



Annual Report 2018
Chinese Academy of Environmental Planning
生态环境部环境规划院

Chinese Academy of Environmental Planning

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How To Find Us



FOREWORD

FOREWORD

The year 2018 marked the start of the comprehensive implementation of the spirit of the 19th CPC National Congress and the 40th anniversary of our Reform and Opening-up. The year 2018 established an important milestone in our development history of the ecological civilization construction and ecological environment protection and witnessed the significant development achieved by Chinese Academy of Environmental Planning (CAEP).

In 2018, a defense war for blue sky, clean water and safe land erupted as the ecological civilization was enshrined into the Constitution, the Ministry of Ecology and Environment was set up, and the National Ecological Environment Protection Conference was held successfully. In 2018, the Chinese Academy of

Environmental Planning made a significant contribution to the environmental protection cause of China and played a supporting role as an environmental think tank. From the final implementation evaluation of *the Action plan on Water Pollution Prevention and Control to the Three-Year Action Plan to Win the Blue Sky Defense Battle*, from advancing the implementation and evaluation of *the Action plan on Water Pollution Prevention and Control to the participation in the revision of the Action plan on Soil Pollution Prevention and Control*, from *the Technical Guidelines for the Preparation of Three Lines and One List to the Implementation Plan for Regional Spatial Ecological Environment Assessment*, from the economic decision reshaped by "Two Mountains Theory", the policy of "Streamline Administration, Delegate Power, Strengthen Regulation and Improve Service" for ecological environment protection to the ecological protection and restoration of mountains, rivers, forests, fields, lakes and grasslands, from *the*

compilation of the Ecological Compensation Measures to the support for the reform of the ecological environment risk and damage compensation system, from the intensified supervision of the blue sky defense battle to the special supervision of the regulation and improvement of dirty and smelly water bodies, every policy document and activity embodied the painstaking efforts and sweat of the all personnel of the Chinese Academy of Environmental Planning.

Looking back at 2018, there are fruitful results. Looking ahead to 2019, we still should work hard. In the spirit of "Iron Army for Environmental Protection", we should perform our duties and work hard with due diligence, and contribute our wisdom and strength during the critical, difficult and window periods of ecological civilization construction to build a vigorous, fragrant and beautiful China with blue sky, white clouds, twinkling stars, green hills and clear waters.

LU Jun
Secretary of the CPC
Committee & Vice President, CAEP

WANG Jinnan
President, CAEP



Photographer: Ding Zhenyu



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ABOUT US

Who We Are? -Giving a brief introduction about CAEP.

Our Vision and Mission

Founded in 2001, Chinese Academy of Environmental Planning (CAEP) is a public institution with independent legal status. CAEP's missions are to carry out research on the development strategies of national ecological civilization, green development and low-carbon economy; to undertake medium-term and long-term environmental strategic planning and annual plans, pollution prevention and ecological protection planning, environmental protection planning on watershed area and urban areas, simulation of prediction analysis, preparation of planning research, implementation of evaluation and assessment and other technical work; to undertake the technical consultation, technical service and performance evaluation of projects with special funds from the central government; to undertake research and technical support on total pollutant emission control, environmental capacity calculation, pollutant discharge permit, emissions trading and climate changes; to conduct the research and provide technical support in environmental risk assessment and management, pollution damage survey and economic loss assessment; to provide the relevant technical support such as rural environmental protection and agricultural environmental management; to conduct the research and provide technical support in environmental function zoning and ecological function zoning; to carry out the environmental economic accounting and other researches on public finance of environmental protection, environmental protection tax, ecological compensation and environmental audit.

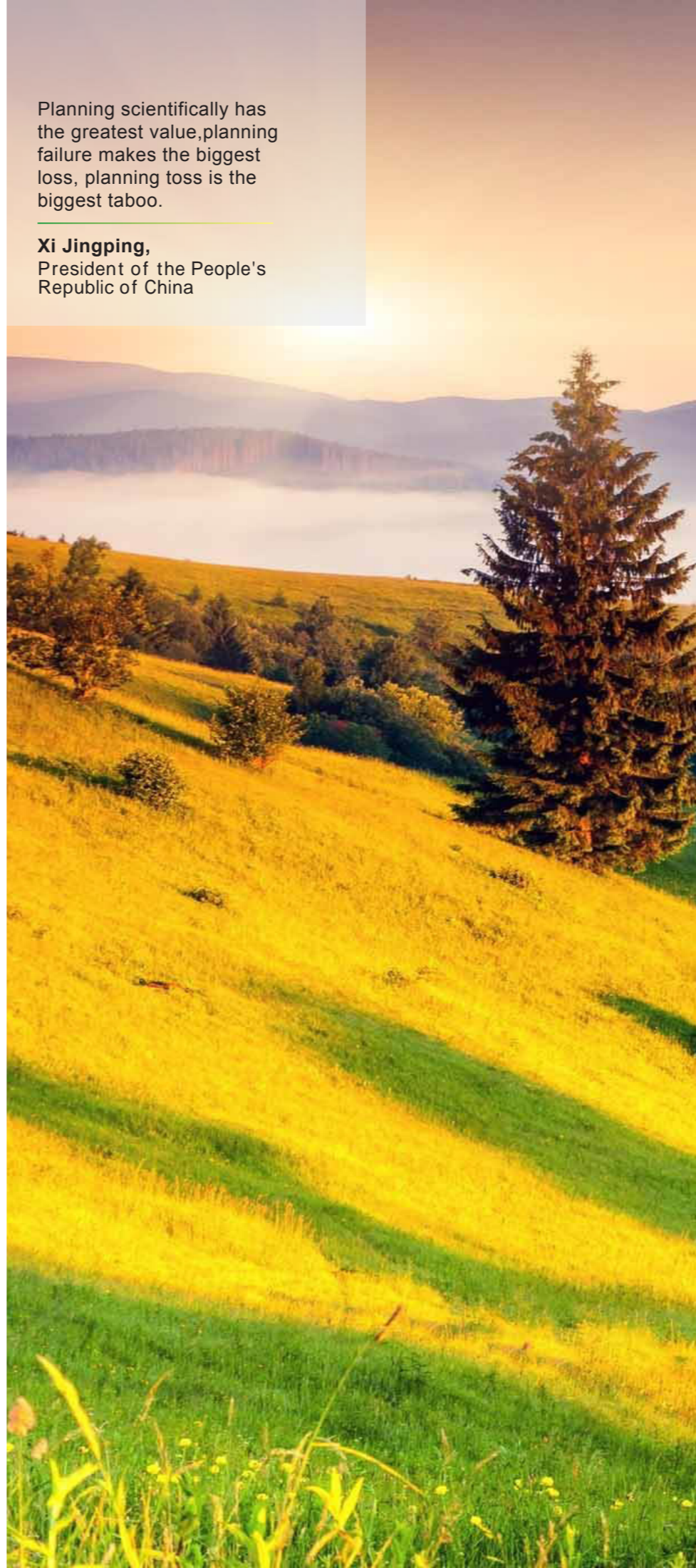
Since its foundation, CAEP always adheres to the purpose of providing high-quality decision service for our country and makes remarkable achievements in the compilation of national

Planning scientifically has the greatest value, planning failure makes the biggest loss, planning toss is the biggest taboo.

Xi Jinping,
President of the People's Republic of China

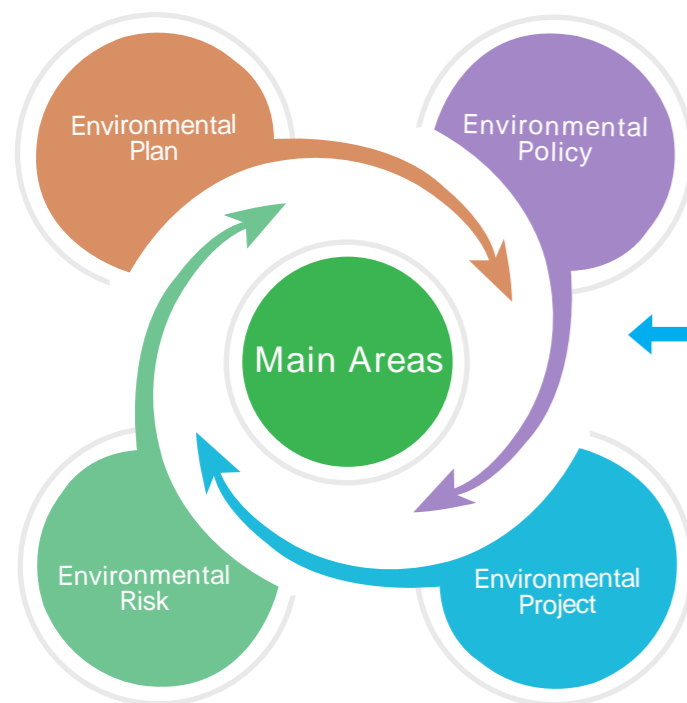
environmental protection plans, the research and formulation of environmental policies, the assessment of major environmental projects and the management of environmental risks. Since 2001, CAEP has accomplished more than 60 national plans and over 50 plans for ecological environmental protection in river basins and regions. CAEP has conducted more than 120 major science and technology research projects, over 70 national environmental policy studies, and more than 60 international projects. As a number of its plans, assessment reports and environmental policies have been approved and adopted by the Chinese government, CAEP has provided an important technical support for the decision-making management of relevant departments. It won 2 second prizes and 2 third prizes of the National Scientific and Technological Progress Award, and 13 first prizes, 17 second prizes and 7 third prizes of the Scientific and Technological Award at provincial and ministerial level, and 1 first prize, 2 second prizes and 1 third prize of the National Excellent Engineering Consulting Achievement Award. According to the *2018 Global Go to Think Tank Index Report* released by the University of Pennsylvania, CAEP ranks 36th among the world's top think tanks in environmental Policy, ranking first among the selected Chinese environmental think tanks.

At present, CAEP holds nearly 300 employees, including 1 academician of Chinese Academy of Engineer, 32 senior fellows, 68 associate fellows (including senior engineers), 208 persons with bachelor and master degrees, 71 persons with PhD degree, 2 persons with the title of "Technical Leaders of National Environmental Protection Specialty", 4 persons with the title of "Young Top Technical Talents of National Environmental Protection Specialty", 4 winners of special subsidies from the State Council, and 2 persons who have been listed in the "Ranking List of Most Influential Scholars in Chinese Social Sciences". A team of professional and technical talents with high knowledge level, reasonable age structure and abundant reserve talents has been formed in CAEP.



Core Research Fields

With the aim to provide high-quality decision services for our country, CAEP has made every effort to offer decision support for the ecological civilization construction, green development and low-carbon economy of China and actively adapted to the needs of the continuous development of environmental protection cause. Based on the orientation of decision-making scientific research institution, it has expanded and refined its business advantages while developing comprehensive business, and initially established a scientific research system with different research directions in environmental plan, policy, project and risk through 18 years of development, laying a solid foundation for the creation of environmental planning discipline clusters.



Environmental Plan

Undertake the works pertaining to preparation and implementation assessment of national long-term environmental strategic planning and specialized environmental protection plans for key river basins, key regions and key areas; carry out technological research of planning and formulation for theoretical methods, target indicators system and environmental planning; take charge of technical review of the relevant plans, technical support for plan implementation, and technical support for the preparation and implementation of total pollutant control plan.

Environmental Policy

Carry out research and technical support for environmental economic accounting and fiscal and economic policies and ecological compensation policies relating to environmental protection, environmental auditing and so on.

Environmental Risk

Carry out technical consultation and assessment of planning programs; carry out examinations, technical services and performance evaluation of the central special fund programs for environmental protection, hazardous waste planning programs, and rural programs for environmental protection.

Environmental Project

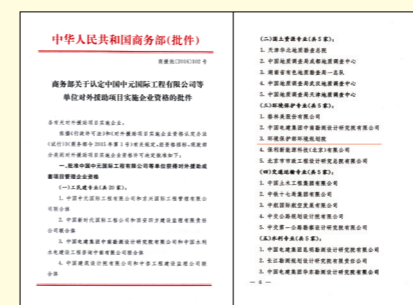
Offer research and technical support for environmental risk assessment and management and the assessment of pollution damage and economic loss.

Certifications

The qualification of the engineering consulting unit, which is related to the national and social investment benefits, is a qualification permit category that needs to be determined with special credibility and conditions. Based on the consideration of comprehensive factors, the qualification level of engineering consulting units is divided into Grade A, Grade B and Grade C. The engineering consulting units at all levels shall conduct business in accordance with the relevant provisions of the State and the requirements of the owners. Our Academy is the highest level of engineering qualification, Grade A.



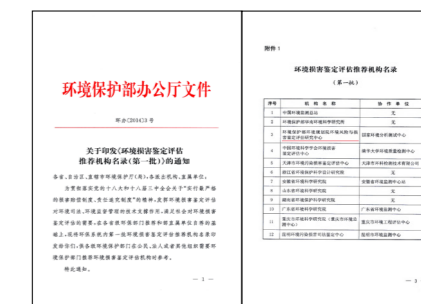
Grade A Credit Certificate of Engineering Consulting



The Qualifications of the First Batch of Foreign Aid Project Implementing Organization

The Ministry of Commerce is the governing agency of foreign aid projects. It adopts qualification examination or qualification bidding to conduct qualification certification for foreign aid projects. The qualified foreign aid project implementation organization can undertake the specific implementation tasks of the foreign aid projects. Our Academy is one of the five qualified environmental implementation organization.

In order to implement the spirit of "the most stringent damage compensation system and accountability system" by the 18th National Congress of the Communist Party of China and the Third Plenary Session of the 18th Central Committee, The need for social assessment of environmental damage shall be provided by the environmental protection departments at all levels when citizens, legal persons or other organizations require the environmental protection department to recommend environmental damage assessment and evaluation organization. Our Academy is one of the organization on the list.



The Assessment Consulting and Remediation Organization for Contaminated Site

Leadership



LU Jun

Senior Fellow
Secretary of the CPC Committee &
Vice President, CAEP



WANG Jinnan

Professor
President, CAEP
Academician, Chinese Academy of Engineering



DENG Zhigeng

Vice President, CAEP



HE Jun

Senior Engineer
Vice President, CAEP



FENG Yan

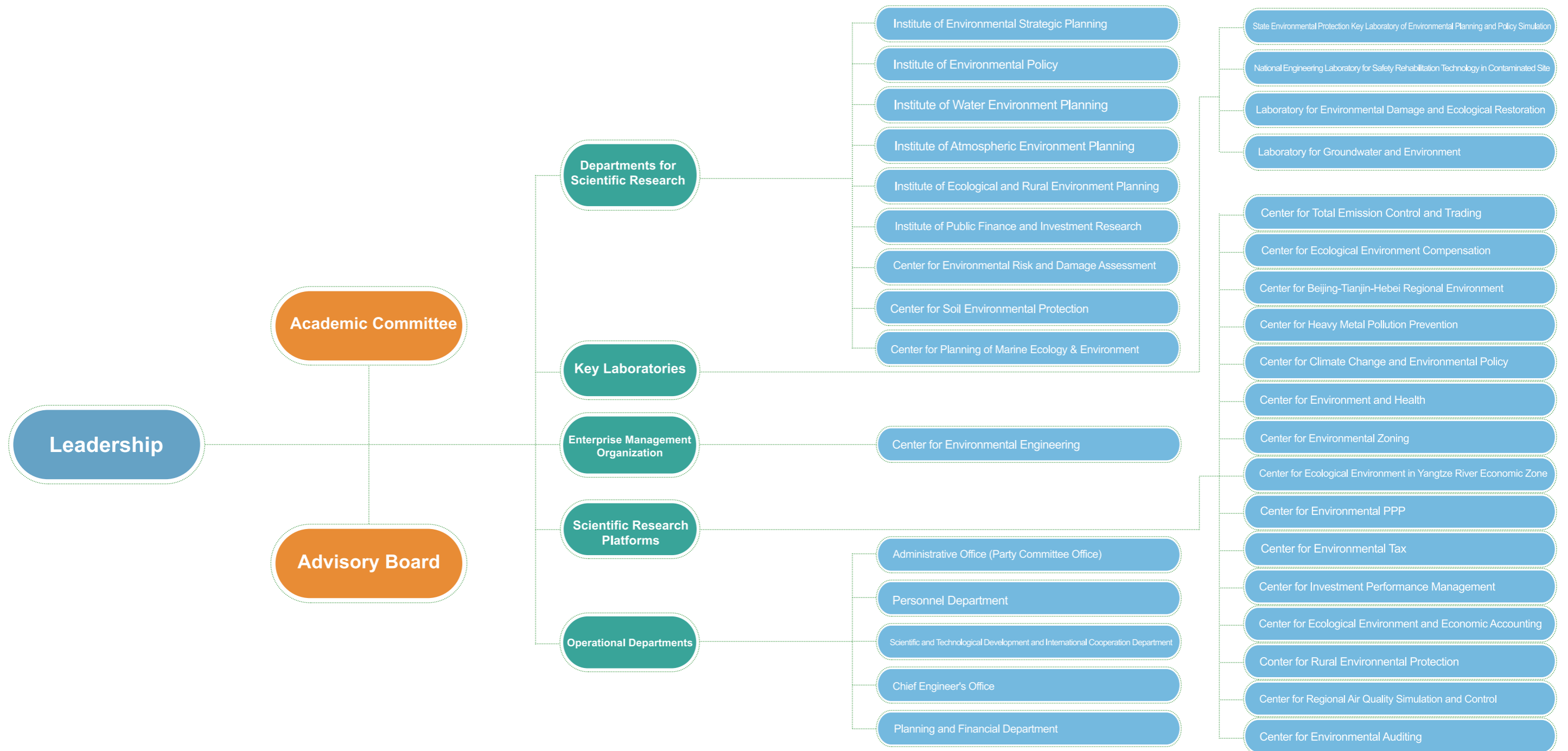
Secretary of Discipline Inspection Commission
Deputy Secretary of the CPC Committee, CAEP



WAN Jun

Senior Fellow
Chief Engineer, CAEP

Structure



Voices of Academician



- The First Special Supervisor of the National Supervision Commission

- The Member of Environment and Resources Committee of National People's Congress

- The Delegate of 13th National People's Congress

On March 6th, 2018, Wang Jinnan, the National People's Congress (NPC) delegate, was interviewed by Xinhuanet. He pointed out that ordinary people were not only the biggest victims of environmental pollution, but also the biggest beneficiaries of environmental improvement. The supervision over polluting enterprises by relying on the ordinary people could be one of the most effective means to prevent pollution, so he suggested accelerating the establishment of the people's environmental protection supervisor system.

On March 12th, 2018, NPC delegate Wang Jinnan was interviewed by www.fangtan.org.cn and answered the following questions:

during the process of building a beautiful China, what problems do we still face and what should we focus on? He said that we should firstly start from the perspective of beautiful ecological space governance, dividing the whole national land space into several categories, and establish management of the national land space, especially the eco-environmental space. Secondly, in view of different issues, we need to make adjustments at the structural level. Structural adjustment is the fundamental way for us to build a beautiful China. Thirdly, we should focus on the prominent environmental problems reported by ordinary people, such as air, water and soil pollution problems, and fight

well against pollution. Fourthly, a beautiful China cannot be separated from its beautiful countryside, and this is also the weakness point in realizing the beautiful China.

On March 18th, 2018, NPC delegate Wang Jinnan was interviewed by CCTV on the topic of overcoming difficulties in pollution prevention and control. He said that we were facing a generally uphill situation, where relatively easier measures were in place. The next step is to solve some difficult issues. The adjustment of economic structure and energy structure is the ultimate solution to air pollution prevention and control. But this structure is related to the whole economy. In order to provide more favorable support to the structure, it is necessary to promote economic development through more technological innovations.

On March 19th, 2018, NPC delegate Wang Jinnan was interviewed by Shanxi Daily. During the two sessions, Wang Jinnan put forward the "Recommendations on Incorporating the Fen-Wei Plains into the Key Region for National Air Pollution Control", and he suggested the country incorporating 11 prefectures and cities into the key region, strengthening regional-level prevention and control, and providing policy, technology and financial supports for regional atmospheric pollution treatment. What treatment measures

would be taken after 11 prefectures and cities are incorporated into the key region? Wang Jinnan suggested that we should adjust the structure of energy, industry and transportation and promote prevention and control as a whole according to the characteristics of the Fen-Wei Plains. In terms of energy structure, we should increase the proportion of clean energy use, vigorously propel central heating in winter, and put the focus on replacing coal by coal-bed gas and electricity for decentralized heating in rural areas. In terms of industrial structure, we should intensify efforts to eliminate backward production capacity in coking and iron & steel industries, and strictly control new production capacity in industries such as coking, iron & steel, as well as electrolytic aluminum. In coking enterprises, online video monitoring should be installed so as to strictly control fugitive emissions. We should intensify efforts to improve the comprehensive regulation of "scattered, disordered and polluting" enterprises. In terms of transportation structure, the train service should be coordinated, and the railway capacity should be released. Meanwhile, we should strengthen the off-peak production and properly deal with heavy pollution days.

Research Team



WANG Xiahui
Deputy Chief Engineer
Director,
Senior Fellow

Institute of Ecological and Rural Environment Planning

Institute of Ecological and Rural Environment Planning undertakes research and preparation of national and regional ecological environmental protection and restoration planning and technical specifications; carries out the research on relevant policies and regulations for ecological environmental protection; carries out the research and formulation of ecological environmental assessment, planning and implementation plans for key ecological function areas; formulates the related plans, policies and technical programs for agriculture and rural ecological environmental protection, non-point source pollution prevention and control, comprehensive renovation of village environment, and prevention and repair of soil pollution; conducts regional ecological and rural environmental quality assessment and biodiversity survey and evaluation research; carries out the research and preparation of national environmental functional zoning, ecological function zoning and implementation plans, and provides technical consultation for relevant departments, local urban and rural ecological environmental protection planning and management.



QIN Changbo
Deputy Director
Associate Fellow

Institute of Environmental Strategic Planning

Institute of Environmental Strategic Planning organizes to carry out the studies on the medium and long-term national and regional environmental protection strategies, and environmental protection strategies in all sectors, organizes to carry out the studies on the national mid-term (five-year) comprehensive environmental protection planning, and studies on theoretical methods and technical research for the planning and preparation of environmental protection and formulates annual comprehensive plans for environmental protection, organizes to carry out the mid-term assessment and final evaluations of the implementation of comprehensive plans for environmental protection, and conducts the analysis of economic conditions and research on the formulation of environmental protection plans in typical regions or cities (groups). The department organizes the development of target indicators such as total quantity control and offers the technical support and undertakes the technical review of the relevant planning and technical guidance for the implementation of the plans.



GE Chazhong
Director
Senior Fellow

Institute of Environmental Policy

Institute of Environmental Policy carries out research on environmental economic policies, including theoretical and empirical studies of environmental economic policies and measures such as taxes, charges, prices, credits and securities in the environmental management, theoretical research on environmental finance, product design and practical application research; carries out industrial research in environmental policy; organizes formulating and upgrading of "high-pollution and high-environmental-risk" product and process directories, and research on national environment-friendly products, processes, and equipment; conducts research in environmental and economic simulation and trade policy, green economy development strategy and policy and environmental performance; and carries out research on policies, institutions and systems for environmental management. The directors and researchers study the role of strategic environmental impact assessment in the environmental management and analyze the effectiveness of environmental policies and measures.



WANG Dong
Director
Senior Fellow

Institute of Water Environment Planning

Institute of Water Environment Planning undertakes the work in the water environment planning, analyzes the current situation of water environment and carrying capacity in countries and drainage basins, organizes the preparation, implementation and assessment of plans for water pollution prevention and control in countries and drainage basins (groundwater and sea areas), and conducts the research in the formulation of the control plan, index allocation, control technology and supporting policy for the total main water pollutants in countries and river basins, analyzes pollution prevention and control technologies for typical industries of water pollution, conducts studies on the system, policies and solutions for water environmental protection in drainage basins, carries out research on the environmental protection of drinking water source areas and provides technical services for local planning for water pollution prevention.



LEI Yu
Director
Senior Fellow

Institute of Atmospheric Environment Planning

Institute of Atmospheric Environment Planning undertakes the preparation of the national plans for air pollution prevention and control, and interprovincial or regional plans for air pollution prevention and control, studies the basic theories and methods of atmospheric environmental planning, and establishes a technical method system for national acid rain control and regional planning for air pollution prevention and control; conducts the decomposition and distribution of emission reduction targets of total main atmospheric pollutants in the country and regions and the research on the control technologies, policies and methods for the total pollutant emission; researches policies for climate change, sustainable energy and environmental protection, formulates environmental protection plans for energy industry and carries out the assessment of the energy industry development on environmental impact.



LU Yuantang
Director
Senior Fellow

Institute of Public Finance and Investment Research

Institute of Public Finance and Investment Research carries out the research on routine power and financial power of environmental protection, environmental public finance policies, and studies the establishment of the system of investment statistics for environmental protection and the system of public finance budget for environmental protection; carries out the design of the mechanism for the use of the special funds for environmental protection of the central government, project tracking and performance evaluation; takes charge of technical assessment of the programs for pollution prevention and control of hazardous wastes, heavy metals, and comprehensive environmental improvement; studies environmental protection industry, environmental service industry development policies and planning; carries out research on innovative modes for environmental service; carries out research and follow-up assessment of the national planning of basic capability construction for environmental protection; carries out preliminary research on major environmental protection programs, and provides evaluation and consulting services of environmental engineering projects for the whole society.



YU Fang
Director
Senior Fellow

Center for Environmental Risk and Damage Assessment

Center for Environmental Risk and Damage Assessment provides technical, institutional and policy support for the Ministry of Environmental Protection in environmental risk assessment and management, pollution damage appraisal, pollution damage compensation and remediation of contaminated sites, participates in the formulation of relevant national and regional policies and regulations, and conducts qualification management of the national agencies for environmental risk and damage assessment.



SUN Ning
Director
Senior Fellow

Center for Environmental Engineering

In March 2015, with the approval of the Ministry of Ecology and Environment, this center was formally established. The center specializes in the remediation of soil pollution, regional environmental investigation and troubleshooting, soil environmental survey and risk assessment, preparation of environmental remediation plans, acceptance evaluation of rehabilitated programs and site remediation projects. The center offers main services including the preparation of plans for regional soil environmental investigation and regional pollution control implementation and risk assessment of soil environmental survey and consulting service for the formulation of restoration scheme and research in soil environmental remediation and soil environmental management.



JIANG Hongqiang
Director
Senior Fellow

State Environmental Protection Key Laboratory of Environmental Planning and Policy Simulation

Facing the major demands of national environmental planning and policy, the laboratory conducts research in the analysis and forecasting on environmental situation, simulation analysis of environmental planning scenario and environmental planning policy, innovates basic theoretical methods for environmental planning and policy formulation, develops a number of key technologies of environmental planning and policy formulation, builds a simulation platform for environmental planning and policy integrating data, model, system and achievements of countries, drainage basins and regions, promotes cooperation and exchange among leading units and personnel in related fields in China, and cultivates outstanding innovative backbone personnel and leading talents so as to improve the scientific level and innovative skill of environmental planning and policy formulation.



WANG Xiahui
Deputy Chief Engineer
Director,
Senior Fellow

Center for Soil Environmental Protection

In order to meet the major demands of the national and local soil environmental protection, Center for Soil Environmental Protection researches and works out the planning, policies, and standards of soil pollution prevention and control, carries out technical assessment and screening, organizes and participates in the related works, such as basic surveys of soil environment and data management platform construction, provides technical consulting services for the related planning, policies, technical plans and engineering design of the soil environmental protection, pollution control and remediation commissioned by the relevant national departments, local governments and enterprises, conducts basic research in major scientific research programs and R&D plans for soil pollution protection, and carries out international cooperation and academic exchanges in the fields of soil environmental protection.

OUR WORK

What We Do?-Connecting our work to the people who make decisions and important policy at different levels.

Overview 2018

The year 2018 marked the 40th anniversary of our Reform and Opening-up, established an important milestone in our development history of the ecological civilization construction and ecological environment protection, and witnessed the significant development of CAEP. With the support from the Party Leading Group and relevant departments, CAEP have thoroughly studied and implemented the spirit of the 19th CPC National Congress and Xi Jinping's Thought on Ecological Civilization. Focusing on the decisions of the Party Leading Group of Ministry of Ecology and Environment and facing the great demand of pollution prevention and quality improvement of the ecological environment, CAEP has always aimed to provide decision-making support for the Ministry of Ecology and Environment, and continuously strengthened the main environmental business (3PIR) of "plan - policy - project - risk". All personnel of CAEP has overcome difficulties and successfully completed the work tasks for the whole year through concerted efforts.

It provides comprehensive technical support for the management decision of the Ministry of Ecology and Environment. CAEP has made full use of its strength to provide all-round technical support for the whole process of the National Ecological Environment Protection Conference and the drafting of documents and the formulation of the program for pollution prevention and control. CAEP has undertaken 79 budget projects, supported the introduction of 40 major national plans and policy documents, completed the preparation of the *Three-Year Action Plan to Win the Blue Sky Defense War* and the *Program for Protection and Repair of the Yangtze River* and provided comprehensive support for the pollution prevention and control. CAEP has provided support

for 20 departments and bureaus of the Ministry of Ecology and Environment, covering 83% of the departments and bureaus (there are 24 departments and bureaus of the Ministry, and only the operations of the Department of Nuclear Power Safety Supervision and Management, the Department of Radiation Source Safety Supervision and Management, the Retirement Office and the Party School are not covered). The scope of the work does not cover the traditional business fields of environmental protection, but follow the reform trend of ecological environment protection system to rapidly expand to new transfer fields such as ocean and climate change. CAEP has sent 30 key professionals to support the work of 13 departments and bureaus of the Ministry of Ecology and Environment and the NDRC, and organize 211 person-times participation in various supervision, patrol and inspection tasks. With solid and strong technical decision support, CAEP has received the unanimous praises from the leaders of the Ministry of Ecology and Environment and relevant government departments.

As the construction of research system is becoming more and more perfect, CAEP has yielded fruitful scientific research results. In order to actively adapt to the development demand of ecological environment protection, CAEP has established a scientific research business system involving four major fields of environmental planning, policy, project and risk, 48 research directions, 16 research platforms and 32 research laboratories. CAEP staff has published 29 academic monographs, including *Study on Ecological Environment Protection and Green Development in Yangtze River Economic Belt* and *Emission Characteristics and Prevention Measures of*

Volatile Organic Compounds from Industrial Coating Pollution Sources, and has published more than 200 papers, including 40 papers in SCI, 13 papers in EI and 106 papers for core journals. CAEP staff have obtained 15 patents (including 3 patents for invention and 12 patents for utility models), such as the patent with title of "A portable comprehensive drilling rig for soil restoration and environmental restoration", and obtained 25 software copyrights. We won 1 First Prize and 1 Second Prize of 2018 "Environmental Protection Science and Technology Awards", 1 First Prize of the Sixth Management Science Award (Academics) issued by China Management Science Society, 1 First Prize and 3 Second Prizes for the research report of "Great Research on Studying, Propagandizing and Implementing the Essence of 19th National Congress of CPC" issued by Ministry of Ecological Environment, 1 First Prize and 3 Second Prizes of "Official Document Writing Contest" issued by Ministry of Ecology and Environment and the "Outstanding Organization Award". *Control of PM_{2.5} Pollution: China's Road Map and Policy Mechanism* and *Research of Action Plan on Soil Pollution Prevention and Control* are selected as the second batch of national environmental protection excellent training materials ". In addition, we have also won 5 Second Prizes and 1 Third Prize at other ministerial and provincial level, 2 Outstanding Contribution Awards, Excellent Paper Awards, etc.

The influence of international think tank based on strong decision-making support has steadily increased. In 2018, we successfully applied for 3 national key research and development program, led 9 national research projects, received 1 youth project funded by the national social science funds, and undertook 13 international cooperation projects. We jointly applied with external organizations for 1 special program for pilot research on air pollution cause and control and 3 special program for pilot research on soil pollution cause and control and obtained 4 approved projects. In the whole year, we undertook 52 national scientific research projects (such as national research and development program, national major science and technology program, national natural science

foundation program and national social science foundation projects) and 13 international cooperation projects. We held High-level national environmental planning and policy forum and signed strategic cooperation agreements with local governments. Our international influence in the field of environment has been continuously improving. In the past five years, our ranking in terms of environmental policy in the *Globe Go To Think Tank Index Report* remained stable at 31st to 34th and ranked first in China. We obtained the qualifications of the first batch of foreign aid project implementing organizations approved by the Ministry of Commerce of the People's Republic of China and were listed in the assessment consulting and remediation organizations for contaminated site in Chongqing. The total number of readers on WeChat account has reached 55,529. President Wang Jinnan was appointed as the first special inspector of the State Committee of Supervisory of the People's Republic of China.

Our technical personnel team has grown stronger. In 2018, the party group of the Ministry of Ecology and Environment allocated Chinese Academy of Environmental Planning with comrade Feng Yan, Secretary of Discipline Inspection Commission, comrade Wan Jun, Chief Engineer, 39 new employees, 2 senior fellows, 2 Professor-level senior engineers, 8 associate fellows and 11 senior engineers. Senior fellow Wang Xiahui won the first "Innovative Talents Award of Chinese Think Tank" and senior fellows YU Fang and Cao Dong were listed in the "Ranking List of Most Influential Scholars in Chinese Social Sciences". There are 32 senior fellows, 68 associate fellows and 70 Doctors in the Chinese Academy of Environmental Planning. The staff with senior titles accounted for nearly 35% of all staff. There are currently 1 academician of Chinese Academy of Engineer, 2 recipients of special subsidies from the State Council, 2 "Technical Leaders of National Environmental Protection Specialty" and 4 "Young Top Technical Talents of National Environmental Protection Specialty". We sent two comrades to the United Nations Environment Programme to work and study, and two comrades for local support work.



▲ Secretary LU Jun Gave Speech on National Environmental Planning and Policy Seminar



▲ President WANG Jinnan Gave Speech to the CPC Committee Theory Learning Group of Tibet Autonomous Region



▲ Secretary LU Jun Led a Team to Carry out National Soil Remediation Technology Pilot Survey in Yunnan



▲ President WANG Jinnan Led a Team to Carry out Investigation on the Atmospheric Pollution in Shanxi



▲ Technical Coordination Seminar on "Three Lines and One List" in the Five Provinces of the Yangtze River Economic Belt



▲ Ecological Protection Red Line Scheme of Tibet Passed the National Review



▲ President WANG Jinnan Presented Lecture about Pollution Prevention and Control for Ministers and Provincial Governors



▲ Vice President HE Jun Led a Team to Carry out Special Inspection Guidance for Environmental Protection of Drinking Water Sources in Guizhou, Chongqing



▲ Hebei Xiong'an New District Ecological Environmental Protection Plan Passed the Review



▲ Carry out Environmental Health Risk Assessment Training Course



▲ Guidance Meeting of "2018 Central Project of Pollution Prevention and Rural Environmental Remediation"



▲ Project Start-up Meeting of "Economic Policy Innovation and System Integration of Watershed Environment Management"

Highlights 2018

► Decision-making Management Support

In 2018, we focused on supporting environmental quality management decisions, continued to consolidate the four core business foundations of "Plan-Policy-Project-Risk", giving full play to the functions of our think tank and providing important scientific and technological support for national and local environmental management.

Full Support for the Success of the National Conference on Ecological Environment Protection

- ✓ Provide 16 special research reports, 3 comprehensive reports and 4 subject reports
- ✓ Participate in the drafting of the *Opinions of the CPC Central Committee and the State Council on Strengthening Ecological Environment Protection in an All-round Way and Resolutely Fighting for Pollution Prevention and Control*
- ✓ Hold more than 20 lectures for propagandizing and interpreting the spirit of the conference
- ✓ Publish more than 10 articles on interpretation of the conference spirit in magazines and newspapers such as *Qiushi*
- ✓ Accept 5 interviews with Xinhua News Agency and other media

In-depth Research on the Strategy and Planning of a Beautiful China

■ National Planning

- ✓ Carry out the mid-term evaluation of the "National 13th Five-Year Plan Outline" and the Planning;
- ✓ Start the research on "the strategy and implementation of ecological environment protection in beautiful China" in an all-round way
- ✓ Carry out the research on *"the belt and road initiative" ecological environmental protection cooperation plan*
- ✓ Carry out the mid-term evaluation of the "National 13th Five-Year Plan Outline" and the Planning
- ✓ Start the research on the basic thoughts of the "14th Five-Year" Planning

- ✓ Further promote the implementation of the *Action Plan for Water Pollution Prevention and Control and the Water Pollution Prevention and Control Planning in Key River Basins (2016-2020)*

- ✓ Carry out the implementation and evaluation of the *Action Plan for Soil Pollution Prevention and Control*

- ✓ Organize and carry out the final evaluation of the implementation effect of *Action Plan for Air Pollution Prevention and Control*

- ✓ Completion of the *Three-Year Action Plan to Win the Blue Sky Defense War* and the Fortification Plan in *Key Areas in Autumn and Winter of 2018 - 2019* as the technical lead organization

■ Regional and Watershed Planning:

- ✓ Complete the preparation of Ecological and Environmental Protection Plan in Xiong'an New Area

- ✓ Carry out the research on *Ecological Environment Protection Planning of the Yangtze River Economic Zone*

- ✓ Implement the detailed rules of the *Three-Year Action Plan to Win the Blue Sky Defense War* in Beijing, Tianjin, Hebei and their surrounding areas, the Yangtze River Delta Region, Fen-wei Plains and other key areas

- ✓ Carry out the research on the environmental protection situation and strategic thinking in the Guangdong-Hong Kong-Macao Greater Bay Area

- ✓ Carry out the research on environmental protection promoting the revitalization of northeast China and regional differentiation

■ Provincial and City Planning

- ✓ Complete the preparation of Xinjiang Environmental Protection Planning

- ✓ Start the strategic research on the construction of beautiful Hangzhou in a new era

- ✓ Start the strategic research on Hainan's ecological environment protection

- ✓ Push forward the preparation of "air quality standards" plans for Dalian, Chengdu and Ningbo

- ✓ Complete the overall environmental planning of Jinan

Making Suggestions for the Reform of the Ecological Civilization System and the Protection of Ecological Environment

- ✓ Focus on the study and drafting of major documents of the CPC Central Committee, the State Council and the Ministry of Environmental Protection

- ✓ Push forward the spatial control of ecological environment and the preparation of "Three Lines and One List"

✓ Fully support the delineation and management of ecological protection red lines

✓ Fully support ecosystem protection and rural environmental protection

✓ Carry out in-depth research on natural reserves, ecological compensation, ecological protection and restoration of mountains, rivers, forests, fields, lakes and grasses, and protection of biodiversity

✓ Deepen the research on market mechanisms such as green tax, price, finance and securities

Carry out Research on the Support for the Reform of the Ecological Environment Risk and Damage Compensation System

✓ Cooperate with the release of *Recommended Methods for Risk Assessment of Environmental Emergencies in Administrative Regions*

✓ Deepen the research on risk assessment techniques and methods

✓ Strengthen the research on risk early warning, prevention and control and emergency plan

✓ Promote the application of market-oriented measures such as environmental liability insurance in risk management

✓ Carry out environmental and health management and policy study

✓ Carry out the environmental impact assessment, investigation, repair and treatment of major environmental events such as the sinking of the "Sanchi" ship and oil spill

Steady Promotion of Environmental Engineering Investment Consultation and Environmental Protection Industry Research

✓ Continue to strengthen the construction of a reserve bank for environmental protection investment projects and technical support for special funds

✓ Prepare a plan for the division of responsibilities for ecological environment protection

✓ Promote the preparation of PPP implementation opinions and PPP research in the field of ecological environment

✓ Provide decision support for environmental protection investment and technical support for environmental supervision capacity building

✓ Deepen the research on environmental protection industry

Major National Research Projects

In 2018, we have 52 ongoing national scientific research projects such as national research and development program, national major science and technology program, national natural science foundation program etc. 3 national key research and development projects, 9 key research and development projects and 1 national social science foundation project were approved.

National Research and Development Program

Key Special Programs for Pilot Research on Air Pollution Cause and Control

- Research on roadmap for improvement of air quality in country and major regions (leading organization, Project Leader: Lei Yu)
- Research on dynamic control and multi-objective optimization decision-making technology of regional atmospheric composite pollution (leading organization, Project Leader: Jiang Hongqiang)
- Pilot research on innovation and entrepreneurship policy mechanism of atmospheric environment protection industrial park (Leading organization, Project Leader: Lu Yuantang)
- Research on management policy and supporting technology of pollution discharge permit (Leading organization, Project Leader: Cai Bofeng)
- Research on economic means and industry policy of atmospheric environment management (Leading organization, Project Leader: Ge Chazhong)
- Integrated assessment model and system construction of the costs and benefits of air pollution prevention and control (Leading organization, Team Leader: Zhao Xuetao)
- Research on assessment technology for damages from sudden air pollution incidents (Leading organization, Team Leader: Zhou Ying)
- Research on joint prevention and control mechanism and overall technical plan of air pollution for urban agglomeration in central plains (Leading organization, Team Leader: Yang Jintian)
- Research on prevention and control mechanism of air pollution and environmental risk (Leading organization, Team Leader: Cao Dong)

Key Special Programs for Site Soil Pollution Cause and Treatment Techniques

- Pollution identification and risk management of site soil and groundwater based on big data (Leading organization, Project Leader: Wang Xiahui)
- Assessment system and method for green sustainable remediation of contaminated sites (Leading organization, Project Leader: Zhang Hongzhen)
- Study on safe development and utilization mode and application promotion mechanism of coking site (Leading organization, Team Leader: Sun Ning)

- Site priority control of pollution sources identification and risk management in rapid economic development areas (Leading organization, Team Leader: Jia Jielin)

- Regional distribution of contaminated sites and their relationship with industry (Leading organization, Team Leader: Zhang Zheng)

■ Key Special Programs for Research on Typical Fragile Ecological Restoration and Protection

- Research on ecological compensation model, standard accounting and policy measures (Leading organization, Team Leader: Liu Guihuan)
- Research on the ecological capacity and industrial consistency evaluation technology in typical regions (Leading organization, Team Leader: Rao Sheng)

National Major Science and Technology Program for Water Pollution Control and Treatment

- Research on comprehensive management and system innovation of water environment quality in Beijing-Tianjin-Hebei regions (Leading organization, Project Leader: Wang Dong)
- Research on key technologies and demonstration for the paid use of water pollutant discharge rights (Leading organization, Team Leader: Wang Jinnan)
- Research on decision-making support platform for water pollution prevention planning in river basin (Leading organization, Team Leader: Jiang Hongqiang)
- Research on development strategy and policy and demonstration for water environment industry (Leading organization, Team Leader: Sun Ning)
- Demonstration research on ecological compensation and economic responsibility mechanism in cross-border key watershed (Leading organization, Team Leader: Liu Guihuan)
- Economic policy innovation and system integration of water environment management in river basin (Leading organization, Team Leader: Dong Zhanfeng)

National Natural Science Foundation Program

- Research on environmental impact of china's carbon market based on emission - transport - exposure model (General Project, Principal: Cai Bofeng)
- Research on spatial-temporal characteristics of environmental equity of China's air pollution transfer (Youth Project, Principal: Zhang Wei)
- Research on preparation of iron-aluminum bimetallic materials with core-shell structure and its reduction mechanism for chlorinated hydrocarbon pollutants in soil (Youth Project, Principal: Yang Wenjie)
- Research on means and mechanism of regional air quality management(Key Project, Joint commitment, Principal: Wang Jinnan)

National Public Welfare Research Project of Environmental Protection Industry

- Research and demonstration of control system for total pollutants based on environmental capacity and quality constraints (Leading organization, Project Leader: Wu Shunze)
- Research on regional characteristics of air pollution and zoning of air quality management in China (Joint commitment, Principal: Ning Miao)
- Research on risk control model and effectiveness evaluation method of cultivated land soil (Joint commitment, Principal: Wang Xiahui)
- Research on high resolution emission inventory and total amount control of air pollutants from industrial boilers (Joint commitment, Principal: Yan Li)
- Air quality zoning management objectives and planning (Joint commitment, Principal: Ning Miao)
- Research on accounting methods for impacts of climate change on water environmental quality losses and damage (Joint commitment, Principal: Cao Dong)
- Research on technical and methodological system of urban emission inventory preparation (Joint commitment, Principal: Lei Yu)
- Simulation estimation and empirical study on pollution load of livestock and poultry breeding (Joint commitment, Principal: Cao Dong)

Causes of Heavy Atmospheric Pollution and Treatment Research Program (The Prime Minister Fund Program)

- Research results of regional atmospheric carrying capacity and air quality improvement roadmap (Leading organization, Team Leader: Lei Yu)

National Social Science Foundation Project

- Research on environmental risk assessment and management of drinking water sources along the yangtze river economic belt (Leading organization, Project Leader: Sun Hongliang)
- Research on ecological compensation mechanism of water environment in Beijing, Tianjin and Hebei (Leading organization, Project Leader: Liu Yaling)

National High-tech Research and Development Program ("863" Project)

- Research on sustainable policy guarantee system for contaminated soil and site risk management (Joint commitment, Team Leader: Zhang Hongzhen)

Policy Engagements

In 2018, we supported the introduction of more than 40 major national plans and policy documents, completed the preparation of the *Three-Year Action Plan to Win the Blue Sky Defense Battle and the Action Plan to Protection and Repair of the Yangtze River* and provided comprehensive support for the pollution prevention and control. Some documents that are mainly supported are as follows.

Major national planning and policy documents supported in 2018

- 01 Three-year Action Plan of Win the Blue Sky Defense Battle (No.22 Document of State Council,2018)
- 02 Implementation Plan of the Central Government's Promotion of the Ecological Protection and Rehabilitation Policy for the Yangtze River Economic Belt (No.6 Document of Economic Construction Department of Ministry of Finance, 2018)
- 03 Performance Evaluation Method of Winter Clean Heating Pilot City in Northern Region (No.253 Document of Economic Construction Department of Ministry of Finance, 2018)
- 04 Administration Measures of Special Funds for Air Pollution Prevention and Control(No.578 Document of Economic Construction Department of Ministry of Finance, 2018)
- 05 2018-2019 Action Plan of Autumn and Winter Air Pollution Comprehensive Treatment in Jing-Jin-Ji Region (No.100 Document of Air Environment Management Department, MEE, 2018)
- 06 2018-2019 Action Plan of Autumn and Winter Air Pollution Comprehensive Treatment in Fenwei Plain(No.132 Document of Air Environment Management Department, MEE, 2018)
- 07 2018-2019 Action Plan of Autumn and Winter Air Pollution Comprehensive Treatment in Yangtze River Delta Region(No.140 Document of Air Environment Management Department, MEE, 2018)
- 08 Opinions on Strengthening Pollution Prevention and Control in Heavy Metals Industry (No.22, Document of Soil Environmental Management Department, MEE, 2018)
- 09 Progress Report on *Action Plan of Soil Pollution Prevention Control Work* (No.25, Document of Soil Environmental Management Department, MEE, 2018)
- 10 The Action Plan of Agricultural and Rural Pollution Control(No.143, Document of Soil Environmental Management Department, MEE, 2018)
- 11 The Guideline of Further deepening the policy of "Streamline Administration, Delegate Power, Strengthen Regulation and Improve Service",Promote High Quality Economic Development(No.86 Document of Planning and Finance Department, MEE, 2018)

- 12 The Guideline of Ecological Protection Red Line, Environmental Quality Bottom Line, Resource Utilization Online and Negative List of Environmental Access (No.99 Document of Environmental Assessment Department, MEE, 2018)
- 13 Implementation Plan of Regional Space Ecological Environment Assessment Work(No.23 Document of Environmental Assessment Department, MEE, 2018)
- 14 Technical Requirements of "Three Lines and One List"(No.14 Document of Environmental Assessment Department, MEE, 2018)
- 15 Research Program of The 14th Five-Year Ecological Environmental Protection Plan and the 2035 Vision Outline Program(No.78 Informal Letter of General Office, MEE, 2018)
- 16 Notice on Carrying out the 2018 Annual Air and Soil Pollution Prevention Control and Rural Environmental Remediation Central Project Reserve Construction(No.37 Document of General Office and Planning & Finance Department, MEE, 2018)
- 17 Report on the Evaluation of the Implementation of the 13th Five-Year Plan in Environmental Protection for 2017(No.144 Document of General Office and Planning & Finance Department, MEE, 2018)
- 18 Implementing the work plan approved by the State Council of the CPC Central Committee to Promote the Implementation of the *Planning Outline of Hebei Xiong'an New District* (No.754 Document of General Office and Planning & Finance Department, MEE, 2018)
- 19 Interim Evaluation Report on the Annual Implementation of 165 Major Projects in the 13th *Five-Year Plan*(No.822 Document of General Office and Planning & Finance Department, MEE,2018)
- 20 Implementation Opinions on Supporting the Reform and Innovation of Deepening Ecological Environment Protection in Xiong'an New District of Hebei Province (No.846 Document of General Office and Planning & Finance Department, MEE, 2018)
- 21 Relevant Requirements for Accounting Total Pollutant Emission Reduction in 2018(No.883 Document of General Office and Planning & Finance Department, MEE, 2018)
- 22 Technical Outline of Mid-term Evaluation of the 13th *Five-Year Ecological Environmental Protection Plan*(No.1483 Document of General Office, MEE, 2018)
- 23 Sewage Permit Application and Issuance Technical Specifications,Boiler(No.26 Announcement, MEE, 2018)
- 24 *Eco-environmental Red Line Management Measures (Temporary)*(Draft)(No.322 Document of General Office and Nature & Ecology Conservation Department, MEE,2018)
- 25 Report on the Thinking of Ecological Environment Work in 2019(No.322 Document of General Affairs Department, MEE,2018)

Photographer: Wang Zhifeng



SCIENTIFIC ACHIEVEMENTS

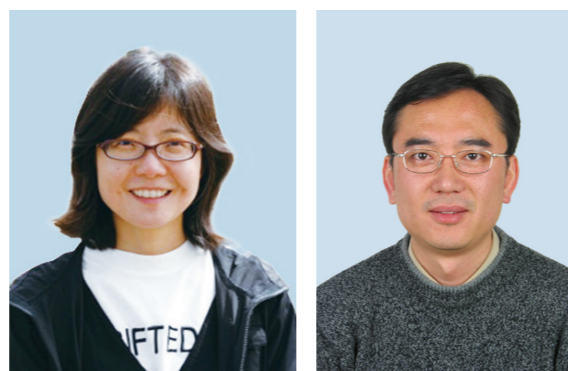
What We Achieve?—We do the intergrative research that finds solutions to problems and makes action happen.and makes action happen.

In 2018, our Academy have won 1 First Prize and 1 Second Prize of 2018 "Environmental Protection Science and Technology Awards" in scientific achievements, 1 First Prize of the Sixth Management Science Award (Academics) of China Management Science Society, 1 First Prize and 3 Second Prizes for the research report of "Great Research on Studying, Propagandizing and Implementing the Essence of 19th National Congress of CPC" hosted by Ministry of Ecology and Environment, 1 First Prize and 3 Second Prizes of "Official Document Writing Contest" of Ministry of Ecology and Environment. In addition, we have also won 5 Second Prizes and 1 Third Prize at other ministerial and provincial level, 2 Outstanding Contribution Awards, Excellent Paper Awards, etc.

Senior Fellow Wang Xiahui won the first "Innovative Talents Award of Chinese Think Tank" and Senior Fellows Yu Fang and Cao Dong were listed in the "Ranking List of Most Influential Scholars in Chinese Social Sciences".



Senior Fellow Wang Xiahui Won the First "Innovative Talents Award of Chinese Think Tank"



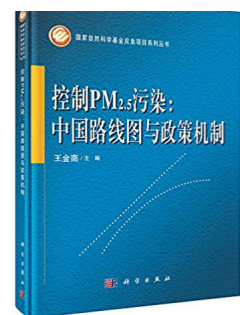
Senior Fellows Yu Fang and Cao Dong Were Listed in the "Ranking List of Most Influential Scholars in Chinese Social Sciences"

Awards

Description of Awarded Achievement	Award	Awarding Department	Level	Major Winners
Research on Key Technologies and Applications of Environmental Function Zoning and Spatial Control	Environmental Protection Science and Technology Awards	Ministry of Ecology and Environment	First Prize	Wang Xiahui, Wang Jinnan, Xu Kaipeng, Wang Jingjing, Chi Yanyan, Zhang Xiao, Liu Guihuan, Zhang Lirong, Tian Rensheng and Wang Bo
Evaluation and Management Research on Health Risks Caused by Atmospheric Pollution	Sixth Management Science Award (Academics) of China Management Science Society	China Management Science Society	Academics	Wang Jinnan, Jiang Hongqiang and Zhang Wei
Statistics of China's Investment in Environmental Protection Forecast Evaluation on Key Technologies and Application Research	Environmental Protection Science and Technology Awards	Ministry of Ecology and Environment	Second Prize	Lu Yuantang, Chen Peng, Xu Shunqing and Gao Jun
Research and Application of Promoting Normal (Technical) Ecological Civilization Construction in Economically Developed Areas	Environmental Protection Science and Technology Awards	Ministry of Ecology and Environment	Second Prize	Jiang Hongqiang, Zhang Jing, Wu Wenjun, Lu Yaling, Liu Nianlei and Zhang Wei
Theoretical Methods for Overall Analysis of River Ecological Environment Flow and Key Technologies for Comprehensive Watershed Regulation	Da Yu Water Conservancy Science and Technology Award	Council for Da Yu Water Conservancy Science and Technology Award	Second Prize	Qin Changbo
Planning of Ecological Line in Guangzhou	National Excellent Urban and Rural Planning and Design Award	China Urban Planning Association	Second Prize	Yu Lei and Wang Chengxin

Published Books

In 2018, we have published 29 books. *Control of PM_{2.5} Pollution: China's Road Map and Policy Mechanism* edited by Wang Jinnan of our Academy, and *Research of Action Plan on Soil Pollution Prevention and Control* edited by Wang Xiahui, Lu Jun and Li Zhitao of our institute have been selected as the second batch of excellent national environmental protection training materials



Control of PM_{2.5} Pollution: China's Road Map and Policy Mechanism

Wang Jinnan
Science Press

Fine particulate matter (PM_{2.5}) has become the most important pollutant index affecting China's air quality. This book focuses on the main measures of PM_{2.5} pollution control at home and abroad. Analysis the impact of social-economic drivers and pollutant cross-border transmission on PM_{2.5} pollution. To explore the policy mechanism that China needs to focus on controlling PM_{2.5}. This book starts with the analysis of natural sciences, and is based on the design of policy mechanisms. It integrates multi-disciplinary research methods and research results in the field of atmospheric science, epidemiology, management, economics, etc..

Research of Action Plan on Soil Pollution Prevention and Control

Wang Xiahui, Lu Jun and Li Zhitao
China Environmental Science Press

Based on the current situation of soil pollution in China, this book fully draws on the successful experience of international soil pollution prevention and control, systematically summarizes the progress of China's soil pollution prevention and control in recent years. This book has carried out special studies and detailed interpretations of key contents in the *Action plan on Soil Pollution Prevention and Control* from the aspect in status assessment of China's soil environment, soil environmental management framework, soil environmental regulations, construction land risk management, soil pollution control and restoration engineering technology, economic policy of soil pollution prevention, financial mechanism of soil pollution control, key projects and social impact analysis of soil pollution control.



Booklist 2018

- *Data Set of Impacts of Weather Changes on PM_{2.5} Pollution in China from 2000 to 2016*
- *Basic Atlas of Multi-directional and Dynamic Information Collected for Water Pollution Prevention in Huangshui Basin*
- *Emission Characteristics and Countermeasures for Volatile Organic Compounds from Industrial Coating Pollution Sources*
- *Technologies and Methods for Calculating the Emission Reduction of Principal Atmospheric Pollutants*
- *Technologies and Methods for Preparing the Emission Reduction Plan of Principal Atmospheric Pollutants*
- *Evaluation on Losses of Ecological Environment during the Rare-earth Resources Development in China*
- *Analysis on Cost Effectiveness of Environmental Policy - Theoretical Methods and Cases*
- *Transfer of Atmospheric Pollution and Environmental Inequity Hidden in China's Trade*
- *Research Progress on Environmental Economy (Volume XII)*
- *Research on Environmental Protection Tax*
- *Research on Cost Accounting for Ecological Environment during the Rare-earth Resources Development: Methods and Evidences*
- *Research on Statistical System of Environmental Protection Industry Based on EGSS in China*
- *Research on Ecological and Civilization Construction Strategy in Zhuhai*
- *Huangshan Birds*
- *Research on Supervision and Management of Red Lines for Ecological Protection and Supporting Policies - A Case Study of Guangzhou*
- *Technical Methods and Case Analysis of Overall Planning of Water Environment*
- *Research on Key Technologies and Demonstration of Paid Use of Emission Rights of Water Pollutants*
- *Technical Methods for Paid Use and Trading of*
- *Emission Rights of Water Pollutants*
- *Risk Assessment for Geologically Segregated Environment of Carbon Dioxide in China*
- *Data Set of Urban Carbon Dioxide Emissions in China (2005)*
- *Urban Carbon Dioxide Emissions in China (2005)*
- *Evaluation and Management of Environmental Performance - China's Exploration and Innovation*
- *Research on Evaluation Methods and Evidences of Urban Environmental Performance*
- *Performance Evaluation for Projects with Investment in Environmental Protection - Theory, Method and Practice*
- *Selected Works of PPP Demonstrative Projects - Solid Waste Industry (Part IV)*
- *Environmental Quality, Regional Differentiation and Growth Momentum*
- *Environmental Protection in China: Situation and Countermeasures*
- *Theory and Method of "Double High" Product List*

Chinese Academy of Environmental Planning Published the First Batch of Green Book on Environmental Planning and Policy

On October 19, 2018, during the 2018 National Environmental Planning and Policy Seminary and Joint Conference of Directors (Superintendents) for Chinese Academy of Environmental Planning hosted by Chinese Academy of Environmental Planning, the Academy published the first batch of Green Book on environmental planning policy, becoming the first domestic scientific research organization that published Green Book on environmental planning and policies.

It marks that China's environmental planning and policy research has taken another solid step towards systematization and standardization. In addition, it indicates that China's environmental planning and policy field has formed a relatively mature and complete system from research initiation to idea promotion. Following the first batch, Chinese Academy of Environmental Planning will release green books on other fields of environmental planning and policy from time to time, as well as the annual update report.



▲ Green Book on Environmental Planning Policy

Patents and Software Copyrights

Patents

Patent Name	Type	Patent Number
An amphibious device for taking soil and groundwater samples	Patent for an Invention	201510392034.4
A portable comprehensive drilling rig for soil and environmental restoration	Patent for an Invention	201510254763.3
A method for measuring the release amount of nitrogen and phosphorus pollutants in the bottom sediment	Patent for an invention	ZL201510451121.2
An apparatus for testing the nitrogen oxides in the atmosphere	Utility model	ZL201721860410.9
An apparatus for controlling RM2.5 in the atmosphere, comprising the stirring and air supplying system	Utility model	ZL201721858563.X
An apparatus for controlling RM2.5 in the atmosphere, comprising the absorption liquid circulating system	Utility model	ZL201721860892.8
An apparatus for absorbing and purifying sulfur dioxide	Utility model	ZL201721860891.3
An apparatus for testing PM _{2.5} in the atmosphere	Utility model	ZL201721860895.1
A tool for cleaning and taking samples from the surface of building structures	Utility model	201810461313.5
A gas - phase vibratory reaction unit for solidifying and stabilizing the polluted soil	Utility model	201721808773.8
A system for dynamic access and management of the water environmental data	Utility model	ZL201721814539.6
An apparatus for measuring the thickness of river sediment	Utility model	ZL201820346968.3
An indoor apparatus for continuously sampling and measuring the run - off and sediment in soil bin test	Utility model	ZL201720714909.2
A passive sampler for measuring the chemical forms of mercury in soil solution and groundwater	Utility model	2018202534416
An in - situ passive sampler for measuring the free ions in surface water solution	Utility model	2018202532177

Software Copyrights

Software Name	Certificate No.	Registration No.
Verification and Accounting System for Total Emission Reduction of Major Atmospheric Pollutants	[RZDZ] No. 2724600	2018SR395505
App Software of Environmental Damage Investigation Assistant (Android)	[RZDZ] No. 3351460	2018SR1022395
App Software of Environmental Damage Investigation Assistant (IOS)	[RZDZ]No. 33511620	2018SR1022525
Water Quality Simulating System for Sudden Water Environmental Pollution Incidents (VI.0)	[RZDZ] No. 3343322	2018SR1014227
Risk Assessment System for Small-Medium Sudden Atmospheric Pollution (VI.0)	[RZDZ] No. 3343317	2018SR1014222
Reformed Progress Report System on Compensation for Ecological Environmental Damage (VI.0)	[RZDZ] No. 3351594	2018SR1022499
Dalian Groundwater Information Data Platform (V1.0)	[RZDZ] No. 3179296	2018SR850201
Soil Environmental Data Management System for Agricultural Land (V1.0)	[RZDZ] No. 2598105	2018SR269010
Soil Environmental Data Management System for Industrial Land (V1.0)	[RZDZ] No. 2600752	2018SR271657
Pre-warning System for Heavy Metal Pollution in Atmospheric Environment of Industrial Park	[RZDZ] No. 2836880	2018SR507785
Pre-warning System for Heavy Metal Pollution in Surface Water Environment	[RZDZ] No. 2834435	2018SR505340
Pre-warning System for Heavy Metal Pollution in Soil of Industrial Park (V1.0)	[RZDZ] No. 2836899	2018SR507804
Intelligent Analysis and Report Customizing System for Environmental Protection Talents	[RZDZ] No. 3154945	2018SR825850
Environmental Planning Project Management System	[RZDZ] No. 3154347	2018SR825252
Water Environmental Database System	[RZDZ] No. 3153197	2018SR824102
Automatic Warning and Analysis Platform for Excessive Emission of Major Industries and Enterprises (Based on the Online Monitoring Data)	[RZDZ] No. 2846158	2018SR517063
Gathering and Capturing System for Products, Enterprise Environment and Illegal information Related to Comprehensive List of Environmental Protection (V1.0)	[RZDZ] No. 2846163	2018SR517068

Key Enterprise Name and Information Proofreading System (V1.0)	[RZDZ] No. 2846153	2018SR517058
Project Management System of Central Specialized Funds for Environmental Protection (V1.0)	[RZDZ] No. 3031174	2018SR702079
Key Ecological Space Identification System for Districts and Counties	[RZDZ] No. 2812980	2018SR483885
Landscape Planting and Planning System for Urban Blocks	[RZDZ] No. 3007130	2018SR678035
Evaluation System for Rationality of Spatial Distribution of Mineral Resources Development and Utilization	[RZDZ] No. 3014403	2018SR685308
Automatic Evaluation Module of Red Lines for Ecological Protection	[RZDZ] No. 3363077	2018SR1033982
Management System for Basis Information of Water Source Environment in Villages, Towns and below (V3.0)	[RZDZ] No. 3335803	2018SR1006708
Public Opinion Analysis System for Environmental Information (V1.0)	[RZDZ] No. 2863161	2018SR534066
Information Platform of Environment Monitoring Well for Groundwater and Drinking Water Sources and Pollution Sources	[RZDZ] No. 3372841	2018SR1043746



Articles

序号	篇名	期刊名	收录	作者
1	Impact of Meteorological Conditions on PM _{2.5} Pollution in China during Winter	Atmosphere	SCI	Yanling Xu, Wenbo Xue, Yu LEI
2	Evaluation of Satellite Aerosol Retrievals with in situ Aircraft and Ground Measurements: Contribution of Relative Humidity	Atmospheric Research	SCI	Jiannong Quan, Chunlai Jiang, Jinyuan Xin, Xiujuan Zhao, Xingcan Jia, Quan Liu, Yang Gao, Dan Chen
3	Chronic Brain Toxicity Response of Juvenile Chinese Rare Minnows (<i>Gobiocypris Rarus</i>) to the Neonicotinoid Insecticides Imidacloprid and Nitenpyram	Chemosphere	SCI	Tian Xue, Yang Wenjie, Wang Dong, Zhao Yue.
4	Spatiotemporal trends in PM _{2.5} levels from 2013 to 2017 and regional demarcations for joint prevention and control of atmospheric pollution in China	Chemosphere	SCI	Nan - Nan Zhang, Fang Ma, Chang - Bo Qin, Yi - Fan Li
5	Optimizing Critical Source Control of Five Priority - regulatory Trace Elements from Industrial Wastewater in China: Implications for Health Management	Environmental Pollution	SCI	Wenjun Wu, Jinnan Wang, Yang Yu, Hongqiang Jiang, Nianlei Liu, Jun Bi, Miaomiao Liu
6	Revealing Environmental Inequality Hidden in China ' s Inter - regional Trade	Environmental Science & Technology	SCI	Wei Zhang, Yu Liu, Kuishuang Feng, Klaus Hubacek, Jinnan Wang, Miaomiao Liu, Ling Jiang, Hongqiang Jiang, Nianlei Liu, Pengyan Zhang, Ying Zhou and Jun Bi
7	Unequal Exchange of Air Pollution and Economic Benefits Embodied in China ' s Exports	Environmental Science and Technology	SCI	Wei Zhang, Feng Wang, Klaus Hubacek, Yu Liu, Jinnan Wang, Kuishuang Feng, Ling Jiang, Hongqiang Jiang, Bing Zhang and Jun Bi
8	Analysis of Soil Risk Characteristics by Comprehensive Assessment in an Industrial Area of China	Environmental Science and Pollution Research	SCI	Guan Yang, Shao Chaofeng, Kang Lei, Li Xin, Ju Meiting
9	Permitted Emissions of Major Air Pollutants from Coal - fired Power Plants in China Based on Best Available Control Technology	Front. Environment. Science	SCI	Xiaohui Song, Chunlai Jiang, Yu Lei, Yuezhi Zhong, Yanchao Wang
10	Carbon Sources/sinks Analysis of Land Use Changes in China Based on Data Envelopment Analysis	Journal of Cleaner Production	SCI	Pengyan Zhang, Jianjian He, Xin Hong, Wei Zhang, Chengzhe Qin, Bo Pang, Yanyan Li, Yu Liu
11	Drivers of virtual water flows on regional water scarcity in China	Journal of Cleaner Production	SCI	Beiming Cai, Wei Zhang, Klaus Hubacek, Kuishuang Feng, ZhenLiang Li, Yawen Liu, Yu Liu
12	Environmental Regulation and the Pollution Haven Hypothesis : Do Environmental Regulation Measures Matter ?	Journal of Cleaner Production	SCI	Jing Yang, Huanxiu Guo, Beibei Liu, Rui Shi, Bing Zhang, Weili Ye

13	Local Strategies for China's Carbon Mitigation: An investigation of Chinese city - level CO ₂ Emissions	Journal of Cleaner Production	SCI	Cai Bofeng, Guo Huanxiu, Cao Libin, Guan Dabo, Bai Hongtao
14	A Study on the Contribution of Industrial Restructuring to Reduction of Carbon Emissions in China During the Five - Year Plan periods	Journal of Cleaner Production	SCI	Jing Zhang, Hongqiang Jiang, Gengyuan Liu, Weihua Zeng
15	Source Data Supported High Resolution Carbon Emissions Inventory for Urban Areas of the Beijing - Tianjin - Hebei Region: Spatial Patterns, Decomposition and Policy Implications	Journal of Environmental Management	SCI	Cai Bofeng, Li Wanxin, Dhakal Shobhakar, Wang Jianghao
16	A Multidisciplinary Investigation on Bio - oxidation Gold Mine Tailings from Dandong, China as a Potential Arsenic Pollution Source	Journal of Geochemical Exploration	SCI	Huang Guoxin, Luo Ximing, Li Daming, Li Zhitao, Chen Zhaoxin
17	China High Resolution Emission Database (CHRED) with Point Emission Sources, Gridded Emission Data, and Supplementary Socioeconomic Data	Resources, Conservation and Recycling	SCI	Cai Bofeng, Liang Sai, Zhou Jiong, Wang, Jinnan, Cao Libin, Qu Shen, Xu Ming, Yang Zhifeng
18	Estimating Perfluorocarbon Emission Factors for Industrial Rare Earth Metal Electrolysis	Resources, Conservation & Recycling	SCI	Cai Bofeng, Liu Helin, Kou Fan, Yang Youming
19	CH ₄ Mitigation Potentials from China Landfills and Related Environmental Co - benefits	Science Advance	SCI	Cai Bofeng, Lou Ziyang, Wang Jinnan, Geng Yong, Sarkis Joseph, Liu Jianguo, Gao Qingxian
20	Characteristics of Public Concern on Haze in China and Its Relationship with Air quality in Urban Areas	Science of the Total Environment	SCI	Yaling Lu, Yuan Wang, Jian Zuo, Hongqiang Jiang, Dacang Huang, Raufdeen Rameezdeen
21	Source Apportionment of Nitrogen in PM _{2.5} Based on Bulk ¹⁵ N Signatures and a Bayesian Isotope Mixing Model	Chemical and Physical Meteorology	SCI	Wang YL, Liu XY, Song W, Yang Wen, Han B, Dou XY, Zhao XD, Song ZL, Liu CQ, Bai ZP
22	Estimation of the Source Apportionment of Phosphorus and Its Responses to Future Climate Changes Using Multi - Model Applications	Water	SCI	Sha Jian, Wang Zhong - Liang, Lu Rui, Zhao, Yue, Li, Xue, Shang Yun - Tao
23	Spatiotemporal Changes of China's Carbon Emissions	Geophysical Research Letters	SCI	Cai Bofeng, Wang Xiuquan, Huang Guohe, Wang Jinnan, Cao Dong, Baetz Brian W., Liu Lei, Zhang Hua, Fenech Adam, Liu Zhu
24	Study of Spatio - Temporal Revolution of Urban Heat Island and Its Cloud Effect Using Modis Observation	Geoscience and Remote Sensing Symposium. IEEE		Ya Ma, Guihuan Liu
25	Scenario Study on PM Emission Reduction in Cement Industry.	Scenario Study on PM Emission Reduction in Cement Industry.		Qian Tang, Chen Xiaojun, Xin Xia, Wang Lijuan, Wang Huili, Ling Jin, Zhen Yan

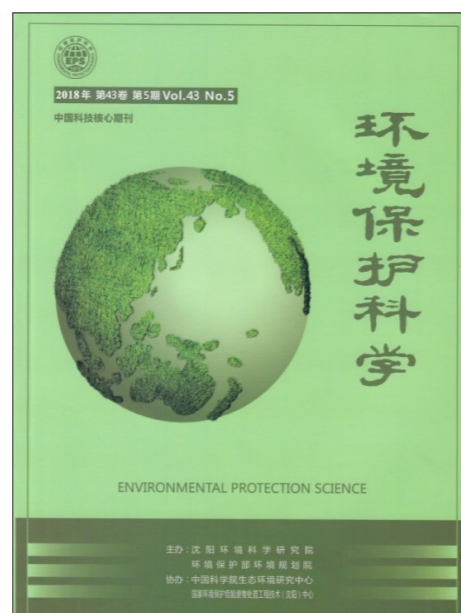
Publications

Chinese Journal of Environmental Management is managed by Ministry of Ecology and Environment, and co-organized by CAEP. It is included in the Chinese SCI-tech Periodical Database, Chinese Periodical Full-text Database and Chinese Academic Journal Evaluation Database. (International standard serial number: ISSN1674—6252.)

Environmental Protection Science is hosted by CAEP. It is a core journal of Chinese science and technology, which is included in retrieval systems such as American Chemical Abstracts Database, Comprehensive Evaluation Database of Chinese Academic Journal and Chinese Science Citation Database. International standard serial number: ISSN1004-6216.



▲ Chinese Journal of Environmental Management



▲ Environmental Protection Science

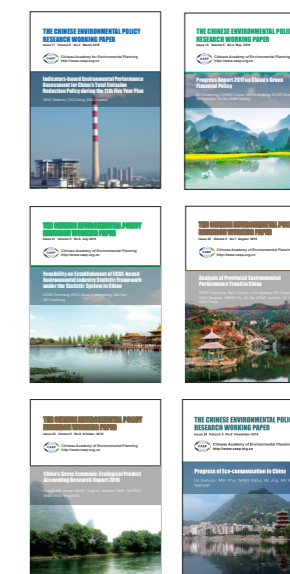
Chinese Reference for Environmental Decision-making, which is a policy consultation report established by our researchers, on the basis of special researches. It is aimed at major environmental problems, environmental planning and policy setting. A total of 21 issues were published in 2018.



- 2015 GEEP Accounting Report
- Analysis of Environmental Costs for Small and Poorly Managed Polluting Enterprises
- Evaluation on Law Enforcement Training
- Prevention and Control of Total Nitrogen in Danjiangkou
- Suggestions on National Park System
- Addressing the Weak Links of Rural Environment
- 2018 Global Environmental Performance Index
- Assessment of Sewage Discharge Permission in Paper-making Industry
- Research on Environmental Impact of Sino-US Trade War
- The 25-Year Environmental Protection Planning in the UK
- SDG Index and Index Board
- PPP Project Investment in Sewage Treatment
- Information Disclosure for Listed Companies
- Monitoring System of Area Sources in the Countryside
- Eco-compensation in Xin'an River Basin
- 2016 GEEP Accounting Report
- CCUS Guidelines in China
- UK's Clean Air Strategy 2018
- Strengthening the Protection of Rural Water Sources
- Liability of Eco-environment Damage
- Project Implementation Management
- Business Climate Index for Environmental Economy
- Road Map of Reaching the Standard of PM_{2.5} in Urban Areas

The Chinese Environmental Policy Research Working Paper is our work report, which is aimed at the environmental policy-making and implementing effects to promote international academic exchange, on the basis of research achievements of international cooperation projects. A total of 8 issues were published in 2018.

- Cost-benefit Analysis of Yellow-label Vehicles Elimination Policy in the Beijing-Tianjin-Hebei Region
- Indicators-based Environmental Performance Assessment for China's Total Emission Reduction Policy during the 11th FYP
- Co-control of CO₂ and SO₂ emissions in the key environmental protection prefectures in China
- Progress Report 2017 on China's Green Financial Policy
- The Story of Improving Air Quality in China: An Assessment of Action Plan of Air Pollution Prevention and Control
- Feasibility on Establishment of EGSS-based Environmental industry Statistic Framework under the Statistic System in China
- Analysis of Provincial Environmental Performance Trend in China
- China's Gross Economic-Ecological Product Accounting Research Report 2016
- Progress of Eco-compensation in China

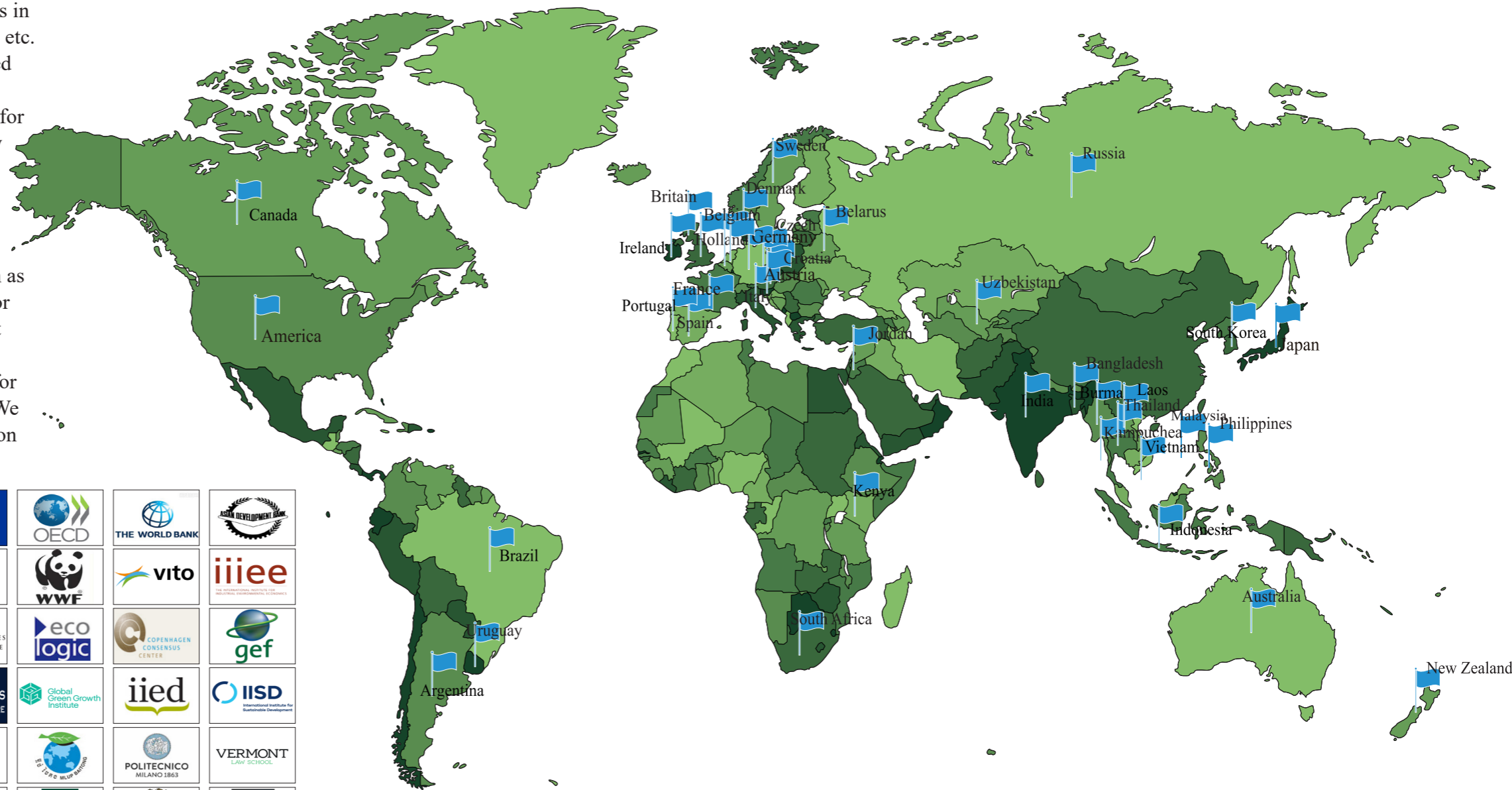


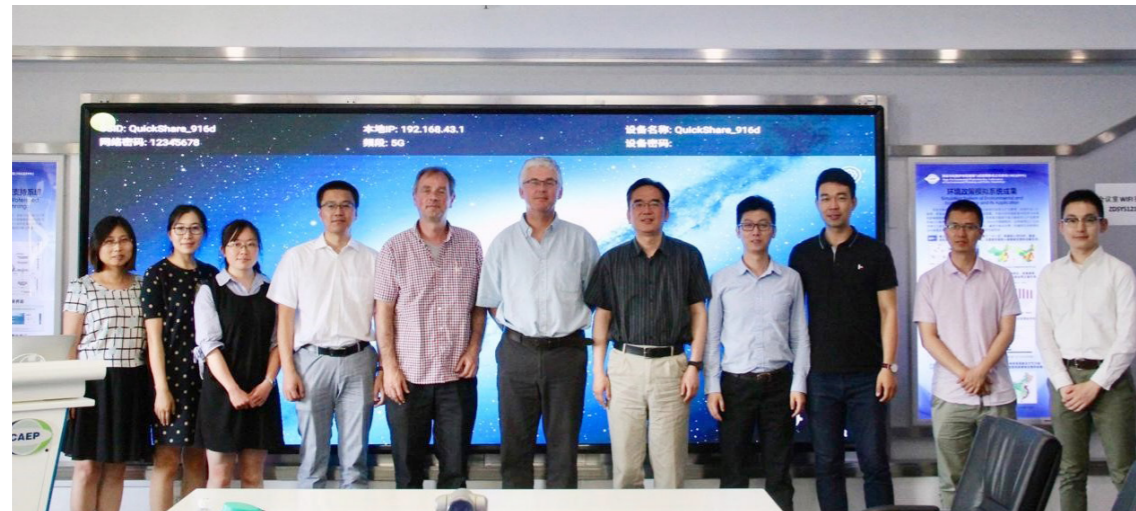
CAPACITY DEVELOPMENT

What We Achieve?—We do the integrative research that finds solutions to problems and makes action happen.

International Exchanges

In 2018, we have actively carried out cooperation and communications with foreign countries and organized totally 11 teams to conduct academic communications in the United States, Canada, Belgium, Japan, etc. In addition, we have received and conducted interchange activities with the founder of Global Water Intelligence (GWI), Director for French Ministry of Ecological and Solidary Transition: Virginie Dumolin, professor of University of Maryland in the United States, and Dr. Liz Rogers from the British Petroleum Company. In addition, we have participated international conferences, such as the Annual Conference of China Council for International Co-operation on Environment and Development, Shanghai International Think Tank Forum, and Kick-off Meeting for Franco-Chinese Year of the Environment. We have undertaken 13 international cooperation projects.





▲ Experts from University of Maryland Visited CAEP



▲ Secretary LU Jun Led a Work Group to Participate the Program for Ecological Environmental Damage Compensation, USA



▲ Ministry of Ecology and Solidarity Transformation (French) Visited CAEP



▲ President WANG Jinnan Visited LI Yong (Director General of UNIDO, Middle) and Stephan Sicars (Director of the Department of Environment at UNIDO, Right)



▲ President WANG Jinnan Gave Speech on the 5th Chinese Environmental Scholars Forum



▲ Mrs. Liz Rogers, VP of British Petroleum, Visited CAEP



▲ President WANG Jinnan Gave Speech on The 5th Green Industry Conference



▲ President WANG Jinnan Gave Speech on Open Forum for CCICED Annual General Meeting



▲ Sino-US Air Quality Management Policy Research, USA



▲ The Trade and Environment Committee, Switzerland



▲ Exchange on China Ecological Environmental Protection Policy, Laos



▲ The Asia-Pacific Clean Air Partnership Forum, Thailand



▲ The "Better Air Quality" Committee, Malaysia



▲ The 19th World Environment Tax Conference, Spain



▲ The International Remediation Technology Seminar, Canada



▲ The Green Development Seminar on "Belts and Roads", Cambodia



▲ The 11th China-US Regional Air Quality Management International Conference, USA



▲ Regional Regulations Legislative Training, Belgium



▲ Sino-Japanese Technical Cooperation of Build an Environmentally Friendly Social Project, Japan

Partnerships

Technical Support for Ecological Civilization at Locals

One of our important works is to provide the local governments with supporting services on environmental science and technology. Currently, we have provided supporting services for more than 170 cities. In 2018, we have actively provided the local governments with consultation services on multiple fields, for example, ecological civilization construction, construction of demonstration area of "Two Mountains Theory", beautiful city, overall environmental planning, compliance planning, definition of red line for ecological protection, environmental risk assessment, ecological compensation, planning of environmental impact assessment, etc.



Strategic Cooperation

In 2018, CAEP signed strategic cooperation agreements with local people's governments and departments.



▲ Singing the Strategic Cooperation Agreement with Hainan Province Environmental Protection Authority



▲ Singing the Strategic Cooperation Agreement with Fujian Province Environmental Protection Authority



▲ Singing the Strategic Cooperation Agreement with Xinjiang Uygur Autonomous Region Environmental Protection Authority



▲ Singing the Strategic Cooperation Agreement with Hebei Province Environmental Protection Authority



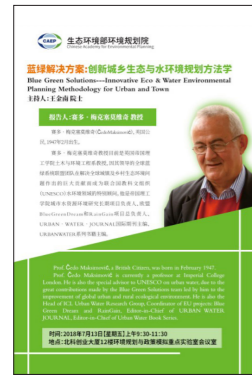
▲ Singing the Strategic Cooperation Agreement with Jinzhong Municipal People's Government



▲ Singing the Strategic Cooperation Agreement with Quzhou Municipal People's Government

Academic Activities

The Forum of China's Environmental Planning and Policy is one of the academic activities carried out by us. The environmental experts from both China and foreign countries are invited to address special lectures, in order to understand the scientific research progress in environmental protection related fields and promote academic communication and cooperation. Till now, 76 sessions have been held, 10 of which were held in 2018.



Forum of China's Environmental Planning and Policy

- Case Study on Establishment of Remediation Value and Risk Control of Contaminated Site in Canada
- A Research Perspective of Computational Science on Environmental and Ecological Management
- Research Methods on Global Burden of Diseases Caused by Air Pollution
- From Regional to Global Scale - Trade-off Analysis of Economic and Environmental Impacts of the Coupling Food, Energy, Water Resources and Ecosystem
- Control Plan and Implementation Plan for Maximum Daily Pollution Load of Contaminated Water Bodies in California, USA
- Primary Investigation on the Application and Practice of SWAT Model in Non-point Source Pollution Simulation
- Research Progress and Challenges of Accurate Prevention and Control of Air Pollution
- Blue-Green Solution: Innovative Methodology for Planning of Urban and Rural Ecology and Water Environment
- Research on Coupled Simulation of China's Provincial Water - Energy- Industry Policies Based on IMED Model
- Evolution of Global Waste Trade System and Benefit-Risk Analysis of China



Youth Academic Salon

- Discussion on Prevention and Control of Heavy Metal Pollution in Typical Farmland, by Dr. Sun Tianwei.
- Research on Space Control to Improve the Urban Thermal Environment, by Ge Rongfeng
- Research on Zoning and Evidence of Areas with Soil Conservation Priority, by Dr. Wang Chao
- Division of Watershed Control Units in the 13th Five-Year Plan, by Dr. Zhao Kangping
- Analysis and Research on Sources of Non-point Nitrogen Pollution, by Dr. Lu Lu.
- The Impact of Pollutant Emission on Residents' Health under the Carbon Trading Policy by Dr. Cao Libin
- Distribution of High Particle (OM10) Pollution Areas in Beijing, Dr. Zhang Zhihong
- Interpretation of Technical Methods for the Preparation of "Three Lines and One List", by Yu Lei (Associate Researcher)
- Thoughts and Experiences for the Preparation of Ecological Protection and Restoration Plan for Mountains, Rivers, Forests, Farmlands, Lakes and Grasslands: A Case Study of Chengde, by Wang Bo (Associate Researcher)
- Large-scale Simulation Research on Non-point Pollution Load of China's Planting Industry, by Dr. Duan Yang
- Investigations and Thoughts on the "Non-discretionary Implementation" of Environmental Protection, by Dr. Du Yanchun

Youth Academic Salon is the youth academic communication platform organized by our Youth League Committee. The key members of our departments are invited to address special lectures in combination with project researches, in order to provide our young people with a platform for mutual learning and communication. A total of 11 sessions were held in 2018.



Culture Establishment



▲ Secretary LU Jun Gave a CPC Lecture



▲ Secretary LU Jun Hold a Thought Exchange Meeting with Female Staff on the International Working Women's Day



▲ New Year Tea Party



▲ Shuttlecock Competition



▲ Environmental Theme Family Activities



▲ New Employee Orientation Training



▲ Staff Outreach Activities



▲ Spring Trip



▲ Gymnastics Competition with Radio Music



▲ The Activities of Chinese Traditional Culture and Costume