

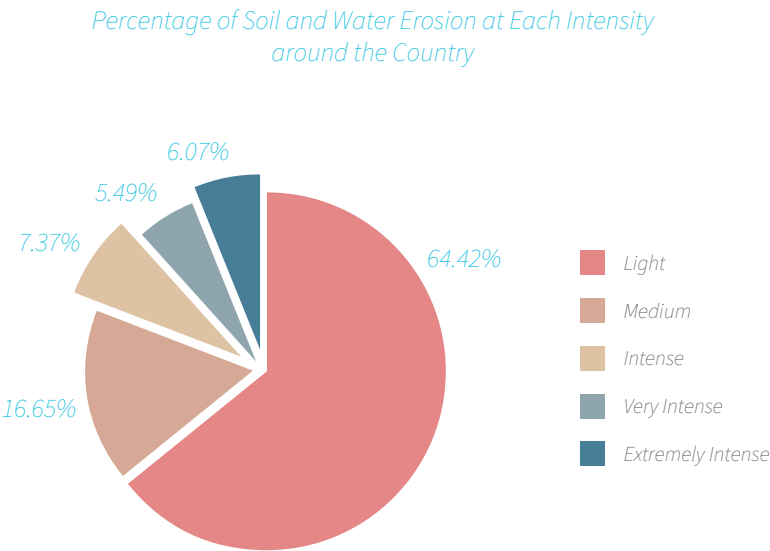
The background of the page is a dynamic, abstract illustration of water. It features large, swirling, and splashing shapes in various shades of blue, from light sky blue to deep navy blue, set against a white background. The motion is captured with energetic brushstrokes and splatters, giving it a sense of fluidity and movement.

# Chapter 8

*Soil and Water Conservation*

# 1 An Overview of Soil and Water Erosion

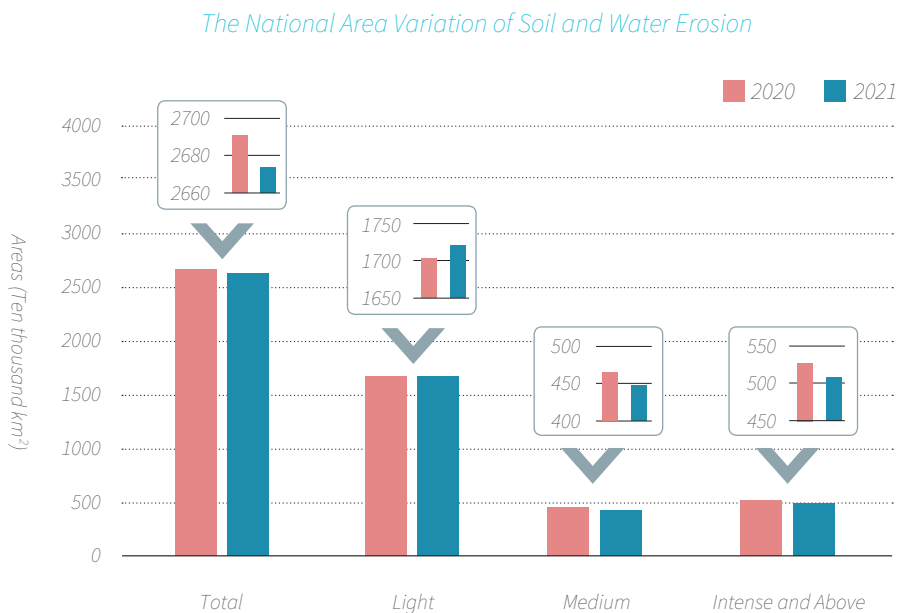
China is one of the countries with the most severe soil and water erosion in the world. In 2021, the areas of soil and water erosion around the country reached 2.6742 million km<sup>2</sup>, accounting for 28% of the national territorial area (excluding Hong Kong, Macao and Taiwan), including 1.1058 million km<sup>2</sup> of areas with water erosion and 1.5684 million km<sup>2</sup> of areas with wind erosion, respectively accounting for 41.35% and 58.65% of the total area of soil and water erosion. According to the erosion intensity, the areas of light, medium, intense, very intense and extremely intense erosion respectively were 1.7228 million km<sup>2</sup>, 445,200 km<sup>2</sup>, 197,200 km<sup>2</sup>, 146,800 km<sup>2</sup>, and 162,200 km<sup>2</sup>, respectively accounting for 64.42%, 16.65%, 7.37%, 5.49%, and 6.07% of the total area of national soil and water erosion. There is no doubt that severe soil and water erosion results in land and water resource destruction, ecological environment deterioration, intensification of natural hazards. It also creates threats to national ecological safety, flood control safety, drinking water safety and food safety, so it is a prominent constraint on the sustainable development of China's economy.



## 2 Major Achievements

China always attaches importance to soil and water conservation and has carried out large-scale soil and water erosion control, achieving remarkable results.

According to data from the Ministry of Water Resources, the area of soil and water erosion around China in 2021 was reduced to 2.6742 million km<sup>2</sup>, nearly a decrease of 275,900 km<sup>2</sup> in comparison with 2011. The soil and water conservation rate reached 72.04%. The proportion of soil erosion area with intense level and above decreased to 18.93%. Compared with 2020, the areas of soil erosion in China have decreased by 18,500 km<sup>2</sup>, with a decrease rate of 0.69%. At present, the area proportion of medium and light soil and water erosion is 81.07%. Most soil erosion is moderate and mild. Compared with 2011, the areas of soil and water erosion in the Three Gorges Reservoir Region, black soil region of northeast China, Danjiangkou Reservoir Area and its upper reaches, Beijing-Tianjin-Hebei Region, Loess Plateau, southwestern rocky desertification area, and the Yangtze River Economic Zone respectively decreased by 1.44%, 0.91%, 1.17%, 1.68%, 1.40%, 1.36%, and 1.32% respectively. Their rate of decline was higher than the national level. As a whole, the area and severity of soil and water erosion in China is reducing year by year. This is a marked improvement.





## 2.1 Comprehensive Implementation of Soil and Water Conservation Law and Effective Control of Artificial Soil and Water Erosion

In 1991, the *Soil and Water Conservation Law of the People's Republic of China* was officially implemented, so that soil and water conservation work in China was gradually on the way to prevention and control according to the law. Maintaining a “three-simultaneous” system (soil and water conservation facilities in construction projects must be simultaneously designed, constructed and put into use with main construction) of soil and water conservation in production construction projects has achieved significant results. In 2011, the revised *Soil and Water Conservation Law* came into effect so that provisions on the main responsibility of the government, the planning of legal status, protection policies for prevention and control, and legal accountability were further intensified to provide more powerful legal safeguard for protecting water soil and water resources according to law. The administrative departments at all levels seriously fulfilled the supervision and management responsibilities of soil and water conservation in production and construction projects. Also, each department fulfilled the approval responsibility for soil and water conservation schemes according to law, reinforced the source control, strictly approved it, and refused to approve production and construction projects that did not conform to ecological protection and soil and water conservation. Besides, each department reinforced the tracking inspection of soil and water conservation scheme implementation, established the sound water administrative

department to fulfill the step-by-step supervision system pursuant to law, reinforced supervision during and after the event, and strictly checked unlawful act. At the same time, through satellite remote-sensing images, unmanned aerial vehicles, and other informatized means were fully applied to make innovations on supervision modes and enhance efficacy of supervision. Since *Soil and Water Conservation Law* was issued, a total of 780,000 production and construction projects implemented soil and water conservation schemes, took soil and water conservation measures, and reduced the area of human-induced soil and water erosion due to development and construction by 320,000 km<sup>2</sup>.

## *2.2 Continuous Implementation of Comprehensive Soil and Water Erosion Governance and Remarkable Improvement of Production and Life Conditions and Ecological Environment in Governed Areas*

Batches of key projects of soil and water conservation have been successively launched and implemented in the midstream of the Yellow River, the upper Yangtze River, the silt dam of the Loess Plateau, sources of sandstorms in Beijing and Tianjin, the black soil region of Northeast China, and rocky desertification control in Karst regions. The range of control has expanded to major river basins nationwide from the traditional upper and middle reaches of the Yellow River and the Yangtze River, basically covering areas with serious soil erosion. We have effectively promoted a series of major projects such as the three northern (northwest-north-northeast) shelter-belts, the conversion of farmland to forests and grassland, the protection of natural forest resources, the rehabilitation of land, desertification and rocky desertification, and the ecological protection and restoration of mountains, rivers, forests, fields, lakes and grassland areas. At the same time, due to improved policy and operation as well as the encouragement of social forces to participate in soil erosion control, the whole society jointly controls soil erosion. By the end of 2021, the country has initially controlled an area of 1.56 million km<sup>2</sup> of soil erosion. The production and living conditions in the controlled areas have improved significantly, the grain output has increased, the income of farmers has increased significantly, and the countryside has taken on a new look. In the 21st century, the Ministry of Water Resources has further expanded its scope of work and gradually promoted the





*Combating Desertification in the Shule River Basin, Gansu Province*

construction of ecologically-clean small watersheds around the new rural construction and rural revitalization strategy. This has produced valuable experience in improving the rural landscape and preventing non-point source pollution.

### *2.3 Attention on Developing Self-repairing Capacity of Ecology and Rapid Recovery of Vegetation in Large Areas*

After entering the new century, China's water and soil conservation methodology has been undergoing constant reform. While strengthening the management of water and soil loss, it has implemented enclosure protection, banned grazing and rotational grazing. It has fully relied on nature's self-repairing ability to speed up vegetation restoration, reduce water and soil loss and improve the ecological environment. The Ministry of Water Resources has successively launched two batches of pilot projects for the ecological restoration of soil and water conservation in more than 200 counties in 29 provinces (autonomous regions). Furthermore, it has implemented prevention and protection projects for soil and water conservation in the "Three Rivers Source" area of Qinghai Province. 136 cities and nearly 1200 counties in 27 provinces, autonomous regions and municipalities directly under the central government have implemented mountain closures and grazing bans. Key national water and soil conservation project areas have implemented full-



*Soil and Water Conservation along a Highway in Baise City, Guangxi Zhuang Autonomous Region*

scale enclosure protection. Many practices have been spread around the country, including grass for livestock, construction, modification and relocation for repair, and energy substitution. This method of ecological recovery has gradually matured, attaining a good ecological effect. The philosophy of sticking to prevention first, followed by crucial protection and the full development of nature's capacity to self-repair enjoys popular support.

#### *2.4 Acceleration of Supervision and Information Application and Improvement on Soil and Water Conservation Management Efficiency*

The Ministry of Water Resources has carried out three national remote sensing surveys of soil and water erosion, basically finding out the situation and dynamic trend of soil and water erosion around the country. The government implemented the supervision networks of national soil and water conservation and construction projects of the information system, combined with local encryption stations, and shared stations with other industries. At present, the whole country has had 826 monitoring stations of soil and water conservation and has preliminarily formed the supervision networks of soil and water conservation covering the whole country. Since 2003, soil and water conservation bulletins have been consecutively issued for 19 years, causing an important impact on society. Since 2018, regular dynamic monitoring of soil and water

erosion throughout China (excluding Hong Kong, Macao and Taiwan) has been consecutively completed to comprehensively master soil and water erosion status and dynamic changes of the whole country, administrative districts at all levels, national key areas, and rivers. What's more, the government developed and improved the national information management system and database of soil and water conservation, formulated the smart construction schemes and data management rules of soil and water erosion during the “14th Five-year Plan” period, and carried out smart construction of soil and water conservation. In order to adapt to the new situation of informatized development, the government keeps enlarging the comprehensive applications of satellite remote sensing, unmanned aerial vehicles, and mobile terminals in supervision management, comprehensive governance, and monitoring evaluation, effectively enhancing the management level and efficiency of soil and water conservation.

## *2.5 Promotion of Plans, Standards and Technical Innovation and Remarkable Enhancement of Basic Supporting Capacity in Soil and Water Conservation*

In 2015, the State Council approved *the National Soil and Water Conservation Plan (2015—2030)*. 31 provincial soil and water conservation plans have been approved by the provincial-level people's government or the authorized department. Since then, special plans such as the comprehensive treatment of erosion gullies in the black soil region of Northeast China and comprehensive treatment of soil erosion on sloping farmland have been made and approved one after another. The top-level design of soil and water conservation has become increasingly perfect. What's more, a number of national soil and water conservation scientific research stations, test areas and key laboratories on soil erosion have been built, and significant progress has been made. The national demonstrative construction of soil and water conservation has been carried out. *The National Demonstrative Construction Management Method of Soil and Water Conservation* was issued. In 2021-2022, a total of 192 were chosen as the national models of soil and water erosion. Practical soil and water conservation technologies focusing on slope-to-terrace, slope river system and rainwater utilization have been tested and promoted. The



contributions of science and technology to soil and water conservation has continuously increased. A water and soil conservation standard system covering the three categories of integration, construction and management and 14 additional functions has been established. At present, there are 44 standards of soil and water conservation in operation. The technical standard system of water conservancy issued in 2021 has 23 standards of soil and water conservation. A technical standard system that meets China's national conditions and the needs of water and soil conservation work has been established, providing basic support for the prevention, control and supervision of water and soil loss.

## **Overall Working Ideas and Important Measures**

### *3.1 Overall Ideas*

Instructed by Xi Jinping's socialist ideology with Chinese characteristics in the new era, it is necessary to deeply run through the spirit of 20th CPC National Congress of the Party, comprehensively carry out Xi Jinping's ecological civilization thought, completely, accurately and comprehensively implement the new development concept, speed up constructing the new development pattern, implement the governance idea of water-saving priority, spatial balance, system governance, and leveraging the strengths of the government and the market, and firmly set up and practice the philosophy that lucid waters and lush mountains are invaluable assets. With the theme of promoting high-quality development and the reform and innovation of system and mechanism as the starting point, we will accelerate the construction of the work pattern of water and soil conservation under the leadership of the Party Committee, the responsibility of the government, the coordination of departments and the participation of the whole society, comprehensively improve the function of water and soil conservation and the supply capacity



*Silt Retention Dam Built in Jiuyuangou River Basin in Shaanxi Province*

of ecological products, and provide strong support for promoting the harmonious coexistence between man and nature.

By 2025, the system mechanism and working system of soil and water conservation will be further improved. Management efficiency will be further enhanced. Man-induced soil erosion has been effectively controlled. Soil and water erosion in key prevention and control areas will be comprehensively controlled. The status of soil and water conservation will be continuously improved. The national soil and water conservation rate will be up to 73%. By 2035, the system mechanism of soil and water conservation with the complete system and high-efficient collaboration will be comprehensively formed. Man-induced soil and water conservation will be comprehensively controlled. Soil and water erosion in key prevention and control areas will be comprehensive managed. The national soil and water conservation rate will be up to 75%. The function of soil and water conservation in the ecosystem will be significantly enhanced.

### *3.2 Important Measures*

#### **3.2.1 Comprehensive Reinforcement of Prevention and Protection of Soil and Water Erosion**

First of all, it is necessary to highlight the prevention and control of soil erosion sources. In accordance with the requirements of land and space

planning and use control, it is essential to establish the space control system of soil and water conservation and take measures of differential protection and governance. The areas of soil and water conservation with important ecological function and vulnerable areas of soil and water erosion will be brought into the red line of ecological protection. It is essential to implement strict control and reduce the occupation of natural ecological space by human activities. For the planning involved in infrastructure construction, mineral resource development, urban construction, and public service facility construction, it is possible to bring soil and water erosion during the implementation process. Then countermeasures and measures for prevention and management of soil and water erosion should be proposed, consulting the administrative department of the same level. Secondly, it is essential to enlarge the prevention and protection in key areas. To be specific, the government should arrange and speed up implementing the protection of important ecosystems and recovery of major engineering, and promote regional integrated ecological protection and recovery of national key ecological functional zones, the red line of ecological protection, and natural protected areas. With the focus on river headwaters, important water sources, and ecotones of water and wind erosion, it is necessary to comprehensively implement prevention and protection of soil and water erosion. For cold and high-altitude areas with freeze-thaw erosion, and concentrated contiguous sandy land areas with wind erosion that have no conditions for soil and water erosion control and are unsuitable for development due to ecological protection, it is essential to reinforce enclosure and protection. Thirdly, soil and water conservation function of ecosystems should be reinforced. It is necessary to focus on enhancing quality and stability of forest and prairie ecosystems for prevention and protection of soil and water conservation, prohibit illegal reclamation, reinforce protection and recovery of natural forests and prairies, implement grazing prohibition, rest grazing, and balance system between forage and animals in prairies, and fully develop the soil and water conservation function of forests and prairies. Focusing on protecting farmland ecosystems, it is necessary to sound the crop rotation and fallow system of farmlands, reinforce quality protection and enhancement of farmlands, promote the construction of high-standard farmlands, improve the irrigation and drainage system of farmlands, construct the



farmland protection forests according to local conditions, and enhance soil conservation capacity. Meanwhile, it is essential to take action for urban renewal, promote urban soil and water conservation and ecological recovery, reinforce protection of mountains, forests, rivers, and wetlands, maintain ecological authenticity and integrity of mountains and rivers, and promote the construction of green cities.

**3.2.2 Strict Supervision of Man-induced Soil and Water Erosion Pursuant to Law**

To begin with, the supervision system and standard should be improved. In detail, it is necessary to implement the scheme system of soil and water conservation in production and construction projects and reinforce the whole process of supervision. In view of features of different areas and different industries, it is essential to clarify the differential targeted requirements and classify accurate supervision. It is better to improve prevention and control standards of soil and water erosion in production and construction activities, including agricultural and forest development, implement supervision in accordance with rules, deepen the reform of “streamline administration and delegate power, improve regulation, and upgrade services” , continuously promote the approval

*Terraced Fields in Yuanyang County, Yunnan Province*





service standardization, normalization, and convenience of soil and water conservation, further optimize the business environment, as well as cultivate and motivate vitality of the market entities. The second is to innovate and improve the supervision mode. It is essential to build the new-type supervision mechanism with the basic means of remote sensor supervision, the supplement of key supervision, and the basis of credit supervision, carry out remote sensor supervision of soil and water erosion with full coverage and normalization, comprehensively monitor, timely discover, and accurately judge human-induced soil and water erosion conditions, and strictly investigate and punish violations of laws and regulations. Beyond that, it is essential to implement credit evaluation of soil and water conservation, deeply implement “internet+ supervision” , and positively promote the remote video supervision based on autonomous supervision of enterprises. Meanwhile, it is better to reinforce the tracking warning of human-induced soil and water erosion risks, enhance the accurate and intelligent level of supervision, and promote the realization of not disturbing when there is no risk, pre-warning when there is low risk, and strict monitoring when there is medium and high risk. The third is to reinforce collaborative supervision. It is necessary to reinforce inter-departmental collaborative supervision



and joint law enforcement, establish and improve systems such as regulatory information sharing, illegal evidence interconnection, as well as case notification and transfer, strengthen the connection between administrative law enforcement of soil and water conservation and criminal justice, cooperate with procuratorial public interest litigation, giving full play to the role of judicial guarantee and supervision, improve the communication mechanism with the discipline inspection and supervision organs, timely transfer the evidence of party members and public officials suspected of violating discipline and law to the discipline inspection and supervision organs for handling, open channels for public supervision and reporting, giving play to the role of social supervision. Besides, it is necessary to perfect the communication mechanism with the disciplinary inspection and supervisory organs, and timely transfer Party members and civil servants involved in violations of disciplines and laws to supervisory organs. Also, the government should smooth the channel of public supervision and reporting and develop a role of social supervision. It is better to reinforce the supervision ability construction of soil and water conservation, enhance the professionalized level and the ability to apply modern scientific and technological means, and guarantee necessary expenditures and equipment investments. The last one is to reinforce the implementation of corporate responsibilities. The production and construction units ought to fulfill the prevention and control responsibilities of soil and water conservation pursuant to law, and strictly implement the “three-simultaneous” requirements (soil and water conservation facilities should simultaneously design, construct, and put into operation with main engineering) of soil and water conservation. Also, it is necessary to dramatically promote green design and green construction, strictly control farmland occupation and surface disturbance, prohibit indiscriminate mining, indiscriminate digging and littering, comprehensively carry out topsoil resources protection, waste residue reduction and comprehensive utilization to minimize possible soil erosion. Meanwhile, the competent department of production and construction projects should reinforce targeted industrial guidance.

### **3.2.3 Acceleration of Key Control of Soil and Water Erosion**

The first is to promote the comprehensive management of small watersheds to improve quality and efficiency. It is necessary to

make overall plans for production and living ecology, and carry out comprehensive management of small watersheds in key areas of soil erosion, such as the upper and middle reaches of major rivers, black soil areas in northeast China, Karst areas in southwest China, water source areas of the South-to-North Water Transfer Project and Three Gorges reservoir area. All localities should incorporate the comprehensive management of small watersheds into economic and social development planning and rural revitalization planning, establish an overall coordination mechanism, and take the watershed water system as a unit to promote the integration of village, township and county. With the goal of green mountains, clean water, beautiful villages and rich people as the goal, focusing on water systems, villages and the surrounding areas of cities and towns, the government will vigorously promote the construction of ecologically-clean small watersheds, promote the organic combination of comprehensive management of small watersheds with improving comprehensive agricultural production capacity, develop characteristic industries and improve the rural living environment, and provide more and better ecological products with soil and water conservation functions. The second is to vigorously promote the control of soil erosion in sloping farmland. It is necessary to focus on farmland protection, food security, non-point source pollution prevention and control, focus on functional areas of grain production and production protection areas of important agricultural products, vigorously implement soil erosion control projects in sloping farmland, improve construction standards and quality, accelerate the control of soil erosion in sloping farmland in the upper and middle reaches of the Yangtze River, improve supporting measures such as field roads and slope water systems according to local conditions, improve the quality and efficiency of cultivated land, promote the construction of dry-farming terraces on the Loess Plateau, strengthen rainwater collection and utilization, develop efficient dry-farming agriculture, strengthen control of soil erosion in sloping farmland and erosion gully in black soil areas of Northeast China, promote conservation farmland and high-standard farmland construction as a whole, and protect black soil resources. In conditional areas, soil erosion control of sloping farmland and high-standard farmland construction should be planned and implemented simultaneously. The third is to do a good job in soil erosion control in the areas where sediment is concentrated.

It is necessary to focus on reducing the sediment entering the river, pay special attention to the comprehensive management of the sandy areas of the Yellow River, where coarse sediment is concentrated, vigorously develop the construction of high-standard warping dams on the Loess Plateau, strengthen the danger removal and reinforcement of dangerous warping dams, upgrade and transform old warping dams, implement the project of gully consolidation and tableland protection, actively promote the comprehensive treatment of collapse in the hilly and mountainous areas of southern China, and protect and rationally utilize water and soil resources.

### **3.2.4 Improvement on the Ability and Level of Soil and Water Conservation Management**

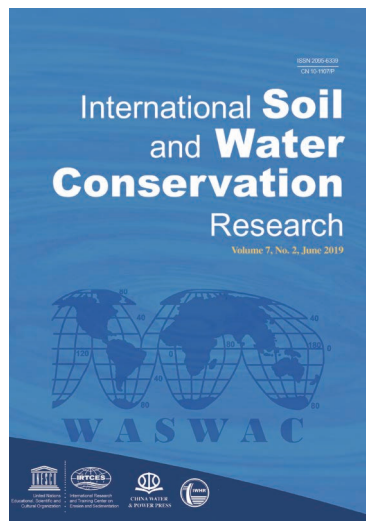
The first is to perfect the planning system of soil and water erosion. It is necessary to carry out the national planning of soil and water conservation, formulate the soil and water conservation planning for important rivers around the country, and promote collaborative governance of upstream, midstream, and downstream, left and right banks, and branch rivers. The second is to improve the engineering construction and management mechanism of soil and water conservation. It is essential to make innovations on the organization and implementation mode of key soil erosion control projects, optimize approval procedures of projects, actively promote the construction mode of substituting awards for subsidies and provide work to relieve poverty, give full play to the role of village-level organizations, land users and contractors, and support and guide social capital and people in governance areas to participate in project construction. The third is to reinforce the assessment of soil and water conservation. The government shall implement the target responsibility system for soil and water conservation and the system of assessment, reward and punishment, take the assessment results as an important reference for the comprehensive assessment of leading group and leaders, and off-office auditing of natural resources assets. Units and individuals with the remarkable achievements in soil and water conservation should be praised and awarded in line with the state's relevant regulations. The fourth is to construct the supervision system of soil and water erosion with the basis of supervision at monitoring stations, the focus of normalized dynamic supervision and



supplementary by regular surveys, deepen the supervision evaluation, consolidate the quality and level of supervision results, and fully develop a supporting role of supervising soil and water conservation on the construction of ecological construction. Besides, it is necessary to optimize the layout of monitoring station of soil and water conservation, improve facility construction and equipment allocation at monitoring stations of soil and water conservation, construct the benign operational mechanism of monitoring stations, reinforce the monitoring equipment measurement management of soil and water conservation, and safeguard quality of monitoring data. Moreover, it is essential to carry out the annual dynamic supervision of soil and water erosion, and comprehensively master the conditions and changes of soil and water erosion in administrative districts at all levels and key areas around China. The fifth is to improve technological innovation of soil and water conservation. It is essential to reinforce in-depth integration of informatization and soil and water conservation, promote the smart construction of soil and water erosion, accelerate the smart hydraulic engineering system of soil and water conservation with the following functions, including forecasting warning of soil and water erosion, risk warning of human-induced soil and water erosion, intelligent comprehensive management of soil and water erosion, and safety flood control of silt dams, and improve the smart business management level of soil and water conservation. Moreover, it is necessary to strengthen basic research and tackle technical problems, focusing on the law and mechanism of soil erosion, the relationship between soil and water conservation, and the carbon sink capacity of soil and water conservation. It is also necessary to support the construction of technologically innovative platforms including key labs and wildlife scientific observation and research stations in the field of soil and water conservation, and promote transformation and technical popularization of technological results.

## 4 International Cooperation and Exchanges

China is the host country of the secretariat of the World Society for Soil and Water Conservation, the secretariat of the World Society for Sediment Research and the Chair country of the International Sea-buckthorn Association. The World Society for Soil and Water Conservation has 1,335 private members and 10 unit members from 85 countries and regions. In 2010, a Chinese expert was elected President of the Council of the World Society for Soil and Water Conservation and Secretary-General of the society. In April 2015, the Chinese government officially approved the registration of the World Society for Soil and Water Conservation. The World Society for Soil and Water Conservation holds a series of international academic seminars and an international Youth Forum for Soil and Water Conservation every three years, and publishes WASWAC Hot News every month. International Soil and Water Conservation Research, the Journal of the Society, is published in English quarterly. The International Sea-buckthorn Association was initiated by 12 countries including China, Russia and Canada and registered with the approval of the State Council in September 2011. It is the 27th international organization headquartered in China and has nearly 300 members from over 20 countries. The council of the International Sea-buckthorn Association has 14 members from 7 frontier countries in the field of sea-buckthorn development in the world. The members of the technical committee are composed of sea-buckthorn experts from all over the world. The conference is held every two years and the board meeting is held every year. China exerts an important influence on the ecological construction of sediments and sea-buckthorns, as well as the field of industrial development. China has successively undertaken a series of important conferences, including the 12th International Conference on Soil and Water Conservation, the 2nd and 5th conferences of the International Sea-buckthorn Association, the International Symposium on Land Degradation Control and the 1st International Symposium of the World Society for Soil and Water Conservation, and the Sino-US and



China-Africa Symposium on Soil and Water Conservation. Also, China has regularly held multiple regional seminars or training classes around the world. Besides, China cooperates with international organizations including World Bank, the EU, and the Asian Development Bank, and reinforces multilateral cooperation and exchanges. The World Bank Project on Soil and Water Conservation on the Loess Plateau is the first large-scale project in China to control soil erosion with foreign investment, and won the “2003 World Bank President’s Outstanding Achievement Award” . Since 2001, the Ministry of Water Resources has organized and implemented the “Demonstration Area of China’s Assistance to Sea-buckthorn Cultivation in Bolivia” project, successfully introducing sea-buckthorn plants to Bolivia, which is located in the Andes Plateau of South America. Sea-buckthorn is now flowering in Bolivia’s three provinces of La Paz, Potosi and Tarija. After that, China has successively organized and implemented the World Bank loan project of soil and water conservation in Yunnan, Guizhou, Hubei and Chongqing, and the minor drainage basin management project with British grants. Through the implementation of such projects, China’s successful management experience and project management experience of soil and water conservation have been systematically summarized and have been widely recognized and applied by other developing countries.

