

Agricultural Development Bank of China

2018 Euro Green Bond

Follow-up Certification Report

(2019)

CECEP Consulting Co., Ltd.

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中国节能
CHINA ENERGY CONSERVATION
INVESTMENT CORPORATION



Certification Conclusion

Agricultural Development Bank of China (hereinafter the "ADBC") issued the Euro Green Bond of the Agricultural Development Bank of China for 2018(hereinafter the "Green Bond")overseas with an amount of about EUR 500 million and coupon of 3 years, and the Green Bond has been listed on the Hong Kong Stock Exchange, Luxembourg Stock Exchange and China Europe International Exchange.

CECEP Consulting Co., Ltd. (hereinafter the "Certifier"), following PBOC Green Bond Endorsed Projects Catalogue (2015) (hereinafter the "Catalogue") issued by the Green Finance Committee of China Society for Finance and Banking, the Green Bond Principles (2018) (hereinafter the "GBP"), the Social Bond Principles (2018) and the Sustainability Bond Guidelines (2018) issued by the International Capital Market Association (ICMA) and the Framework of the Agriculture Development Bank of China for Green and Sustainable Development Bond (hereinafter the "Framework"), conducts the annual follow-up certification based on the procedures set out in the Conformity Assessment - Requirements for Bodies Providing Audit and Certification of Management Systems (ISO/IEC 17021: 2011) and the Guidelines for Auditing Management Systems (ISO 19011: 2011).

As of October 31, 2019, ADBC had raised proceeds of EUR 5 billion, with 1.959 billion yuan (about 248 million euros, with a reference exchange rate of 1 euro = 7.8943 yuan) allocated to 9 eligible green projects. The Certifier has conducted evaluation and certification of ADBC in terms of the use of proceeds raised by the Green Bond, the assessment and selection of green projects, the proceeds management, information disclosure and reporting and environmental benefit targets of proposed green projects. As of October 31, 2019, there has been no deviation from the Catalogue, the GBP and other relevant policies, regulations, and standards of China, and green projects that are also social responsibility projects within the Framework meet the requirements set out in Article 1 and 2 in the SDGs.

As of October 31, 2019, it is evaluated that the proposed green projects funded by means of the Green Bond are expected to produce the following quantifiable overall environmental benefits when put into formal operation:

(1) Sustainable water and wastewater management

- Increasing the wastewater treatment capacity by 64.79 million tons/year and reducing the chemical oxygen demand by 20,650 tons/year, reducing the biochemical oxygen demand by 10,780 tons/year and reducing the ammonia nitrogen demand by 1,900 tons/year;
- Constructing 19.16km of new wastewater transfer tunnels;
- Completing the ecological improvement of 9.6km of rivers.

(2) Environmentally sustainable management of living natural resources and land use

- Increasing high standard farmland by 6 million m²;
- Maintaining 109 million m² of high standard farmland;
- Reclaiming 609,500 m² of damaged land;
- Increasing green area by 2,302,300 m², increasing the carbon sequestration capacity by 69,000 tons, increasing the sulfur dioxide absorption capacity by 27.8 tons/year, reducing dust fall by 5.0 tons/year, increase the oxygen release by 3,000 tons/year and increasing the water conservation capacity by 811,000 tons/year .

(3) Renewable energy

- Increasing the power generation capacity by 21.06 million kWh/year and replacing a consumption of fossil energy of 6,634 tons of standard coal per year, reducing CO₂ emission by 18,926 tons/year, reducing sulfur dioxide emission by 142 tons/year and reducing nitrogen oxide emission by 56 tons/ year.

Two of the nine proposed green projects funded by means of the Green Bond are also social responsibility projects under the Framework intended to be beneficial to society. The social benefits expected after the two projects are put formal operation are as follows:

- A flooding mitigation project which is also a poverty alleviation project is expected to reduce the impact of floods on the residents (including the registered poverty-stricken population) in the vicinity of the project;
- A flooding mitigation project that is also a cultivated land improvement and restoration project is expected to increase the grain production and the income of the poverty-stricken population and help to alleviate the poverty of the registered poverty-stricken population.

Our estimates as to the environmental benefits and social benefits are made based on the supporting materials provided by the Issuer in relation to relevant projects. Such estimates are subject to changes in technical standards and the external environment.



Section I Clarification on Certification

1. Scope of Certification

Euro Green Bond of Agricultural Development Bank of China for 2018(in duration).

2. Objectives of Certification

Compliance of the Green Bond to be issued by ADBC with the Catalogue, the GBP and other relevant laws and regulations of China and the compliance of the funded green projects funded by means of the Green Bond that are also social responsibility projects under the Framework with the SDGs.

3. Content of Certification

- (1) Compliance of the green projects funded by proceeds;
- (2) The effectiveness and compliance of the evaluation and selection of green projects;
- (3) The completeness and compliance of the management of proceeds;
- (4) The completeness and compliance of information disclosure and reporting;
- (5) The environmental benefit goals and social benefit goals (if any) of the allocated green projects.

4. Basis of Certification

- (1) PBoC Green Bond Endorsed Projects Catalogue (2015) (the Green Finance Committee of China of China Society For Finance and Banking);
- (2) Green Bond Principles (2018) (the International Capital Market Association)
- (3) The Framework of the Agriculture Development Bank of China for Green and Sustainable Development Bond (ADBC);
- (4) Sustainable Development Goals;
- (5) The Circular of the People's Bank of China on Establishing a Special Statistical System for Financial Accurate Poverty Alleviation Loans (Yinfa [2016] No. 185);
- (6) The Green Credit Guidelines (Yinjianfa [2012] No. 4);
- (7) The Energy Efficiency Credit Guidelines (Yinjianfa [2015] No. 2);
- (8) The Conformity Assessment - Requirements for Bodies Providing Audit and Certification of Management Systems (ISO/IEC 17021: 2011);
- (9) The Guidelines for Auditing Management Systems (ISO 19011: 2011);
- (10) ADBC's relevant documents, mainly information relevant to the application for issuance of the Green Bond and documents related to ADBC's management system.



5. Procedures of Certification

The procedures that CECEP Consulting(hereinafter the “Certifier”) plans to undertake for the evaluation and certification of the Green Bond include formation of the project team, due diligence, report preparation and three-level audit, review of the assessment certification by the internal quality management committee, external opinion solicitation, report issuance and filing.

- (1) Formation of the project team. After accepting the commission, the Certifier’s Green Financing Department appoints a person in charge and members of the project team with reference to the features of the project.
- (2) Due diligence work. As due diligence efforts, the Certifier reviews the documents related to Issuer’s systems, relevant public information and reference related to the Green Bond, conducts on-site interviews with the Issuer’s management and relevant department heads and survey of projects funded by proceeds and calculates the environmental benefits. Commissioned by ADBC, the Certifier also evaluates social benefits of funded green projects that are also social responsibility projects under the Framework and certified whether they are consistent with the UN SDGs.
- (3) Based on the foregoing due diligence efforts, the certification team finalizes and submits the Certification Report to the Internal Quality Management Committee for review after the report is reviewed by the project team, the relevant department and the supervisor at the level of the company management, and issues a Certification Report in consultation with all relevant parties.

Section II Basic Information

On November 26, 2018, the Agricultural Development Bank of China (hereinafter referred to as the “ADBC”) successfully issued the 2018 Green Finance Bonds of the Agricultural Development Bank of China. The basic situation of the bonds is detailed in the table below.

Table 1 Basic information of bonds

Description	Euro Green Bond of the Agricultural Development Bank of China for 2018
Size (EUR 100 million)	5
Tenor (year)	3
Issue date	November 26, 2018
Expiry date	November 26, 2021
Coupon	3mE+48bp



Accounting date	November 26, 2018
Amount received	EUR 500 million

Section III Allocation and Management of Proceeds

1. Allocation of Proceeds

ADBC issued the Green Bond with proceeds of EUR 500 million. As of October 31st, the proceeds with a total of 1.959 billion yuan (about 248 million euros, with a reference exchange rate of 1 euro = 7.8943 yuan) have been allocated to 9 eligible green projects, which are in line with the framework as defined in the Catalog and can achieve the environmental goals in the GBP Principles.

According to the definition and classification criteria of the Catalogue, the eligible green projects to be funded by the proceeds are classified into pollution prevention and control, ecological protection/climate change adaptation and clean energy. ADBC plans to invest mainly in the projects in the first two classes that account for 88.9% in terms of the total number of projects and 99.1% in terms of proceeds. The categories to which the project planned to be funded are detailed in Table 2. The geographical distribution of above-mentioned green projects are detailed in Figure 1.

Table 2: Categories of Green Projects Listed in the Catalogue Funded by the Proceeds

Category of green projects			Number of projects	Amount of the fund invested (CNY 100 million)
Level 1	Level 2	Level 3		
2. Pollution prevention and control	2.1 Pollution prevention and control	2.1.1 Facility construction and operation	3	10.32
5. Clean energy	5.2 Solar photovoltaic power generation	5.2.1 Facility construction and operation	1	0.16
6. Ecological protection and climate change adaptation	6.1 Natural ecological protection and protective development of tourism resources	6.1.1 Facility construction and operation	3	7.03



Category of green projects			Number of projects	Amount of the fund invested (CNY 100 million)
Level 1	Level 2	Level 3		
	6.4 Emergency prevention and control of disasters	6.4.1 Facility construction and operation	2	2.08
Total			9	19.59



Figure 1: Geographical Distribution of Allocated Green Projects

ADBC plans to use proceeds while following the GBP. Funded projects are classified into three categories: sustainable water and wastewater management, environmentally sustainable management of living natural resources and land use, and renewable energy.



Table 3: Categories of Proposed Green Projects Listed in the Catalogue Allocated by the Proceeds

Categories of eligible green projects		Number of projects	Amount allocated to projects (CNY 100 million)
Category	Project		
Sustainable water and wastewater management	Wastewater treatment and drainage network	3	10.32
	Flooding mitigation	2	2.08
Environmentally sustainable management of living natural resources and land use	Farmland improvement and restoration	2	4.53
	Urban greening	1	2.50
Renewable energy	Photovoltaic power generation	1	0.16
Total		9	19.59

We have not found any deviation of the classification of funded green projects by means of the Green Bond from the Catalogue and the GBP.

2. Management of Proceeds

Through document review and due diligence, the Certifier learned that ADBC followed the requirements set out in the Management Measures and the Framework on the management and allocation of proceeds of the Green Bond to ensure that proceeds are allocated in proposed green projects.

For the issuance of the Green Bond, ADBC established a Green Bond proceeds management ledger for the green financial bond proceeds to strengthen the management of the receipt, disbursement and fund recovery of the Green Bond and ensure that the proceeds are used exclusively.

When idle, ADBC temporarily allocated the proceeds to Green Bond or/and money market instruments with good credit rating and market liquidity, but the proceeds will eventually be fully allocated to green projects, to comply with the requirements for the special account management and the application of the fund to designated purposes.

We have not found any deviation of management of proceeds from requirements of the GBP.



Section IV Information Disclosure and Reporting

Through document review and due diligence, the Certifier learned that before the issuance, ADBC had employed CICERO and IISD to evaluate the Framework and jointly issued a second-party opinion. ADBC also employed the Certifier to conduct pre-issuance evaluation and certification of the Green Bond and publish the evaluation certification opinion.

In the duration of the Green Bond, ADBC has made the following arrangements for information disclosure and reporting: ADBC will publish annual reports on the issuance of the bond, including a report on the use of the fund and a report on the impacts of the Green Bond. The fund use report will include information as to the amount of funds invested in various green projects, the balance at the end of the year and the regional distribution of the projects. Subject to the confidentiality agreement between ADBC and the client (borrower), the report will disclose certain cases. The impact report will disclose the expected and actual environmental and social benefits (if any) of the green projects that have been funded with the proceeds as well as the methods and key assumptions used for measuring the impacts. ADBC has employed the Certifier to conduct ongoing follow-up assessments of the actual (or expected) environmental and social benefits (if any) generated by green projects funded by means of the Green Bond and issue annual assessment reports.

In addition to the above reports, ADBC will also make disclosure through other feasible channels. For example, annual reports and corporate social responsibility reports will be posted on the official website of ADBC (<http://www.adbc.com.cn/>) or Hong Kong Stock Exchange, Luxembourg Stock Exchange and China Europe International Exchange.

We certify that ADBC has set up a disclosure mechanism and arranged for a third-party certifier to conduct follow-up assessment and we have not found any deviation of the disclosure and reporting from the requirements of the GBP.

Section V Assessment of Environmental and Social Benefits

As of October 31st, 2019, the 9 green projects funded by ADBC with proceeds of Green Bond fall into the three categories: pollution prevention and control, clean energy and ecological protection/climate change adaptation listed in the Catalogue, and the three categories set out in the GBP: sustainable water and wastewater management, environmentally sustainable management of living natural resources and land use, and renewable energy. According to the allocation of the green bonds of ADBC, the Certifier reviewed and verified the information and supporting materials of the project progress provided by ADBC and related project undertaking agencies, including but not limited to: the feasibility study reports and project approvals related to all green projects, project environmental impact assessment reports and approvals, project construction progress, completed project activities and project cumulative asset expenditures, etc.. The Certifier extracted key information such as project technical indexes and evaluated and calculated the environmental benefits expected to be generated by the green projects, combined with



the EIB project's carbon footprint methodology and CDM methodology, taking full account of China's regional factors and technical characteristics. The Certifier also evaluated social benefits of 2 green projects that are also social responsibility projects under the Framework and certified that they are consistent with the UN SDGs.

The Green Bond was offered to the public following plans and schedules set out in the Framework. Expected environmental benefits of the green projects are as follows:

1. Projects for sustainable water and wastewater management

The proposed green projects funded with the proceeds include five sustainable water and wastewater management projects, mainly wastewater treatment plants and drainage networks, flooding mitigation facilities (for ecological management of rivers and reservoir risk elimination and reinforcement). Such projects will greatly enhance the urban wastewater treatment capacity, improve the water quality and produce significant environmental benefits in terms of ecological restoration, flooding mitigation and drainage. One of the projects is also a social responsibility project under the Framework, which, in addition to environmental benefits, will also generate poverty alleviation benefits and contribute to the achievement of the UN Sustainable Development Goal 1, namely the alleviation of poverty.

- (1) The (two) wastewater treatment plants, upon completion, will realize a wastewater treatment capacity of 64.79 million tons/year and reducing the chemical oxygen demand by 20,650 tons/year, reducing the biochemical oxygen demand by 10,780 tons/year and reducing the ammonia nitrogen demand by 1,900 tons/year;
- (2) The deep tunnel wastewater pipeline network project will realize a total of 19.16 kilometers of new wastewater tunnels. After the completion, the project will significantly raise the local wastewater collection rate, enhance the urban wastewater treatment capacity, reduce wastewater discharge and improve the quality of local water;
- (3) A river ecology improvement project is designed to cover a river section of 9.6 kilometers. The banks of the target river will be built, reconstructed or reinforcement, which will significantly increase the flooding mitigation capacity of the river section. An ecological wetland system will be developed to increase the green area of the city (by 600,000m² ecological wetland) while improving the ecological environment of the river.
- (4) A reservoir risk-elimination and reinforcement project will further consolidate the flooding mitigation capacity of the reservoir by reinforcing the dam, which will further enhance its flooding mitigation capacity (once-in-50-year standard).

Typical Case 1: Banxuegang Sewage Treatment Plant(Phase II)

The Banxuegang Sewage Treatment Plant(Phase II) is located in Banxuegang Industrial Zone, with a sewage treatment scale of about 120,000m³ per day. Sewage treatment adopts "pre-treatment (coarse and fine screen + aerated sedimentation) + rapid



sedimentation tank + MBR” treatment process. The total investment of the project is about RMB 339 million. It is estimated that the annual sewage treatment capacity can reach 43.8 million tons/year, reduce chemical oxygen demand by 16,206 tons/year, reduce biochemical oxygen demand by 9,373 tons/year, and reduce ammonia nitrogen by 1,467 tons/year.



The project started in February 2018. So far, the main body construction and environmental protection acceptance have been completed. During the operation of the project, the conventional monitoring indicators of water pollution discharges will reach the “Quality Standard for Surface Water Environment” (GB3838-2002) Class IV standard and other control indicators will meet the “Emission Standards for Pollutants from Urban Sewage Treatment Plant”(GB18918-2002) Level A standard requirements. After the project is put into operation, the sewage treatment capacity in the Banxuegang area will be significantly enhanced, which will help improve the ecological environment of the Guanlan River Basin.

After being put into operation, the project can reduce pollutants entering the river, helping meet the water body assessment requirements of the Guanlan River Basin. According to the Green Bond Principles (2018), the project meets the defined standards and requirements for the Category “Sustainable Water Resources and Wastewater Management”. According to the Catalog of Green Bond Supported Projects, the project complies with the definition criteria and requirements of the category “2. Pollution Prevention/2.1 Pollution Prevention/2.1.1 Facilities Construction and Operation”.

2. Projects for environmentally sustainable management of living natural resources and land use

The proposed green projects to be funded by proceeds include three projects for environmentally sustainable management of living natural resources and land use, designed mainly to support the improvement and restoration of cultivated land and urban greening initiatives. Such projects will help achieve the goals of making effective use of



resources (land) and sustainable development. One of the projects is also a social responsibility project under the Framework, which, in addition to environmental benefits, will also generate poverty alleviation benefits and contribute to the achievement of the UN Sustainable Development Goal 1 (to eliminate poverty in all forms) and UN Sustainable Development Goal 2 (to eliminate hunger, realize food security, improve nutrition and promote sustainable agriculture).

- (1) Two farmland improvement and restoration projects, when completed, will increase the area of high-standard farmland by 6 million m², maintain 109 million m² of high-standard farmland and restore 609,500 m² of damaged farmland. Those projects will improve land quality, prevent soil acidification and alkalinity, alleviate soil erosion, improve the capacities of farmland production systems to cope with climate change and help efficient use of land use and sustainable development of agriculture.
- (2) One urban greening project will increase the green area by 2,302,300m², the carbon sequestration capacity by 69,000 tons and the sulfur dioxide absorption capacity by 27.8 tons/year, reduce dust fall by 5.0 tons/year, increase the oxygen release by 3,000 tons/year and the water conservation capacity by 811,000 tons/year.

3. Renewable energy project

One of the proposed green projects to be funded by proceeds is the renewable energy project, in which a photovoltaic green house with a capacity of 18MWp has been developed. After being put into operation, the project will realize an annual power generation capacity of 21.06 million kWh, with the benefits of replacing and reducing fossil energy consumption and, therefore, reducing the emissions of carbon dioxide and pollutants such as sulfur dioxide and nitrogen oxides. According to the Certifier's estimates, the project, when put into operation, will replace a consumption of fossil energy of 6634 tons of standard coal per year and reduce CO₂ emission by 18,926 tons/year, sulfur dioxide emission by 142 tons/year and nitrogen oxide emission by 56 tons/ year.

Typical Case 2: Ganliangou 18MW Photovoltaic Greenhouse Project in Yuliangku District, Youjiang, Guangxi

The 18MW photovoltaic greenhouse project in Ganliangou, Youliangku District, Youjiang, Guangxi is located in the flooded area of the reservoir at Ganliangou, Youjiangku District, Youdong Reservoir, Tiandong County, Baise City, Guangxi Zhuang Autonomous Region. It makes full use of the land in the flooded area of the reservoir, effectively uses the local stable solar energy resources, meets the local electricity demand and optimizes the energy mix, with the benefits of replacing and reducing fossil energy consumption and, therefore, reducing the emissions of carbon dioxide and pollutants such as sulfur dioxide and nitrogen oxides.



Starting in March 2018, the project has been completed and put into operation now. with actual total investment of RMB 129 million, actual installed capacity of 18MW, actual annual power generation of about 21.06 million kWh, corresponding to the replacement of fossil energy of 6,634 tons of standard coal/year, carbon dioxide emission reduction of 18,926 tons/year, sulfur dioxide emission reduction of 142 tons/year, nitrogen oxide emission reduction of 56 tons/year.

This photovoltaic power generation project complies with the definition standards and requirements of the "Renewable Energy" of "Green Bond Principles" (2018), and also meets the definition criteria and requirements of "5. Clean Energy/5.2 Solar Photovoltaic Power Generation/5.2. 1 Facility construction and operation" of the Catalogue.

Our estimates as to the environmental benefits and social benefits are made based on the supporting materials provided by the Issuer in relation to relevant projects. Such estimates are subject to changes in technical standards and the external environment.



Certifier's Statement

We hereby make the following statement as to this Third-party Certification Report on the Green Corporate Bond (hereinafter the "Report") we have issued:

- I. We have fulfilled our obligation of investigation and integrity and have issued this Report following the principles of objectivity, good faith and fairness.
- II. The conclusion we have presented in this Report is based on the information provided by the Issuer, who shall be responsible for the authenticity, legality and completeness of the information it has supplied to us.
- III. The conclusion contained in this Report is presented following proper technical standards and certification procedures, free of any adjustment made under influence of the Issuer or any other organization or individual.
- IV. This Report shall provide support and reference in relation to issues involved in the planned issuance and we disclaim any liability for any consequence of the use of the conclusion presented and information contained in this Report.

Person in charge of the certification team:

马云川

Ma Yunchuan

Certifier's seal:



CECEP Consulting Co., Ltd.

Members of the certification team:

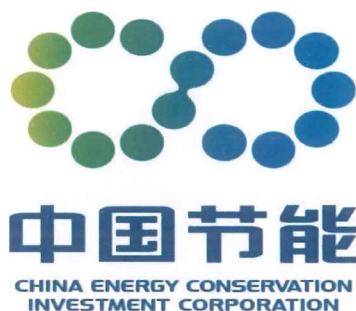
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April 10th, 2020



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