Organizations - Non-Discrimination and Equal Opportunity - Anti-Harassment & Abuse - Retrenchment - Grievance Mechanism - Child Labor, Forced Labor - Information Disclosure and Stakeholder Engagement 	<ul style="list-style-type: none"> - Health and Safety Management System - Health and Safety Performance Indicator and Monitoring - Equipment Safety - Medical care and First aid - Emergency Response - Wildlife Strikes Management - Airport Security - Traffic Safety - Hazardous Material Management

ESS 2: Land Acquisition and Involuntary Resettlement (ESS 2, a separate resettlement due diligence and/or resettlement plan is under preparation and not covered in this report); and

ESS 3: Indigenous Peoples (ESS 3, not covered in this report).

3.1.2 IFC Environmental, Health, and Safety Guidelines

The EHS Guidelines are technical reference documents with general and industry-specific examples of Good International Industry Practice (GIIP)

Environmental, Health, and Safety Guidelines for Airports

The EHS Guidelines for Airports apply to the operation of commercial airports. The document does not include activities associated with aircraft operators including aircraft maintenance activities, which are covered by the EHS Guidelines for Airlines.**3.2 Legal and Regulatory Framework Applicable to Airport Operation**

3.2.1 Constitution and Policy

China Constitution revised in 2018. The constitution is the supreme law of the country. Several articles of the constitution cover environmental and social aspects:

- Article 9 All mineral resources, waters, forests, mountains, grasslands, unreclaimed land, mudflats and other natural resources are owned by the state, that is, by the whole people, except for the forests, mountains, grasslands, unreclaimed land and mudflats that are owned by collectives as prescribed by law.
- The state shall ensure the rational use of natural resources and protect rare animals and plants. It is prohibited for any organization or individual to seize or damage natural resources by any means.
- Article 10 Land in cities is owned by the state.
- Land in rural and suburban areas is owned by collectives except for that which belongs to the state as prescribed by law; housing sites and cropland and hillsides allotted for private use are also owned by collectives.
- The state may, in order to meet the demands of the public interest and in accordance with the provisions of law, expropriate or requisition land and furnish compensation.
- No organization or individual shall unlawfully transfer land through seizure, sale and purchase, or in any other form. Land-use rights may be transferred in accordance with the provisions of law.
- All organizations and individuals using land must use it in an appropriate manner.
- Article 22 The state shall develop art and literature, the press, radio and television broadcasting, publishing, libraries, museums and cultural centers, and other cultural undertakings that serve the people and socialism; and shall promote public cultural activities.
- The state shall protect places of scenic beauty and historical interest, valuable cultural relics and other forms of important historical and cultural heritage.
- Article 26 The state shall protect and improve living environments and the ecological environment, and prevent and control pollution and other public hazards.
- The state shall organize and encourage afforestation and protect forests.

Yunnan Province the 14th Five Year Energy Saving and Emission Reduction Plan, issued in June 2022, specified that by 2025, measures will be taken to promote clean energy transportation equipment, including airport service vehicles.

The "14th Five-Year Plan" of Yunnan Civil Aviation (issued in January 2022), required to improve the level of airport greening, including aspects of use of cleaner energy, green building, energy saving, emission reduction, water saving, use of stormwater, using Auxiliary power unit (PCA) require less ground equipment inventory & maintenance, migrating from oil- to electricity-powered vehicles and etc.

3.2.2 Environmental & Social Legal Framework

The key pieces of environmental legislation closely related to airport operations include:

- Environmental Protection Law.
- Law on Environmental Impact Assessment (EIA Law).
- Administrative Measures for Pollutant Emission Permitting (for trial implementation).
- Emergency Response Law.
- Circular Economy Promotion Law.

Laws relating to specific fields of environmental protection include the:

- Air Pollution Prevention and Control Law.
- Water Pollution Prevention and Control Law.
- Solid Wastes Pollution Prevention and Control Law.
- Soil Pollution Prevention and Control Law.
- Environmental Noise Pollution Prevention and Control Law.
- Radioactive Pollution Prevention and Control Law.
- Grassland Law.
- Forestry Law.
- Water Law.
- Regulation for the Central Environmental Inspection.

Laws relating to specific fields of labor protection include the:

- Chinese Constitution
- 1995 Labor Law of the People's Republic of China
- 2008 Labor Contract Law of the People's Republic of China
- Law of the People's Republic of China on Labor Dispute Mediation and Arbitration
- Labor Union Law of the People's Republic of China
- Law of the People's Republic of China on Work Safety
- Social Security Law
- Regulations promulgated by the Ministry of Human Resources and Social Security (the "MOHRSS") and other ministries and commissions of the State Council

Airport Licensing Requirements in China

The Civil Aviation Law of the People's Republic of China. The airports were divided into two categories: transport airports and general airports. Transport airports refer to airports which provide services for civil aircraft engaging in public aviation transportation activities for passengers and cargo, etc. General airports refer to airports which provide services for civil aircraft engaging in flight operations for industry, agriculture and construction, as well as flight activities for medical and health services, emergency rescue, scientific experiments, and culture and sports purposes, among others.

For a transport airport, the airport management institutions shall apply to the CAAC for a civil transport airport use permit, while to put into use a general airport, the airport management institutions shall apply to the CAAC regional administrations for a general airport use permit.

Environmental Impact Assessment Requirement in China. *The Environmental Impact Assessment (EIA) Law of the People's Republic of China* has come into force since 1 September 2003 (revised in 2018), setting out the statutory requirements for EIA of plans and construction projects; and the legal liability and public participation in the EIA process.

An EIA is mandatory for construction projects and relevant requirements are as follows: Construction cannot be commenced without the EIA in accordance with the law. Facilities for the prevention and control of pollution must conform to the requirements of the approved document of EIA and must not be dismantled or left idle without permission. Otherwise the construction entity may be fined, ordered to stop construction or to make restitution.

Environmental impact reports must be submitted for examination and approval and environmental impact registration forms must be submitted for record-filing.

Soil pollution and countermeasures in China For enterprises in China, the *Law on the Prevention and Control of Soil Pollution* (2018) sets out various obligations. Manufacturing and operating companies and land use rights holders must take effective measures to prevent and reduce soil pollution and bear liability for soil pollution they cause. If any survey, monitoring or inspection indicates potential pollution of construction land, the land use right holder will be required to investigate the status of soil pollution. If the investigation reveals pollution in excess of relevant standards, the party responsible for the pollution and the land use right holder must complete and file a risk assessment report on the soil pollution.

Air pollution and countermeasures in China

Under the *Law on the Prevention and Control of Air Pollution* (revised in 2018), the prevention and control of dust pollution from construction projects is regulated as follows:

Construction entity: a construction entity must include the cost of prevention and control of dust pollution in the project cost and clearly stipulate the responsibilities of the constructing enterprise concerning the prevention and control of dust pollution in the construction contract; bare ground must be covered by the entity at construction sites where work cannot start on time.

Contractor: contractors engaging in housing construction, municipal infrastructure construction, river development or building demolition must register for record-filing at the competent authorities responsible for the supervision and administration of dust pollution prevention and control; contractors must develop a specific plan for the prevention and control of dust pollution during the construction process; contractors must set up solid enclosures at the construction sites and take effective measures to prevent and reduce dust pollution; contractors must install a bulletin board at the construction site, disclosing information concerning the dust pollution prevention and control measures, the person in charge, and the competent department for the monitoring and control of dust pollution.

Water pollution and countermeasures in China

The main requirements include (*Law on Prevention and Control of Water Pollution* (revised in 2017)):

Designing, constructing and using facilities for the prevention and control of water pollution simultaneously. Imposing special preventive measures for water source protection zones.

Waste pollution and countermeasures in China

In China, solid waste is divided into five classes: "industrial solid waste", "household waste", "building waste", "agricultural solid waste" and "hazardous waste". China's legal and regulatory framework for solid waste pollution prevention consist of the higher-level laws such as "*Solid Waste Environmental Pollution Prevention Law*," "*Clean Production Promotion Law*," and "*Circular Economy Promotion Law*," and individual administrative laws, action plans and emission standards for solid waste which were developed based on these higher-level laws.

Sustainable development

There is no People's Republic of China law specifically covering construction sustainable development, but sustainable development is often promoted by regulations on environmental protection, energy conservation, and carbon emission. For example, the *Environmental Protection Law* generally encourages sustainable development for the economy and society. Under the *Energy Conservation Law*, energy conservation should be considered in national

socio-economic development plans. The use of energy-saving equipment must be encouraged in design and construction, and construction energy-saving checks are required as part of construction completion acceptance checks.

Information Disclosure Regulations in China. *The Environmental Protection Law* revised in 2014 added a chapter regarding information disclosure and public participation, requiring key pollutant-discharging units to voluntarily disclose environmental information. *The Air Pollution Prevention and control law, Water Pollution Prevention and Control Law, Measures for the Administration of Energy Conservation of Major Energy-Consuming Entities* also have relevant provision on the information disclosure.

In order to implement the “*Plan for the Reform of the Legal Disclosure System of Environmental Information*” issued by China’s Ministry of Ecology and Environment (MEE) in May 2021, the MEE has stipulated new disclosure rules that will require enterprise to disclose environmental information on an annual basis, effective from February 2022, which applies to listed companies and entities that are subject to certain environmental penalties in the previous year and other identified by the MEE, including those that discharge high levels of pollutants. Covered entities must disclose information on environmental topics including:

- Environmental management;
- Generation and treatment of pollutants;
- Carbon emissions;
- Energy and resource used; and
- Emergency preparedness and response plan.

The entities applicable to these rules must also disclose climate change, environmental information related to investment and financing transactions.

Health & Safety

In summary, employers’ duties are specified in the Work Safety Law:

- ensure the health and safety of employees
- comply with laws concerning occupational safety, strengthen safety management and establish a sound work safety system
- organise pre-job, on-the-job, and post-job health monitoring of employees
- create a work environment and conditions which meet national occupational health standards and requirements
- provide personal protective equipment where necessary that meets national and industry standards and train and supervise employees in its use
- provide first aid and welfare facilities
- create a written risk assessment
- provide training and information on risks
- notify occupational safety and health authorities of work-related deaths or injuries
- deal with reports of dangers or emergencies immediately.

When two or more organisations share a workplace, they should sign agreements to co-ordinate and clarify the responsibilities for each party.

Aviation safety in airport is governed by Civil Aviation Administration in China (CAAC).

Labor protection requirements in China

China has an extensive legal framework that gives workers a range of rights and protection against exploitation and discrimination.

The main sources that govern employment relationships in China mainly include the *Labour Law, the Employment Contract Law, the Implementing Regulations of the Employment Contract Law and the Social Security Law*, together with other implementing rules and regulations and local legislation at provincial or municipal level, as well as varying local practices. Regarding wage, working hours, rest and vacation, the main regulations mainly include the *Regulations on the Composition of Gross Wages, the Interim Provisions on Wage Payment, the Provisions on Minimum Wage, and the Regulation on Paid Annual Leave for Employees*, etc.

Trade Unions

The law entitles trade unions to protect the interests and rights of employees, as well as to negotiate and mediate on their behalf. According to Labour Law, trade unions shall represent and safeguard the legitimate rights and interests of employees and carry out their activities independently in accordance with the law. The status, legal obligation and rights of trade union are stipulated in detail in the Trade Union Law. The 2021 revised Trade Union Law further clarifies the status of trade union, which is a voluntary organisation formed by employees at their own free will.

Discrimination

Discrimination is prohibited by employment law in China.

The Labour Law generally provides that people should not be treated unfairly due to race, sex, and religion, etc. and women should enjoy equal rights of employment enjoyed by men. Additionally, the Employment Promotion Law of PRC provides that workers are entitled to equal employment, and workers seeking employment shall not be discriminated because of ethnicity, race, gender, religious belief, disability, and whether the workers are from rural places. There are also specific regulations prohibiting discrimination against employees who are hepatitis B carriers.

4. ENVIRONMENTAL AND SOCIAL REVIEW

This Section presents the review and audit of the current airport operation and the activities proposed to be associated with its current operation. It is divided into sub-sections for each particular set of standards assessed against (e.g. AIIB ESSs, IFC EHS Guidelines, etc.). It should be noted that the AIIB ESSs are used as the core standard for the assessment. Gap analysis is conducted to assess their performance against regulatory requirements, each additional standard / policy / requirement to the extent that it differs in scope / specification to the AIIB.

Within each sub-section, an introductory paragraph is included to provide the most relevant observations and to facilitate the understanding of the compliance table that follows. Therefore, the narrative paragraphs preceding the compliance tables are aimed to provide the “rationale” for the identified gaps, and recommendations. The most important identified gaps, which require action for improvement, have been formatted in bold within this text to facilitate identification

4.1 Organization Capacity

Based on review of its organization chart, there is no dedicated department/person to manage environmental and social at the airport, responsibilities of which are assigned to various departments. No Organization Chart for Environmental and Social Management was available for review.

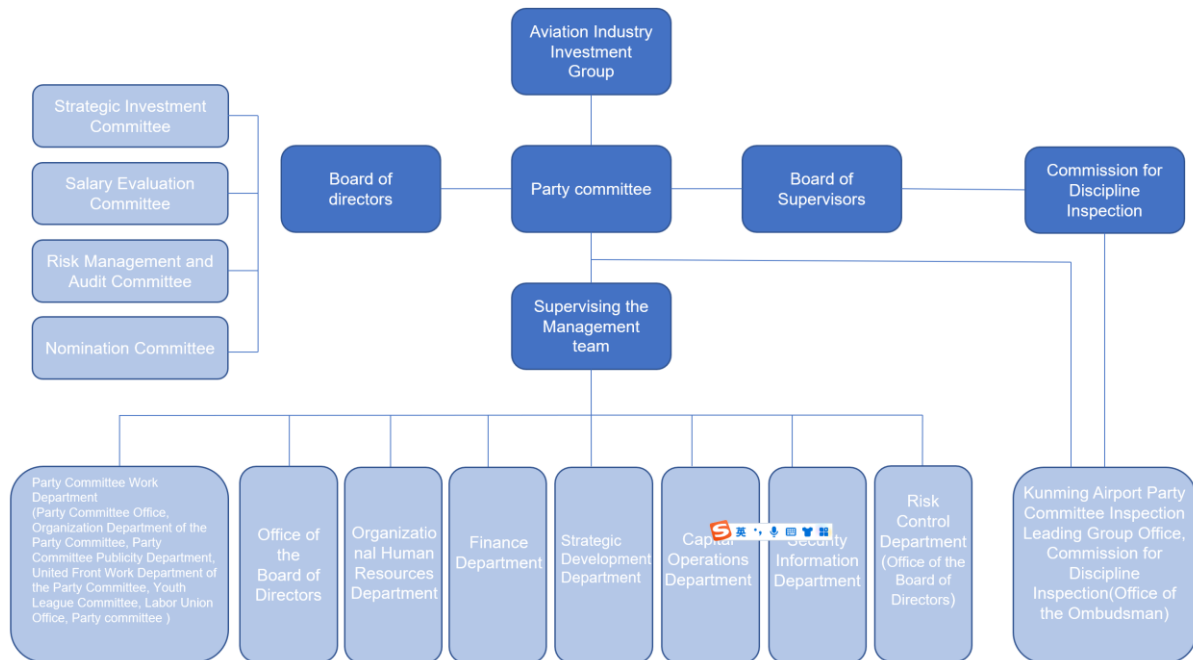


Fig. Organization Chart of Airport Operation

- The Work union and HR department are responsible for labor relations.
- As one of the primary roles and responsibilities at the Property Management Department, Mr. Xiaofeng Bao the department head is responsible for environmental management and reports to senior executive as necessary, and Mr. Yu Liu and Mr. Xiongying Huang support him on daily operation related to environmental permits, pollution prevention, greenhouse gas emission, etc.
- The power and energy center is responsible for energy resource statistic of water, electricity, and natural gas, and report to Property Management Department.
- The Safety and Quality Department of Yunnan Airport Group is responsible for the development of the occupational health and safety system and the safety operation supervision of its subsidiaries (including Kunming Airport). The Safety Service Management Department of Kunming Airport is responsible for the operation and management of the safety and occupational health management system of Kunming Airport, the implementation of regulatory requirements and the safety requirements of Yunnan Airport Group at Kunming Airport. The Safety Service Management Department also provides guidance and support for the implementation of department safety management, supervises and evaluates department safety performance.
- A Risk Management and Auditing Committee, reported to the Board of Director, is controlling the operation and financial risk.
- A corporate social responsibility (CSR) report 2021 was provided for review, which communicated CSR efforts and their impact on the environment. Reportedly, the report was prepared by the Board of Director office of Yunnan Airport Group.
- The Kunming Airport has a Fire Safety Committee to ensure fire safety, which is composed of representatives of all key stakeholders located in the airport.

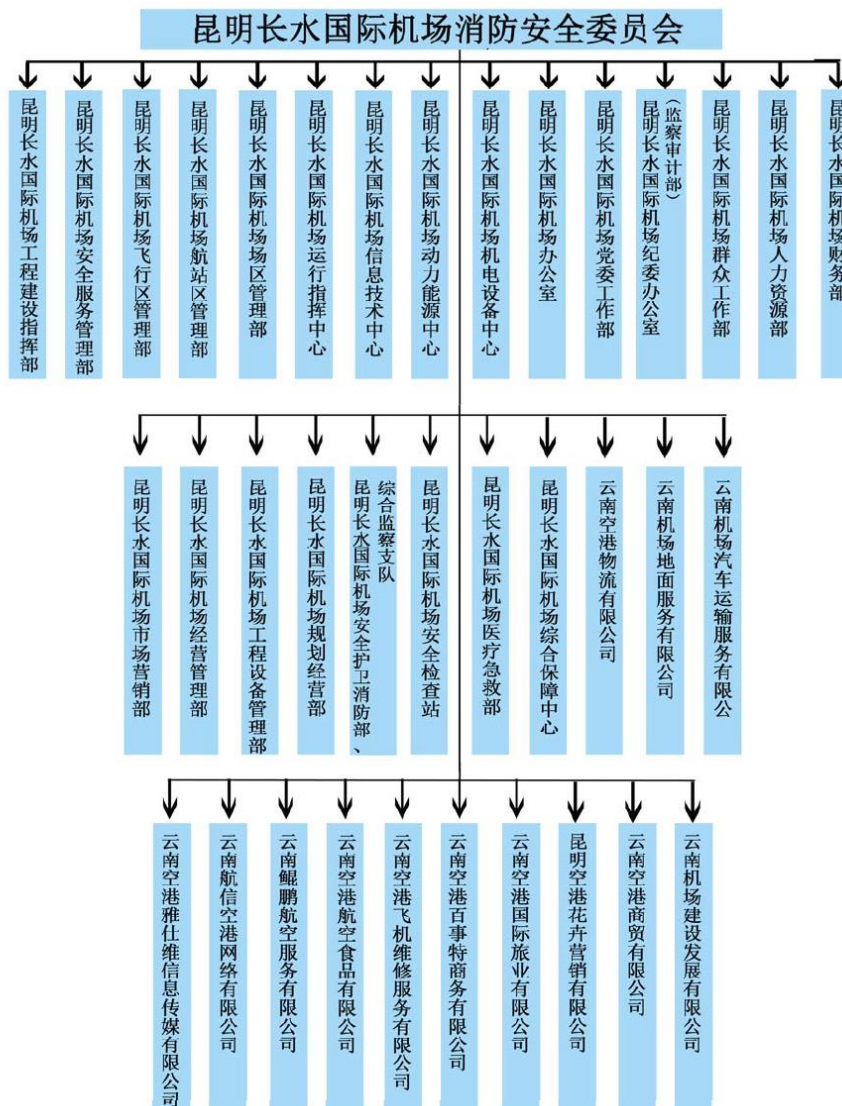


Fig. Organization Chart of Fire Safety Management

- There was no designated Community Liaison Officer assigned in Kunming Airport. Reportedly, the local government - authorities of Kunming Airport Economic Zone (KAEZ), is working with the Kunming Airport to facilitate public communication, complain handling, coordinate community activities, manage dispute resolution and emergency response etc.

No.	Findings	Recommendations
1	No Organization Chart for Environmental and Social Management was available for review. No evidence was available to proof that the roles of responsibilities for Environmental and Social Management are clearly defined.	Review the current capacity, clearly define Environmental and Social Management roles and responsibilities, and develop an organization chart specific for Environmental and Social Management, especially the following roles:

		<ul style="list-style-type: none"> - Assign responsibility for implementation of this ESAP and detailed recommendations of ESIA at management level. - Ensure sufficient capacity to implement stakeholder engagement and grievance mechanism, and assign responsibility for implementation.
2	There was no designated ESMS officer, or Environmental/Social Coordinator, Community Liaison Officer assigned in Kunming Airport.	Consider recruiting or assigning Community Liaison Officer and ESMS officer or Environmental/Social Coordinator.

4.2 Environmental Coverage

The environmental authorities of Kunming Airport Economic Zone (KAEZ) where the Project is located are Kunming Bureau of Ecology and Environment, and KAEZ Bureau of Ecology and Environment, both of which are principally responsible for supervision and administration of environmental permits/licenses and pollution discharge generated by its construction and operation of Kunming Airport. According to interviews with site representatives, local officials came to visit for regular inspections every 1~2 months, and no penalties / fines have been imposed due to environmental management at the Airport in the past few years.

Management System

The quality and EHS systems have been established and put into implementation since 1 January 2014, and distributed to each of administrative divisions at the airport for consideration where necessary. However, site representatives indicated that the quality and EHS systems had not been updated to keep up its progress with applicable laws and regulations associated with environmental management, energy use, greenhouse gas emission, etc.

Energy efficiency, GHG emission are tracked by the Power and Energy Center, wastewater recycling and waste recycling are tracked by environmental service providers, but the airport did not have a specific environmental KPI tracking system.

No.	Findings	Recommendations
1	The quality and EHS systems had not been updated to keep up its progress with applicable laws and regulations associated with environmental management, energy use, greenhouse gas emission, etc.	As one of the best management practices, it is recommended that management shall designate a dedicated department to take responsibility for quality and EHS management systems and update on a regular basis. Also, it is deemed necessary to carry out internal audit of management systems, and then to follow up for continual improvement.
2	There was not an environmental KPI tracking system.	It is recommended to work with environmental service providers, each department to identify and develop environmental KPIs matrix, such as

biological diversity, GHG emission amount, waste recycling rate, waste reduction, energy efficiency, and etc.

Environmental Permits

The environmental licenses/assessments were provided for review during the site visit, described as follows:

- Environmental Impact Assessment (EIA) Report for the Airport Construction Project, prepared by the Environmental Development Center of the Ministry of Ecology and Environment, June 2007
- The EIA Approval of the Airport Construction Project, issued by the Ministry of Ecology and Environment, 28 August 2007
- EIA Report for the Modification to the Feasibility Study Report of the Airport Construction Project, prepared by Beijing Guohuan Environmental Technology Co., Ltd., May 2012
- The EIA Approval to the Modification to the Feasibility Study Report of the Airport Construction Project, the Ministry of Ecology and Environment, 24 May 2012
- The Trial Operation Approval of the Airport Project, approved by Department of Ecology and Environment of Yunnan Province, 15 June 2012
- The Completion Acceptance Inspection (CAI) Monitoring Report for the Airport Project, conducted by Yunnan Hubai Environmental Technology Co., Ltd., September 2019
- Technical Opinion of Environmental Protection CAI Approval for Airport Project, issued by the Engineering & Command Center of Kunming Airport, 4 June 2019
- The Post-EIA Report to the Modification to the Feasibility Study Report of the Airport Project, prepared by Beijing Guohuan Jianbang Environmental Technology Co., Ltd., May 2022 (note: the EIA information has been disclosed online for publication since June 2022, and the Post-EIA had not been registered with local environmental authority as of the audit.)
- Pollutants Discharge Permit (Airport and Boiler), issued by KEDZ Bureau of Ecology and Environment, 2 July 2020

After these afore-mentioned assessments and approvals were reviewed, it was concluded that none of material issue related to environmental permits/licenses was identified at the airport. To move onwards, it was recommended that these assessments and approvals shall be well kept on file and maintained in good condition. Meanwhile, site management should keep good interaction with local environmental authorities to learn new update of environmental laws and regulations to avoid any deviation.

No.	Findings	Recommendations
1	EIA information has been disclosed online for publication since June 2022, and the Post-EIA had not been registered with local environmental authority as of the audit.	Complete the post-EIA registration with local environmental authority and implement the measures recommended in the post-EIA. 1) Installation of air quality automatic on-line monitoring system, and aircraft noise monitoring system in areas of sensitive receptors. 2) Work with government to define the zoning area nearby the airport,

to prohibit or restrict construction of new noise sensitive receptors.

No material issue related to environmental permits/licenses was identified at this assessment.

Pollution Prevention

The pollutants generated from the operation and maintenance activities of the airport and control measures installed onsite are summarized as follows:

- Air Emission: the sources of air emission included:
 - a) SO₂, NO_x and smoke dust from three natural gas-fired boilers (2X10 t/h and 1X6 t/h), and then emitted out into atmosphere via 13-meter stacks on the rooftop;
 - b) Aircraft exhausts from landing and take-off cycles;
 - c) Vehicle exhausts on the ground for land transport;
 - d) Cooking fumes from onsite canteens to emit out after treatment of the installed electrostatic purifiers; and odors from the reclaimed wastewater treatment plant.
- Wastewater Discharge: the sources of wastewater discharge generated onsite included
 - a) Sanitary wastewater from onsite toilets to discharge into the reclaimed wastewater treatment plant after treatment of onsite septic tanks; and
 - b) Process wastewater from Yunan Airport Food Supply Co., Ltd., and then discharged into the reclaimed wastewater treatment plant after treatment of oil separators installed onsite. With the design capacity of 10,000 m³/d, the Cyclic Activated Sludge System (CASS) was adopted to process wastewater in the reclaimed wastewater treatment plant. The treated wastewater is monitored on a monthly basis to ensure water quality for reuse. The reclaimed wastewater is then channeled and used for greening irrigation, and under some cases (e.g., rainy season) proportionally discharged to the municipal KAEZ wastewater treatment plant for further treatment to ensure its compliance.
- Noise Emissions: the sources of noise and vibrations are aircrafts during the landing and take-off cycles, operations of ground support vehicles (e.g., passenger buses, mobile lounges, fuel trucks, aircraft tugs, aircraft and baggage tractors, and dolly carts). The noise abatement measures included resettlement of sensitive receptors (e.g., villages, schools, healthcare centers and others) in the surrounding areas, engineering control (e.g. sound insulation, barriers), administrative enhancement, etc.
- Waste Generation: it included
 - a) Used lubricating oils, spent batteries and lamps during maintenance;
 - b) The scrapped X-ray devices from security inspection activities;
 - c) Medical wastes generated from onsite hospital;
 - d) Recycling wastes like cartons and plastic; and
 - e) Wastewater sludge.

Since June 2012, Kunming Airport have engaged external agencies to monitor air pollutants, noise, wastewater discharge every one year for the purpose of its compliance, which are summarized as follows:

- Air Emissions: SO₂, NO_x, and smoke dust generated from 3 natural gas-fired boilers met applicable limits of the *Emission Standard of Air Pollutants for Boiler (GB13271-2014)*; fugitive emission met applicable limits of the *Integrated Emission Standard of Air Pollutant (GB16297-1996)* based on the monitoring data of 2019-2021. However, no evidence of cooking fume from onsite canteens was provided for review to confirm its compliance status.
- Wastewater Discharge: pH, suspended solid, dissolved oxygen, biochemical oxygen demand, and ammonia nitrogen generated from the reclaimed wastewater treatment

plant met applicable limits of the *Reuse of Urban Recycling Water – Water Quality Standard for Urban Miscellaneous Use (GB/T18920-2020)* based on the monitoring data of 2019-2021. However, no evidence of wastewater discharge from the reclaimed wastewater treatment plant was provided for review to confirm its compliance status, prior to being discharged into the KAEZ wastewater treatment plant for further treatment under some circumstances (e.g. rainy season).

- Noise Emission: according to the monitoring data of 2019-2021, aircraft noise level of **Lwecpn** was detected at some levels which were higher than applicable limit of ≤75 dB in the Standard of *Aircraft Noise for Environment around Airport (GB9660-88)* at some of sensitive receptors (e.g., Changpo Village, Yunnan Policy Officer College, Fuxing Village, Changshui Aviation City, Wuxi Village (长坡村、云南司法警官职业学院、复兴村、长水航城、乌西村)). Also, based on the CAI monitoring report in 2019 there were 6 sensitive receptors with higher levels of noise emission, including Changshui Aviation City, Changpo Village, Yuanyichang Hospital, Hanluo Village, Da Village and Huaqing Village (长水航城、长坡村、园艺场医院、甘落冲、大村子、花箐村). It was obvious that noise emission generated from operation of Kunming Airport have some impact on the surrounding areas, especially for sensitive receptors.
- Waste Generation: hazardous wastes (e.g. lubricating oils, spent batteries, medical wastes), recycled wastes and wastewater sludges were well categorized for storage, and properly disposed of by qualified contractors, and transfer records were well documented. However, the hazardous wastes of spent lamps and scrapped X-ray devices were kept onsite which have not been disposed of yet.

Based on review of the feasibility study on the installation of noise monitoring systems in 2022, the stationary noise monitoring devices (11 sets), radar noise monitoring devices (4 sets), and mobile noise monitoring devices (1 set) will be integrated and constructed in the automatic monitoring network of environmental noise along with the development of expansion project of Kunming Airport. These monitoring devices will be installed and distributed at the surrounding sensitive receptors (e.g. villages, schools, hospitals, and household communities).

No.	Findings	Recommendations
1	No evidence of cooking fume from onsite canteens was provided for review to confirm its compliance status.	The responsible staff shall ask external agency to include cooking fume emission generated onsite in the monitoring plan to check its compliance status.
2	No evidence of wastewater discharge from the reclaimed wastewater treatment plant was provided for review to confirm its compliance status, prior to being discharged into the KAEZ wastewater treatment plant for further treatment under some circumstances (e.g. rainy season).	The responsible staff shall ask external agency to include wastewater discharge from the reclaimed wastewater treatment plant, prior to being discharged into the KAEZ wastewater treatment plant for further treatment under some circumstances (e.g. rainy season).
3	According to the monitoring data of 2019-2021, aircraft noise level of Lwecpn was detected at some levels which were higher than applicable limit of ≤75 dB in the Standard of <i>Aircraft Noise for Environment around Airport (GB9660-88)</i> at some of sensitive receptors (e.g., ., Changpo Village,	Kunming Airport shall keep good interaction with local government to finish resettlement plan of sensitive receptors with high level of aircraft noise, along with the development of the airport expansion project. Also, the noise abatement measures like engineering control (e.g. sound insulation, barriers), administrative

<p>Yunnan Policy Officer College, Fuxing Village, Changshui Aviation City, Wuxi Village). Also, based on the CAI monitoring report there were 6 of sensitive receptors with higher levels of aircraft noise, including Changshui Aviation City, Changpo Village, Yuanyichang Hospital, Hanluo Village, Da Village and Huaqing Village. It was obvious that noise emission generated from operation of Kunming Airport have some impact on the surrounding areas, especially for sensitive receptors</p>	<p>enhancement, etc. shall be installed and well maintained to reduce noise at acceptance level.</p> <p>Installation of the automatic noise monitoring system has been projected along with the development of expansion project of Kunming Airport. So it was also recommended that the resources and budget shall be reserved to make sure that the installation will progress as expected.</p>
<p>4 The hazardous wastes of spent lamps and scrapped X-ray devices were kept onsite which have not been disposed of.</p>	<p>The responsible staff shall commission a licensed hazardous waste vendor to collect and dispose of spent lamps and scrapped X-ray devices, and keep transfer manifest on file.</p>

Soil and Groundwater Impact

Based on interview with site representatives, the areas, where the Kunming Airport was located, is historically hills and agricultural lands, and had not been utilized for industrial purposes, dumping site, or gas station. According to EIA Report dated June 2007, monitoring indicators of soil samples (e.g. pH, petroleum hydrocarbons, organic matter, arsenic, lead, zinc, copper, chromium, and cadmium) were monitored, which indicated that levels of chromium and cadmium at filling stations, copper and chromium at gardening area are higher than applicable Class II limits in the *Environmental Quality Standard for Soils (GB15618-1995)* due to naturally occurrence in the acid soils.

It was indicated that the groundwater quality was sampled from 3 mouths of surrounding springs, and sent over to a licensed laboratory for chemical analysis, and the monitoring data from 2018 to 2021 met applicable limits of *the Standard for Groundwater Quality (GB/T14848-2017)*. But no evidence of soil / groundwater investigation was provided for review to confirm its compliance status beneath the property.

It should be mentioned that the aviation fuel depot was owned and managed by China National Aviation Fuel (Yunnan) Co., Ltd., and operated to supply fuels by underground pipelines.

After completion of site reconnaissance, the potential risk associated with soil and groundwater impact at the Kunming Airport were identified and summarized as follows:

- According to the zoning map of Kunming Airport Expansion Project, there has been one underground fuel transport pipeline which was owned by China Petrochemical Corporation and goes through along western portion of the airport. Site representative indicated that the underground pipeline would be relocated before the upcoming development of airport expansion project. However, no evidence associated with soil and groundwater impact along the western portion was provided for review, which included impervious design and maintenance, soil vapor and groundwater monitoring data, etc.
- Three filling stations of double-wall underground tanks were installed and operated to supply with aviation fuels of aircrafts at the Kunming Airport, where a distance of underground pipeline was built to connect with fuel depot. However, no evidence

associated with soil and groundwater impact at the filling stations and underground pipeline was provided for review to confirm its compliance status.

- Sanitary waste generated from operation of Kunming Airport was collected by CSSC Environmental Technology Co., Ltd. and properly classified for reuses. During the site tour, damaged pavement (cracks) of around 100m² was observed, where the leachate generated from improper storage of sanitary wastes might infiltrate through damaged pavement and impact the groundwater quality beneath the property. Also, no evidence associated with soil and groundwater impact at the waste station was provided for review to confirm its compliance status.

No.	Findings	Recommendations
1	<p>No evidence of soil / groundwater investigation was provided for review to confirm its compliance status beneath the property. After completion of site reconnaissance, the potential risk associated with soil and groundwater impact at the Kunming Airport were identified, which included</p> <p>a) One underground oil transport pipeline which was owned by China Petrochemical Corporation and goes through along western portion of the airport;</p> <p>b) The filling stations and underground pipeline; and</p> <p>c) Waste station operated by CSSC Environmental Technology Co., Ltd.</p>	<p>It was recommended that soil and groundwater investigation shall be performed to monitor the quality of soil and groundwater beneath the property, especially for the potential areas of concern listed herein.</p>

Emergency Preparedness and Response

The Environmental Incidents Emergency Preparedness and Response Plan was developed in July 2020 and then registered with the KAEZ Bureau of Ecology and Environment. Based on review of the emergency plan, the emergency response group and the roles & responsibilities of each individual were formulated and distributed to each function. Meanwhile the external stakeholders were identified and included in this emergency response plan, which included but not limited to:

- Kunming Emergency Response Command Center
- Kunming Bureau of Ecology and Environment
- KAEZ People's Government
- KAEZ Bureau of Ecology and Environment
- KAEZ Work Safety Supervision Bureau
- KAEZ Fire-fighting Brigade
- China National Aviation Fuel (Yunnan) Co., Ltd.
- Others (e.g., hospitals, public security station, etc.)

It was observed that the KAEZ wastewater treatment plant, the CSSC waste station and sensitive receptors with high levels of noise in the surrounding areas were not included as external stakeholders in the emergency response plan.

As per review of the emergency response plan, contact persons and the organization chart at the Kunming Airport had been modified to meet actual condition. However, the emergency response plan had not been updated and registered since 2020. In addition, site representative confirmed that no training drill of environmental incidents had been performed since June 2012, though the drill plan had been developed at the Kunming Airport.

No.	Findings	Recommendations
1	Based on review of the emergency plan, most of the external stakeholders were identified and included in this emergency response plan. However, the KAEZ wastewater treatment plant, the CSSC waste station and sensitive receptors (e.g., neighboring villages/hospitals/schools) with high levels of aircraft noise in the surrounding areas were not included in the emergency response plan.	It was recommended that external stakeholders mentioned herein shall be included in the emergency response plan, and the roles and responsibilities of each stakeholder shall be defined to meet international standards.
2	As per review of the emergency response plan, the emergency response plan had not been updated and re-registered when change of contact persons and organizational charts. In addition, site representative confirmed that no drill of environmental incidents had been performed since June 2012, though the drill plan had been developed at the Kunming Airport.	The emergency response plan shall be updated every 3 years, and/or be updated on time if any change of major hazards, or contact persons occurs. Regular drill of environmental incidents is required at least 1~2 times per year.

Resources Efficiency

Power and Energy Center is responsible to maintain water and electricity supply facilities, and collect consumption data of water, electricity and natural gas, identify resource saving opportunity, and establish action plan. The following energy resources are used in the Airport:

- Natural gas is used as fuel for boiler to provide heating in the airport;
- Gas stations supply diesel and gasoline for vehicles; and
- Electricity.

Reportedly, airport smart energy management system was installed in Kunming Airport to improve the efficiency of energy use and monitoring. Since the system put into use at Kunming Airport in April 2020, energy use efficiency has been greatly improved. For example, the internal electricity consumption of Kunming Airport in 2021 is 8.65% less than the expected amount, while the water consumption was 24.25% less than the target consumption, realizing the efficient utilization of energy and resource conservation.

According to review of 2021 carbon auditing report, energy resources data are collected to calculate GHG emission, data of which had been submitted to national carbon emission online platform.

The Airport has developed energy saving program and ensure its implementation, and the efforts included but not limited to:

- a. promote the on-demand cooling and heating at terminal buildings, saving 26% of air-conditioning and cooling electricity costs;
- b. Introduce the green operation mode in the flight area, reduce the taxiing distance of aircraft to optimize emission reductions hence simultaneously minimizing fuel consumption;
- c. Install the leakage alarm of the water pipeline network, and develop intelligent water management system for toilets, greening sprinkler irrigation, etc., saving 27% of toilet water and 12.4% of green water respectively.
- d. Implement intelligent operation management system, collaborative operation and maintenance scheduling, and life cycle equipment management. With the intelligent energy operation and maintenance management system, the management of facilities and equipment is transformed from "post-response" to "proactive" management mode, to improve management efficiency.
- e. Use energy E-platform management, integrate intelligent sensing technology, complete the four-level metering coverage of key areas, and address the deficiencies of insufficient measurement points, insufficient data and statistical analysis in the former energy management mode. The new system allows dynamic control of energy operation and quantitative analysis.

Kunming Airport has established a special fund for energy system improvement, which has invested more than 100 million yuan, to ensure the compliance of fuel vehicle emissions, full-process monitoring and management of the operating status of related equipment and systems, and long-term agreement for the technical support of auxiliary power units (APUs).

According to statistics, during the implementation of the three-year action plan of "Win the battle for blue skies", from October 1, 2018 to December 20, 2020, it saved 53,000 liters of vehicle fuel, reduced aviation fuel consumption by 32,100 tons, and reduced carbon dioxide emissions by 85,200 tons. In addition, Changshui Airport has also innovatively carried out research on the optimization of aircraft taxiing routes, and further saved 25,500 liters of fuel per year and 188,000 liters per year, reducing 153 tons carbon emissions every year.

No.	Findings	Recommendations
1	No material issue related to resource efficiency was identified.	N/A

Climate Change and Greenhouse Gas Emission

According to review of carbon auditing reports, the following data of greenhouse gas (GHG) emissions from 2019 to 2021 were calculated and summarized as follows:

- In 2019, volumes of GHG emissions are 1717.73 tCO₂ for burning of fossil fuels (e.g. natural gas, diesel, gasoline), and 45232.33 tCO₂ for purchased electricity, respectively.
- In 2021, volumes of GHG emissions are 2496.79 tCO₂ for burning of fossil fuels (e.g. natural gas, diesel, gasoline), and 47411.52 tCO₂ for purchased electricity, respectively.

Therefore, the total volumes of GHG emissions from 2019 to 2021 are 46946 tCO₂, 44256.88 tCO₂, and 49908 tCO₂, respectively. In addition, the GHG emission monitoring plan had been developed and uploaded onto the GHG emission databased which is owned and operated by the Ministry of Ecology and Environment in terms of legal requirements and technical guides.

No.	Findings	Recommendations
1	None of material issue related to GHG emission at the airport identified.	N/A

Biodiversity Consideration

According to review of the Post-EIA Report dated May 2022, the types of vascular plants are 108 families, 317 genera and 466 species, indicating that the richness level of Kunming Airport is medium in Yunnan Province. It was noticed that there are two types of state-protected wild plants, namely 大花香水月季 (*Rosa odorata var. gigantea*) and 滇重楼 (*Paris polyphylla var. yunnanensis*) according to the *Catalogue of the State-protected Wild Plants (2021)*. Moreover, there is none of Yunnan-protected Wild Plants, plus ancient and rare trees in the surrounding area.

The types of invertebrates are 113 species, in which 6 species of amphibians, 5 types of reptilia, 82 species of birds, and 20 types of mammals. Also, none of state-protected / Yunnan-protected Reptilia was found in the surroundings.

No.	Findings	Recommendations
1	None of material issue related to biodiversity conservation at the airport identified.	N/A

4.3 Labor and Social

Contract and Supplier Management

Reportedly, the operation department is responsible for procurement and supply chain, EHS management of onsite contractors. Screening is conducted for a new supplier to ensure it has sufficient capacity regarding EHS management and qualified service/production. Due to COVID restriction, no interview for the contractors/suppliers were conducted at the time of the assessment. Information was provided by the airport management.

The main suppliers and contractors include but not limited to:

- All service providers related to airport daily operation signed "Safety Agreement for Airport Operation" to clearly define rights, obligations, and responsibilities regarding airport safety management;
- The facilities in the Power and Energy Center are maintained by a qualified third party. The maintenance service contract was provided for review, which defined the work scope, and also responsibilities for safety, health and COVID management;
- Operation of parking building is outsourced to a third party. Supervision and Management Procedure for Kunming Airport Parking Building/Lot was in place to regulate the service performance, EHS requirements. In the same time, regular inspection was conducted to ensure the compliance with company policy and laws;
- Staff canteen is managed by a third party with proper qualification certificate. Kunming Airport also conducted regular inspection to ensure food safety and service performance, specific KPIs of which are developed and assessed by the Kunming Airport on a monthly basis, including indicators for food safety, service performance, energy reduction and etc.,

- Waste management is managed by CSSC Environmental Technology Co., Ltd. and
- Transportation and supply of aviation fuel. The fuel depot is owned and managed by China National Aviation Fuel (Yunnan) Co., Ltd
- Based on interview with HR management, one third party employment agency is used to employ workers, such as security and inspection, including 400 staff hired by this agency. Reportedly the workers signed employment contract with the agency directly, and wage payment is also provided by the agency.

Kunming Airport conducted safety assessment for airport operation on an annual basis. The assessment results were communicated with the concerned contractors and suppliers, who would be involved in the corrective action plan, implementation and feedbacks. In addition, some key suppliers were required to participate the safety assessment to provide expertise and recommendations. According to the 2021 Operation Safety Assessment Report, 11 suppliers were involved.

No.	Findings	Recommendations
1	CSR has not fully incorporated into the contractor and supplier chain management system, such as the areas of ethics and environmental activities.	<p>Develop a supplier management plan and update vendor evaluation forms where needed to include evaluation of labour and human related risks including review of HR policies and ethical code/code of conduct of potential suppliers.</p> <p>Consider including CSR requirements in the contracts, which will help to raise awareness of environmental, social and governance issues. Ensure clauses in contracts of suppliers or stand-alone commitments from suppliers to adhere to ESS1/PS2.</p> <p>In the case where the suppliers are found to be non-compliant with contract, Yunnan Airport Group will plan and deliver on site audits for primary suppliers of ongoing goods and services.</p>
2	Due to COVID-19 restriction, no staff from the onsite third party was interviewed at the time of the audit. Therefore, no records including business license, labor agent qualification, labor contracts, working hours, wages and social insurance records were provided for review to verify the compliance.	Review business license, labor agent qualification, labor contracts, working hours, wages and social insurance records of the third-party employment agency, and ensure that the third-party employment agencies it uses are compliant with the provisions of environmental and social standards, and regulatory requirements.

Human Resources Policies and Procedures

The following policies were developed by Yunnan Airport Group Co., Ltd (the Group) and were provided for review:

- 1) Collective Labor Agreement /Contract -General (including details of establishment and termination of employment, wages, working hours, leave,

- social insurance, welfare system, training, change of contract, compensation, etc.)
- 2) Collective Labor Agreement /Contract – wage negotiation special requirements (Wage can be negotiated on an annually basis)
 - 3) Collective Labor Agreement /Contract - Occupational safety and health special requirements (including safety training, safety policy, working condition, occupational hazard prevention, etc.)
 - 4) Collective Labor Agreement /Contract - Protection of female employees' rights and interests (including special female protection policy during menstruation, pregnancy, childbirth, breastfeeding, regular screening for cervical cancer, breast cancer, sexual harassment prevention, further training, career development, etc.)
 - 5) Interim Policy of Labor Contract Management
 - 6) Interim Policy of Overtime Wage
 - 7) Interim Policy of Rest and Leave
 - 8) Interim Policy of Working Hours
 - 9) Interim Policy of Various Compensation
 - 10) Reward and Penalty Management Procedures

No.	Findings	Recommendations
1	<p>Based on document review, it is required to provide safety and health training according the regulatory requirements. The policies and agreements were communicated to all employees. According to the collective agreement, training should be conducted according to the specific training management policy.</p> <p>However, the policy was not provided for review. In addition, no training plan, training records or training performance review records were available to review to ensure the training effectiveness and employees keep up with the dynamics of airport management.</p>	<p>The airport should provide the training policy for review, and develop and implement a training plan for HR policies and social responsibilities, such as prevention of involuntary labor, underage worker, working hour, benefits, freedom of association and collective bargaining, sexual anti-harassment & abuse, anti-discrimination, grievance mechanisms.</p>

Labor Relations - Employment Contract

Terms of employment are provided in writing and in Chinese prior to employment. Collective Labor Agreements (CLA, refers to a written contract negotiated through collective bargaining for employees by work union with the management of the company group, Yunnan Aviation Industry Investment Group Co., Ltd) was provided for review, which is in place to regulate the worker's rights and obligations related to employment, working conditions, working hours, wages, overtime, leave, compensation, and benefits etc. In addition, the agreement specifies the wage negotiation special requirements (Wage can be negotiated on an annually basis). The occupational safety and health special requirements are also included in the agreement, including safety training, safety policy, working condition, occupational hazard prevention, etc. The agreement requires employment agreement must be issued to each employee, including the following information:

- 1) The name, location, and legal representative of the company;

- 2) The employee's name, address and resident ID card or other valid ID number;
- 3) The term of the labor contract;
- 4) Job content;
- 5) Workplace;
- 6) Working hours, rest and leave;
- 7) probationary period, probationary wage;
- 8) Labor protection, working conditions and occupational hazard protection;
- 9) Labor discipline;
- 10) Wage;
- 11) social insurance benefits;
- 12) Termination, renewal, modification and cancellation of the labor contract;
- 13) Liability for violating the employment contract;
- 14) Handling of labor disputes;
- 15) confidential agreement, and matters related to intellectual property rights; and
- 16) Other matters that both parties need to agree on.

Based on the interview and questionnaire, each employee maintains a copy of employment agreement, and the agreement is explained verbally so employees understand what the terms of employment states.

No.	Findings	Recommendations
1	No issue was identified regarding employment contract.	N/A

Working hour, wage and benefits

Policy has been developed to manage working hours, wage and benefits.

Reportedly, there are two kinds of working hour systems, one is fixed working hour system for 8 hours per day and 40 hours per week from 9:00am to 5:00pm, Monday to Friday; The other is comprehensive working hour system with two years period. The comprehensive working hour waiver is issued by the local government and valid from November 1, 2022 to October 31, 2024.

The comprehensive work hour system accumulates work hours over a specified cycle (yearly). The average number of hours is then determined based on this accumulation period.

Based on the questionnaire survey, employees are satisfied with benefits provided by the company. Accommodation is provided for migrant workers from other regions, based on employees' need. In addition, extra leaves for family reunion are given to those workers whose family are not local. Sufficient leaves such as sick leave, annual leave, holidays, marriage holidays, bereavement leave etc. are provided to the workers per legal requirement.

The payroll records listed the wage information, subsidies, deductions, total wages and net wages. Based on the records reviewed, the wage met the minimum wage requirement. The workers were paid monthly in a timely manner, and social insurance and housing fund was provided to each worker.

No.	Findings	Recommendations
1	The severance wage is paid on regular wage issuance date instead of upon termination, which did not meet Article 9	When the employment contract is terminated, the employer shall pay the

of Provisional Regulations for the Payment of Wages (1995)	lump-sum wage to employees at the time of the employment termination.
2 Because the staff who is responsible for record keeping was not available during the site visit, no clock-in clock-out records (timecard records) were provided for review. Therefore, the compliance of working hours, overtime and the compliance of comprehensive work hour system would not be fully verified.	The airport should ensure a reliable time recording system, and provide relevant record for sampling review. The employer should follow the waiver limit to control the working hours and have an effective working hour control system.
3 According to policy and KPI records, monetary penalties will be deducted from workers' wages as a disciplinary measure, but there was no document provided to proof that deductions met regulatory requirements or the deduction was authorized by the worker.	In the case of worker authorized deductions, the authorization must be in writing, specify a particular amount, and be given in a way that is truly consensual. In the case of monetary penalties for indirect employee, the company shall specify procedures, documentation for worker authorization, processing and handling of complaints in the contract with the third-party employment agency or subcontractor. It is recommended to review the compliance of the deduction, and ensure all required documents are maintained.

Workers' Organizations

Based on interview, questionnaire survey and document review, workers can enroll in a worker organization on their own free will. Participants respect the legal right of all workers to peacefully assemble as well as respect the right of workers to refrain from doing so. No evident presence of violence and explicit threats of any kind and no evidence of management's control of a worker organization.

There is a worker union of the Group to guarantee the worker's rights and obligations. No unequal treatment was noted between unionized or worker representatives and other workers during the site visit. The interview and questionnaire reveal no evidence that the employer dismisses, disciplines and explicitly threatens workers in order to encourage or discourage workers from forming, joining, being part of a trade union, or refraining from doing so. The union meeting holds once per month or for needed and the main topic of union meeting covers the labor relationship, the benefits, wage negotiation, award and penalty discussion, the worker activities etc. No grievance is received during the questionnaire survey regarding the work union.

In addition, the work union also developed a female protection committee, which protects the interests of the rights and interests of women workers to pay attention to their working environment, their career growth and their inner construction. The questionnaire survey indicated that employees were willing to participate in the activities of the work union, and the work union had indeed strived for their best interests.

No.	Findings	Recommendations
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1	Because the staff who is responsible for record keeping was not available during the site visit, the license of the labor union was not provided for review.	Provide the license of trade union for review.
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Non-Discrimination and Equal Opportunity

No visible instances of discrimination were noted from site observation. The corporate level policy states a) a ban on all forms of discrimination b) decisions in hiring, employing (such as compensation, promotion, access to training), or terminating workers are based solely on the candidate's ability to perform the job's requirements. Based on the interview, the management could clearly explain how the employer recruits, promotes, terminates workers consistent with the non-discrimination policy, which was also confirmed by the workers by questionnaire survey. According to the interview with HR management, workers or potential workers are not subjected to medical tests that could be used in a discriminatory way, pregnancy testing, or contraception is not used as a condition of employment and all conditions regarding pregnancy and postnatal employment protections including maternity and paternity benefits are respected.

However, the job advertisement posted in the hiring website has a limit on age (25-35 years old) without any test or evaluation for inherent job requirements regarding age. The management stated actually they had too much candidates, they set the limitation on the age to filtrate the most suitable one.

No.	Findings	Recommendations
1	The job advertisement posted in the hiring website had a limit on age (25 to 35 years old) without any test or evaluation for inherent job requirements regarding age.	Revise the job advertisement with age limit. Any employment should not be based on age limitation if there is no any exception.
2	Because the staff who is responsible for record keeping was not available during the site visit, payroll records, promotion records, training records or disciplinary records etc. were not provided for review to further confirm no instances of discrimination.	Ensure anti-discrimination based on age, disability, ethnicity, gender, marital status, national origin, political affiliation, race, religion, sexual orientation, gender identity, union membership, or any other status protected by country law, in hiring and other employment practices. Relevant records shall be maintained and provided for review, such as payroll records, promotion records, disciplinary record, etc.

Anti-Harassment & Abuse

According to Collective Labor Agreement /Contract - Protection of female employees' rights and interests, the agreement specifies the types of sexual harassment, general anti-harassment policy, and states that the Group respects the personal rights of privacy, health, body, name, portrait, reputation and etc.

No.	Findings	Recommendations
1	The group developed policy to define the forms of sexual harassment. However, no evidence was available to prove that specific anti-harassment training was provided for all staff or security personnel. Based on the interview with management and the questionnaire survey, the employees had insufficient knowledge of harassment, sexual harassment or abuse of authority.	It is recommended to provide specific training regarding anti-harassment, to equip employees with the knowledge and tools needed to identify, avoid, and report inappropriate behavior within the workplace.

Retrenchment

Based on the interview, no retrenchment is occurred in the past years and there is no plan for elimination of a significant number of jobs or a layoff of a significant number of employees in coming future. Based on the interview with HR management, the overall turnover rate was very low, which was less than 5%.

No.	Findings	Recommendations
1	No issue was identified	N/A

Grievance Mechanism

The Group has developed an adequate and effective process to manage airport customer complaints, and also developed a health and safety incident-reporting systems related to airport safety and security. According to the management interview and questionnaire survey, employee conflict or complaints can be reported to the work union or line manager. However, the Kunming Airport did not have a specific grievance mechanism to include whistle-blower policies, reporting mechanisms for issues such as sexual harassment and etc.

No.	Findings	Recommendations
1	The Kunming Airport did not have a specific grievance mechanism to include whistle-blower policies, reporting mechanisms for issues such as sexual harassment and etc.	It is recommended to develop a grievance mechanism and have an objective process for handling complaints/concerns from employees that is outside the direct supervisory chain in the organization to address the concern, and ensure employees aware of the grievance mechanism that protects employees' privacy and protects them against retaliation.

Child labor

As reported, employees including direct hiring and from employment agency are not below the minimum age. The mainly educational background of the employees is undergraduate student and junior college student, and their age is above 20 after graduation. A verification

process is established to ensure that employee age above the legal minimum working age. Before hiring, the recruitment team requires the candidate conduct background check including criminal records check and ID card verification check in their local police station. The educational degree verification is also required as well. Per onsite observation, no workers under 20 years old were detected.

No.	Findings	Recommendations
1	No issue identified.	NA

Forced Labor

Any type of forced, involuntary or exploitative prison, indentured, bonded (including debt bondage), trafficked or slave labor is not permitted based on the Group policy. Collective Agreement also have policy to ensure: a) no forced, bonded (including debt bondage), involuntary or exploitative prison, trafficked or slave labor is permitted. b) workers are not required to pay fees, deposits or incur debt as part of the employment. c) when employment has been terminated voluntarily or involuntarily the worker will be paid appropriate amounts for all hours worked. The interviewees and questionnaire survey confirmed workers can quit their job upon legal notice period and are free to leave the place after work with no explicit threat of punishment, fines, violence, or withholding wages.

The provided payroll journals and time records show no form of non-voluntary labor or fees.

No.	Findings	Recommendations
1	No issue identified	NA

Information Disclosure and Stakeholder Engagement

As an integral part of the EIA process, Yunnan Airport Group disclosed EIA information for public comments. The EIA public disclosure, presentation to affected communities was conducted in compliance with legal requirements for the airport construction and change projects. Any comments received during the public participation period have been addressed and EIA was updated to incorporate the comments and EIA approval was obtained for airport construction project and several facility modification projects.

The multi-sectoral nature of airport operations requires engagement of and coordination among various stakeholders, including the local communities, airlines, employees, tenants, passengers, government authorities (traffic authorities, environmental authority, Urban Development Authority, Municipal Councils, Aviation Authority, and etc.), suppliers, media and unions. etc. Reportedly, the local government - authorities of Kunming Airport Economic Zone (KAEZ), is working with the Kunming Airport to facilitate public communication, complain handling, coordinate community activities, manage dispute resolution and emergency response etc.

Regarding the stakeholders of tenants, suppliers, airport service providers, onsite sub-contractors, Kunming Airport has developed a process to communicate the EHS requirements (see more detail in health and safety section.)

The airport management indicated that they would address key concerns for the surrounding communities in relation to noise, air pollution and potential resettlement due to the airport operation or future expansion. Noise monitoring devices are being installed and efforts are taken to reduce the noise impact on nearby communities (see detail in environmental section).

In addition, public hearing(s) have been conducted for the designation of airport clearance area in Kunming Airport in 2020.

It is recommended to develop SEP (Stakeholder Engagement Plan) for Kunming Airport during the airport expansion project, to describe the key stakeholders and the ongoing information and communications plans relating to the project. The SEP will be reviewed periodically during implementation of the project and will be updated as necessary; contact with the communities shall be maintained, their views and concerns solicited.

The SEP shall also contain a grievance redress mechanism (GRM) to address concerns that the communities living in the vicinity of the project may have in relation to the project activities, their impacts, compensation and other mitigation measures. The main objective of the GRM will be to provide a mechanism to mediate conflict and allow people who might have objections or concerns regarding the project to raise them and see that they are adequately addressed.

No.	Findings	Recommendations
1	There was no designated Community Liaison Officer (CLO) assigned in Kunming Airport.	Assign a designated CLO
2	No list of stakeholders for operation in Kunming Airport was provided for review.	Review and develop a list of stakeholders
3	NA	<p>It is recommended to develop SEP (Stakeholder Engagement Plan) for Kunming Airport during the airport expansion project, to describe the key stakeholders and the ongoing information and communications plans relating to the project. The SEP will be reviewed periodically during implementation of the project and will be updated as necessary; contact with the communities shall be maintained, their views and concerns solicited.</p> <p>The SEP shall also contain a grievance redress mechanism (GRM) to address concerns of the communities.</p>

4.4 Health and Safety (Working Condition)

Health and Safety Management System

The Safety and Quality Department of Yunnan Airport Group is responsible for the development of the occupational health and safety system and the safety operation supervision of its subsidiaries (including Kunming Airport). The Safety Service Management Department of Kunming Airport is responsible for the operation and management of the safety and occupational health management system of Kunming Airport, the implementation of regulatory requirements and the safety requirements of Yunnan Airport Group at Kunming Airport. The Safety Service Management Department also provides guidance and support for the implementation of department safety management, supervises and evaluates department safety performance. The "Kunming Airport Safety Management Manual" and "Occupational Health and Safety Management Procedures" describe the overall requirements for airport safety and health management. At the same time, each department develop the department's safety management manual and safety management procedures in accordance with the department's work scope and safety management responsibilities. At the time of the audit, the safety management system documents of the airport and some departments has been provided for review.

The airport regularly organizes departments to carry out safety hazard identification and risk assessment, and each department is responsible for the management of hazard identification, risk assessment and control in its own department. The Safety Service Management Department summarizes the risk assessment results of departments and supervises the implementation of risk control measures. At the time of the audit, the risk assessment result summary of the airport and some departments have been provided for review.

The airport organizes an annual operational safety status assessment in accordance with regulatory requirements. The scope of the assessment includes the airport and internal departments, airport service supporting enterprises and onsite service units. The content of the assessment includes the performance of safety responsibilities, the implementation of daily safety work, safety equipment and facilities, and personnel safety qualifications and training. The 2021 operational safety status assessment has been provided for review. The report summarizes the overall safety operation of the airport, the analysis of abnormal operation, and the problems and suggestions of the department. At the same time, the evaluation report also shows that the airport's total safety investment in 2021 is about 621.33 million yuan.

No.	Findings	Recommendations
1	None of material issue related to health and safety management System at the airport identified.	N/A

Health and Safety Performance Indicator and Monitoring

The Safety Service Management Department of Kunming Airport is responsible for the management of the annual safety performance indicators of the airport. Airport-level indicators are regularly monitored by the Safety Service Management Department, and departmental-level and post-level indicators are regularly monitored by the leading department. The Safety Management Department regularly publishes the monitoring results of airport-level safety

performance management indicators in the airport's monthly safety committee meeting and annual safety management review report. In 2022, the airport formulated 236 safety performance management indicators, including all identified key elements that affect the safety risks of airport operations. Safety performance indicator summary form was provided for review at the time of the audit, it was noted that the indicators related to work-related accidents of airport employees are not specified. At the same time, the main focus of safety performance indicators is on the airport and internal departments. The safety performance of stakeholders closely related to the safety of airport operations is not specified in the safety performance monitoring. These stakeholders include airlines, aircraft maintenance companies, catering and food providers, fuel providers, etc.

No.	Findings	Recommendations
1	Airport safety performance indicator did not specify work-related accident indicator of airport employees.	It is recommended that the airport consider specifying the monitoring indicators related to work-related accidents of employees of the airport and departments in the annual safety performance indicators.
2	The safety performance of stakeholders closely related to the safety of airport operations is not specified in the safety performance monitoring. These stakeholders include airlines, aircraft maintenance companies, catering and food providers, fuel providers, etc.	It is recommended that the airport consider including the safety performance of stakeholders closely related to airport safety at Kunming Airport in the airport's annual safety performance indicators.

Fire Safety

The Security and Fire Protection Department of Kunming Airport is responsible for the fire safety management of the airport. The fire safety management contents include the construction of fire-fighting facilities and equipment configuration planning recommendations, participation in project fire-fighting acceptance, operation and maintenance of airport fire-fighting systems and facilities, fire rescue response, organization of fire drills and other fire-fighting work required in the fire safety management manual. The airport safety performance (KPI) summary shows that the airport's fire safety-related management performance indicators include the percentage of fire-fighting vehicles and rescue equipment in good condition, the qualifications of personnel in fire-fighting positions, the number of fire-fighting commanders, the number of firefighters, the number of fire incidents, the integrity rate of the automatic fire alarm system, and the timely completion of fire testing and drills.

Kunming Airport has developed a comprehensive fire safety management manual, including definition of fire safety responsibilities, training, evacuation safety, fire inspection, fire control room management, electricity safety, fire facilities maintenance, corrective action for concerns, fire drill, gas system inspection, electricity system inspection, KPI management, fire brigade, hot work permitting, and etc.

The Kunming Airport commissioned qualified agencies to maintain and inspect fire facilities, the annual maintenance and inspection report in 2022 was provided for review. According to document review, fire drill was conducted on a quarterly basis.

Due to the epidemic control, no onsite tour was conducted to check the airport's fire-fighting system and key fire-fighting facilities, and no interview was arranged with the fire safety management representative during the audit period. Based on the 2021 operating safety

status assessment report, it showed that there were no major fire-fighting system and fire-fighting safety management deficiencies in 2021.

No.	Findings	Recommendations
1	None of issue related to fire safety management at the airport identified.	N/A

Equipment Safety

The maintenance of the airport's baggage system, elevators, boarding bridges, trams are managed by the Mechanical and Electrical Equipment Center. The regular maintenance of equipment is carried out in accordance with the requirements of the preventive maintenance plan. At the time of the audit, regular inspection and maintenance records of the baggage system, elevator and boarding bridge have been provided for review. The safety management manual of the Mechanical and Electrical Equipment Center specifies the basic safety management system of the department. At the same time, the center has developed on-site work instruction and standard operation procedures according to the maintenance requirements of different equipment, and standardized the safe operating procedures for equipment maintenance.

The operation and maintenance of the airport's water supply, power supply, gas supply and air conditioning systems are managed by the Power and Energy Center. Based on the introduction of the center representative, all equipment is regularly maintained to ensure its normal operation.

The operation and maintenance of the X-ray security inspection equipment is managed by the Airport Security Station. The security inspection equipment has obtained a license for the use of civil aviation safety inspection equipment, and the security inspection personnel have been trained to comply with the regulations and are licensed before onboard. Security Station regularly maintains and tests security inspection equipment to ensure they are in good working condition. At the time of the audit, the use license of the equipment, regular inspection reports, and personnel qualifications are all provided for review.

No.	Findings	Recommendations
1	None of issue related to equipment safety management at the airport identified.	N/A

Medical care and First aid

The medical service department of the airport is responsible for emergency medical work in the airport area, airport clinics, disease prevention, medical training, health surveillance, occupational health check, medical work management and medical equipment management. Based on the information of the representative of the Medical Service Department, there are emergency rooms equipped with medical professionals and open 24 hours a day in the terminal area to meet the medical service needs of airport passengers and staff. Airport emergency medical equipment is equipped in accordance with the requirements of the standard "GB18040 Requirement of Emergency Medical Service Facilities and Equipment for Civil Transportation Airport", and is regularly inspected and maintained.

According to the communication with the Medical Service Department, the main occupational disease hazard factor at the airport is X-ray radiation from the security screening machine. The Medical Service Department provides occupational health check for staff who are exposed to radiation. The results of the occupational health check showed that no potential occupational diseases occurred. At the time of the audit, the safety management manual of the Power Energy Center indicated that the occupational disease hazard of the Power Energy Center include noise, but noise is not included in the airport's occupational health check plan.

No.	Findings	Recommendations
1	The safety management manual of the Power Energy Center indicated that the occupational disease hazards of the Power Energy Center include noise, but noise is not included in the airport's occupational health check plan.	The medical service department works with departments to review the occupational disease hazards and areas with occupational disease hazards in the airport operation activities, and ensure that the occupational disease hazard exposure personnel of all departments are included in the occupational health examination plan.

Emergency Response

Kunming Airport has formulated the "Kunming Airport Emergency Response Plan" in accordance with the requirements of regulations to standardize the emergency rescue management of aircraft emergencies and non-aircraft emergencies. The emergency scenarios in the plan include aircraft crashes, air distress, runway incidents, ground distress, aircraft illegal interference, explosives, illegal interference, fire, hazardous chemical leakage, medical emergencies, natural disasters, evacuation, earthquake, flood prevention and drought resistance, and power outages. The content of the plan includes emergency scenario analysis, emergency response command system, emergency rescue implementation, drills, training, rewards and punishments, emergency protection and plan management. The airport Operation Command Center is the management department for the formulation and review of emergency response plan, emergency drill planning, and on-site organization of emergencies. After the plan is revised by the Operation Command Center every year, it is distributed to all airport departments and domestic and foreign airlines. At the same time, the plan is also submitted to the Yunnan Emergency Management Department, Kunming Emergency Management Bureau, and Civil Aviation Administration for the record. The internal and external contact details in the plan are confirmed and updated every month to ensure smooth communication.

The Airport Operation Command Center develops an annual emergency response work plan at the beginning of each year to specify the airport's annual emergency drills, inspections, and training etc. Kunming Airport has developed and implemented an emergency rescue information management system, through which it realizes real-time management of the content of the emergency plan, the integrity of emergency materials, the implementation of emergency inspections, the completion rate of emergency training, and emergency drills of the airport and various departments. After each department has completed the relevant emergency management work, the information will be uploaded to the system in a timely manner for the record. During the audit period, it was noted that all planned work was completed on schedule after checking of the emergency work plans of the airport and departments in the system.

No.	Findings	Recommendations
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1	None of issue related to emergency response Management at the airport identified.	N/A
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Wildlife Strikes Management

Kunming Airport has implemented wildlife management programs such as the "Wildlife Hazard Prevention Plan of the Department of Flight Area Management" and the "Bird Hazard Prevention Plan of Kunming Changshui International Airport" to prevent birds and non-bird wild animals from posing threats to aircraft operations. The plan specifies the organizational structure and responsibilities of wildlife hazard management, work performance objectives, specific preventive management measures and response principles. At the same time, the airport has established cooperation with local wildlife protection departments to coordinate the transfer of wild animals after they are captured. The preventive measures for the invasion of wildlife include the investigation of the bird situation and the situation of wild animals in the airport area, physical isolation of the field boundary, the deployment and use of bird repellent systems, regular manual mowing, and regular placing bird repellent.

The Flight Area Management Department conducts daily inspections on the integrity of the physical perimeter of the airport and the implementation of various management measures. At the time of the audit, some daily wildlife control daily inspection record in November and December 2022 have been provided for review.

No.	Findings	Recommendations
1	None of material issue related to Wildlife Strikes Management at the airport identified.	N/A

Airport Security

Kunming Airport has developed and implemented the "Kunming Airport Aviation Safety and Security Plan" and reported it to the civil aviation department for the record. The plan includes the security responsibilities of each unit, the composition of the security committee, security measures, emergency response plans etc .The Security and Fire Protection Department is responsible for on-site security, aircraft monitoring, control area security management, comprehensive airport supervision, operation analysis and supervision, etc,. According to the introduction of airport personnel, all kinds of security personnel at the airport have passed training before onboard. Security personnel are provided based on the operation situation of the airport. The airport control area implements zoning management according to security needs. Traffic control is implemented in the control area. People and vehicles entering the airport control area need to apply for access permit. The security facilities in the airport control area are patrolled and inspected by corresponding security personnel to ensure that they are intact and effective.

No.	Findings	Recommendations
1	None of issue related to airport security management at the airport identified.	N/A

Traffic Safety

The road traffic in the aircraft activity area is managed by the Flight Area Management Department. The regulations "Measures for the Implementation of Road Traffic Safety Management in the Aircraft Activity Area" clarify the basic requirements for the qualifications of vehicles and personnel entering the aircraft activity area, entry permits, safe driving requirement of vehicles, and daily management requirement. Kunming Airport has signed a safety agreement with all onsite sub-contractors, and drivers need to pass the training before they can take the job. At the same time, motor vehicles that have obtained access must be equipped with satellite positioning equipment with recording function, and the vehicles can only be used until passing regular inspections.

The road traffic in the parking lot, parking building and terminal building is managed the Site Management Department. The "Kunming Airport Parking Building (Field) Business Supervision and Management Measures" clarify the safety management measures for parking lots and parking buildings. At the same time, the Site Management Department also coordinates the traffic arrangements of the airport with the traffic management department and the public security traffic control department. At the time of the audit, the inspection records of the parking building have been provided for review.

No.	Findings	Recommendations
1	None of issue related to traffic safety management at the airport identified.	N/A

Hazardous Substance Management

The ice and snow removal work of the airport's yard is the responsible by the Flight Area Management Department. The operation process of ice and snow removal has been clarified in the operation management document. De-icing chemicals are stored in designated areas of warehouses and runways. According to SDS information, de-icing chemical have relatively few chemical and environmental hazards. According to airport personnel, the existing drainage design of the airport can also prevent the leakage of deicing chemical into the outside area and causing pollution. Due to epidemic control, the fuel tank farm and gas station area and interview with the fuel supplier were not possible in this audit.

No.	Findings	Recommendations
1	None of issue related to hazardous substance management at the airport identified.	N/A

5. ENVIRONMENTAL AND SOCIAL ACTION PLAN

Table 6.1 Environmental and Social Action Plan

No.	Action	E&S Risks, Liability/Benefits	Requirement (Legislative, Best Practice)	Resources, Investment Needs, Responsibility	Timetable	Target and Evaluation Criteria for Successful Implementation	Status
Organization Capacity							
5.1.1	<p><u>Organization Capacity</u></p> <ol style="list-style-type: none"> 1. Review the current capacity, clearly define Environmental and Social Management roles and responsibilities, and develop an organization chart specific for Environmental and Social Management, especially the following roles: Assign responsibility for implementation of this ESAP and detailed recommendations of ESIA at management level. 2. Ensure sufficient capacity to implement stakeholder engagement and grievance mechanism, and assign responsibility for implementation. 	Ensure that there is sufficient capacity to implement stakeholder engagement and grievance mechanism management by assigning an experienced social expert	AIIB ESS1 Good Practise	YAG	2023-Q2	Employment/appointment records	

3. Consider recruiting or assigning Community Liaison Officer and ESMS officer or Environmental/Social Coordinator.

Environmental Management

<p>5.2.1 <u>Environmental Management System</u></p>	<p>1. It is recommended that management shall designate a dedicated department to take responsibility for quality and EHS management systems and update on a regular basis. Also, it is deemed necessary to carry out internal audit of management systems, and then to follow up for continual improvement.</p> <p>2. It is recommended to work with environmental service providers, each department to identify and develop environmental KPIs matrix, such as biological diversity, GHG emission amount, waste recycling rate, waste reduction, energy efficiency, and etc.</p>	<p>An effective environmental and social management system</p>	<p>AIB ESS1 Good Practise</p>	<p>YAG</p>	<p>2023-Q2</p>	<p>Updated management system; Internal audit report Environmental KPI matrix</p>
<p>5.2.2 <u>Environmental Permits</u></p>	<p>1. Complete the post-EIA registration with local environmental authority.</p> <p>2. Implement the measures recommended in the post-EIA, including 1) Installation of air quality automatic on-line monitoring system, and</p>	<p>Compliance with local legislation</p>	<p>Law of People's Republic of China on EIA AIB ESS 1</p>	<p>YAG, local authority Invest to install on-line monitoring system, resettlement</p>	<p>1. 2023-Q1 2. 2023-Q4 and along with airport</p>	<p>Post-EIA registration record Complete acceptance of</p>

	<p>aircraft noise monitoring system in areas of sensitive receptors.</p> <p>2) Work with local government to finish resettlement plan of sensitive receptors (it is part of the noise management framework of the environmental and social management plan of the Project)</p> <p>3) Work with government to define the zoning area nearby the airport, to prohibit or restrict construction of new noise sensitive receptors.</p>				expansion project	<p>monitoring system</p> <p>Resettlement plan</p> <p>updated zoning map</p>
5.2.3	<p><u>Pollution Prevention-Air</u></p> <p>1. Commission an external agency to include cooking fume emission generated onsite in the monitoring plan to check its compliance status.</p>	Compliance with local legislation	Law on Air Pollution Prevention and Control	External agency	2023-Q2	<p>Environmental monitoring plan</p> <p>Monitoring results</p>
5.2.4	<p><u>Pollution Prevention-Water</u></p> <p>2. Commission an external agency to include wastewater discharge from the reclaimed wastewater treatment plant, prior to being discharged into the KAEZ wastewater treatment plant for further treatment under some circumstances (e.g. rainy season).</p>	Compliance with local legislation	Law on Wastewater Pollution Prevention and Control	External agency	2023-Q2	<p>Environmental monitoring plan</p> <p>Monitoring results</p>

5.2. 5	<p><u>Pollution Prevention-Noise</u></p> <p>3. Kunming Airport shall keep good interaction with local government to finish resettlement plan of sensitive receptors with high level of aircraft noise, along with the development of the airport expansion project. Also, the noise abatement measures like engineering control (e.g. sound insulation, barriers), administrative enhancement, etc. shall be installed and well maintained to reduce noise at acceptance level.</p> <p>4. Installation of the automatic noise monitoring system has been projected along with the development of expansion project of Kunming Airport. So it was also recommended that the resources and budget shall be reserved to make sure that the installation will progress as expected.</p>	Compliance with local legislation and approved EIA	Law on EIA; Law on Noise Pollution Prevention and Control AIIB ESS 1	YAG, local authority, external suppliers Invest to install on-line monitoring system, resettlement	2023-Q4 and along with airport expansion project	Complete acceptance of monitoring system Resettlement plan
5.2. 6	<p><u>Pollution Prevention- Hazardous Wastes</u></p> <p>5. The responsible staff shall commission a licensed hazardous waste vendor to collect and dispose of spent lamps and scrapped X-ray devices, and keep transfer manifest on file.</p>	Compliance with local legislation	Law on Solid Waste Pollution Prevention and Control AIIB ESS 1	Hazardous waste vendor, Cost for hazardous waste disposal service	2023-Q2	Hazardous Waste Disposal Contract Qualification of vendor Transfer manifest

5.2. 7	<u>Soil and Groundwater Impact</u>	Reduce risk of soil and groundwater pollution	AIIB ESS 1 Best practice	External agency Cost of soil and groundwater monitoring	2023-Q3	Environmental monitoring plan Monitoring results
<p>1. It was recommended that soil and groundwater investigation shall be performed to monitor the quality of soil and groundwater beneath the property, especially for the potential areas of concern listed below:</p> <p>d) One underground oil transport pipeline which was owned by China Petrochemical Corporation and goes through along western portion of the airport;</p> <p>e) The filling stations and underground pipeline; and</p> <p>f) Waste station operated by CSSC Environmental Technology Co., Ltd.</p>						
5.2. 8	<u>Emergency Preparedness and Response</u>	To ensure effective emergency preparedness and response management	AIIB ESS 1 Best practice Measures for the management of emergency plans for environmental emergencies in enterprises	YAG	2023-Q2	Environmental emergency response plan Drill records
<p>1. It was recommended that external stakeholders (KAEZ wastewater treatment plant, the CSSC waste station and sensitive receptors (e.g., neighboring villages/hospitals/schools) with high levels of aircraft noise in the surrounding areas) shall be included in the emergency response plan, and the roles and responsibilities of each stakeholder shall be defined to meet international standards.</p> <p>2. The emergency response plan shall be updated every 3 years, and/or be updated on time if any change of major hazards, or contact persons occurs.</p>						

3. Conduct regular drill of environmental incidents at least 1~2 times per year.

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5.3. **Contract and Supplier Management**

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1. Develop a supplier management plan and update vendor evaluation forms where needed to include evaluation of labour and human related risks including review of HR policies and ethical code/code of conduct of potential suppliers.
2. Consider including CSR requirements in the contracts, which will help to raise awareness of environmental, social and governance issues. Ensure clauses in contracts of suppliers or stand-alone commitments from suppliers to adhere to ESS1/PS2.
3. In the case where the suppliers are found to be non-compliant with contract, Yunnan Airport Group will plan and deliver on site audits for primary suppliers of ongoing goods and services.
4. Review business license, labor agent qualification, labor contracts, working hours, wages and social insurance records of the third party employment agency, and ensure that the third-party employment agencies it uses are

Management
of third-party
risks on
labour rights

AIIB
ESS 1

Best
practice

Labor
Law

YAG

2023-Q2

Supplier
managem
ent
policy/vend
or
evaluation
forms
Written
commitment
s (in
contracts or
stand-alone
declarations
)
Supplier
audit report

	compliant with the provisions of environmental and social standards, and regulatory requirements.					
5.3.2	<u>YAG Policies and Procedures</u> Review the training policy, and develop and implement a training plan for HR policies and social responsibilities, such as prevention of involuntary labor, underage worker, working hour, benefits, freedom of association and collective bargaining, sexual anti-harassment & abuse, anti-discrimination, grievance mechanisms.	Compliance with local legislation Improve labor relations	AIB ESS 1 Labor Law	YAG	2023-Q2	Training policy Training plan Training records
5.3.3	<u>Working hour, wage and benefits</u> 1. When the employment contract is terminated, the employer shall pay the lump-sum wage to employees at the time of the employment termination instead of next payment cycle. Update the wage policy and implement. 2. The airport should ensure a reliable time recording system, and provide relevant record for sampling review. 3. Follow the working hour waiver limit to control the working hours and have an effective working hour control system. 4. In the case of worker authorized deductions for monetary penalty, the authorization must be in writing, specify a particular amount, and be given in a way that is truly consensual. In the case of monetary penalties for indirect employee, the company shall specify procedures,	Compliance with local legislation	AIB ESS 1 Provisional Regulations for the Payment of Wages	YAG Third-party employment agency, subcontractor	2023-Q2	Wage policy Time records Monetary penalty records contract with the third-party employment agency or subcontractor

documentation for worker authorization, processing and handling of complaints in the contract with the third-party employment agency or subcontractor. It is recommended to review the compliance of the deduction, and ensure all required documents are maintained.

5.3.4	<u>Workers' Organizations</u> Ensure the license of trade union is obtained.	Compliance with local legislation	Measures for the Registration and Management of Trade Union Legal Persons ...	YAG	2023-Q1	the license/registration of trade union
5.3.5	<u>Non-Discrimination and Equal Opportunity</u> 1. Revise the job advertisement with age limit. 2. Ensure anti-discrimination based on age, disability, ethnicity, gender, marital status, national origin, political affiliation, race, religion, sexual orientation, gender identity, union membership, or any other status protected by country law, in hiring and other employment practices.	Social responsibility Good reputation	AIBB ESS 1 Best practice	YAG	2023-Q1	Job advertisement Payroll records, promotion records, disciplinary record

5.3.6	<p><u>Anti-Harassment & Abuse</u></p> <p>It is recommended to provide specific training regarding anti-harassment, to equip employees with the knowledge and tools needed to identify, avoid, and report inappropriate behaviour within the workplace.</p>	<p>Social responsibility</p> <p>Better working environment</p>	<p>AIIB ESS 1</p> <p>Best practice</p>	YAG	2023-Q2	<p>Training materials</p> <p>Training records</p>
5.3.7	<p><u>Grievance Mechanism</u></p> <p>It is recommended to develop a grievance mechanism and have an objective process for handling complaints/concerns from employees that is outside the direct supervisory chain in the organization to address the concern, and ensure employees aware of the grievance mechanism that protects employees' privacy and protects them against retaliation.</p>	<p>Social responsibility</p> <p>Better working environment</p>	<p>AIIB ESS 1</p> <p>Best practice</p>	YAG	2023-Q3	<p>Grievance mechanism</p> <p>Grievance records</p>
5.3.8	<p><u>Information Disclosure and Stakeholder Engagement</u></p> <ol style="list-style-type: none"> 1. Assign a designated CLO 2. Review and develop a list of stakeholders 3. It is recommended to develop SEP (Stakeholder Engagement Plan) for Kunming Airport during the airport expansion project, to describe the key stakeholders and the ongoing information and communications plans relating to the project. The SEP will be reviewed periodically during implementation of the project and will be updated as necessary; contact with the communities shall be 	<p>Effective information disclosure and consultation in compliance with IFC PS1</p>	<p>AIIB ESS1</p>	YAG	<p>2023-Q2</p> <p>Construction period</p>	<p>SEP</p> <p>Records of disclosed information, SEP, documents/ brochures etc. Meeting minutes, attendance lists</p> <p>Stakeholder engagement log</p> <p>Complaints</p>

- maintained, their views and concerns solicited.
4. The SEP shall also contain a grievance redress mechanism (GRM) to address concerns of the communities.

registry log, monitoring reports, contractor monitoring and audit reports

Health and Safety (Working Condition)

5.4.1	<u>Health and Safety Performance Indicator and Monitoring</u>	Effective safety management system	AIIB ESS1	YAG	2023-Q1	KPI tracking form
	<p>1. It is recommended that the airport consider specifying the monitoring indicators related to work-related accidents of employees of the airport and departments in the annual safety performance indicators.</p> <p>2. It is recommended that the airport consider including the safety performance of stakeholders closely related to airport safety at Kunming Airport in the airport's annual safety performance indicators.</p>					
5.4.2	<u>Medical care and First aid</u>	Industrial hygiene Compliance with local legislation	AIIB ESS1 Measure s for the Administration of Occupational Health	YAG medical surveillance agency Cost of medical surveillance	2023-Q2	occupational health check plan medical surveillance records
	<p>Include noise hazard of Power Energy Center in the airport's occupational health check plan.</p> <p>Review the occupational disease hazards and areas with occupational disease hazards in the airport operation activities, and ensure that the occupational disease hazard exposure personnel of all departments are</p>					

included in the occupational health
examination plan.

Surveillance

APPENDIX A: LIST OF DOCUMENTS REVIEWED

第一部分 基本信息 A. Basic Information		Translation
1.1	昆明长水国际机场总体规划 (2019 年版审定稿), 民航新时代机场设计研究院, 2019 年	Master Plan of Kunming Changshui International Airport (2019 Finalized Draft), Civil Aviation New Era Airport Design and Research Institute, 2019
1.2	民航局关于昆明长水国际机场总体规划的批复 (民航函【2019】777 号), 中国民用航空局, 2019 年 9 月 9 日	Civil Aviation Administration's Approval on the Master Plan of Kunming Changshui International Airport (Civil Aviation Letter [2019] No. 777), Civil Aviation Administration of China, September 9, 2019
1.3	关于云南机场集团本部和昆明长水国际机场内设机构设置、部门职责及编制调整的通知 (云航投党发【2021】24 号), 中国共产党云南航空产业投资集团有限责任公司委员会, 2021 年 3 月 4 日	Notice on the internal organizational chart, department responsibilities and staffing adjustments of Yunnan Airport Group Headquarters and Kunming Changshui International Airport (Yunhangtou Dangfa [2021] No. 24), Committee of the Communist Party of China Yunnan Aviation Industry Investment Group Co., Ltd., 2021 March 4
1.4	云南机场三标一体管理体系知识案例库 (编号: YAG/QES-ZSJ-2013), 发布日期: 2014 年 1 月 1 日	Yunnan Airport Three Integrated Management System - Knowledge Case Database (No.: YAG/QES-ZSJ-2013), release date: January 1, 2014
第二部分 环境管理 B. Environmental Management		
2.1	新建昆明国际机场工程环境影响报告书, 国家环保总局环境发展中心, 2007 年 6 月	EIA Report of the Construction of Kunming International Airport Project, Environmental Development Center of the State Environmental Protection Administration, June 2007
2.2	关于新建昆明国际机场工程环境影响报告书的批复 (环审【2007】351 号), 原国家环境保护总局, 2007 年 8 月 28 日	EIA Approval of the Construction of Kunming International Airport Project (Huan Shen [2007] No. 351), former State Environmental Protection Administration, August 28, 2007

2.3	昆明新机场已批可研调整项目环境影响报告书，北京国寰天地环境技术发展中心有限公司，2012年5月	EIA Report for the Modification to the Feasibility Study Report of the Airport Construction Project, prepared by Beijing Guohuan Environmental Technology Co., Ltd., May 2012
2.4	关于昆明新机场已批可研调整项目环境影响报告书的批复（环审【2012】137号），原国家环境保护总局，2012年5月24日	The EIA Approval to the Modification to the Feasibility Study Report of the Airport Construction Project, the Ministry of Ecology and Environment, 24 May 2012
2.5	关于新建昆明国际机场工程投入试运行的复函（云环函【2012】193号），云南省环境保护厅，2012年6月15日	The Trial Operation Approval of the Airport Project, approved by Department of Ecology and Environment of Yunnan Province, 15 June 2012
2.6	昆明新机场建设项目竣工环境保护验收调查报告，云南湖柏环保科技有限公司，2019年9月	The Completion Acceptance Inspection (CAI) Monitoring Report for the Airport Project, conducted by Yunnan Hubai Environmental Technology Co., Ltd., September 2019
2.7	机场二站双层罐及复合管更换工程环境影响报告表+机场三站双层罐及复合管更换工程环境影响报告表，2017年9月	EIA form for the replacement project of double-layer tanks and composite pipes at the second station of the airport + EIA form for the replacement project of double-layer tanks and composite pipes at the third station of the airport, September 2017
2.8	云空港环复【2017】12号+云空港环复【2017】13号，云南省昆明空港经济区环境保护局，2017年9月4日	EIA Approval of tank and pipe replacement, September 2017
2.9	机场二站双层罐及复合管更换工程项目竣工环境保护验收监测报告表+机场三站双层罐及复合管更换工程项目竣工环境保护验收监测报告表，云南浩辰环保科技有限公司，2018年11月	Completion Acceptance Inspection (CAI) Monitoring Report for tank and pipe replacement, November 2018

2.10	机场二站双层罐及复合管更换工程+机场三站双层罐及复合管更换工程竣工环保验收, 2019年1月	Completion Acceptance Inspection (CAI) Approval for tank and pipe replacement, January 2019
2.11	昆明新机场建设项目竣工环境保护“三同时”验收意见, 昆明新机场建设指挥部, 2019年6月4日	Technical Opinion of Environmental Protection CAI Approval for Airport Project, issued by the Engineering & Command Center of Kunming Airport, 4 June 2019
2.12	昆明新机场已批可研调整项目环境影响后评价报告(最终版), 北京国环建邦环保科技有限公司, 2022年5月(待审批)	The Post-EIA Report to the Modification to the Feasibility Study Report of the Airport Project, prepared by Beijing Guohuan Jianbang Environmental Technology Co., Ltd., May 2022 (note: the EIA information has been disclosed online for publication since June 2022, and the Post-EIA had not been registered with local environmental authority as of the audit.)
2.13	昆明新机场已批可研调整项目环境影响后评价报告专家组技术评估意见, 昆明长水国际机场有限责任公司资产管理部, 2022年5月19日	Expert comments of the Post-EIA Report to the Modification to the Feasibility Study Report of the Airport Project, May 19, 2022
2.14	排污许可证(机场, 锅炉), 发证机关: 云南省昆明空港经济区环境保护局, 发证日期: 2020年7月2日	Pollutant discharge permit (airport, boiler), issuing authority: Environmental Protection Bureau of Kunming Airport Economic Zone, Yunnan Province, issuing date: July 2, 2020
2.15	突发环境事件应急预案	Emergency plan for environmental emergencies
2.16	突发环境事件应急预案备案凭证, 云南省昆明空港经济区环境保护局, 2020年7月24日	Registration record of emergency plan for environmental emergencies, Environmental Protection Bureau of Kunming Airport Economic Zone, Yunnan Province, July 24, 2020
2.17	2019年昆明长水国际机场环境质量综合评价, 云南众测检测技术有限公司	Comprehensive evaluation of environmental quality of Kunming Changshui International Airport in 2019, Yunnan Zhongce Testing Technology Service Co., Ltd.

2.18	2020 年昆明长水国际机场环境质量综合评价, 云南众测检测技术有限公司	Comprehensive evaluation of environmental quality of Kunming Changshui International Airport in 2020, Yunnan Zhongce Testing Technology Service Co., Ltd.
2.19	2021 年昆明长水国际机场环境质量检测及综合评价报告, 云南坤发环境科技有限公司	Environmental Quality Inspection and Comprehensive Evaluation Report of Kunming Changshui International Airport in 2021, Yunnan Kunfa Environmental Technology Co., Ltd.
2.20	2022 年昆明长水国际机场环境质量检测及综合评价项目 (2022 年度检测计划), 报告编制中	2022 Kunming Changshui International Airport environmental quality inspection and comprehensive evaluation project (2022 annual inspection plan), the report is under preparation
2.21	昆明机场环境在线监测系统项目可行性研究报告 (部分章节)	Feasibility Study Report of Kunming Airport Environmental Online Monitoring System Project (partial chapters)
2.22	固定废弃物清运及处理管理制度汇编	Solid waste removal and treatment management procedures
2.23	昆明长水国际机场疫区国际航空垃圾清运处置服务项目委托合同, 云南大地丰源环保有限公司 (服务方), 2020 年 8 月 24 日 (一年期)	Consignment contract for the international aviation waste removal and disposal service in the epidemic area of Kunming Changshui International Airport, Yunnan Dadi Fengyuan Environmental Protection Co., Ltd. (service provider), August 24, 2020 (one year)
2.24	昆明长水国际机场垃圾清运处理服务项目委托合同, 云南昆船环保技术有限公司, 2020 年 3 月 16 日至 2023 年 3 月 15 日	Kunming Changshui International Airport Garbage Removal and Disposal Service Contract, Yunnan Kunchuan Environmental Protection Technology Co., Ltd., March 16, 2020 to March 15, 2023
2.25	中水处理厂污泥检测报告 (污泥、固体废物), 云南众测检测技术有限公司, 2021 年 6 月 28 日。	Sludge Test Report (Sludge, Solid Waste) of Reclaimed Water Treatment Plant, Yunnan Zhongce Testing Technology Service Co., Ltd., June 28, 2021.

2.26	昆明长水国际机场 2022 年国际航班保障医疗垃圾处置服务合同, 云南正晓环保投资有限公司, 2022 年 1 月 18 日	Kunming Changshui International Airport's 2022 International Flight Medical Waste Disposal Service Contract, Yunnan Zhengxiao Environmental Protection Investment Co., Ltd., January 18, 2022
2.27	东方航空技术有限公司云南分公司危险废物处置合同, 文山海创环保科技有限责任公司, 2021 年 7 月 20 日至 2022 年 7 月 31 日。	Hazardous waste disposal contract of Eastern Aviation Technology Co., Ltd. Yunnan Branch, Wenshan Haichuang Environmental Protection Technology Co., Ltd., from July 20, 2021 to July 31, 2022.
2.28	昆明长水国际机场有限责任公司关于下发餐厨废弃物收运处置管理办法的通知 (云机场【2022】166 号), 2022 年 6 月 30 日	Notice of Kunming Changshui International Airport Co., Ltd. on Issuing Management Measures for the Collection, Transportation and Disposal of Kitchen Waste (Yunjichang [2022] No. 166), June 30, 2022
2.29	昆明市餐厨废弃物收运处置合同书, 收运处置单位: 昆明清源润通环保科技有限公司, 2020 年 12 月 8 日至今	Contract for the collection, transportation and disposal of kitchen waste in Kunming, the collection, transportation and disposal unit: Kunming Qingyuan Runtong Environmental Protection Technology Co., Ltd., from December 8, 2020 to the present
2.30	昆明长水国际机场区及巫家坝区域绿化管养项目合同 (云机场昆【2022】170 号), 服务方: 昆明空港绿化景观工程有限公司	Kunming Changshui International Airport Area and Wujiaaba Area Greening Management Project Contract (Yunchang Kun [2022] No. 170), service provider: Kunming Airport Greening Landscape Engineering Co., Ltd.
2.31	2021-2022 年能源使用量	Energy usage in 2021-2022
2.32	昆明长水国际机场有限责任公司温室气体排放核查报告 (2019 年度), 深圳华测国际认证有限公司, 2020 年 7 月 22 日	Kunming Changshui International Airport Co., Ltd. Greenhouse Gas Emission Verification Report (2019), Shenzhen CTI International Certification Co., Ltd., July 22, 2020

2.33	昆明长水国际机场有限责任公司温室气体排放核查报告 (2020 年度), 中国船级社质量认证公司, 2021 年 11 月	Kunming Changshui International Airport Co., Ltd. Greenhouse Gas Emission Verification Report (2020), China Classification Society Quality Certification Company, November 2021
2.34	昆明长水国际机场有限责任公司温室气体排放复查报告 (2021 年度), 云南德申环保科技有限公司, 2022 年 11 月 8 日	Review Report on Greenhouse Gas Emissions of Kunming Changshui International Airport Co., Ltd. (2021), Yunnan Deshen Environmental Protection Technology Co., Ltd., November 8, 2022
2.35	中国民航报, 昆明长水, 从绿色机场到双碳机场, 2023 年 1 月 30 日	China Civil Aviation Newspaper, Transmission from Green Airport to Dual Carbon Airport, January 30, 2023.
第三部分 安全与健康 C. Safety and Health		
3.1	昆明机场安全管理手册	Kunming airport security management manual
3.2	昆明机场消防安全管理手册 (2018 版)	Kunming airport fire safety management manual
3.3	昆明机场建筑消防设施月检查表	Kunming airport fire facility inspection checklist
3.4	昆明机场建筑消防工程维修单	Kunming airport fire facilities maintenance order
3.5	动火作业审批表	Hot work permit approval form
3.6	昆明机场建筑消防设施设备维护保养服务 2022 年工作总结	Fire facilities maintenance service 2022 annual report
3.7	昆明机场建筑消防设施检测评价报告 2022 年 9 月	Fire facilities inspection and test report, dated September 2022

3.8	职业健康安全管理程序	Occupational health and safety management program
3.9	机场与昆明的航空安全责任书	Kunming airport and aviation safety responsibility pledges
3.1	昆明长水国际机场 2022 年安全绩效管理指标库	Kunming Changshui international airport safety KPI summary form in 2022
3.11	昆明机场 2022 年职业健康安全目标	Kunming airport 2022 occupational health and safety KPI form
3.12	危险源辨识和风险评估控制措施记录表	Hazard identification and risk assessment control measures summary form
3.13	昆明长水国际机场运行安全状况评估报告 (2021 年)	Kunming Changshui international airport operation safety situation assessment report (2021)
3.14	昆明机场安全管理体系 (SMS) 内部审核报告	Kunming airport safety management system (SMS) internal audit report
3.15	职业健康安全风险监测记录表	Occupational health and safety risk monitoring records
3.16	安全教育和培训管理程序	Safety education and training management procedures
3.17	昆明机场航空安全保卫方案	Kunming airport aviation security solution
3.18	昆明机场突发事件应急救援预案	Kunming airport emergency contingency plan
3.19	昆明机场消防演练通知, 2022 第一、二、三季度	Fire drill notification, first, second, third quarter of 2022
3.20	昆明机场停车楼 (场) 业务监督管理办法	Kunming airport parking building (field) business supervision and management measures

3.21	停车楼（场）检查表	Parking building (field) checklist
3.22	动力能源中心安全管理手册	The safety management manual power energy center
3.23	机电设备中心安全管理手册	The safety management manual mechanical and electrical equipment center
3.24	机电设备中心应急救援管理手册、事故调查程序、动火作业程序、现场岗位操作规范、标准化作业规范	Mechanical and electrical equipment center safety work instructions, including accident emergency rescue management manual investigation procedure, hot work procedures, post operation work instructions, standardized operations work instructions
3.25	机电设备中心危险源识别和风险评估清单	Mechanical and electrical equipment center hazard identification and risk assessment list
3.26	昆明机场安监站技术室维修管理手册	Kunming airport station safety engineering office maintenance management manual
3.27	X射线安检设备检测员证书	X-ray security equipment inspector certificates
3.28	民用航空安全检查设备使用许可证书	Civil aviation security check equipment licensing certificates
3.29	场务维修室工作手册	Airport yard services maintenance department manual work
3.3	场务维修室应急预案培训记录	Airport yard services maintenance department emergency plan training records
3.31	昆明长水国际机场飞行区无动力设备管理规定	Kunming Changshui international airport airfield no-power equipment management regulations
3.32	昆明长水国际机场航空器活动区道路交通安全管理实施办法	Implementation Measures for Road Traffic Safety Management of Kunming Changshui international airport aircraft area

3.33	地面管制指挥室机坪巡视检查单	Apron patrol record of Ground control command room
3.34	飞行区管理部野生动物危害防范方案	The airfield management wildlife hazards prevention plan
3.35	动物防治工作日报表	Animal control working day reports
3.36	昆明长水国际机场飞行区违规处理实施细则	Kunming Changshui international airport airfield mishandling the detailed rules for the implementation
3.37	昆明长水国际机场航空器活动区道路交通安全管理实施办法	Kunming Changshui international airport aircraft area of road traffic safety management measures for its implementation
第四部分 劳工 D. Social		
4.1	云南航空产业投资集团有限责任公司集体合同（雇佣关系的建立和终止、工资、工作时间、休假、社会保险、福利制度、培训、合同变更、赔偿等）	Collective Labor Agreement /Contract -General (including details of establishment and termination of employment, wages, working hours, leave, social insurance, welfare system, training, change of contract, compensation, etc.)
4.2	云南航空产业投资集团有限责任公司职工劳动安全卫生专项（包括安全培训、安全规章、劳动保护、职业危害预防等）	Collective Labor Agreement /Contract - Occupational safety and health special requirements (including safety training, safety policy, working condition, occupational hazard prevention, etc.)
4.3	云南航空产业投资集团有限责任公司女职工权益保护专项集体合同（包括女性在经期、孕期、产期、哺乳期的保护制度、宫颈癌、乳腺癌的筛查、性骚扰预防、进修培训、职业发展等）	Collective Labor Agreement /Contract - Protection of female employees' rights and interests (including special female protection policy during menstruation, pregnancy, childbirth, breastfeeding, regular screening for cervical cancer, breast cancer, sexual harassment prevention, further training, career development, etc.)

4.4	云南航空产业投资集团有限责任公司劳动合同管理制度暂行规定	Interim Policy of Labor Contract Management
4.5	关于加班工资支付的暂行规定	Interim Policy of Overtime Wage
4.6	关于休息休假的暂行规定	Interim Policy of Rest and Leave
4.7	关于工时的暂行规	Interim Policy of Working Hours
4.8	关于各类费用赔偿暂行规定	Interim Policy of Various Compensation
4.9	下发奖惩管理办法	Reward and Penalty Management Procedures
4.10	综合计时工时批复	comprehensive working hour system waiver
4.11	业务外包管理暂行管理办法	Interim measures for the management of outsourcing management
4.12	机场运行安全协议书	Safety Agreement for Airport Operation
4.13	智能楼宇系统维保项目合同	Intelligent building system maintenance project contract

APPENDIX B: MAP AND LAYOUT



Fig. 1 Satellite image of the site and vicinity

Reference: Zhongkexintu (2022)

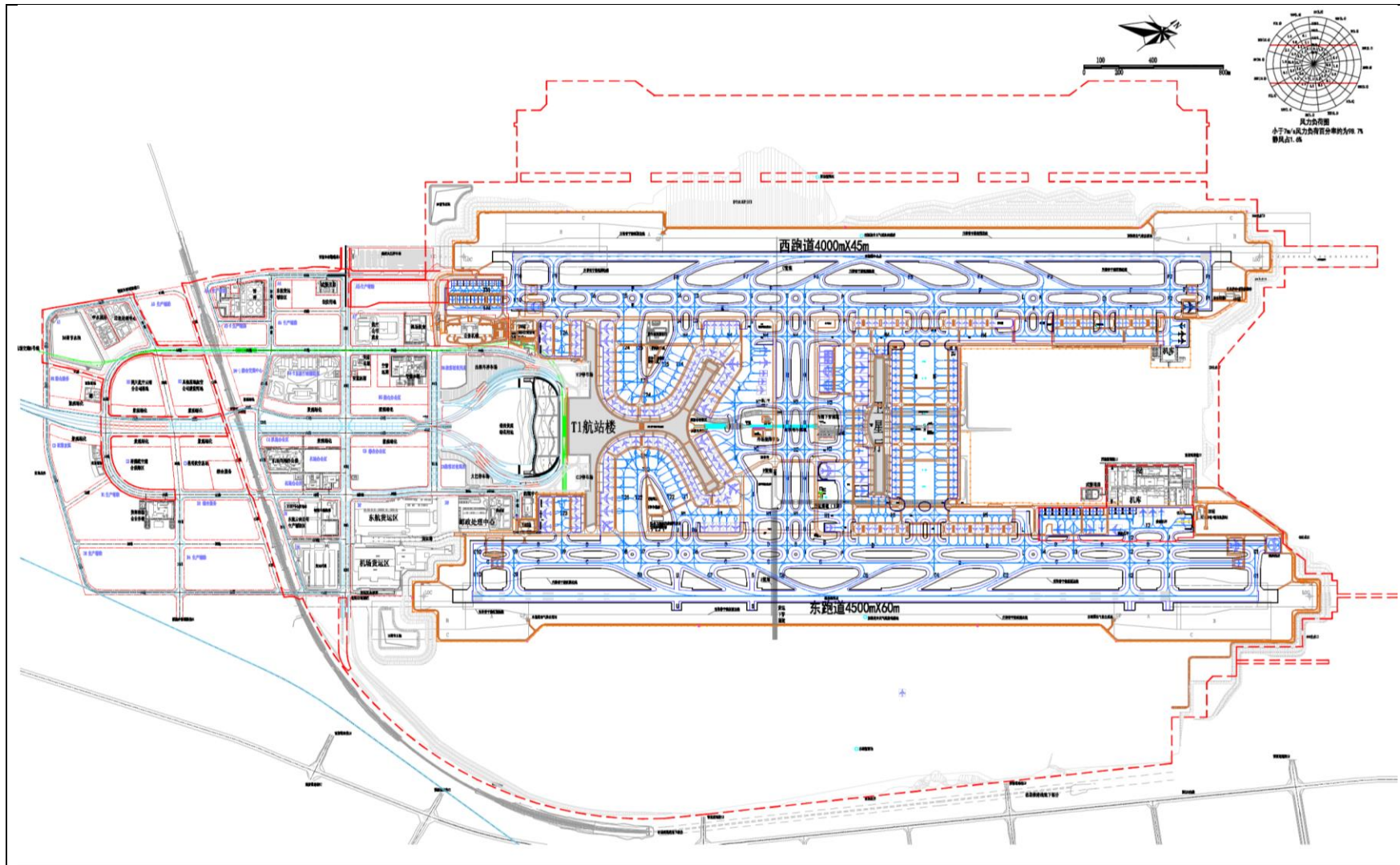


Fig. 2 Site Layout

Source: feasibility study report prepared by China Airport Planning & Design Institute Co., Ltd.

APPENDIX C:PHOTOLOG



Fig. 1 Wastewater treatment system



Fig. 2 Dosing system and chemical storage for wastewater treatment



Fig. 3 Used chemical (hazardous wastes) generated from wastewater treatment



Fig. 4 Overview of domestic waste treatment station



Fig. 5 Domestic waste temporary storage area



Fig. 6 Concrete floor with cracks in the domestic waste temporary storage area



Fig. 7 Domestic waste leachate treatment device



Fig. 8 Waste recycling line managed by a third party (Yunnan Kunchuan Environmental Protection Technology Co., Ltd.)



Fig. 9 Waste recycling line managed by a third party (Yunnan Kunchuan Environmental Protection Technology Co., Ltd.)



Fig. 10 Gas Boilers at Power Energy Center



Fig. 11 Gas boiler stack



Fig. 12 Chiller units at the Power and Energy Center



Fig. 13 China Eastern Airlines Maintenance Center (no access inside)

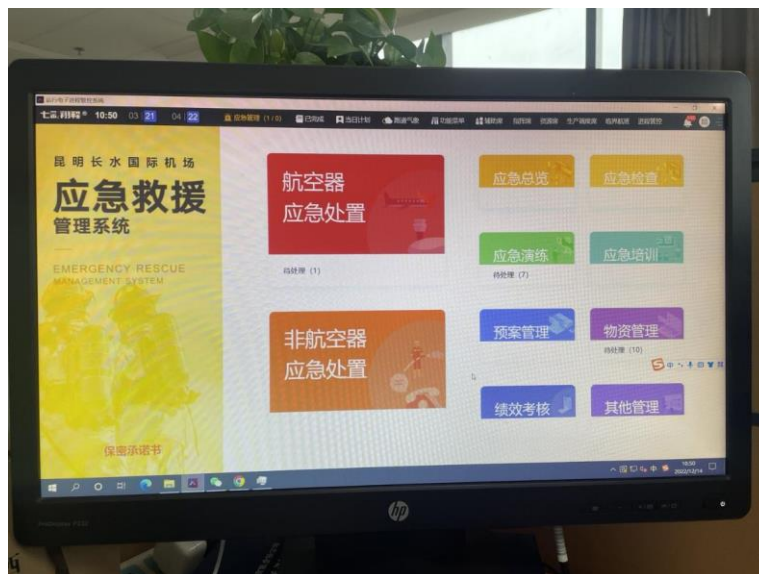


Fig. 14 Emergency management E-system (including emergency plan, inspection, drill, training, emergency response equipment, performance review, etc)



Fig. 15 Emergency management E-system (emergency plans for each department)

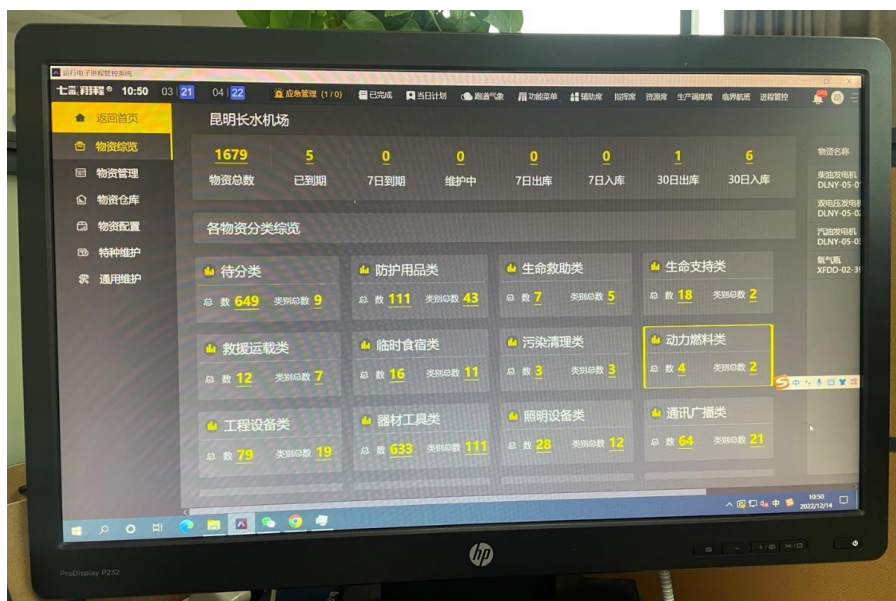


Fig. 16 Emergency management E-system (emergency equipment list)