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Responsible Operations

We are always committed to the principle of "people-centered, quality foremost, safety first, environment prioritized" to achieve "zero defects, zero injuries and zero pollution". We regard providing clean energy, minimizing environmental impact and reducing emissions as the strategic foundation for the Company's sustainable development. The Company continues to improve the quality management of products and services, and promote safe, environmentally-friendly and resource-saving operations, in order to promote the construction of an ecological civilization and develop a resource-saving and environmentally-friendly enterprise.

SDGs



Safe Operation

We actively promote the building of a long-acting safety system and comprehensively enhance our work safety management. In 2019, the Company maintained a stable improvement in safety performance.

Management System and Performance Assessment

In 2019, we enacted some regulations including the *Measures for the Implementation of Reporting on Safety in Production by Enterprise Leaders*, and the *Measures for the Safety Supervision and Management of Leasing Business*, and revised the *Overall Response Plan for Emergencies* and 23 special emergency plans, thereby enhancing the top-level design. We enhanced the auditing quality of our HSE management system, and concentrated our efforts in rectifying problems found during the auditing process. We assessed the safety and environmental protection performance of critical personnel who was just appointed or transferred to relevant positions. We revised the detailed rules and relevant regulations regarding the assessment of safety performance, and strengthened our evaluation and accountability system for process management performance and accidents/incidents.



Hazard Control

We attach equal importance to both prevention and control of hazards, and build a long-acting mechanism for hazard control, so as to ensure all hazards are timely and effectively treated and enhance the overall safety performance of the Company. In 2019, we carried out targeted inspections of the safety hazards in the control projects of external floating roof storage tanks, oil/gas transportation pipelines and refined volatile organic compounds (VOCs). We upgraded safety controls of oil and gas pipelines, implemented comprehensive hazard control for the high consequence areas of oil/gas long-distance pipelines and the corrosion and leakage of gathering and transportation pipelines, and improved the intrinsically safe operation level of oil and gas pipelines.

Safety Risk Management

We fully implemented a dual-prevention mechanism covering risk prevention and control and hazard identification and treatment for production safety, and established a sound classified risk prevention and control system, so as to eliminate safety risks and potential hazards to prevent accidents.

In 2019, we carried out classified supervision and targeted responses to risks in our subsidiaries. We strengthened risk early warning, prevention and control in key areas, and took special actions for risk prevention, hazard removal and accident control. We formulated the risk prevention and control guide for main specialties including oil and gas fields, and refining and chemical, and instructed our subsidiaries in making 354 risk prevention and control plans. We continuously promoted the standardization of grass-roots groups/teams, of which 96% were qualified for the HSE standardization.



Supplier Safety

We included suppliers and contractors into our safety management, and had a systematic management on their access, selection, training, use, evaluation and assessment, so as to prevent and reduce accidents caused by suppliers and contractors.

In 2019, we strengthened the supervision and management of contractors, highlighted the control over contractor access at the source, and enhanced the safety training for critical personnel of the contractors, in order to reduce safety risks relating to contractors.

<p>In 2019, we</p>	<ul style="list-style-type: none"> • Strictly reviewed our contractors. We removed 2,500 unqualified contractors, accounting for about 13% of our total contractors. • Established a compulsory training system for the contractor's key personnel. A total of 70 sessions of training were provided for contractors' key personnel, involving over 7,000 personnel.
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CNPC Supply Chain Safety Management Process



Hazardous Chemicals Management

We conduct full cycle management of hazardous chemicals covering production, storage and transportation. In 2019, taking the major accidents at some local hazardous chemicals enterprises as a warning, we took special actions such as hazard control and centralized treatment concerning hazardous chemicals, and carefully implemented the *Guidelines for Identification and Treatment of Safety Risks and Hazards of Hazardous Chemicals Enterprises*. We promoted relocation and transformation of hazardous chemicals subsidiaries in populated regions and established a safety risk monitoring and early warning platform of hazardous chemicals, thereby improving the capability of supervision on hazardous chemicals.

Offshore Oil Safety Management

We make unremitting efforts to improve offshore oil safety management. In 2019, we carried out special inspections of the safety risk prevention and control in offshore oil reserves and productivity expansion projects, and put more efforts in risk prevention and control in key operations such as onboard hoisting. We maintained offshore emergency measures for typhoons and storm surges, by which we responded successfully to Typhoon Lekima. As a result, we kept a stable status of offshore oil safety.

Overseas Security Management

Personnel safety has always been an overriding priority in our operations. We constantly reinforced the operation of social security management system, fully strengthened social security risk prevention and control, and continuously enhanced emergency response capabilities. In 2019, we strengthened prevention and early warning, enhanced process control, improved emergency capabilities, and braced ourselves for political and social unrest in Venezuela, Sudan, Iraq, Ecuador, and other high-risk areas. There were no fatalities in our overseas projects.

Overseas Security Risk Management

Risk level	Management measures
Extremely high risk	CNPC sets out clear and unified security management requirements and implements intensified security management policies
High risk	Any project is implemented only after security risk assessment is made and a security program is prepared and approved by the Company. Depending on changes in local security situations during project implementation, the security program is improved, the emergency response plan is revised, and emergency drills are arranged, to ensure personnel safety
Medium risk	Before a project is implemented, risk assessment is made, an emergency response plan is prepared, and security measures are kept in place
Low risk	Necessary security measures are taken

Environmental Protection

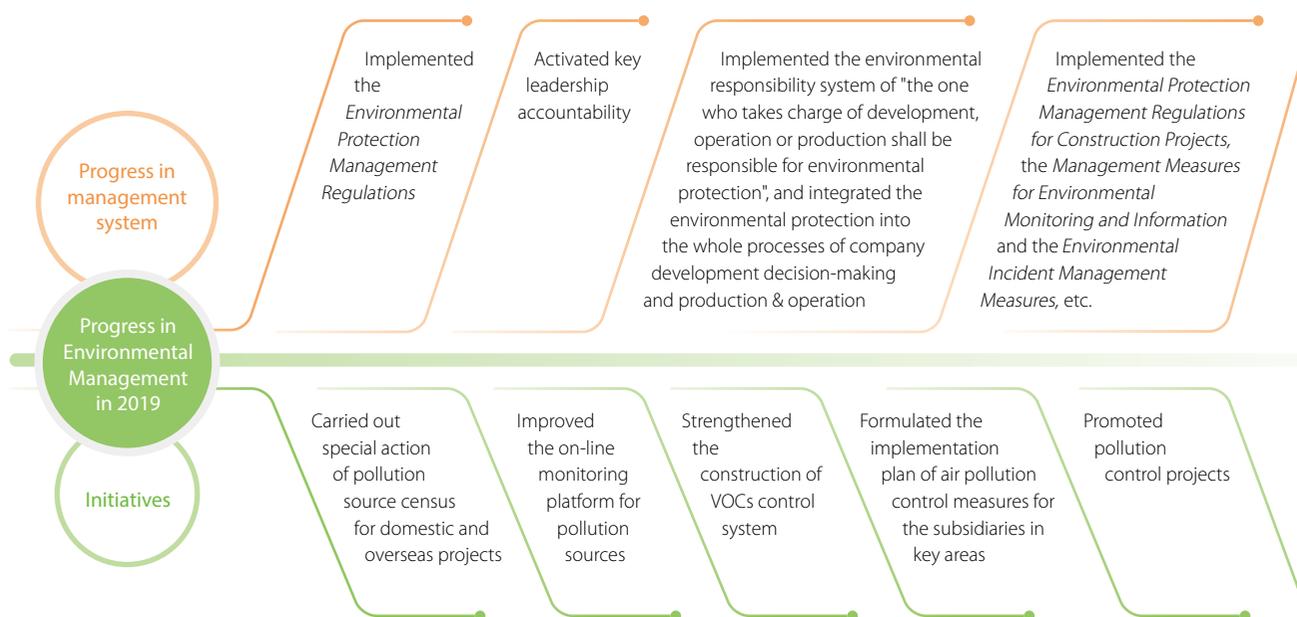
We take the initiative to evaluate the environmental impact of our management and activities, and make efforts to reduce adverse effects on the environment and climate. By improving the resource utilization efficiency, implementing the Clean Air Act, and promoting energy conservation and emission reduction, we strive to achieve environmentally friendly and resource-efficient operations and vigorously advocate ecological civilization, in order to achieve harmonious development with the environment. In July 2019, CNPC was rated by SASAC as one of the "Enterprises with Outstanding Contributions in Energy Conservation and Emissions Reduction" (2016-2018).

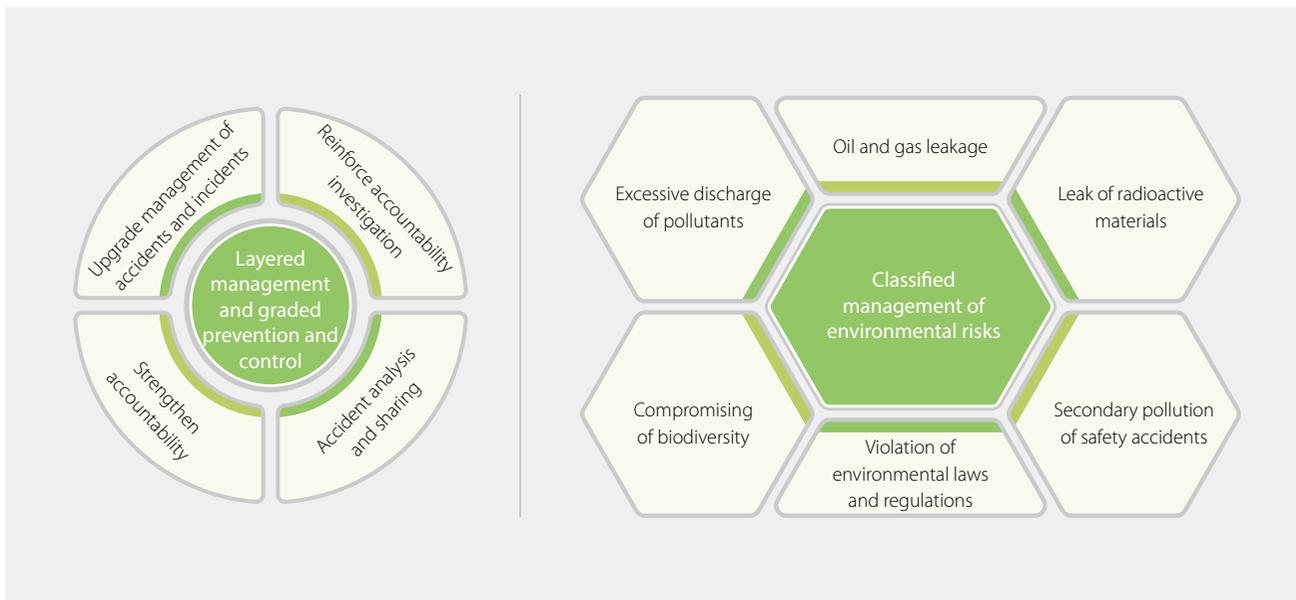
In 2019, CNPC continuously improved its environmental risk prevention and control capabilities by

- Releasing the opinions on further strengthening the management and control of ecological environment risk
- Making safety and environmental risk diagnosis and assessment, and strengthening the control of event sources
- Regularly making comprehensive investigations of ecological environmental risks and treatment of potential hazards

Strengthening Risk Prevention and Control

We carried out environmental risk identification and assessment and implemented a risk prevention and control management model focusing on environmental forecasting, pre-warning and monitoring. We began the environmental risk management at an earlier stage and established a sound risk management mechanism featuring "management in tiers, prevention and control by levels", in order to ensure overall control over environmental risks. In 2019, no major environmental accidents were reported.





Case Study

On-line Monitoring of Pollution Sources

In 2019, 463 monitoring points of 38 subsidiaries were accessed to CNPC's pollution source on-line monitoring system. Particularly, key pollution sources given in the National Directory of Key Pollutants were all controlled.

Case Study

Strengthening Environmental Governance

In 2019, we invested about RMB 9.9 billion in environmental governance, typically covering anti-seepage reconstruction of underground oil storage at service stations, comprehensive treatment of VOCs in refineries, upgrading of wastewater treatment plants, treatment of oily sludge, and eco-environmental risks/hazards control.

Case Study

Holding the First Competition in Environmental Monitoring

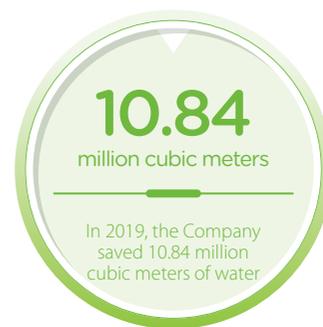
In 2019, we held the first competition in environmental monitoring at the Dagang Oilfield, with participants from 35 oil and gas fields and refineries. This competition is of great significance to creating an excellent learning and research atmosphere and improving the quality of ecological environment monitoring talents.

Sustainable Use of Resources

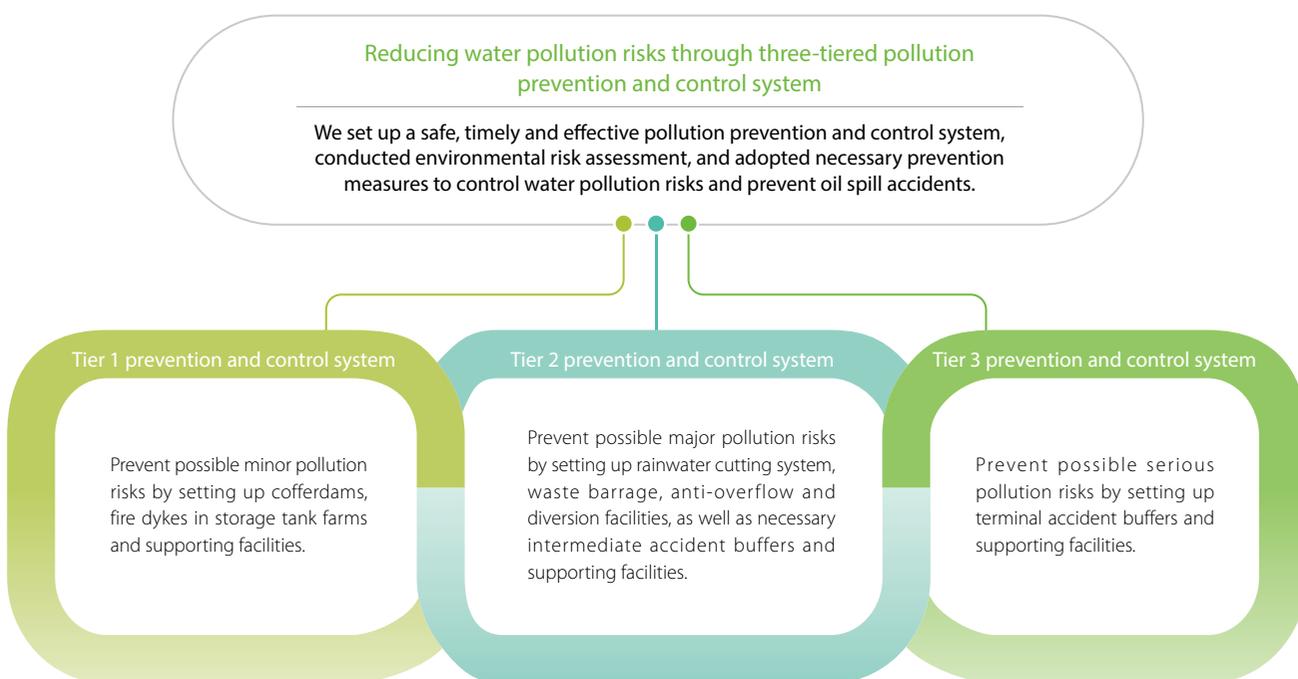
We attach great importance to the protection and rational utilization of resources. We strengthen the protection of water, conservation of freshwater and rational use of land, and strive to improve energy and material utilization efficiency to minimize resource consumption.

Water Resources

We endeavor to improve water utilization efficiency and realize sustainable use of water throughout various links in our production and operation activities. Through strengthening water utilization process management, adopting technologies for water-saving and wastewater treatment and recycling, and integrating water-saving indicators into performance evaluation and other measures, we worked to reduce the use of fresh water. In 2019, we saved 10.84 million cubic meters of water.



Water Resources Management throughout the Industry Chain





Land Resources

Based on the principle of scientific siting, efficient use, proper protection, and timely restoration and through innovation in land-saving technologies and management models, we made careful and intensive use of land during production, strictly controlled land use growth, made good use of land in various ways, proactively reclaimed land, carried out environmental treatment and recovery in mining areas, and enhanced land use efficiency. In 2019, we saved 1,247 hectares of land.

In 2019, the Company continued to promote new intensive drilling modes (e.g. large well cluster and platform type), applied the technologies of "no mud on ground" collection and recycling and clean drilling and workover operations, and replaced small to medium-sized stations with integrated units.

- Reduced land use by more than 30,000 *mu*
- Reduced drilling waste by more than 4.80 million tons
- Reduced oily sludge and oil-staining plastic cloth by 274,000 tons

Energy

We have been striving to reduce the consumption of fossil fuels and increase energy efficiency by reducing energy intensity. We paid high attention to energy conservation at the source, and carried out energy-saving assessments of newly-built, revamped and expanded projects. We promoted the application of energy-saving technology and equipment to boost the efficiency of heating furnaces in oil and gas fields and optimize refining and chemical energy systems. We reinforced energy use management in the production process, and conducted monitoring and evaluation of more than 6,000 sets of energy and water-intensive devices and equipment.



82×10⁴ tons

In 2019, we saved 82×10⁴ tons of standard coal.

7.77 %

Compared to 2010, the proportion of natural gas consumption in our total energy consumption increased by 7.77%.

7.87 %

Compared to 2010, the proportion of raw coal consumption in our total energy consumption decreased by 7.87%.

Waste and Pollutants

We strictly monitored and controlled discharges of waste and pollutants in the production process, strengthened waste management, and reduced discharges of pollutants in the air, land and water. We actively promoted collection measures and recycling technologies for drilling waste, and clean operation technologies at our oil and gas fields, significantly reducing waste and pollutants.

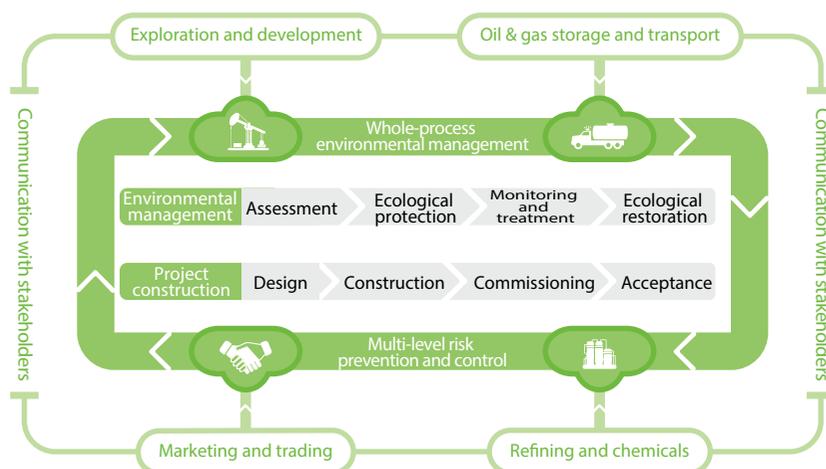
Conservation of Biodiversity and Natural Habitats

We are devoted to reducing the potential influence on the environment and biodiversity during production and operations, and take comprehensive precautions to avoid environmental impacts and work hard to restore the environment to its original state in case of any adverse impact. We make an all-out effort to identify and address environmental pollution and ecological damage, and reduce the impact on the environment by various means, including reducing noise and emissions. We do our utmost to reduce the occupation of cultivated land, protect water and land, and restore vegetation. Various measures are taken to restore the environment in the working areas and protect biodiversity.

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In 2019, the Company invested about RMB 4.8 billion in the treatment of VOCs, with 29 comprehensive treatment projects of VOCs of refining and chemical enterprises being completed

Eco-environment Management in Full Life Circle Through the Industry Chain



Case Study

Returning "Home" to Przewalski's Horse

Przewalski's horse is the only extant wild horse in the world. It is classified as an EW (extinct in the wild) species in the IUCN Red List of Threatened Species and regarded as a "living fossil".

Przewalski's horse habits in the Mt. Kalamaili Ungulate Natural Reserve, where there are also rare animals like Mongolian Khulan and Gazella subgutturosa. The Reserve is adjacent to the operation area of Xinjiang Oilfield. In order to protect wildlife, Xinjiang Oilfield invested nearly RMB 200 million to restore the 352,000 km² landform of the Reserve by shutting down 284 water injection and oil production wells. Thus, Xinjiang Oilfield "completely withdrew from the Mt. Kalamaili Ungulate Natural Reserve and returned it to Przewalski's horse".



"The practice of Xinjiang Oilfield fully embodies its social responsibility as a central enterprise. It is a very good example in the history of Mt. Kalamaili Ungulate Natural Reserve, and also in the history of domestic reserves!" said Chu Hongjun, the Director of the Management Center of Mt. Kalamaili Ungulate Natural Reserve.

Climate Change

We respond to the *Paris Agreement* adopted by the 2015 United Nations Climate Change Conference, and we embrace the goal of limiting global warming to less than 2 degrees Celsius by the end of this century. To this end, we actively responded to climate change, devoted ourselves to low-carbon development, and shared the practice of greenhouse gas control with industry peers and all sectors of society.

CNPC Low Carbon Development Progress Chart

Safeguard measures ▶



1. Integrate low-carbon development concept into corporate strategy

- Based on the carrying capacity of resources and environment, rationally arrange industrial planning and project construction, improve policies for low-carbon development by fields and phases, introduce a carbon cost assessment mechanism, carry out carbon assessment of construction projects, and reduce arrangements for and investment in high-carbon emission businesses;
- Conduct stress tests on related assets of the enterprises and strengthen management measures in the affected assets;
- Improve the phasing-out mechanism, and gradually phase out oilfields/blocks with high energy consumption and high water cut and the refining and chemical plants with high carbon emissions per unit of product and low market demand.

2. Integrate low-carbon concept development into corporate management

- Improve green and low-carbon development systems and mechanisms, and conduct special supervision (especially on carbon emission intensity, implementation of tasks and measures, and progress of pilot/demonstration projects) to ensure the realization of targets and tasks;
- Improve the measurement and inspection system for greenhouse gas emissions, check greenhouse gas emissions, regularly update the list of greenhouse gas emissions, and engage third parties in verification and evaluation;
- Establish a greenhouse gas control system, improve the carbon emission quota control and carbon asset centralized management and control modes, plan and implement emission control projects/measures to effectively reduce emissions intensity and ensure that risks are brought under control.

Strategic goals

By

2030

- By 2030, further increase the supply of natural gas and other clean energy, enable natural gas, new energy and renewable energy to take higher proportions of the Company's domestic primary energy output.

Progress in 2019

- In 2019, natural gas accounted for 45% of the Company's domestic production equivalent output.

Enhanced carbon trading performance and carbon asset management

- In 2019, all PetroChina enterprises on the list of the national carbon emissions trading market fulfilled their contracts.

Strengthened management on carbon emissions

- Upgraded the *Green Action Plan*
- Established a special low-carbon management division



3. Infuse low-carbon development into technological innovation

- Reinforce the synergy of enterprises, colleges/universities, research institutes and users to accelerate the translation and popularization of cutting-edge technology and research findings;
- Build a low-carbon technology support platform and enhance the independent technological innovation capacity in terms of energy conservation, emission reduction and environmental protection. By 2030, the proportion of technology research input in low-carbon field will reach 10%;
- Apply the green manufacturing technology to provide low-carbon products, and promote the lifecycle ecological environmental protection and resources/energy saving;
- Communicate and cooperate with international organizations such as OGCI in respect of reducing methane emissions, promoting CCUS, improving energy efficiency, and reducing the carbon emissions intensity in the transportation sector.

4. Integrate low-carbon development concept into social responsibility

- Promote the concept of low-carbon development, take measures for ecological civilization, support low-carbon activities, and commence the construction of low-carbon demonstration zones;
- Establish a low-carbon development & climate investment fund, innovate business models and operating methods, and strengthen cooperation with social capital, local governments/enterprises and community, in order to build a low-carbon society;
- Implement low-carbon demonstration projects in line with the Belt and Road Initiative, participate in South-South cooperation on climate change, and create the image of a responsible energy company.

By

2050

- By 2050, raise the proportion of natural gas, new energy and renewable energy in the Company's domestic primary energy output to a new high.

Reduced emissions by the use of technological means, lowered greenhouse gas emissions in production processes, and developed the CCUS system

- The existing CCUS system was improved both theoretically and technically.
- Over 1.5 million tons of carbon dioxide was stored in the CO₂-flooding demonstration project in Jilin Oilfield.
- New demonstration projects are in construction in Xinjiang Oilfield and Changqing Oilfield.

Participated in activities under the OGCI framework

- Established the OGCI Climate Investment Kunlun.
- Set up the Xinjiang CCUS Industrial hub.
- The Company's executives attended the CEO Summit of OGCI.
- Hosted the OGCI 2019 conferences in Hangzhou, China.

Built carbon sink forests

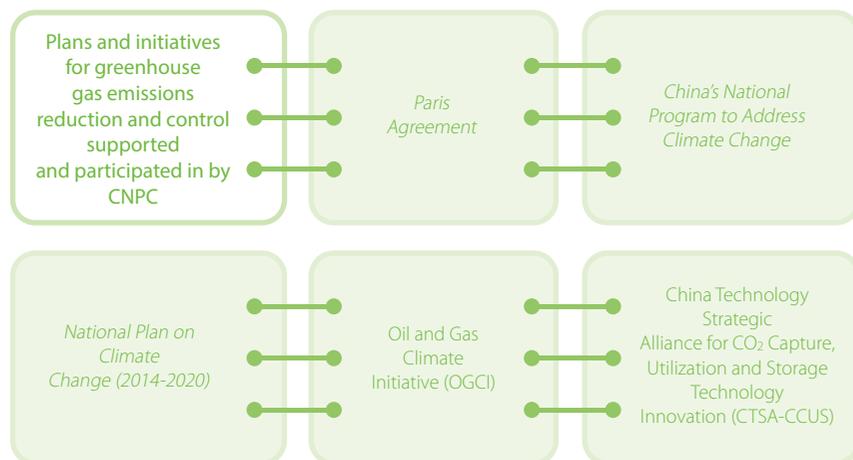
- The total green area reached 286 million square meters.
- A total of 2,197,400 trees were planted in 2019.
- Provided support to local landscaping, with a green area of 7,438,000 square meters.
- Changqing Oilfield constructed ecological forests (more than 600,000 *mu*), such as "PetroChina Changqing Forest", "Jiaozichuan River Basin Changqing Carbon Sink Forest" and "Changqing Maling Carbon Sink Forest".



At the 10th Charity Exhibition entitled "Low-carbon Development • Green Life" and the "2019 China Low-carbon Models" press conference, CNPC was designated "Low Carbon Model in China" for the ninth consecutive year.

Carbon Emission Management

We paid close attention to greenhouse gas emissions and included combating climate change in our development plan. In 2019, CNPC formulated the *Green Action Plan*, established a special low-carbon management division, enhanced the carbon emission management, improved the carbon emission control system, and took an active part in the cooperation with global oil and gas industry to cope with climate change.



Case Study

CNPC Actively Participated in OGCI Activities to Promote Carbon Emissions Reduction in the Industry

As the sole member of OGCI in China, CNPC is deeply involved in international cooperation with other OGCI members to address issues on climate change and low-carbon transition in the oil and gas industry.

• Establishment of the OGCI Climate Investment Kunlun

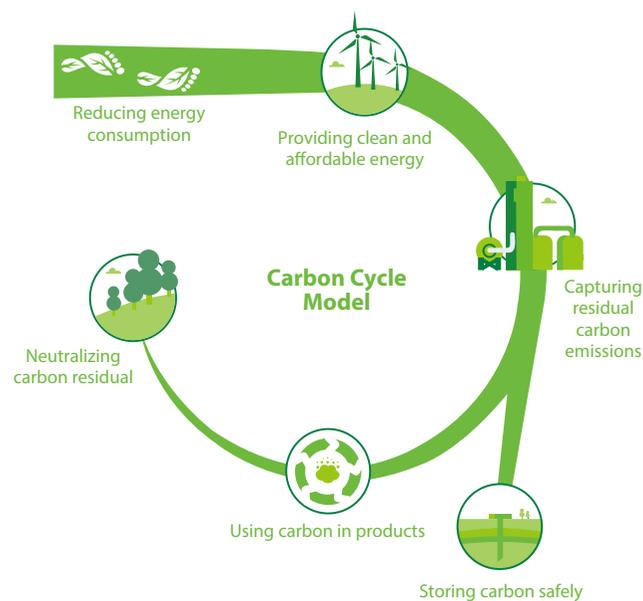
In 2019, CNPC Assets Management Co., Ltd. and OGCI Climate Investments signed the *Framework Agreement of Climate Investment China* to set up the OGCI Climate Investment Kunlun through a branch of OGCI Climate Investments in China in the form of limited partnership.

• Establishment of Xinjiang CCUS Hub

The Xinjiang CCUS Hub, led by CNPC, was incorporated by OGCI into the world's first CCUS hub under the CCUS KickStarter. CNPC actively participated in the discussions of OGCI about CCUS, invited the OGCI working group to visit Xinjiang Oilfield and Karamay Petrochemical, and conducted a feasibility study on the construction of the Xinjiang CCUS Hub. The Xinjiang CCUS Hub will be constructed through joint venture cooperation by fully relying on the OGCI think tank and learning from international mature technology and management experience of the million-ton CCUS projects.

• Industry Exchange

- CNPC executives attended the CEO Summit of OGCI.
- CNPC hosted the OGCI 2019 conferences in Hangzhou, China.



Case Study

Implementing Green Credit Projects to Drive Green Development

CNPC focuses on clean energy, energy saving and environmental protection industries, involving mineral resources comprehensive utilization, the construction of clean energy facilities construction and clean energy production. Through the combination of industry and finance, and green finance, CNPC has contributed to the environmental protection in the country. In 2019, CNPC issued US\$ 4.09×10⁸ of green credit in foreign exchanges.

Key green credit projects in 2019

- Changing shale gas development
- Provision of clean energy to the Central Asia-China Gas Pipeline
- Clean energy development of Kunlun Energy
- Yamal LNG development in Russia
- Gas field development project in Karakul, Uzbekistan

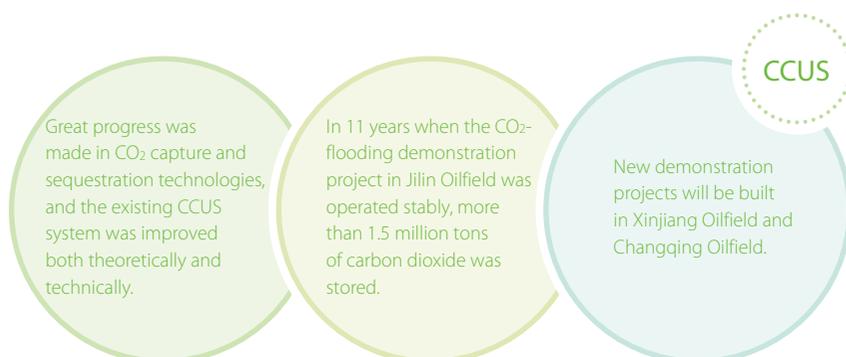
Development of Low-carbon Energy

As an advocate and participant of the low-carbon economy, we actively develop natural gas, coal-bed methane, shale gas, biomass energy and other low-carbon energies, attach great importance to producing and supplying clean products, and work hard to achieve clean production and consumption processes (see Chapter 1: Sustainable Energy Supply for details).

Development and Application of Low-carbon Technologies

With science and technology playing a significant role in controlling greenhouse gas emissions and addressing climate change, we carried out research on carbon emission reduction technologies such as CO₂ flooding and storage, assessment of carbon sequestration potential in salt water layers and oil reservoirs, and CO₂ capture for flue gas from the Company's power plants.





Carbon Emission Reduction during Production

While supplying society with clean oil products, we also pay high attention to optimizing our own energy consumption mix. We also address carbon emissions and carbon footprint during production and operation. In Huabei Oilfield, Tarim Oilfield and other areas, we used renewable energies such as geothermal energy and solar energy to reduce carbon emissions during production.

Market-based Mechanism for Carbon Saving

We actively participated in carbon trading activities to achieve carbon emissions reduction through market-based mechanisms. We are co-founders of the Tianjin Climate Exchange (TCE), the first comprehensive emissions trading institution in China. The energy saving and emissions reduction projects developed by TCE could save more than 200,000 tons of standard coal annually, equivalent to over 500,000 tons of CO₂ emissions reduction. In 2019, all CNPC enterprises on the list of the national carbon emissions trading market fulfilled their contracts.

Forestry Carbon Sequestration

We actively support carbon sink forest construction and forestation activities in China. We established the China Green Carbon Foundation together with the State Forestry Administration, continuously building carbon sink forests. Meanwhile, we set up the Forestation Committee to ensure continuous forestation in our working areas and living quarters. As of the end of 2019, our green coverage reached 286 million square meters, representing an increase of 5.595 million square meters in the year. A total of 499,000 employees voluntarily planted 2.027 million trees in 2019.



Products and Service

Following the quality principle of "Integrity and Excellence", we strengthen the quality management system and improve process quality control to create brand products. In addition, we continue to promote high-quality development for the Company by consistently improving product, project and service quality.

Quality Control

In 2019, CNPC continued to enhance quality management, focusing on quality system audit, quality supervision and inspection, and quality culture building.

Major Progress of Quality Management in 2019

Key work	Content
Quality system audit	<ul style="list-style-type: none"> • Full coverage of quality system audit
Quality supervision and inspection	<ul style="list-style-type: none"> • Enhanced supervision of self-manufactured products • Conducted quality supervision of products procured, with 1,565 batches checked • Strengthened the engineering quality monitoring and management, and carried out wellbore quality diagnosis and evaluation and the QHSE integrated auditing
Quality culture building	<ul style="list-style-type: none"> • 223,000 employees participated in the quality activities • Over 250,000 employees attended the quality management contest organized by the State-owned Assets Supervision and Administration Commission (SASAC). • Carried out a consumer satisfaction survey • 27 teams won the title of "National Quality Trustworthy Team", 15 QC activities were awarded the title of "National Excellent Quality Management Team", the first prize and second prize at the 2nd Central Enterprises' QC Team Result Presentation Competition • Our 8 projects were granted with the National Quality Project Award

In 2019

- High-quality chemical products: Ethylene production increased by 295,000 tons;
- Synthetic resin production increased by 415,000 tons, synthetic rubber production increased by 42,000 tons, and urea production increased by 380,000 tons, on a year-on-year basis;
- New chemical products: 72 trademarked new chemical products were produced, with an output of 705,000 tons;
- Promotion of new products: 27 new products were promoted, including special-purpose polypropylene resin for hygienic materials produced by Dalian Petrochemical, ternary foamed polypropylene produced by Dushanzi Petrochemical;
- Quality upgrading of oil products: The National VIA-phase quality upgrading of gasoline and diesel was completed on schedule.

Product Management

We provide consumers with products in compliance with legal requirements and industrial standards in a responsible way. While providing products, we put emphasis on the influence on consumers and guarantee product safety. Meanwhile, we actively communicate with consumers, publish product safety risk evaluation results and make great efforts to protect consumers' legal interests.

Quality Products and Services

Providing Quality Products

By strengthening technological innovation and promoting product quality upgrading, we provided applicable solutions for our industry as well as safe, reliable, high-quality and environmentally friendly products for our customers. All equipment for gasoline and diesel production in our refining and chemical companies were able to meet National VI Standard.



Refined products such as gasoline, diesel and lube oil produced, and trademarked chemical products

Product	Type	Purpose
Gasoline	Vehicle gasoline, vehicle ethanol gasoline, local standard gasoline, export gasoline and aviation gasoline	Traffic
Diesel	Light diesel, urban automotive diesel, military diesel, local standard diesel and exported diesel, etc.	Traffic
Kerosene	Kerosene for lamps and 3# jet fuel oil for aviation	Aviation
Lube oil	Vehicle lube oil, industrial lube oil, synthetic lube oil, metal processing oil, etc.	Aviation, aerospace, nuclear industry, ships, etc.
Petroleum liquefied gas	Chemical basic raw materials and new fuels	Synthetic resins, rubber, fiber and medical dyes, etc.
Fertilizer	Urea and some compound fertilizer	Agricultural
Natural gas	--	Power generation, chemical industry, city gas, transportation, etc.



Six kinds of refined products such as commercial fuel oil and six kinds of refined and chemical products such as synthetic resin

Product	Type	Purpose
Refined products	Chemical light oil	There are various distillation ranges for different purposes. It can be used as reforming and chemical raw materials, and for producing high-octane gasoline and solvents.
	Commercial fuel oil	Fuel oil is widely used in power generation at power plants, and as fuel for marine boilers, heating furnaces, metallurgy furnaces and other industrial furnaces.
	Solvent oil	--
	Bitumen	It is divided into heavy traffic pavement petroleum bitumen, modified bitumen, bitumen for pipeline coating, cable bitumen, etc.
	Paraffin wax	Semi-refined paraffin, fully refined paraffin, crude paraffin, medicinal Vaseline, paraffin for food and Vaseline for electrical appliances, etc.
	Petroleum coke	It is mainly used in the production of carburant, graphite electrode, smelting of industrial silicon and fuel in the carbon industry.
Chemical products	Synthetic resin	Manufacture of plastics
	Synthetic rubber	Tire raw materials
	Synthetic fiber	Polyester (textiles), Acrylic (wool, clothing, etc.) and Polypropylene (mosquito nets, carpets, gauze, etc.)
	Organic raw materials	--
	Fine chemicals	Catalysts and surfactants
	Inorganic chemicals	Sulphur and concentrated nitric acid
Equipment products	Drilling equipment, Oil recovery equipment, Power equipment, Petroleum pipe, Refining equipment, Marine equipment, Geophysical equipment, Logging equipment	--



Others

Other high-quality products, and environmental-friendly, diversified products.
eg: Washer fluids, Bactericides, Fireproof coating

Promoting Service Level

We constantly improve consumer experience and provide consumers with satisfactory and efficient services. In 2019, we continued to strengthen online and offline integration. Specifically, the first batch of refueling card mobile payment services was successfully launched, and the first "people, vehicle and life" one-stop service station, i.e. a warehouse-type convenience store, was constructed in Nanning, offering more convenient services for consumers.

<p>Service network</p>	<ul style="list-style-type: none"> • Our services covered 31 provinces (municipalities and autonomous regions) and the Hong Kong SAR • We could sell more than 110 million tons per year • We provided services to 11 million customers every day
<p>Service category</p>	<ul style="list-style-type: none"> • We have 22,365 domestic gas stations • We have 19,000 uSmile convenience stores • We have issued more than 100 million Kunlun refueling cards
<p>Consumer satisfaction</p>	<ul style="list-style-type: none"> • We carried out the "Golden Experience" campaign, in which the consumers were invited to enjoy the in-store experience • We issued the <i>CNPC's Quality Management Manual for Non-oil Commodities</i> and the <i>CNPC's Quality Integrity Code for Non-oil Commodities</i> • We initiated the "uSmile · Quality Action for Good Life" program • Customer satisfaction rate for follow-up calls of CNPC service hotline 95504 reached 97.1%

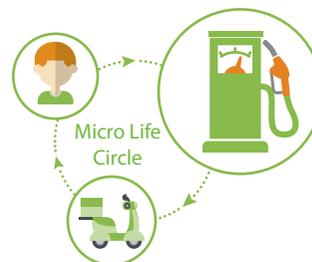


According to the brand ranking and analysis report of the 2019 China Customer Satisfaction Index (C-CSI) released by brand rating and consulting institute Chnbrand, CNPC ranked the first, in terms of comprehensive score, for the third consecutive year since 2017, based on customer loyalty, overall satisfaction, and factor satisfaction.



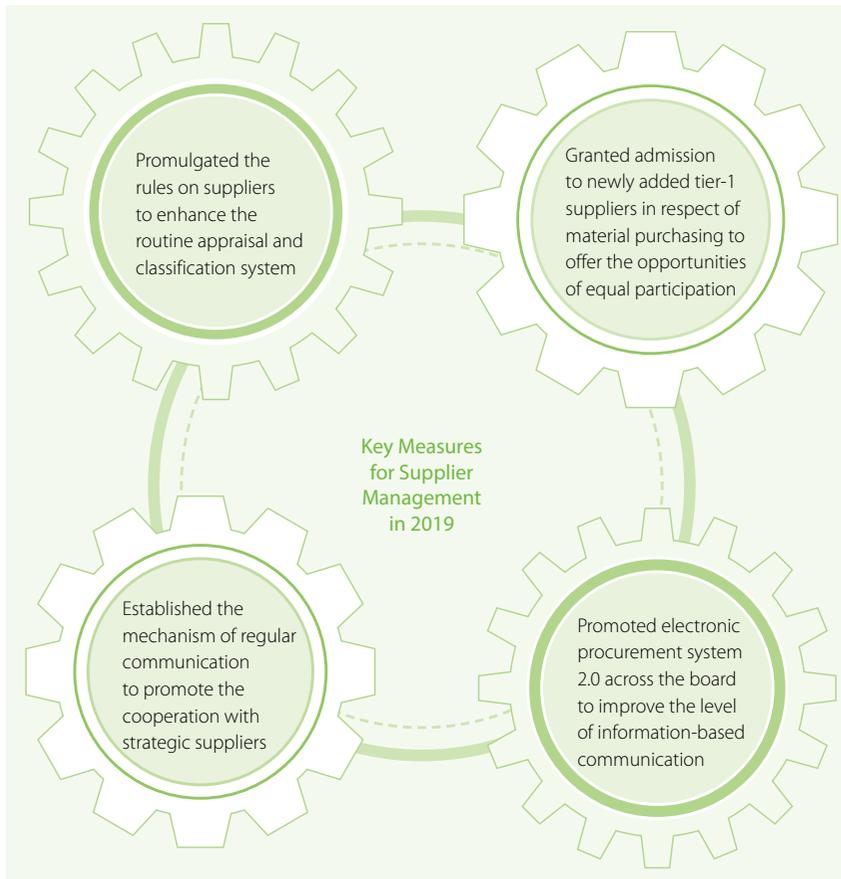
Kunlun Lubricant became an official supplier for the Beijing 2022 Winter Olympics. The "Kunlun Lubricant Guarding Plan" was released synchronously, that is, Kunlun Lubricant will serve as a comprehensive support platform for the Beijing 2022 Winter Olympics, through guarding the Winter Olympics, the consumers, the green mountains and clear waters, and the future.

We built the first warehouse-type convenience store in Nanning, Guangxi Province. The convenience store can: (1) provide storage and distribution of non-oil products for 15 service stations nearby; (2) meet the customer needs to the greatest extent by virtue of the business mode with integration of warehouse and storage; and (3) provide customers with quality, convenient services via the "Micro Life Circle" consisting of automotive service center, "Supermarket" and refueling station.



Supply Chain Management

We actively promote the sustainable development of the industrial chain. Accordingly, we work in a respectful, communicative, honest and cooperative manner to encourage our partners to jointly fulfill our social responsibilities, and provide society with high-quality products and services, through compliance, standardized operation, openness and transparency, effective supervision, process control, and performance assessment methods.



Management principles

Open and voluntary, small quantity but high quality, dynamic management, resource sharing, global sourcing, mutual benefits and win-win

Management philosophy

Unified management system, unified operation flow, unified management standards, and unified supplier database