Guidelines of Sustainable Infrastructure for Chinese International Contractors（SIG）

中国对外承包工程商会
CHINA INTERNATIONAL CONTRACTORS ASSOCIATION

Contents

Foreword

As sustainable development has become a mutual endeavor of countries around the world, so is sustainable infrastructure a topical issue of governments and financial institutions. After “developing sustainable infrastructure” was included in the UN Sustainable Goal of Industry, Innovation & Infrastructure in 2015, the 2016 G20 Hangzhou Summit once again billed infrastructure as one of the global priorities for sustainable development, and vowed heavier investment in sustainable infrastructure. International financial institutions, out of consideration for risk control, has successively issued loans and investment principles relating to environmental and social issues, including the Equator Principles, Principles for Responsible Investment and Green Credit, urging project investors, owners and contractors to take full account of the economic, environmental and social impact of funding, planning, design, building and operation. Meanwhile, professional institutions from western developed countries have in turn launched evaluation standards for sustainable infrastructure projects, such as Envision of Harvard University, SuRe of Global Infrastructure Basel (GIB), and Performance Standards on Environmental and Social Sustainability of International Finance Corporation (IFC). These standards are binding, from the perspectives of economy, society, environment and governance, on companies engaged in sustainable infrastructure projects, and have been, or are planned to be, applied to financing evaluation for the same projects. Sustainable infrastructure will obviously become a new trend in international markets.

Sustainable infrastructure projects are required to comply with the long-range objectives of local economic development, social progress and environmental protection. Such a requirement is completely in accord with what the Belt and Road (B&R) initiative stands for - B&R projects should be jointly built through consultation to accommodate the concerns of all and seek a conjunction of interests, so that the results of the harmonious, inclusive, win-win cooperation will benefit wider areas and populations. Sustainable infrastructure projects point a way for Chinese companies to implement the B&R initiative. For those companies who conduct outward investment and project contracting, it is necessary for them to expedite business restructuring and upgrading, namely, shifting their business model from sole contracting to the integration of funding, planning, design, building and operation. With market expansion and supply chain extension, come heavier capital investment and higher financing and operation risks. Economically, environmentally and socially sustainable infrastructure projects are, therefore, an inevitable choice for Chinese go-global com-

panies to achieve long-term sustainability.

To follow the international trends of sustainable infrastructure, satisfy the needs for rapid industrial development, and promote the building of soft power, China International Contractors Association (CHINCA) started its research into sustainable infrastructure and development of related industrial standard. In September of 2016, CHINCA and Inter-American Development Bank (IDB) jointly released a report entitled *Sustainable Infrastructure: New Chapter for China-LAC Infrastructure Cooperation*. In June of 2017, CHINCA and Dagong Global Credit Rating Group (Dagong Group) jointly formulated the *Guidelines of Sustainable Infrastructure for Chinese International Contractors (SIG)*. The Guidelines are designed to be an industrial standard that could guide and spur companies to fund, design, build and operate sustainable infrastructure projects.

The core topics hereof include the guidelines for economic, environmental and social sustainability as well as sustainability governance rules. The Guidelines have taken in certain concepts and views from such standards of sustainable infrastructure as Envision and SuRe and referred to IFC Performance Standards on Environmental and Social Sustainability and other internationally accepted conventions, as well as domestic laws and rules on environmental protection and CSR in China. To enhance the applicability and feasibility of the Guidelines, indicators herein are tailor-made for all the stages of a project, to the extent that qualitative indicators are assessable and quantitative ones measurable.

As a guiding document for Chinese companies engaged in overseas infrastructure projects, the Guidelines, prepared and released by CHINCA, are subject to amendment in due course as per industrial business conditions and effect of implementation hereof.

CHINCA will, based on the Guidelines, select and publicize qualified sustainable infrastructure projects undertaken by Chinese companies overseas. Meanwhile, CHINCA will also cooperate with relevant governments and financial institutions so that the Guidelines could be taken as a reference in their decision-making for either project or loan approval.

1. General Provisions

1.1 Instructions

1.1.1 To guide and promote Chinese companies to fund, plan, design, built and operate infrastructure projects overseas in a sustainable manner, CHINCA hereby formulates the Guidelines in accordance with domestic and international laws, regulations, standards and rules regarding sustainable infrastructures.

1.1.2 The Guidelines aim to help companies to establish effective and equitable sustainability governance rules, boost economic, social and environmental sustainability through viable actions, and in turn ensure the sustainability of infrastructure projects.

1.1.3 As a voluntary standard for sustainable infrastructure, the Guidelines advocate desirable behaviors and governance rules for Chinese companies engaged in infrastructure projects overseas.

1.2 Scope

The Guidelines are applicable to overseas infrastructure projects of which Chinese companies (or consortia led by Chinese companies) are a part, covering the entire process from funding, planning, design, building, operation and maintenance to closure.

The infrastructure projects mentioned herein refer to engineering facility projects benefiting industries and households as well as large contracting projects, covering transport, power, petrochemical, communication, mining, water conservancy, massive house-building and other public utilities.

Chinese companies involved in the merger and acquisition of infrastructure projects overseas or any or all stages of the said projects may refer to relevant contents of the Guidelines.

The Guidelines may also serve as a tool for evaluation of sustainability on completed projects.

1.3 Definition

Sustainable infrastructure projects refer to the projects which fully integrate the ideology of sus-

tainable development into the processes of funding, planning, design, building, operation, maintenance and closure so as to eliminate or ensure the least harm to stakeholders' rights and interests throughout their lifecycle, minimize natural resource consumption and adverse environmental effect, keep in harmony with the host community, and meet the local needs for medium-to-long-term socioeconomic growth.

1.4 Principles

Three principles related to sustainable infrastructure must be followed as below:

First, stakeholders must be given due attention. Companies should take into account stakeholder's concerns and interests as well as environmental risk avoidance and ecosystem protection related to the projects. The stakeholders mentioned herein refer to the groups and individuals that may influence, or be influenced by, business activities and decisions, including shareholders, employees, consumers, governments, suppliers, investors, competitors, civil societies, media and community residents.

Second, the entire project lifecycle should carry the stamp of sustainability. During the stages of investment, planning, design, building, operation, maintenance and closure, the companies should safeguard the legitimate rights and interests of employees, creditors and shareholders, treat consumers and suppliers in a sincere manner, and engage in environmental protection, community building and other public welfare campaigns so that the projects can take their economic, environmental and social value up a notch and grow in concert and harmony with stakeholders.

Third, infrastructures should be not only aligned with current and short-term demands, but also adaptable to changes (social demands, natural disasters and climate changes) in the distant future. In face of uncertainties, the projects should be capable of constant self-adjustment and self-improvement. In the event of an emergency or crisis, solutions should be promptly proposed and effectively implemented so as to resume normal operation of infrastructures within the shortest time possible.

1.5 Logical Framework

The Guidelines shed light on the four dimensions of sustainability: economy, society, environment and governance. Economic sustainability is the foundation of sustainable building and operation, social sustainability the prerequisite for stakeholder engagement and harmonious co-existence, environmental sustainability the premise of ecological balance, and sustainability governance the institutional guarantee of systematic project management.

2. Guidelines for Economic Sustainability

Economic sustainability is the basis of building and operating sustainability. Economic sustainability means the companies ensure, through operation, financial soundness and expected return on investment (ROI), keep the projects involved in local industrial integration, and spur the economic development.

2.1 Financial Performance

2.1.1 The companies should take account of local culture, economy, laws, politics, religion and market needs so as to ensure financial soundness, expected ROI, and the safety of their assets and capital.

2.1.2 In the process of funding, the companies should issue, or authorize a qualified third-party institution to issue, a project feasibility report covering the general situations, necessity & feasibility, building conditions, design proposal, investment estimate, fund raising, economic assessment, environmental & social risk analysis and risk avoidance measures. They should thereby understand and evaluate investment risks, take full account of economic, environmental and social costs, and set the profit margin or return on investment.

2.1.3 In the course of design, the companies should establish equitable operating modes and forecast, or authorize a professional institution to forecast, the profitability of the projects.

2.1.4 In the process of building or operation, the companies should, based on an overall consideration of environmental and social benefits, do their best to uplift the financial performance of the projects and perform their corresponding responsibilities and obligations, including but not limited to:

(1) Adopt innovative building or operating modes to increase business revenue;

(2) Control the risks of capital use (including payment);

(3) Pay close attention to the fiscal capacity and solvency of overseas owners;

(4) Reduce costs and enhance profitability;

(5) Guarantee creditors' rights and interests;

(6) Strictly perform the duty of information disclosure; and

(7) Brief stakeholders on the project audit report.

2.1.5 Upon the expiration of service life of infrastructures, the companies may terminate the projects according to law or the contract.

2.1.5.1 During the early stage of closure, the companies should disclose to stakeholders the closure plan and audit report in an accurate and timely manner, fully communicate with stakeholders on major matters and potential impacts, make a comprehensive evaluation on the risks of the closure, and prevent all kinds of emergencies.

2.1.5.2 In the course of closure, the companies should protect the legitimate rights and interests of investors and creditors, and fairly handle the debtor-creditor relationship.

2.1.6 Core evaluation indicator

Profit margin or ROI.

2.2 Implications for Local Industries

2.2.1 The projects should be as closely aligned with local industry trends as possible, and the companies should make full use of local resources to drive circular economy.

2.2.2 In the process of operation, the projects should, without prejudice to their usage, do their best to extend their positive influence on local industries, including but not limited to:

(1) Sharpen their edge and spur industrial development;

(2) Boost coordinated development of the projects with upper- and lower-stream industries and relevant sectors.

2.2.3 In the process of operation, the companies should rigorously disclose information on project compatibility with local industries and coordinated development.

2.2.4 Core evaluation indicators

(1) Relevance of the projects to local industries; and

(2) Expansion of new industries through the projects;

(3) Use of local resources or raw materials; and

(4) Impact on industrial structure.

2.3 Benefits for Local Economy

2.3.1 In the course of funding, the companies should fully assess and do their best to engage in projects with the greatest relevance to local economy.

2.3.2 At the stage of design, the companies should calculate, or authorize a professional institution to calculate, the profitability of the projects, and assess their relevance to local economy.

2.3.3 In the process of operation, the projects should be aimed to boost regional economic growth and restructuring, and rigorously disclose information including but not limited to:

(1) Relevance of the projects to local economy;

(2) Annual contribution rate of the projects to local economy; and

(3) Sustainability of such contribution.

2.3.4 Core evaluation indicators

(1) Contribution rate of the projects to local economic growth;

(2) Contribution of the projects to local economic restructuring;

(3) Relevance of the projects to local consumption and investment; and

(4) Tax paid to the local government.

3. Guidelines for Social Sustainability

Social sustainability means Chinese companies engaged in infrastructure projects overseas need to safeguard stakeholder's rights and interests, optimize supply chain management, enhance quality management, boost local employment, promote living standards and sustainability of community, strengthen preservation of cultural heritage and natural scenery, mitigate the negative social impact of projects at present and in the future so as to achieve harmonious co-existence and common development with stakeholders.

The Guidelines offer a five-pronged approach to social sustainability: protection of employees' rights and interests, occupational health and safety management, supply chain management, quality management, and co-existence with community residents.

3.1 Protection of Employees' Rights and Interests

3.1.1 The companies should support the local union and safeguard employees' legitimate rights and interests to ensure smooth operation of the projects.

3.1.2 In the course of design, the companies should, in line with industrial characteristics, establish corresponding employee support policies, including but not limited to:

(1) Safeguard employees' rights and interests in recruitment and promotion;

(2) Provide equal employment opportunities;

(3) Give weight to diversified recruitment and career paths;

(4) Prohibit child labor;

(5) Stay in compliance with local laws and regulations on working hours;

(6) Offer reasonable compensation and benefits;

(7) Treat employees in a humane manner;

(8) Prohibit racial and gender discrimination in employment;

(9) Accord special grants to and take precautions for employees engaged in offshore/down-hole operations; and

(10) Establish and maintain the channels for communicating with employees and soliciting their concerns.

3.1.3 In the process of building and operation, the companies must take the following measures to safeguard employee's rights and interests:

(1) Observe relevant employment and labor laws;

(2) Offer necessary facilities and venues to the union;

(3) Do their best to recruit local workers, strengthen localized management and prevent racial discrimination;

(4) Enhance professional training;

(5) Pay employees in a timely manner;

(6) Forge, maintain and improve the labor relations;

(7) Prevent forced labor;

(8) Provide healthy and safe working conditions;

(9) Release policies on safeguarding employees' rights and interests, and disclose how well they are implemented.

(10) Enhance identification, warning and prevention of safety risks arising from political turmoil or religious/social conflicts, and build capacity for handling terrorist attacks, robberies or other emergencies so as to guarantee the safety of employees.

3.1.4 In the process of closure, the companies should disclose project closure conditions in advance, terminate employment relationship according to law or the contract, settle unpaid salaries and compensations etc., and facilitate proper employees' resettlement.

3.1.5 Core evaluation indicators

(1) Social security coverage;

(2) Compensations and benefits;

(3) Training frequency and coverage;

(4) Improvement in professional skills of locals; and

(5)Mechanism for fair promotion and its implementation.

3.2 Occupational Health and Safety Management

3.2.1 The companies should establish an occupational health and safety management system to

enhance safety awareness, protect employees' health and ensure workplace safety, covering:

(1) Prevention and control of occupational diseases;

(2) Management of occupational medical examination;

(3) Education and training on occupational health; and

(4) Safer operating conditions.

3.2.2 In the process of building and operation, the companies should take the following measures to enhance occupational health and safety management:

(1) Entrust specific departments and personnel with occupational health and safety management;

(2) Conduct regular safety training;

(3) Provide employees with necessary, reliable drugs in case of injury and illness, and arrange regular medical examination for employees;

(4) Ensure workplace safety;

(5) Provide and routinely replace labor protection appliances in line with industrial regulations and standards;

(6) Reduce noise in the workplace;

(7) Prevent chemical and electrical hazards, fire accidents and explosions;

(8) Control dust in the workplace;

(9) Optimize the construction process, and mitigate or eliminate health hazards;

(10) Work together with local fire departments and hospitals to establish the "first-aid green path" for employees;

(11) Release policies on occupational health and safety management, and disclose how well they are implemented; and

(12) Observe occupational health management rules provided by local laws and regulations.

3.2.3 Core evaluation indicators

(1) Annual medical examination coverage;

(2) Safe and sanitary workplace;

(3) Occupational disease rate;

(4) Work-related injury and death rate; and

(5) Employee satisfaction over occupational health and safety.

3.3 Supply Chain Management

3.3.1 The companies should enhance supply chain management and integrate resources in the course of building and operation so as to sharpen their edge, avoid operating risks, and realize sustainable development of the projects.

3.3.2 In the course of design, the companies should, in line with local conditions, identify stakeholders along the supply chain, including equipment providers, dealers and subcontractors, and develop the mode and process of supply chain management.

3.3.3 In the process of building and operation, the companies should enhance cooperation with suppliers and disclose the progress of supply chain management and major partnerships to ensure sustainable development of the projects, including but not limited to:

(1) Implement the policy of open procurement, in an effort to safeguard the legitimate rights and interests of, and fulfill their commitment to, suppliers and subcontractors;

(2) Develop new modes of cooperation with subcontractors for the purpose of profit and risk sharing;

(3) Do their best to purchase local products and services; and

(4) Do their best to partner with CSR-minded suppliers and subcontractors for the sake of green procurement.

3.3.4 In the process of closure, the companies should complete settlement in a timely manner with suppliers and sub-contractors, safeguard their legitimate rights and interests, and fulfill the commitment to the same.

3.3.5 Core evaluation indicators

(1) Design of supply chain management process;

(2) Local procurement; and

(3) Green procurement.

3.4 Quality Management

3.4.1 The companies should lay down the policies and targets of quality management during the implementation of the projects. By means of quality planning, control, assurance and improvement - the four elements of quality management system - they should provide communities and residents with premium, reliable, safe offerings.

3.4.2 In the course of design, quality management should be conducted in the following manners:

(1) Lay down the policies and targets of quality management;

(2) Specify responsibilities of quality management unit;

(3) Establish quality management and technology standards; and

(4) Develop quality inspection mechanism.

3.4.3 In the process of construction, quality management should be conducted in the following manners:

(1) Urge the quality management unit to itemize the quality flaws and propose solutions;

(2) Rectify the flaws and collect data concerned;

(3) Evaluate quality improvement and benchmark the achieved level of quality against the standards; and

(4) Follow out quality management to the point of meeting the standards.

3.4.4 Core evaluation indicators

(1) Availability of quality management and technology standards;

(2) Influence of quality standards on local industrial standards concerned;

(3) Establishment and implementation of quality inspection mechanism; and

(4) Rectification of quality issues.

3.5 Co-existence with Community Residents

3.5.1 In the course of investment, the companies should comprehensively assess the implications of projects for local employment, living standards and development of community.

3.5.2 In the course of design, the companies should take into full consideration the relevance of the projects to local employment, living and working conditions, fulfillment of residents' needs, living environment and lifestyle. They should encourage the participation of the public, heed residents' views on the subsequent stages of the projects through communication with community representatives or opinion leaders, and make improvements in a timely manner.

3.5.3 In the process of building and operation, the companies should take the following measures to promote the harmonious co-existence with community residents:

(1) Create job opportunities and provide professional training for the residents;

(2) Do their best to protect the living environment;

(3) Prevent significant changes to the living environment and lifestyle;

(4) Make proper compensations for residents whose long-term livelihood is affected by the projects;

(5) Enhance cooperation with the local government to ensure lawful and rational land access, and take appropriate measures to relocate affected residents without prejudice to their living standards;

(6) Avoid damage to cultural heritage above- and under-ground and natural scenery. Such damage, if unavoidable, should be effectively rectified;

(7) Engage in local public welfare campaigns;

(8) Smooth communication channels, respond to residents' views and make corresponding improvements; and

(9) Disclose beforehand, and solicit residents' views on, any measure that may affect the residents.

3.5.4 In the process of closure, the companies should disclose information to, and solicit and promptly respond to opinions from, community residents. They should take appropriate measures to protect the living environment, and properly relocate residents affected by the projects.

3.5.5 Core evaluation indicators

(1) Resident satisfaction;

(2) Means of land access and difficulty of resettlement;

(3) Subsidy for residents;

(4) Employment of local workers;

(5) Improvement of living standards;

(6) Engagement in public welfare campaigns;

(7) Relevance of the project to local employment; and

(8) Frequency of communication with community residents.

4. Guidelines for Environmental Sustainability

The requirement for environmental sustainability prompts Chinese companies engaged in overseas infrastructure projects to a) observe local environmental laws and regulations; b) authorize specific personnel to establish, optimize, implement, or supervise the implementation of environmental rules; c) provide necessary human and material resources, funds and technology in support of environment protection; and d) rectify any violation of the said rules.

The companies should emphasize the reduction in greenhouse gas (GHG) emission and pollutant discharge as an approach to address water, air, soil, noise and solid waste pollution. They should strengthen water and soil conservation as well as the protection of species, nature reserves and marine environment. They should also make effective and rational use of resources.

4.1 GHG Emission Reduction

4.1.1 The companies should do their best to reduce GHG emission, in an effort to avoid direct or indirect damage of global warming to ecological balance and living environment.

4.1.2 In the course of design, the companies should establish scientific environmental rules, improve environmental proposals, develop financially and technically viable solutions to GHG emission, including the use of renewable or low-carbon energy, and design and work out green logistics plans for subsequent stages of the projects so that the GHG emission per unit of GDP meets both local standards and the requirements for environmental sustainability.

4.1.3 In the process of building and operation, the companies should cut energy use by increasing energy conversion efficiency, and reduce fossil fuel consumption and CO2 emission. A number of energy conservation and emission reduction measures should be taken, including but not limited to:

(1) Upgrade the operating efficiency or technology of available equipment;

(2) Develop advanced and efficient modes of energy use;

(3) Increase the use of low-carbon fuel (e.g. natural gas) in power generation;

(4) Adopt CO2 capture and storage technology; and

(5) Implement green logistics plans for infrastructure projects.

4.1.4 Core evaluation indicators

(1) Plans and measures for GHG emission reduction; and

(2) CO2 emission per unit of GDP.

4.2 Pollution Control

4.2.1 The companies should take pains with pollution control to avoid direct or indirect threat to humans and other creatures from changes in the composition and nature of the environment. Pollution control measures should be integrated into the stages of design, building and operation.

4.2.2 In the course of funding, the companies should, in line with the nature and needs of the project, authorize a qualified appraisal agency to a) issue an environmental impact assessment (EIA) report; b) test underground water, soil and air in the locality; and c) appraise raw materials, potential wastes, environmental facility design, and environmental impact of the project, and use the appraisal as the basis for measuring environmental costs. According to local laws and regulations, the EIA report should be filed for approval with the local environmental authority.

4.2.3 In the course of design, the companies should foster the scientific outlook on green development and give the greatest possible scope to energy-efficient equipment and clean production techniques, with the aim of reducing water, air, soil, noise and solid waste pollution. To be specific, they should:

(1) Develop detailed solutions to air pollution, including the installation of desulfurization and denitrification systems as well as dust remover for emission reduction, the use of sprinkler for dust suppression, and the installation of real-time smoke detection system;

(2) For industrial projects which may produce poison gas, design and install poison gas treatment facilities and detection meters;

(3) Work out measures for wastewater separation and treatment;

(4) Make comprehensive use of pollutant treatment technology for the sake of recycling;

(5) Protect soil against such contaminants as toxics, heavy metals and ions; and

(6) Lay down noise control plans.

4.2.4 In the process of building and operation, the companies should, based on their own needs, authorize specific personnel to routinely supervise the implementation of environmental rules and

pay full heed to the suggestions of locals and environmental organizations so as to control pollution in a pragmatic manner and rectify any conduct that might violate relevant environmental rules. The following measures should be taken:

4.2.4.1 Air pollution control

(1) Install the device for air pollutant discharge reduction;

(2) Entrust specific personnel with regular inspection of the device; and

(3) Sprinkle building site or take other measures to remove dust.

4.2.4.2 Water pollution control

(1) The building site is supposed to be far away from the water body. If not, it is strictly prohibited to discharge industrial wastes directly into the water body; and

(2) Wastewater should go through biochemical treatment so as to meet the discharge standards.

4.2.4.3 Solid waste pollution control

According to the nature of solid wastes, the companies should:

(1) Remove or handle domestic wastes and general industrial solid wastes in a timely manner;

(2) Properly emplace or dispose of hazardous wastes; and

(3) Recycle wastes.

4.2.4.4 Soil pollution control

(1) Prevent or reduce the infiltration of such contaminants as toxics, heavy metals and ions into the soil; and

(2) Prevent pollution through bioremediation and microbial catalytic degradation, or reduce/eliminate pollution and resume the ecological functions of soil through physical/chemical remediation.

4.2.4.5 Noise reduction

(1) High-decibel projects are supposed to be far away from noise-sensitive areas (e.g. schools, hospitals and sanatoria);

(2) If not, such projects should prefer low-decibel machinery and prohibit the use of machinery with noise exceeding standard. Noise barriers, acoustic ventilation windows, shielding woods and buffer zones are preferred; and

(3) Strictly control the duration of high-decibel operations so as to reduce disturbance to the surroundings, residents and entities.

4.2.4.6 Environmental information disclosure

In the process of building and operation, the following environmental information should be disclosed:

(1) Environmental protection plans and targets for the stages of building and operation;

(2) Environmental investment and environmental technology development;

(3) Type, quantity, concentration and discharge of pollutants;

(4) Building and operation of environmental protection facilities;

(5) Waste treatment, recycling and comprehensive utilization; and

(6) Other relevant information.

4.2.5 Core evaluation indicators

4.2.5.1 Air pollution

(1) Air pollution control measures, plans and techniques;

(2) SO2, NOx and soot emission per unit of output; and

(3) Up-to-standard emission rate.

4.2.5.2 Water pollution

(1) Water pollution control measures, plans and techniques;

(2) Wastewater treatment rate; and

(3) Up-to-standard discharge rate.

4.2.5.3 Solid waste pollution

(1) Proper solid waste treatment rate; and

(2) Solid waste recycling rate.

4.2.5.4 Soil pollution

(1) Soil pollution control measures and plans;

(2) Restoration of polluted soil; and

(3) Resources invested in soil pollution control.

4.2.5.5 Noise pollution

(1) Noise control measures for the stage of building;

(2) Avoidance of noise-sensitive areas; and

(3) Residents' complaint.

4.2.5.6 Appraisal of environmental impact and pollution control by local communities

4.3 Species Protection

4.3.1 Species protection should be a major factor in the siting decision. The companies should do their best to prevent damage to the ecosystem and conserve biodiversity and habitats.

4.3.2 In the course of design, the places where rare and endangered wildlife species grow, inhabit, forage, spawn, breed or migrate should be avoided as the project site, thus minimizing the environmental impact.

4.3.3 In the process of building and operation, the companies should take precautions to minimize their impact on major species in the locality, including but not limited to:

(1) Establish an ecological corridor;

(2) Cordon off a conservation area;

(3) Set up a buffer zone; and

(4) Establish isolation belts.

4.3.4 Core evaluation indicators

(1) Measures and plans for species protection;

(2) Construction of species protection facilities; and

(3) Avoidance of places where rare species inhabit, breed and migrate.

4.4 Ecosystem Management

4.4.1 Emphases should be placed on water source protection, water and soil conservation, flood diversion and storage, windbreak and sand fixation, and maintenance of biodiversity in the nature reserve.

4.4.2 In the course of design, eco-sensitive zones, including water sources and rare species preservation areas, should be avoided as the project site, thus preventing direct or indirect impacts on the ecosystem.

4.4.3 In the process of building and operation, measures should be taken to enhance the protection of nature reserve, including but not limited to:

(1) Implement laws and regulations on nature reserve protection;

(2) Be responsible for the filing of species in the nature reserve and contingency planning;

(3) Restore drainage and irrigation systems;

(4) Plant trees and grass to restore vegetation, and ensure a high plant survival rate;

(5) Make a reasonable schedule for the building and lay stress on waterproofing and drainage in the rainy season so as to reduce water and soil erosion; and

(6) Minimize adverse effect of the projects on local nature reserve.

4.4.4 Core evaluation indicators

(1) Measures and plans for nature reserve protection;

(2) Avoidance of eco-sensitize zones;

(3) Resources invested in ecological conservation;

(4) Measures and plans for water and soil conservation;

(5) Land restoration after the building; and

(6) Support projects for water and soil conservation.

4.5 Marine Environment Protection

4.5.1 Marine nature reserves should be avoided as the project site. Onshore engineering projects should protect marine environment and resources, maintain ecological balance, and promote the sustainable development of marine ecosystem.

4.5.2 In the course of design, onshore engineering projects should conduct EIA, develop scientific regional marine environment protection plans and pollution contingency plans to prevent and control pollution, and include the required funds for pollution control in the project budget.

4.5.3 In the process of building and operation, measures should be taken to enhance marine environment protection, including but not limited to:

(1) Implement local laws and regulations on marine environment protection;

(2) Authorize specific departments and personnel to monitor and control the total amount of offshore discharge, and protect seawater and aquatic resources;

(3) Give priority to clean energy and techniques which discharge less pollutants, with the aim of reducing or preventing marine pollution; and

(4) Restore marine ecosystem and minimize the adverse effect of the projects on local sea areas.

4.5.4 Core evaluation indicators

(1) Measures and plans for marine environment protection;

(2) Avoidance of marine nature reserve;

(3) Resources invested in marine environment protection; and

(4) Implementation of pollution contingency plans.

4.6 Sustainable Use and Protection of Resources

4.6.1 During the projects, the companies should a) minimize the consumption of natural resources (e.g. energy, materials and water); b) use durable, renewable and resilient materials, prioritize local procurement, and reasonably handle surplus materials; and c) enhance energy efficiency and advocate resource-saving production patterns.

4.6.2 In the course of design, the companies should work out energy conservation plans, covering:

(1) An energy structure with renewable energy (e.g. hydropower, wind power, solar power, biomass power, ocean power and geothermal power) as the mainstay;

(2) Effective heat recycling for the stage of operation; and

(3) Advanced recycling measures for energy, water and production materials.

4.6.3 In the process of building and operation, the companies should take the following measures to enhance resource efficiency:

(1) Install energy-efficient equipment;

(2) Give the greatest possible scope to renewable energy; and

(3) Use energy-efficient recycling technology.

4.6.4 In the process of building and operation, the companies should disclose the following information:

(1) Energy conservation plans and targets;

(2) Implementation of energy conservation plans;

(3) Total resource consumption per unit of GDP;

(4) Resource recycling; and

(5) Other information on resource utilization.

4.6.5 In the process of closure, the companies should pay heed to environmental protection by minimizing adverse environmental effects and expediting pollution or hazard arising out of building and operation processes until the projects meet the requirements of local environmental regulators.

4.6.6 Core evaluation indicators

(1) Type of renewable energy;

(2) Proportion of renewable energy; and

(3) Recycling of resources.

5. Sustainability Governance Rules

5.1 Definition of Sustainability Governance Rules

5.1.1 Sustainability governance rules refer to the by-laws and processes established by Chinese companies engaged in overseas infrastructure projects to ensure sustainable development of the projects, regarding the stages of funding, planning, design, building, operation, maintenance and closure.

5.1.2 To comprehensively promote sustainability governance, the companies should a) foster and include the ideology of sustainable development in their decision making processes; b) set up and staff the Sustainability Governance Committee or departments concerned (e.g. Environmental Protection Dept. and CSR Dept.); c) establish the sustainability governance system which integrates sustainability evaluation into risk control and performance assessment; d) develop the emergency management mechanism for force majeure events; and e) work out sustainability governance information disclosure and implementation plans.

5.2 Sustainability Governance System

5.2.1 The companies should set up an efficient, well-structured Sustainability Governance Committee as the organizational guarantee for the sustainable development of the companies, and clearly specify the rights and responsibilities of Committee members.

5.2.2 The Director of the Committee should be doubled by the Chairman or General Manager. Certain members may assume multiple posts to implement the decisions and directives of the Committee and promote sustainable development of the companies.

5.2.3 The main responsibilities of the Committee include:

(1) Develop and release sustainability plans, strategies and targets;

(2) Organize the preparation and implementation of sustainability plans and special budgets.

(3) Guide various units in appointing the sustainability personnel, and foster a well-structured sustainability promotion organization;

(4) Call for stakeholder engagement in major decision making and other business activities; and

(5) Organize the preparation and publishing of annual project sustainability report.

5.3 Sustainability Information Disclosure

5.3.1 The companies should establish and optimize a mechanism for disclosing sustainability information to domestic stakeholders and communities where the projects are based, promote project transparency in an all-round manner, and foster closer relationship with stakeholders.

5.3.2 The following rules should be observed:

(1) The companies should entrust specific personnel with accurate, complete, timely and truthful information disclosure. The information disclosed should not contain any false record, misleading statement or serious omission;

(2) The companies should disclose on the website the sustainability governance rules and environmental protection units, and regularly release the sustainability report; and

(3) Major changes in the sustainability governance system and pollution accidents should be promptly disclosed via the website or media, and filed with the competent authority.

5.4 Sustainable Development Report

The companies should establish the mechanism for regularly preparing and releasing the project sustainability report. To be specific:

(1) The report should fully disclose the companies' sustainability governance rules, actions, performance and future plans;

(2) The report should be prepared no later than the end of the year, and released no later than the end of April of the following year; and

(3) The Sustainability Governance Committee should prepare, or commission a professional institution to prepare, the report.

5.5 Sustainability Evaluation System

The companies should, based on the targets provided in the sustainability report, a) establish a sustainability evaluation system which contains the mechanism for fulfillment monitoring and

methods for routine evaluation; b) lay down the evaluation standards; c) set up a full-fledged sustainability performance evaluation system; d) assess the all-round implementation of sustainability rules; and e) regularly review the assessment results and rectify the problems.

In line with industrial characteristics, the evaluation standards apply both to the Sustainability Governance Committee and to the units concerned, including but not limited to:

(1) Development and release of sustainability plans, strategies and targets by the Committee;

(2) Preparation and implementation of sustainability plans and special budgets by the Committee;

(3) Appointment of sustainability personnel with clearly specified responsibilities by various units under the Committee's guidance;

(4) Establishment of evaluation standards and alert lines by the Committee for core economic, environmental and social indicators in line with the applicable local laws and regulations as well as the nature of industries concerned;

(5) Preparation and release of annual project sustainability report by the Committee;

(6) Tracking and regular forwarding of environmental, building and operating data by sustainability personnel of various units;

(7) Ability of sustainability personnel of various units to account for, and promptly inform the Committee of, the nearing or hitting of the alert line by the core indicators; and

(8) Ability of the Committee to promptly review the data forwarded by sustainability personnel of various units and deal with those above the alert line.

5.6 Sustainability Emergency Management

5.6.1 The companies should be capable of contingency planning and effective response to external uncertainties within the shortest time, ensuring sustainable operation of the projects.

5.6.2 The companies should pay attention to the management of man-made accidents, political turmoil, religious/social conflicts, outbreak of infectious diseases, terrorist attacks, ecological disasters (e.g. earthquake, flood, natural disasters and extreme weather) and other emergencies.

5.6.3 The companies should develop contingency plans and support mechanism to ensure a timely response.

6. Supplementary Provisions

The Guidelines are subject to CHINCA's interpretation.

The Guidelines take effect as of the date of promulgation.

Acknowledgement

Over the past year, organizations from different fields have shared their expertise, views and experiences for the Guidelines. The drafting team of Dagong Global Credit Rating Group (Dagong Group) has made enormous efforts and Emerging Market Multinationals (EMM) Network for Sustainability* has extended great support in the development and publicity of the Guidelines. Experts from relevant government departments, financial institutions, international organizations, foreign embassies in China, industry associations, research institutions and member companies have given substantial support for the development of the Guidelines. CHINCA would like to express its sincere gratitude to all the parties concerned. CHINCA's special thanks also go to Ms. Xi Ning from Dagong Group, who participated in all the drafting and revision of the Guidelines, Mr. Jiang Ketao from China Development Bank, Mr. Sven-Uwe Mueller and Ms. Li Fan from Inter-American Development Bank and Mr. Qi Shaoyun from CNPC Economics and Technology Research Institute, who have contributed valuable comments and suggestions on the Guidelines.

List of Acknowledged Organizations:

1. Ministry of Commerce of P.R.C.
2. Ministry of Housing and Urban-Rural Development of P.R.C.
3. Ministry of Environmental Protection of P.R.C.
4. China Development Bank
5. The Export-Import Bank of China
6. Bank of China
7. Asian Infrastructure Investment Bank (AIIB)
8. Inter-American Development Bank (IDB)
9. Dagong Global Credit Rating Group
10. Gesellschaft für Internationale Zusammenarbeit (GIZ)
11. United Nations Development Program (UNDP)
12. World Wildlife Fund (WWF)
13. Embassy of Sweden in China
14. Embassy of France in China
15. Embassy of Australia in China
16. Embassy of the Netherlands in China

17. The World Resources Institute
18. China National Textile & Apparel Council (CNTAC)
19. China WTO Tribune
20. China Chamber of Commerce of Metals Minerals & Chemicals Importers & Exporters (CCCMC)
21. CNPC Economics & Technology Research Institute
22. China Nonferrous Metal Mining (Group) Co., Ltd. (CNMC)
23. China Road and Bridge Corporation (CRBC)
24. CITIC Construction
25. China Civil Engineering Construction Corporation (CCECC)
26. China Three Gorges International Corporation
27. China State Construction Engineering Corporation (CSCEC)
28. SINOHYDRO Corporation Limited
29. China Railway Group Limited
30. China National Technical Import and Export Corporation (CNTIC)
31. China Harbour Engineering Company Ltd.
32. China CAMC Engineering Co.,Ltd. (CAMCE)
33. CGCOC Group
34. Beijing Construction Engineering Group
35. Dongfang Electric Corporation
36. Weihai International Economic (Technical Cooperative Co., Ltd(WIETC)
37. ZTE Corporation
38. China Gezhouba Group Corporation (CGGC)
39. COSCO Manning Cooperation INC.

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* The Emerging Market Multinationals (EMM) Network for Sustainability (EMM for short) is a network of leading sustainability managers and executives of multinational companies that are based or operating in emerging economies, who jointly work on developing and implementing sustainability and environmental standards, and turning them into successful business solutions. The EMM is an integral part of the Emerging Market Sustainability Dialogues (EMSD) that is committed to innovative economic policy making, sustainable business development, and sustainable finance. The secretariat of the EMSD is hosted by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ).