

Environment and Society

The Company has been committed to the principle of “people-oriented, quality utmost, safety first, and environment prioritized” to achieve the goal of “zero defect, zero pollution and zero injury”. We pay attention to people's livelihood and social progress, and strive for harmonious relationship between energy and the environment, as well as enterprises and the community.



Safe Operation

At CNPC, we promote the building of a long-acting safety system and strengthen the control of safety risks to enhance our work safety management. In 2021, the Company maintained a safe momentum in production.

Management System

Safety management rules and regulations were formulated, including the Rules on Accountability for Work Safety and Environmental Protection, underscoring the safety responsibilities of all employees.

Risk Management

A dual-prevention mechanism covering risk prevention and control as well as hazard identification and treatment was put in place to ensure production safety. Safety supervision was conducted for key construction projects and risk-related construction projects. A grid-based approach to safety monitoring was widely used in high-risk work sites.

Emergency Response Capabilities

The headquarters' emergency plan was revised to respond to emergencies more effectively. Emergency drills were held as part of the continuous improvement efforts for emergency preparedness.

Supply Chain Safety Management

The Company provided trainings for key personnel related to contractors and implemented a "zero tolerance" policy against incompetent contractors.

Overseas Security Risk Management

At CNPC, we constantly reinforce the implementation of our social security management system, strengthen prevention and control on overseas social security risks, and enhance our emergency response capabilities.

Environmental Protection

At CNPC, we make great efforts to reduce adverse effects on the environment and climate. By improving resource utilization, fighting the battle against pollution, and promoting energy conservation and emission reduction, we strive to achieve harmony between energy and the environment.



Guangxi Petrochemical conducting emergency drills together with relevant local departments at the 100,000-ton crude oil terminal

Environmental Risk Prevention and Control

Measures were taken to identify and assess environmental risks and treat ecological and environmental hazards effectively. Efforts were stepped up to strictly control environmental risks as the three-tiered prevention and control facilities continued to improve. In 2021, no major environmental pollution incidents were reported.

Management of Air Pollutant Emissions

Emissions from sulfur dioxide and nitrogen oxides (including emissions from flaring) were 13,600 tons and 108,000 tons respectively. Emissions from volatile organic compounds (VOCs) in the refining and chemicals operations were 7.4% lower than a year earlier.

Sustainable Use of Resources

Great importance was attached to the protection and rational utilization of resources to minimize resource consumption. In 2021, we saved energy of 740,000 tons of standard coal and reduced water use by 10.49 million cubic meters.

Conservation of Biodiversity

A holistic approach to pollution source control and lifecycle management across the value chain was adopted, and pollution and ecological damage issues were investigated and addressed effectively. Noise and emission reduction measures were taken to minimize our footprint in the ecological environment. In 2021, no events of damage to biodiversity were reported.

Climate Change

Actions were taken in line with the Paris Agreement and the Chinese government's goals for carbon peak and carbon neutrality. Our involvement in the collaborative effort of the global oil and gas industry for addressing climate change continued to deepen and we played an active role in promoting the green and low-carbon transition.

Carbon Emission Management

In 2021, the Company pushed ahead with the building of carbon emission management system, formulated the Guidance for Strengthening Greenhouse Gas Emission Management, Measures for Carbon Trading Management, Measures for the Management of Statistical Assessment of Greenhouse Gas Emissions and Measures for the Management of Voluntary Greenhouse Gas Emission Reduction Projects, and established a "1+3" management system for carbon emissions. The Greenhouse Gas Emission Verification Center was set up to bolster GHG emissions verification comprehensively. The Company stepped up efforts to implement the measures set forth in the Action Plan for Methane Emission Control and took the lead in setting up China Oil and Gas Methane Alliance to reduce the methane emission intensity effectively.

The Company has supported and participated in a number of reduction and control plans and initiatives on GHG emissions.

- *The Paris Agreement*
- *United Nations Framework Convention on Climate Change*
- *China's National Climate Change Program*
- *Action Plan for Carbon Dioxide Peaking Before 2030*
- *China Technology Strategic Alliance for CO₂ Capture, Utilization and Storage (CTSA-CCUS)*
- *Oil & Gas Climate Initiative (OGCI)*
- *China Oil and Gas Methane Alliance*
- *China Petroleum and Chemical Industry "Carbon Peak" and "Carbon Neutrality" Pledges*



A fox keeping company with the inspection staff patrolling at the Karamaili gas operation area of Xinjiang Oilfield

The Company's key measures for carbon emission management

- Upgrading industrial structure, phasing out obsolete capacity, and promoting energy conservation and emission reduction
- Optimization of energy mix (clean energy replacement)
- Monitoring/Verification/Reporting of greenhouse gas emissions
- Recycling of greenhouse gases (carbon dioxide utilization, and methane recovery from oil and gas fields)
- Formulation of management regulations on carbon emissions compliance for enterprises

International Cooperation

As the only Chinese member in OGCI, CNPC has been actively involved in international cooperation to address climate change. In 2021, the Company's Chairman Dai Houliang and the Chairmen/CEOs of other OGCI member companies jointly signed the OGCI's Strategy Refresh Document, pledging to speed up efforts to limit the global temperature rise; the Company worked with Saudi Aramco in leading the research on emission reduction technologies in key areas of transportation; the Company also hosted the OGCI Forum on Low-Carbon Technologies in Transportation to explore the emission reduction potential and technological innovation in transportation; the Company fully participated in the research on carbon capture, utilization and storage (CCUS), and published the OGCI White Paper on CCUS Commercialization in China to share expertise and knowhow on the low-carbon transition for the oil and gas industry.

Carbon Emission Reduction during Production

The Company endeavors to minimize the use of fossil fuels, accelerate the shift towards cleaner alternatives and reduce energy consumption intensity. In Huabei Oilfield, Tarim Oilfield and other areas where the conditions permit, renewable energy resources such as geothermal energy and solar energy are used to reduce carbon emissions during production.

Market-based Mechanism for Carbon Reduction

As one of the first 10 companies trading on the National Carbon Market, the Company played an active role in building China's

national carbon market. Member companies were encouraged to launch their own voluntary emission reduction projects. In 2021, the Company ensured full compliance with its annual carbon allowance.

Social Responsibilities

At CNPC, we maintain a strong commitment to aligning our business growth with the sustainable development of the local communities where we operate by boosting people's livelihood and social progress, fulfilling our corporate social responsibilities in a variety of ways, and sharing our achievements with the society.

Rural Revitalization

In response to the national rural revitalization strategy and the United Nations' *2030 Agenda for Sustainable Development*, the Company combined its resources with local needs and conditions in the assisted areas to facilitate and consolidate poverty alleviation achievements and rural revitalization efforts. In 2021, the Company invested approx. RMB 300 million in nearly 600 rural revitalization and paired support programs.



6-year-old Yusup Talipti and his family studying at the Farmer Night School

CNPC's contribution to rural revitalization

In 2021, China achieved a sweeping victory in the fight against poverty. However, getting rid of poverty is not the end. Instead, it's the beginning of a new life and a new journey. To rejuvenate the nation, the countryside must be revitalized.

At CNPC, we implemented the national rural revitalization strategy diligently to consolidate and broaden our achievements in poverty alleviation. Aligning our strength with the demands and actual conditions of the assisted areas, we pushed rural revitalization forward by deepening industrial, consumption and educational assistance.

Rural Revitalization through Industries Development

With a focus on strengthening the independent ability in rural development, the Company took targeted measures to support local special industries and promote the diversified and sustainable development.

In 2021, the Company invested RMB 77.4 million in six counties in Xinjiang, i.e. Nilka, Toli, Qapqal, Qinghe, Jeminay, Barkol, to develop nine industrial projects, including ancient desert poplar wetlands and national reserve forests, and six livelihood projects such as water-saving irrigation, providing industrial support for local development.

Market Exploration

At CNPC, we make full use of our own channel and platform advantages to develop markets for local specialty products.

We maintain an up-to-date CNPC Recommended Products Catalogue of Assistance Program. So far, we have recommended more than 4,000 kinds of products from over 300 counties that have just been lifted out of poverty. More than 10,000 uSmile convenience stores across the country offered agricultural products from rural areas and a range of high-quality products sold well nationwide, contributing to both brand image and economic benefits.

uSmile provides marketing channels for rural products

From June 17 to 18, the 2021 CNPC Assistance Products Exhibit & the 1st uSmile Shopping Festival was held in Chengdu, Sichuan. With the theme of "Rural Revitalization for a Better Life", the event attracted more than 2,000 kinds of products from 150 counties across the country and boosted the sales of rural specialty products effectively.

The Company has set assistance products section in more than 10,000 uSmile convenience stores across the country, leveraging its nationwide network to provide a marketing platform for rural specialty products.

Personnel Training

At CNPC, training programs on rural revitalization, new business models of agriculture and animal husbandry, digitalized agriculture and industrialized operations are delivered through multiple means such as online classrooms, video teaching and rural education programs to train local people into “experts and scholars” in the field and support the endogenous development in the areas that have just shaken off poverty. In 2021, a total of 70,500 people received training, including 24,400 officials at county, township and village levels, 23,700 entrepreneurial individuals in rural revitalization and 22,400 technical personnel, providing human capital needed for the rural revitalization. In addition, CNPC continued to push forward training programs for teachers and healthcare professionals by sending teachers and health workers to rural areas on a regular basis.

Cultural Inheritance

At CNPC, we promote respectable social civility, family culture and folk customs, with a focus on passing on fine traditional culture in rural areas. With respect to the development of local economy, we emphasize the integration with the local culture to carry forward and boost our traditions. For example, in Taiqian County and Fan County, Henan Province, the brands of “Jiang Ziya's Ferry” and

“North Henan Lotus Fragrance” were created, highlighting the folk culture about Jiang Ziya in ancient villages and the tradition of lotus farming in northern Henan. In addition, CNPC Libraries opened in many local communities to make newly published books available, share information on economic policies and farming skills, and enrich the cultural life in local communities.

Ecological Conservation

At CNPC, we follow the notion of “lucid waters and lush mountains are invaluable assets” in improving the ecological environment in the assisted areas. In accordance with the requirements of the Five-Year Action Plan for Improvement of Rural Living Environment, we continued to promote “toilet revolution” and sewage treatment. The Company invested RMB 45.21 million in introducing household garbage and sewage treatment into nine villages in Qinghe and other counties in Xinjiang and improved rural toilets for 286 households.

Rural revitalization is embarking on a new journey as poverty alleviation has succeeded with great achievements. With a stronger sense of responsibility and mission, the Company will take targeted measures to promote the comprehensive rural revitalization covering rural industries, personnel, culture and ecology.



CNPC actively promoting rural tourism development in Xishui, Guizhou

Education

At CNPC, we continue to help young people access equal opportunities for education and realize their dreams and values through various student aid programs. In 2021, the number of universities eligible for CNPC Scholarships increased from 13 to 17, and an amount of RMB 4.47 million was given to 685 candidates throughout the year. We actively explored new models and worked in partnership with China Foundation for Poverty Alleviation, Beijing Normal University Education Group and Tencent Charity Foundation to promote commonweal projects such as Xuhang Scholarship Program and the Teacher Training Program, and helped more and more children in accessing education in poverty-stricken areas.

Promoting Local Development

At CNPC, we adhere to the principle of opening-up and cooperation for mutual benefit, and keep expanding our joint-venture cooperation with local capital in the upstream, midstream and downstream sectors. During the process of developing and running our projects, we help nurture local suppliers and contractors, thereby creating jobs, driving related business growth, and achieving win-win results between businesses and localities.

Contributions to the Development of Overseas Communities

At CNPC, we respect the cultures and conventions of the host countries, and are committed to establishing long-term and stable cooperative relationship with them. As a good corporate citizen, we incorporate our development into local socioeconomic growth and actively create socioeconomic value to promote the development and prosperity of local communities.

Managing Community Impact

At CNPC, we strive to have a positive influence in community development through responsible operations. This influence 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 fulfilling our CSR.

Enhancing Communication with Local Communities

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

Xuhang Scholarship Program

In 2021, the Program provided RMB 11 million to support 3,397 students from 20 schools in eight provinces.

Teacher Training Program

In September 2021, the Teacher Training Program was launched as part of the educational assistance efforts for rural revitalization. Supported by the education platform of Beijing Normal University, the program offered e-learning courses to rural teachers in 10 counties and districts in Xinjiang Uygur Autonomous Region, Jiangxi, Guizhou and Henan province. More than 2,000 teachers from primary and secondary schools in these areas participated in the training program.

A small “desk” solves a big problem

Andes Oil Company, a subsidiary of PetroChina International (Ecuador), worked with two local communities in the north and south of the oil field to set up a Community Association comprising seven “desks”, i.e. Employment, Wages, Bidding, Material Supply, Dispute Settlement, Environmental Protection and Health and Safety. Each “desk” was composed of community workers from the EHS Department of Andes Oil Company, social workers from the local government and community representatives. All matters involving the relationship between Andes Oil Company and these communities were addressed through negotiation by the three parties participating in the “desks”.

Participating in Community Welfare Activities

At CNPC, we play an active role in helping local people improve the living conditions by donating in education, healthcare and other public welfare programs to improve the level of education and prepare the local communities for sustainable development.

Indonesia

- ◆ Every year, special funds were provided to improve education, health, sanitation, infrastructure and living conditions
- ◆ The Suku Anak Dalam Aboriginal Kids Support Project received the Outstanding Community Development Award from the Department of Social Services of the Republic of Indonesia
- ◆ The Traditional Batik Women's Support Project received the Gold Prize of the Sustainable Development Goals Award (ISDA) issued by the Indonesia Corporate Social Responsibility Development Association

Chad

- ◆ The "Sweet Community" program was implemented to dig water wells and address drinking water issues in surrounding communities
- ◆ In recent years, we participated in and supported several public events such as the Peace Cup Half Marathon, National Women's Day Celebration, "Chinese Bridge" Chinese Language Proficiency Competition for Foreign College Students in Chad, and National Anti-Malaria Campaign
- ◆ We also provided assistance to sickle cell anemia hospitals, orphanages and other institutions

Promoting Localization

CNPC is earnest in promoting localization. We place priority on purchasing local products and services, and offer opportunities for local contractors, suppliers and service providers to participate in our projects. We also support the development of local SMEs and community-based startups, and create job opportunities.

Job creation for local residents

Andes Oil Company, a subsidiary of PetroChina International (Ecuador), assisted the local government in developing an employment database, compiling employment files for community residents, providing trainings on employment skills, with priority given to local employees, and creating more than 700 jobs.



Creating jobs for the local community by the Indonesian project