



## Environment and Society

At CNPC, we have been committed to the principles of “people-oriented, quality-utmost, safety-first, and environment-prioritized” to achieve the goal of “zero accident, zero injury, zero pollution and zero defect.” We continue to improve our HSE Management System, actively address to people’s livelihood and social progress and strive for harmonious relationship between energy industry and the environment, as well as between enterprise and the community.

## Safe Operation

In line with the Company's overall reform and development plan, we implemented the three-year action plan for fundamental improvement of production safety and the special program targeting safety hazards in urban gas pipelines to identify and eliminate safety hazards and deepen the efforts in building a high-quality and healthy enterprise. Throughout the year, CNPC maintained a generally solid track record in production safety.

### System construction

Rules and procedures for production safety management were improved. *Measures for Investigation, Remediation and Supervision of Safety and Environmental Hazards, Measures for Reporting Production Safety Accidents and Incidents, Measures for Ship Safety Management, and Measures for Offshore Petroleum Production Safety and Environmental Protection* were introduced to further improve the production safety management system.

### Risk management

The procedures for regular production safety meetings were introduced, and routine HSE management activities were implemented, with a focus on the identification and elimination of risks and hazards. *Safety Risk Warning Letters* were issued, based on an "enterprise-specific" approach to risk assessment.

### Emergency response capabilities

Emergency response drills were conducted, targeting road transport emergencies involving hazardous chemicals, and well control and rescue responses during production well leaks and fires at offshore gas storage facilities. In this way, employees and rescue teams are well-prepared for potential emergencies. The Company's capability to respond to emergencies continued to improve.

### Supply chain safety management

Highlighting the "pre-phase, in-progress, and post-phase" whole-process supervision of contractors and the rectification of subcontractors, the production safety performance of contractors was assessed and the "zero tolerance" policy against incompetent contractors was strictly implemented to reduce supplier/contractor-related accidents.

## Environmental Protection

At CNPC, we make great efforts to reduce adverse impact on the environment and climate and to achieve goals in the battle against pollution.

### Fighting the battle against pollution

The *Enhanced Action Plan for Air Pollution Prevention and Air Quality Assurance Plan for Key Periods* were released to meet the standard of waste gas discharge and meet the requirements of air quality assurance. The Company pushed ahead with 14 wastewater discharge projects and enhanced remediation treatments and on-site inspections of key wastewater outlets to ensure a closed-loop solution for wastewater discharge issues. The *Action Plan for Prevention and Control of Soil and Groundwater Pollution* was released. On-site inspections were conducted to ensure compliance in solid waste control.

### Improvement of the framework of standards

The *Measures for Industrial Solid Waste Management* was released, highlighting the importance of a lifecycle approach to hazardous waste compliance. The *Rules for Eligibility Verification and Management of Third-Party Organizations for Online Monitoring of Point Source Pollution* was released to standardize third-party operation and maintenance services in terms of eligibility, basic capabilities, management requirements, supervision, and verification. The Company participated in the formulation and revision of national standards such as the *Emission Standards of Pollutants from Petroleum Refineries* and the *Technical Specifications for Application and Issuance of Pollutant Discharge Permits for the Petrochemical Industry*.

### Eco-environmental zoning management

Environmental governance in key areas was deepened; refined management was implemented in enterprises in the Yangtze River Economic Belt, the Yellow River Basin, the Songliao River Basin, and the Beijing-Tianjin-Hebei region; a list of discharge outlets was deployed; surveillance and early warning of excessive emissions was enhanced; environmental compliance was achieved at industrial wastewater discharge outlets in key river basins.

### Ecological and environmental protection in key river basins

The *Action Plan for High-Level Corporate Ecological and Environmental Protection for the Yangtze River Basin and the Yellow River Basin* was released to coordinate efforts in pollution prevention & control and ecological & environmental protection. A comprehensive investigation of wastewater and waste gas outlets was conducted in the Yangtze and Yellow River Basins to develop a list of discharge outlets and implement a multi-tiered approach to discharge control.

### Environmental hazard management and risk control

Environmental hazards were identified and addressed on an ongoing basis. A multi-tiered approach to risk control was deepened, and the progress of remediation was tracked and scheduled on a monthly basis.

### Management of key pollutants

Chemical oxygen demand, ammonia nitrogen, nitrogen oxides, and volatile organic compounds from refining and petrochemical operations were reduced by 14.3%, 26%, 2.1% and 9% respectively year-on-year.

### Sustainable use of resources

Great importance was attached to protection and rational utilization of resources to minimize resource consumption. We reduced energy consumption by 0.78 million tons of coal equivalent, and water consumption by 8.24 million cubic meters throughout the year.

### Conservation of biodiversity

The Company actively engaged in biodiversity conservation and fully integrated such an endeavor into its business operations. Under the *CNPC Guidance on Other Effective Area-Based Conservation Measures (OECMs) for Biodiversity Conservation*, a total of 10 OECMs were established nationwide. These initiatives included building conservation station cabins, forming volunteer teams, and conducting comprehensive biodiversity conservation monitoring, creating a "four-in-one" CNPC model for biodiversity protection. The Guowu Lake OECM Reserve in Daqing Oilfield was included in the *Report on the Current Status of Other Effective Area-Based Conservation Measures in China* by the IUCN China Office. The Company was recognized by *Fortune* magazine's lists for the Most Admired Companies All-Stars and the Most Admired Companies Industry-Stars in China for its outstanding performance in biodiversity conservation.

## Climate Change

Actions were taken in line with the *Paris Agreement* and the Chinese government's goals on carbon peaking and carbon neutrality. The *Green Enterprise Promotion Initiative* was launched, and the *Action Plan for Green Enterprise Promotion* was released, setting forth 6 green enterprise standards to cover all business operations such as oil and gas production, refining, marketing, and oilfield services. In 2024, the Company was recognized as a "Low-carbon case" (formerly known as "low-carbon model") by *China News Weekly* for the 13<sup>th</sup> consecutive year.

## Carbon Emission Management

At CNPC, we continue to strengthen the management system for carbon emissions control, implement measures for carbon intensity-based emission reduction to further reduce the emission intensity of greenhouse gases, actively participate in the National Carbon Trading Market and deepen cooperation on climate change in the global oil and gas industry to promote green and low-carbon transition. In 2024, the Company's domestic and overseas GHG emissions totaled 187 million tons.

### In 2024, the Company

- ⊙ Released and implemented the *2024-2025 CNPC Energy Conservation and Carbon Reduction Action Plan* to form a "1+7" action plan framework for energy conservation and carbon reduction.
- ⊙ Enhanced the "dual control" mechanism for carbon emissions reduction and released the *guidelines for improving carbon emission data quality and promote the dual control mechanism for carbon emissions reduction*.
- ⊙ Developed a centralized carbon asset management platform and strengthened the depth of carbon emission accounting and verification.
- ⊙ Co-founded the Energy and Chemical Industry Chain Carbon Footprint Alliance and played a leading role in the working group on carbon footprint standards for upstream oil and gas products.
- ⊙ Formulated and implemented the *Methane Emission Control Action Enhancement Plan* and established a methane monitoring network to facilitate efforts in methane emission control.
- ⊙ Led the formulation of the ISO standard "*Methane Leak Detection and Repair in Oil and Gas Fields*" and advocated voluntary methane reduction actions in the industry.
- ⊙ Organized the COP29 side event "Methane Emission Control in China" and co-organized the side event "The Green Journey of Chinese State-Owned Enterprises" to build up the international presence of Chinese oil and gas enterprises in methane emission control and green transition.

### The Company supported and participated in a number of programs and initiatives for GHG emissions reduction.

- ⊙ *Paris Agreement*
- ⊙ *United Nations Framework Convention on Climate Change*
- ⊙ *China's National Climate Change Program*
- ⊙ *Action Plan for Carbon Dioxide Peaking Before 2030*
- ⊙ Carbon Technology Innovation Strategic Alliance for Carbon Capture, Utilization and Storage (CTSA-CCUS)
- ⊙ Oil and Gas Climate Initiative (OGCI)
- ⊙ China Oil and Gas Methane Alliance
- ⊙ *China Petroleum and Chemical Industry Carbon Peak and Carbon Neutrality Pledge*
- ⊙ *Aiming for Zero Methane Emissions Initiative*
- ⊙ Energy and Chemical Industry Chain Carbon Footprint Alliance

## Cooperation on Climate Response

As the only Chinese member of the Oil and Gas Climate Initiative (OGCI), we are actively involved in international cooperation in CCUS, methane emission reduction, nature-based climate solutions, energy efficiency improvement and decarbonization in the transportation sector etc. We also play an active role in implementing the national voluntary non-CO<sub>2</sub> GHG emissions reduction actions, and formulated the *Methane Emission Control Action Enhancement Plan* to control methane emissions. As the chair of China Oil and Gas Methane Alliance, we are leading the efforts of Chinese oil and gas enterprises in controlling methane emissions.

## Accelerated Clean Substitution

At CNPC, we endeavor to minimize the use of fossil fuels, enhance energy consumption management, optimize the energy structure and accelerate the substitution with cleaner alternatives. The Hadexun Oilfield in the Tarim Basin became the first megaton oilfield with zero fossil consumption. Xinjiang Oilfield and Liaohe Oilfield promoted the use of thermal recovery techniques for heavy oil production, bringing the green and low-carbon transition to the next level.



Liaohe Oilfield' s accelerated green and low-carbon transition: oil, gas and new energies integration



### Launch of CNPC Carbon Asset Management Platform

On July 10, 2024, the CNPC Carbon Asset Management Platform was officially launched after the test-run review. The platform integrates carbon emission analysis, carbon cost accounting, carbon trading, and green enterprise certification etc., providing an IT infrastructure for CNPC's carbon services operations and marking a significant step in the intelligent management of carbon emissions. Since its test run at the end of 2023, the platform has supported the monthly carbon emission accounting for more than 14,000 emission sources. At the same time, it supports the carbon compliance and carbon trading management, facilitates internal carbon cost accounting in the member companies and enhances carbon emissions reduction under the dual-control mechanism.

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Yumen Oilfield's PV power project

## Participation in the National Carbon Emissions Trading Market

At CNPC, we actively participate in carbon trading activities through the National Carbon Emissions Trading Market, optimize the compliance strategy, and enhance the management of carbon allowance and carbon compliance. All Company-owned power plants under the national carbon emissions trading scheme have fully completed compliance and clearance of their annual carbon allowances.

## Forestry Carbon Sink

At CNPC, we actively engage in building forestry carbon sinks and NbS (Nature-based Solutions) forests to promote carbon neutrality through carbon compensation. In 2024, the Company's participation in voluntary tree planting reached 1.01 million person-times, planting 3.41 million trees. As of the end of 2024, the existing green space had amounted to 360 million square meters. In the Afforestation Campaign for 10,000 Well Sites, 1,624,000 trees were planted at 8,724 well sites and stations, making CNPC the first Central SOE in response to the World Economic Forum's One Trillion Trees Initiative. A total of 1.554 million people participated in the "Plant a Tree for Carbon Neutrality" program, and forestry carbon sinks with a total area of 4,550 *mu* (≈303 hectares) were completed over the past three years.

The Company's participation in voluntary tree planting reached 1.01 million person-times, planting

**3.41** million trees

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**360** million square meters

## Social Responsibility

At CNPC, we maintain a strong commitment to aligning our business growth with the sustainable development of the localities where we operate, with a focus on bolstering people's livelihood and social progress, supporting community agenda in various forms, and promoting harmonious socio-economic development of local communities.

### Rural Revitalization

At CNPC, in response to the *United Nations' 2030 Agenda for Sustainable Development* and the Chinese government's guidance on promoting rural revitalization, we leverage our resources and increase investment to enhance local industries with characteristics, improve living environments, strengthen talent training, and improve public health. We introduce new assistance models and support demonstration projects to bolster our poverty alleviation efforts in alignment with the goals of rural revitalization. In 2024, the Company earmarked RMB 669 million for rural revitalization and public welfare and implemented over 1,100 assistance projects.

- ⊙ We supported own-brand projects such as "Return to Rural Tourism", "Yuanju" Industrial Park, and "Fertile Soil" Food Security Assurance Program, to develop characteristic industries, optimize industrial structures, and build industrial clusters.
- ⊙ We supported the "Zero-Carbon Courtyards" project, promoted waste conversion and utilization, set the standards for low-carbon villages and facilitated the efforts under the Happy Villages initiative.
- ⊙ We purchased and sold rural products worth RMB **2** billion by leveraging our online and offline resources to bolster consumption-driven assistance.
- ⊙ We created own-brand healthcare programs such as "Go, Baby" healthcare campaign for children, "Cloud Doctor" remote medical consultation program and Kangyuan Initiative township hospital assistance program. These programs benefited over **80,000** people.
- ⊙ We developed a talent ecosystem for rural revitalization and trained **143,500** people throughout the year to strengthen the talent pool for rural revitalization.

### Education

At CNPC, we continue to support education through various student aid programs, including scholarships and grants. We explore new ways to raise awareness on education equality and help students from poverty-stricken areas get access to education and realize their dreams and values.



In 2024

CNPC Scholarships provided RMB **4.47** million to **685** outstanding students.

The Xuhang Scholarship Program provided RMB **12.886** million to **3,951** students.



### Promoting Local Development

At CNPC, we adhere to the principle of open-up and cooperation for mutual benefit and keep expanding our joint-venture cooperation with local partners across the upstream, midstream and downstream sectors. During the process of developing and running our projects, we help foster local suppliers and contractors, thereby creating jobs and driving business growth in related sectors to achieve the city-based and industry-driven "city-industry integration".

## Contributing to Local Communities in Overseas Operations

At CNPC, we respect local cultures and customs where we operate, and are committed to building long-term and stable cooperative relationships with the host countries. We integrate our development into local socioeconomic growth and actively create socioeconomic value to promote local development and prosperity.

### Managing Community Impact

At CNPC, we seek to exert a positive influence on local community development through responsible operations. This is not only reflected in creating jobs, paying taxes, and providing business opportunities for local suppliers, but also in protecting the environment, safeguarding human rights of local residents and supporting public welfare.



#### Al-Ahdeb Company donates supplies to Iraq's Wasit University

On December 4, 2024, CNPC (Iraq) Al-Ahdeb Company donated 40 laptops and auxiliary equipment to Wasit University.

At the ceremony, Mazen, the President of Wasit University, introduced the university's history. Since its inception in 2003, Wasit University has consistently adhered to the principle of strengthening itself through scientific research, and dedicating itself to cultivating high-quality skilled talents for enterprises and society. Mazen noted that during challenging times when the university was confronted with shortages of teaching

resources and equipment, CNPC promptly provided assistance, contributing charitable support that effectively addressed the urgent need for educational materials among faculty and students. This has significantly bolstered local education efforts and exemplifies the strong sense of corporate social responsibility held by international corporations.

Looking ahead, Al-Ahdeb Company plans to increase its investment in education and further collaborate with Wasit University on the establishment of petroleum engineering disciplines and the cultivation of local talents.

### Enhancing Communication with Local Communities

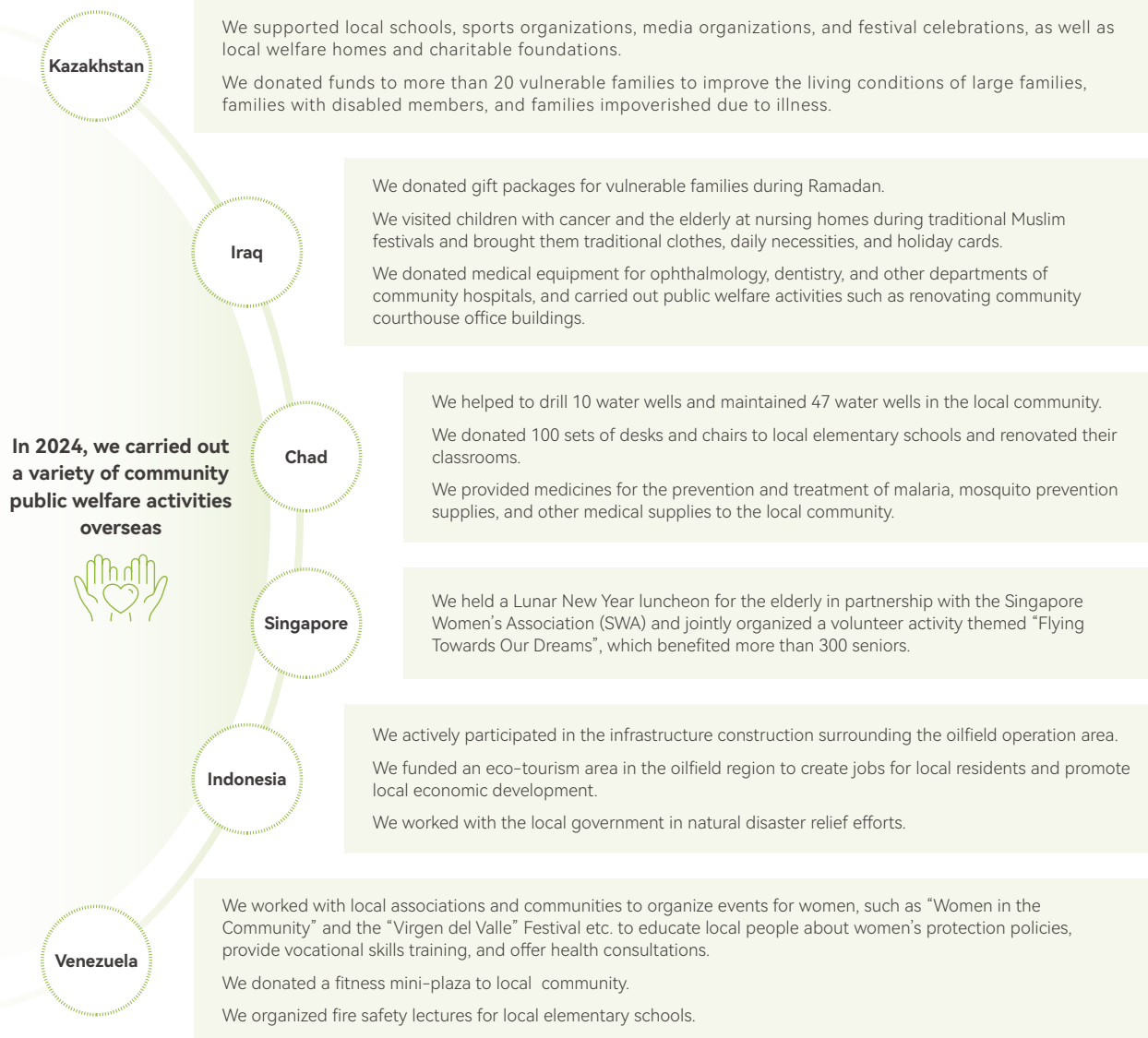
At CNPC, we set up overseas liaison points for environmental protection and community relations to strengthen communication and coordination with local governments, NGOs and community representatives in a variety of forms.



CNPC's employees of the Halfaya project in Iraq carry out environmental protection work

## Participating in Community Welfare Activities

At CNPC, we play an active role in helping local people improve their living conditions. Every year, we give support to education, healthcare and environmental protection to facilitate sustainable development of local communities.



## Promoting Localization

At CNPC, we embrace the localization strategy, with a preference for local products and services, so as to create opportunities for local contractors, suppliers and service providers to participate in our projects. We also support the development of local SMEs and community-based start-ups to create employment opportunities.