Jointly Shaping

a Harmonious Ecology

Sustainability Context

Safeguarding Lucid Waters and Lush Mountains with Smart Applications

Climate change has become a challenge facing all countries. The Chinese government earnestly fulfils its obligations under the *United Nations Framework Convention on Climate Change* and the *Paris Agreement*, incorporates the construction of an ecological civilization into the overall national development planning, and thoroughly implements three major action plans for the prevention and control of atmospheric, water and soil pollution. Based on a sustainable consumption and production model, China has contributed significantly to the realization of the relevant United Nations Sustainable Development Goals. One of the contributions lies in the ICT sector, which plays a key role in monitoring climate change, mitigating and adapting to its impact, and promoting society's transformation to a green circular economy. At the same time, with the continuous evolution and development of 5G technology, how the ICT industry seeks a balance between the surge in energy demand and low-carbon development has also been placed under the spotlight.

Adhering to the ecological civilization philosophy of "Lucid waters and lush mountains are invaluable assets", China Mobile is committed to pursuing green and environmentally friendly development. While leveraging our industry advantages and actively managing our own environmental footprint, we continue to innovate the methods and means of applying ICT to environmental protection as we join hands with all sectors of society to contribute to minimizing environmental pollution.

In the Yunzhongshan Nature Reserve of Anxi, Fujian province, there is a magical pair of "eyes": they can detect forest pests and instantly prompt the conservation department to take treatment measures; when the rangers handle withered trees, they can then connect them with experts for "zero distance" guidance; and they can also swiftly detect forest fires and send the fastest warnings to the forest department.

This pair of "eyes" is called the Yunzhongshan Nature Reserve Information System, which has been tailor-made for the provincial-level Yunzhongshan Nature Reserve by our Fujian subsidiary. Relying on 4G, cloud computing, Global Positioning System (GPS) and other information technologies, the system supports a range of management functions such as personnel positioning and dispatching, real-time monitoring of key locations, processing of captured images, and SMS alert and publicity, and diligently performs its duties to protect the local environment.

A Smart "Housekeeper" for Forest Monitoring

Located in the mountainous area of Anxi County, the expansive Yunzhongshan Nature Reserve is home to many precious animals and plants and requires intensive efforts to patrol and protect the forest. The Yunzhongshan Nature Reserve Information System enables a full range of functions such as ranger management, video surveillance and mobile resource monitoring. Different from traditional forest protection that relies on manual labor, the system has digitalized the alerting and monitoring of forest fires and disasters with the monitoring command center as the core and digital communication as the means.

The system divides up the entire scenic area and sets up electronic fences. GPS positioning and historical movement tracing enable assessment and management of the rangers at any time; forest fires are monitored in real time through remote monitoring of key areas and intersections using the video surveillance system.

At the same time, the system uploads pictures taken by the thermal imaging monitors to the monitoring center through the mobile resource monitoring system. Those pictures enable the Reserve to collect and analyze information of passing rare animals and provide clues about poaching and smuggling of wild animals and plants, leading to markedly enhanced efficiency and precision in solving cases and effectively deterring illegal activities.

This system has been of enormous help to Yunzhongshan rangers. Not long ago, tea farmers in the Reserve set the tea trees on fire as they attempted to plant fruit trees in the tea garden. The system detected the smoke when the fire began to develop and sent out an immediate early warning, which prompted the forest protection department to quickly rush to the scene and stop a forest fire from happening. This spring, the system detected some hunters hunting in the mountain at night. The rangers immediately joined forces with the forest police to take protection actions and conducted timely investigations in surrounding villages, which served as an effective deterrent.
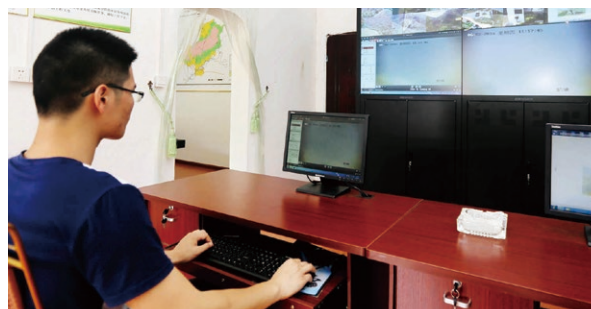
With the help of the System, the ranger is dedicated to safeguarding the Yunzhongshan Nature Reserve

Real-time HD video surveillance at each important location of the Yunzhongshan Nature Reserve area

A Smart "Helper" to Daily Forest Patrols

The Yunzhongshan Nature Reserve Information System is mainly composed of the monitoring command center, long-distance video surveillance, resource monitoring wireless image-capturing, and ranger movement tracing. In addition to smart monitoring in the forest areas, there is also a smart patrol "good helper" for frontline rangers.

This "good helper", called the "Smart Ranger Patrol System", was specially developed for Yunzhongshan forest preservation inspections. During the inspections, the rangers can take photos or videos with the built-in camera of specially-made mobile phones, which are uploaded to the cloud in real time. By analyzing the uploaded data, the monitoring center can accurately detect cases of illegal forest logging and provide scientific guidance on pest control and forest preservation. In the event of an emergency, the rangers can also use a one-click SOS alarm to quickly locate the incident, which safeguards their safety and guarantees highly effective firefighting efforts.

Ranger using the Smart Ranger Patrol System
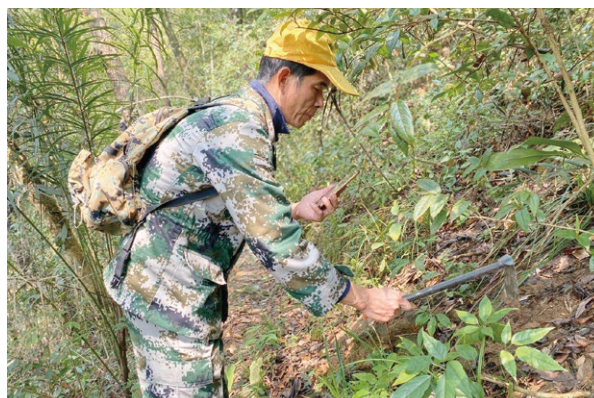
Real-time video communication with ranger

"This system can help us report situations discovered during the patrol to the back-office staff in time. For example, when we discover abnormal conditions such as fallen trees, suspicious animal access, insect disasters, fires, etc., we can use the platform to report information automatically with precise geographic location to facilitate work while ensuring our personal safety."

—— Lin Fuxiang, Ranger

"A few days ago, we communicated in real time over the treatment of a few withered trees, which were found by some rangers during a patrol. We immediately set up a dedicated line to have the rangers communicate with forestry experts in real time via a video link, and provided proper treatment of the trees."

—— Shen Jinquan, Director of the Management Committee of the Yunzhongshan Nature Reserve Area

As of the end of 2019, we had equipped all the rangers with the patrol system, enabling protection of over 3,000 hectares of forests.

Developing Innovative Green Solutions
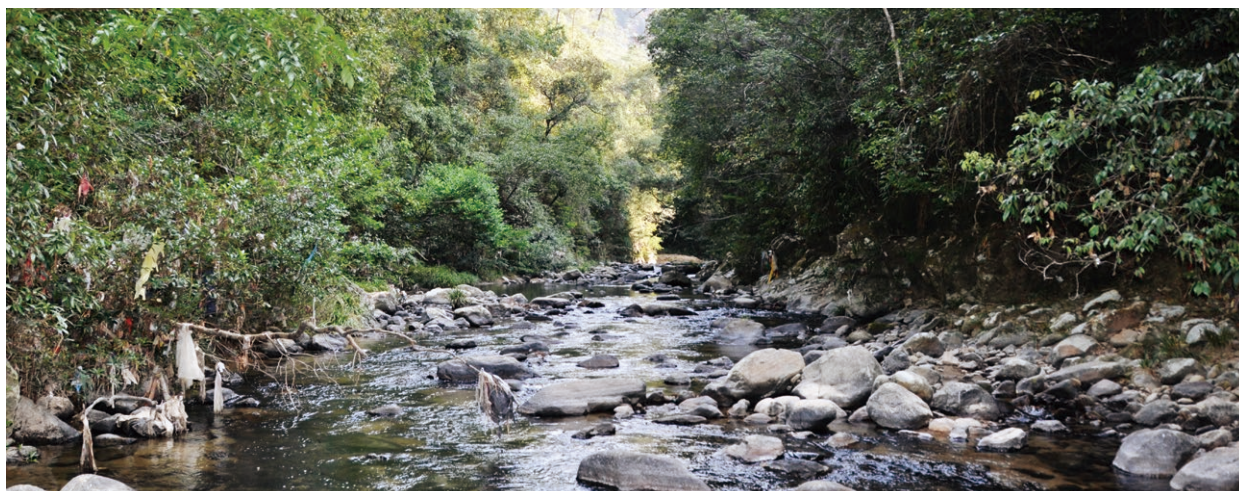
Innovating Environmental Applications

In the past years, China Mobile has put into practice the green development concepts and strives to make the sky bluer, water greener, and mountain lusher by promoting ecological construction with information-based means. The Company has launched exploration of IoT application in many fields across China, such as smart logistics, smart transportation, smart lighting and smart factories, using IoT technology to help all sectors effectively reduce greenhouse gas (GHG) emissions.
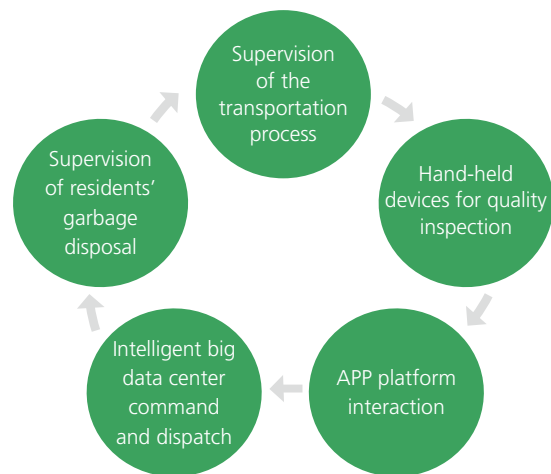
Window of Ecology, Contributing to Clearer Water

With a view to better protecting the lakes, wetlands and meadow ecosystem in Sanjiangyuan region, our Qinghai subsidiary and the Qinghai Provincial Environmental Protection Department jointly launched the Qinghai "Window of Ecology" project, and established a provincial observation and control platform, an on-site video observation system at observation points for key ecological function areas and typical locations, an audio and video connection system, and dedicated long-distance transmission networks. The project enables remote and real-time HD video observation, monitoring, and research and assessment of the ecological types, natural landscapes, wildlife and biodiversity in the five major ecological regions of Qinghai based on 35 observation points deployed throughout the province. A unified, complete, authoritative and efficient ecological environment monitoring network has thus been constructed, guaranteeing better refined management of environmental protection efforts.

Technology Empowering Garbage Sorting for a Green Life

Closely following governmental requirements for environmental protection, our Beijing subsidiary introduced a full-process garbage sorting supervision program based on its independent R&D and local integration capabilities.

- **Supervision of the transportation process:** It tracks garbage trucks in real time and plans the collection and transportation routes and personnel workload in a rational and effective manner to improve work efficiency.

- **Supervision of residents' garbage disposal:** The AI smart garbage bins placed in the community allow registered residents to throw in garbage based on face recognition; the residents can also scan a QR code to acquire knowledge on garbage sorting and earn points by throwing in garbage, which can be exchanged for rewards. The residents can also see their rankings on the data analysis platform and learn about the impact of garbage sorting on the environment.

- **Intelligent big data center command and dispatch:** It enables timely collection of data about the whole process of garbage disposal, collection, transportation and processing and the flow of garbage to prevent the sorted garbage from being mixed again on the back end.

- **APP platform interaction:** It promptly publishes monitoring data via the public service app and interactive coordination platform, and has channels in place to offer consultation and receive complaints, suggestions and feedback from residents.

- **Hand-held devices for quality inspection:** These devices allow sanitation workers to enter information such as the type of garbage, and offer intelligent means to reduce their workload such as the smart sorting system and smart inspection app.

Supervision of the transportation process → Hand-held devices for quality inspection → APP platform interaction → Intelligent big data center command and dispatch → Supervision of residents' garbage disposal →

At present, the full-process garbage sorting supervision services have been piloted in Miyun District and Dongcheng District of Beijing, increasing the decontamination, reuse and recycling rate of garbage in those two districts from 65% to 100%. In the future, we will further improve the functions and promote nationwide adoption of the services to contribute to garbage reuse and recycling.

Smart garbage bins

Garbage sorting mobile app

Spreading Green Ideas

Our Energy Conservation Awareness Week continued in 2019. We fully played to our strengths and disseminated low-carbon and green concepts among our stakeholders such as employees, customers and the general public through activities like carbon emissions calculation, "And Machine Swap Service" (the trade-in of old mobile phones for new ones and recycling and refurbishing of optical modems and set top boxes), "Green Box by Your Side" (recycling of used phones, batteries and accessories), Green Life Photography Exhibition, and the publication of the *Special Issue on Energy Conservation Awareness*.

Scan the QR code to watch China Mobile 2019 Energy Conservation Awareness Week proposal

Scan the QR code to learn more about China Mobile Green Action Plan

Various Green and Environmental Protection Awareness Activities

In Liaoning, our employees made office supplies and daily necessities with waste paper and made vases and unique pen holders and storage boxes with waste newspapers, cultivating a sound atmosphere of energy consumption and low carbon.

In Sichuan, we carried out a number of activities such as garbage sorting and recycling, green running and urban "scanning", calling on our employees customers and partners to cultivate an environmental awareness in their daily work and life.

In Shanxi, we initiated the hand-drawn energy consumption awareness posters event themed "Energy Conservation by My Side" at our business stores in Taiyuan and Yuncheng, promoting green ideas to our customers through delicately drawn posters.

Helping Build Green Urban Homes

"Green Shanghai with You" is a strategic public welfare brand of our Shanghai subsidiary. It works with government agencies and runs diversified programs with a view to intensifying residents' awareness and actions for loving, protecting and appreciating the environment. Our Shanghai subsidiary hosted a number of environmental protection volunteering campaigns in 2019, which were very well received by the public.

- Charity Run in Celebration of China's 70th Birthday: We supported activities such as "Scent of Books Exchange for Scent of Flowers" and "One Child and One Tree" at the Charity Run event to allow residents to experience the environmental protection and public welfare concept of "Green Life Starts With Me".

- Close-to-nature Family Activity: The event allowed parents and children to experience the wonderful and magical relationship between plants and insects in nature together by watching the "One Flower One World" painting exhibition. The "Garbage Sorting" family game further strengthened children's awareness of garbage sorting.

- Care Activities on Campus: Gifts like ecology photographs and flowers were given to mentally challenged students in the supplementary reading class of Xinzhuang elementary school; educational classes on environmental protection and guided outdoor appreciation courses were given to the private Yumiao Elementary School where the majority of the students were children of migrant workers, and our volunteers also conducted interactive prize quizzes and gave away free plant seeds.

Since the project was launched, our Shanghai subsidiary has won honors such as "Excellent Public Welfare Partner" and "Excellent Partner in Shanghai for Volunteer Tree Planting". In the future, our Shanghai subsidiary will continue to carry out environmental volunteering activities regularly and advocate environmental protection together with the public.


Charity run in celebration of China's 70th birthday

Green class at the private Yumiao Elementary School

09 Promoting Low Carbon, Circular Development

Coping with Climate Change

China Mobile actively responds to the challenges brought by climate change. We have established a circular management system covering all aspects of our operation, and made continuous efforts to improve our environmental performance and reduce our GHG emissions.
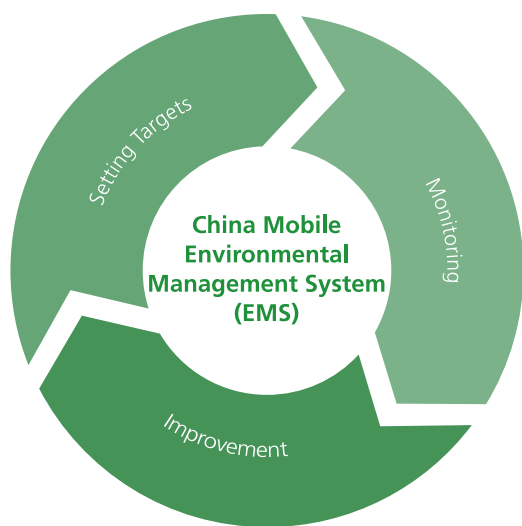
EMS Coverage: All aspects of our operations, including product operation and commercial facilities, selection of suppliers and service providers, research and development of new products and services, packaging and shipping, waste management, engineering design, new project construction, due diligence, daily office operations, etc.

Since the launch of the Green Action Plan in 2007, we compile the *China Mobile Green Action Plan Annual Priorities* every year, and allocate special funds for energy conservation and emission reduction to be used in energy saving renovations of communication base station, data center, office building, business stores, etc., thereby safeguarding the implementation of climate change related investment projects. We also vigorously promote energy conservation measures in technology and management and actively use renewable energy.

In 2019, we established the China Mobile Leading Group for Pollution Prevention and Energy Conservation as the main responsible body for ecological environmental protection and energy conservation, to ensure that solid progress is being made in pollution prevention and control as well as in energy conservation. We have formulated the *China Mobile's Management Measures for Prevention and Control of Environmental Pollution Risks* and the *China Mobile Management Measures for Energy Conservation*, laying out detailed regulations on the identification, prevention and remediation of the risk points of air, water, soil and other emissions in our operation activities, as well as detailed requirements regarding energy conservation and pollution prevention, including allocation of responsibilities, scope of work, prevention and control measures, functional management requirements and comprehensive evaluation system.

Climate Risks Faced by China Mobile and Our Responses

Risk Type	Risk Description	Response
Current or emerging laws and regulations	The requirements of laws and regulations regarding energy conservation and emission reduction, and carbon trading market become stricter	We closely follow changes in policies, laws and regulations, and promptly adjust our strategy and measures accordingly and arrange for the publicizing and implementation across the Group; quarterly calculate carbon emissions data and evaluate the cost of fulfilment and legal risk regarding non-fulfilment; and annually assess and ensure the consistency of our current internal management rules of carbon trading with the ETS regulations released by Beijing Municipal Commission of Development and Reform. In 2019, we successfully completed the tasks of submission of carbon emission report, third-party verification, carbon trading and compliance.
Legal	Risk of the counterparty default due to increase in carbon price	We regularly monitor carbon price fluctuation, and monthly evaluate the cost of fulfilment and the financial impact if the counterparty defaults.
Market	Risk of sudden expansion of network scale due to rapid user growth	We analyze the impact of network scale on energy consumption and greenhouse gas emissions and on our cost based on our annual internal planning.

Risk Type	Risk Description	Response
Reputation	Risk of government criticism or fine for unfulfilled carbon trading obligations	We conduct regular assessments on fulfilment risk, plan to include a contingency mechanism regarding non-fulfilment in our carbon trading management system, and assess the impact of reputation damage on the Company.
Acute physical	Damages to infrastructure and fixed assets due to extreme weather conditions	We built 46 super base stations in 2019 that can function under disaster conditions of earthquake, flood, typhoon or snow storm.
Chronic physical	Greater power consumption of equipment room due to global warming	We regularly evaluate and monitor the operation hours of A/C units in equipment room, and the impact on energy cost. We have also adopted energy-saving technology for main equipment in wireless network, transmission, IT/IP and core networks. We have implemented energy-saving upgrade of existing equipment rooms by using air-conditioning, power supply, lighting and other energy efficient technologies and products.
Upstream	Equipment with high energy consumption will use more energy	We issue equipment energy conservation grading standards to suppliers annually as part of the supplier assessment process, requiring equipment manufacturers to meet the requirement for product energy consumption and efficiency. During the procurement process, we strictly inspect the energy consumption and efficiency parameters of the equipment. Each year, we calculate and evaluate the energy consumption and financial impact of each supplier, and update the energy conservation grading standard to achieve greater emission reduction along our supply chain.
Downstream	Data center (IDC) leasing business increases energy consumption	We regularly make forecasts about the growth rate of the IDC business, and evaluate the related financial impacts such as operating cost and energy cost.
Technology	Existing low-carbon technologies cannot meet market and policy requirements	We regularly research the growth trend of our energy consumption every year based on policies or other management requirements. We also conduct cost analysis on the portion that exceeds the control targets, set energy saving and emission reduction targets for the current year, formulate the plan of technologies to be added or replaced as well as old or high energy consumption equipment to be replaced, and ensure the implementation by formulating relevant work and evaluation requirements. Meanwhile, we actively explore and apply the latest and most practical low-carbon technologies, closely follow industry trends related to energy-saving technologies and products, cooperate with research institutions to support long-term research on energy conservation, actively carry out pilot applications of new energy-saving technologies and products, regularly collect best practices in energy conservation and emission reduction from front-line units, and organize training and experience sharing on energy conservation and emission reduction.

In 2019, we modified more than 1,000 existing equipment rooms and data centers to make them more energy-saving and green, including optimization of air conditioning system and airflows, application of natural cooling sources, sleep function for power switches, and upgrade to high-efficiency power switches.

Building Green Data Centers

Huainan Data Center, located in Anhui Province, is the single largest data center in East China and a major energy user. We actively researched and innovated on green data center. In 2019, we filed 4 patent applications, laying a solid foundation for the transformation to become a clean and low-carbon data center.

- Fine management of equipment room cooling: We replace compressors with natural atmospheric cooling in autumn and winter, and use storage cooling in off-peak time in the middle of the day, realizing an annual power saving of over 12 million kWhs.

- Central air conditioning water treatment and pollution reduction system: The system monitors the water quality of water-cooled air conditioning units, and softens and treats the water automatically to increase the efficiency of heat exchange. The system can help reduce power consumption by 1.9 million kWhs and avoid the discharge of 20,000 cubic meters of sewage each year.

- Zero-power green testing system: The system can be used to run the full-capacity testing of new data center equipment rooms, to avoid the overheating problem associated with full-capacity operation.

- Smart and paperless equipment room maintenance system: Maintenance personnel swipe their NFC enabled mobile handsets over patrolling checkpoints, allowing accurate, automatic and closed-loop management and maintenance of data center infrastructure.

- AI precision refrigeration configuration assistant: We use AI technology to automatically adjust the configuration of refrigeration hardware based on the real-time operating conditions to improve refrigeration efficiency with precision and to lower A/C energy consumption.

- Equipment room airflow optimization: We modify the air duct and air baffle to ensure the isolation of hot and cold air in the equipment room to achieve accurate cooling.

Regarding the use of renewable energy, we actively promote the use of alternative new energy sources, such as solar energy, wind energy, water energy, hydrogen energy, etc. in areas with rich natural resources but insufficient supply of traditional energy. Xinyu Branch of our Jiangxi subsidiary utilized its unused rooftop space and built a 105kWp distributed solar power generation system, which generated 82,000 kWhs of power in 2019.

Regarding the construction of 5G base stations, we studied the energy consumption of 5G network in advance, and upgraded our enterprise equipment energy conservation grading standards accordingly during the early stage of network construction. In Jiangsu, we innovatively applied the liquid cooling technology, which could significantly reduce the PUE of base station to around 1.1, saving as much as 35% of energy compared with traditional base stations. At the 2019 Information and Communication Industry Conference on Energy Conservation and Emission Reduction, the 5G liquid cooling node technology was the only application technology of the Company selected for sharing, showcasing our leadership in the green application of 5G network.

In 2019, the Company had zero violation of environmental laws and regulations.

Driving Value Chain Green Transformation

While continuously developing and applying advanced energy-saving technologies, we are also committed to driving the green transformation of our value chain.

Green Procurement

In 2019, our paperless bidding process ran smoothly, achieving an annual paperless rate of 99.9% of all biddings. We continue to apply energy conservation grading standards, energy-saving technical requirements and green packaging grading standards for communication products in our equipment bidding and procurement. We also gave greater priority to energy conservation at the source, and significantly increased the weight of energy conservation performance in the technological assessment of the centralized procurement of 5G wireless equipment.

At the annual supplier reception day event, we focused on the theme of "Building a Green Supply Chain", publicized the green development concept to our suppliers, and shared with them our excellent cases to encourage them to work together with us to build a green planet for all.

Green Packaging

We cooperated with Apple Inc. to implement the mixed pallet upgrade project. During the initial sales of iPhone 11 series products, we upgraded the single-layer, single-model and mixed pallet model to the single-layer, multi-model, multi-category and mixed pallet model, using 15% less wood pallets. Meanwhile, our green packaging rate of newly procured main equipment reached 69%, saving 164,000 cubic meters of timber resources.

Reusing Optical Modems to Promote the Circular Economy

Optical modem is a low value optical fiber transmission equipment widely used in the installation of fiber optical broadband equipment. Retired optical modems are usually disposed of as waste. Our Hubei subsidiary launched the Optical Modem Recycle, Refurbish and Reuse project, established a dedicated team overseeing the process and a standard operation procedure manual that covers the entire process including code-scanning recycle registration, sorting and testing, cleaning, repairing, refurbishing, labeling and packaging. We also formulated quality inspection standards to ensure that the refurbished optical modems could function properly.

As of the end of 2019, we had delivered 387,600 refurbished optical modems and 180,000 set top boxes, saving RMB62.16 million from the purchase of optical modem and auxiliary supplies.

Managing Water Resources Consumption

The water used in our daily office and production operations mainly comes from centralized municipal water supplies. We do not have any risk of water resources.

We strictly abide by the relevant requirements of the *Water Law of China* and the *Water Pollution Control Law of China*, advocate water conservation, strictly control sewage discharge, and strive to reduce water consumption. In 2019, we continued to strengthen water management of equipment rooms, management facilities and stores. Our Ningxia subsidiary adopted wastewater recycling and reuse technology to treat and recycle the wastewater generated in the production center, and used it as supplementary water sources for vegetation irrigation and toilet flushing, reusing nearly 10,000 tonnes of wastewater on average each year.

Summary of Our Key Performances

6 CLEAN WATER AND SANITATION **7** AFFORDABLE AND CLEAN ENERGY **12** RESPONSIBLE CONSUMPTION AND PRODUCTION **13** CLIMATE ACTION **15** LIFE ON LAND

Our Achievements in 2019

- Leveraged our expertise to innovate on ecological and environmental information applications.

- Established the China Mobile Leading Group for Pollution Prevention and Energy Conservation, continued to implement the Green Action Plan, and further optimized our environmental management system.

- Reduced our annual overall energy consumption per unit of information flow by 43% through measures such as energy saving renovations, innovative environmental applications and improvement in green operation.

- Implemented green procurement and promoted the green development of the supply chain, and increased our green packaging rate of newly procured main equipment to 69%.

- Reduced annual power consumption by 2.21 billion kWhs, equivalent to the reduction of 1.415 million tonnes of GHG emissions.

- Awarded the CDP (Carbon Disclosure Project) Global Leadership Level Company on climate change, and was one of the top-rated companies in Mainland China.

Our Goals for 2020 and Beyond

- To explore the means and ways to apply 5G technology for environmental protection, and continuously innovate on environmental applications.

- To reduce the overall energy consumption per unit of information flow by 15% and the overall energy consumption per unit of telecom business by 10% by 2020; to achieve a 60% or higher ratio of green packaging usage by 2020.

- To continue to promote green procurement and green logistics management, and establish a green supply chain system covering the whole procurement process, realizing fully paperless and electronic procurement in the next three years; to formulate scientific energy conservation and environmental protection targets, and encourage suppliers to enhance their social responsibility awareness; to promote the full-process application of green packaging, continue to strengthen reverse logistics, explore Radio Frequency Identification (RFID) embedded packaging, and realize the traceability of the whole process.

- To ensure that the year-on-year growth rate of our overall energy consumption and the year-on-year growth rate of our carbon emissions are lower than the growth rate of our network (connection) scale in the next five years.

Key Performance Indicators

Environmental Investment

Indicator	2017	2018	2019
Investment in Green Action Plan (RMB100 million)	1.4	1.9	1.6

Energy

Indicators	2017	2018	2019
Direct Energy Use			
Coal consumption (10,000 tonnes)	0.1	0.2	0.05
Gasoline consumption (million liters)	121.5	112.4	101.3
Diesel fuel consumption (million liters)	19.4	14.8	13.1
Natural gas consumption (million m³)	7.9	11.2	11.0

Indicators	2017	2018	2019
Coal gas consumption (million m³)	0.10	0.05	0.08
LPG consumption (100 tonnes)	3.1	2.7	2.3
Indirect Energy Use			
Total electricity consumption (100 GWhs)	223.3	244.7	264.0
Purchased heating costs (RMB million)	160.9	123.4	157.9
Energy Savings			
Total annual electricity savings (100 GWhs)	21.4	26.6	22.1
Equivalent annual cost savings (RMB100 million)	28.9	37.7	21.6

Indicators	2017	2018	2019
Equivalent annual GHG emission reduction (10,000 tonnes)	148.5	170.6	141.5
Overall energy consumption per unit of telecom business (kg standard coal/ RMB10,000)	21	10	6
Percentage decrease of overall energy consumption per unit of telecom business (%)	29	53	40
Reduction in overall energy consumption per unit of information flow (%)	40	57	43

Emissions

Indicators	2017	2018	2019
CO_2 emissions [1] (million tonnes)	15.98	16.17	17.32
Direct GHG emissions (Scope 1) (million tonnes)	0.33	0.31	0.28
Indirect GHG emissions (Scope 2) (million tonnes)	15.65	15.86	17.04
Carbon emission intensity (tCO_2e/ RMB10,000)	0.216	0.219	0.232
SO_2 emissions [2] (tonnes)	23.59	35.93	9.28
Carbon emission from commute (10,000 tonnes)	37.79	39.45	50.77
Carbon emission from business travel (10,000 tonnes)	29.44	7.10	8.19

Notes:

1. CO_2 is the only type of GHGs generated in our operations, and over 95% of our CO_2 emissions are from the use of electricity. CO_2 emissions are calculated mainly in accordance with the *Guidelines for National Greenhouse Gas Inventories* published by IPCC in 2006, and the baseline emission factors for the China regional grid published by the National Development and Reform Commission in 2017.
2. SO_2 is the only type of air emissions generated in our operations, mainly from coal burning in certain regions.

Water Use

Indicators	2017	2018	2019
Total amount of water consumption （million tonnes）	42.24	35.12	36.29
Water consumption per capita (tonnes)	91	76	80

Raw Materials Use

Indicator	2017	2018	2019
Total amount of resources used for producing devices (tonnes)	8,847	9,394	12,396

Waste Management [1,2,3]

Indicators	2019
Non-hazardous solid waste produced (10,000 tonnes)	7.14
Non-hazardous waste produced (10,000 tonnes)	4.52
Electronic waste produced (10,000 tonnes)	2.62
Non-hazardous General solid waste comprehensively utilized (10,000 tonnes)	7.21
Comprehensive utilization rate of non-hazardous solid waste [4] (%)	93.93
Non-hazardous solid waste intensity (kg/RMB10,000)	0.96
Hazardous waste produced (10,000 tonnes)	1.89
Hazardous waste disposed (10,000 tonnes)	2.17
Hazardous waste disposal rate [5] (%)	84.30
Hazardous waste intensity (kg/RMB10,000)	0.25

Notes:

1. In 2019, we updated and standardized the scope for the statistics of different types of solid waste in accordance with the requirements of the *Notification on Issuing the Statistical Report on Energy Conservation and Ecological Environmental Protection of Central Enterprises* of SASAC. We will disclose new indicators on a rolling basis every year.
2. Our operation generates three types of solid wastes: non-hazardous waste, electronic waste and hazardous waste.
3. Non-hazardous waste mainly includes domestic waste, food waste, office and marketing waste paper or packaging, construction waste, etc. Electronic waste mainly includes electronic components and equipment replaced from base stations and equipment rooms, and retired office equipment such as printers, copiers, fax machines and computers. Hazardous waste mainly includes bare circuit boards and batteries retired from base stations and equipment rooms, printer cartridges, ink cartridges and fluorescent tubes from offices, and damaged or retired smart terminals such as mobile phones, batteries and SIM cards. We sell most of our waste to qualified third parties recycling companies for
4. disposal.
   The comprehensive utilization rate of non-hazardous solid waste refers to the ratio of the amount of non-hazardous solid comprehensively utilized within the reporting period minus the storage capacity of comprehensive utilization in the past year, to the amount of non-hazardous solid waste generated. In 2019, our comprehensive utilization from the
5. previous year was approximately 5,100 tonnes.
   The disposal rate of hazardous waste refers to the ratio of the volume of hazardous waste disposed minus the storage volume of hazardous waste from the previous year, to the amount of hazardous waste generated in the reporting period. In 2019, our hazardous waste disposal storage volume from the past year was approximately 5,800 tonnes.

Green Operations

Indicators	2017	2018	2019
Number of video conferences usage at group level	882	970	1,184
Online sales volume (RMB100 million)	4,648	4,785	5,635
Number of online e-procurement projects in the year (10,000)	appr. 3.8	appr. 1.0	appr. 3.4
Reduction of paper-based documents with the wholly electronic procurement process (10,000 copies)	appr. 61.6	appr. 14.1	appr. 48.0