

8 特别策划 | Special Focus

Crossing Taklamakan Desert: A Green Miracle in the “Sea of Death”

Taklamakan Desert Highway connecting multiple cities and counties along the northern and southern edges of the desert plays a crucial role in promoting economic development in Xinjiang and supporting national energy endeavors. The builders of the highway have overcome many challenging hurdles and technical problems, such as constructing roadbeds on moving sand dunes, establishing a sand barrier system along the highway, and implementing science-based maintenance and protection of shelterbelt forest. It is their toil and moil that have made the green miracle traversing the desolate desert which is nicknamed the “Sea of Death”.

Back into the Kumtag Desert to See the Sea Changes

The Kumtag Desert is located at the eastern end of the Tarim Basin in China. It is bordered by the Altyn-Tagh Mountains to the south, by the Aqike Valley (Aqik Valley) and the Beishan Mountains to the north, and by the Mingsha Mountain in Dunhuang to the east. Facing the Taklamakan Desert across the Lop Nur to the west, it is the sixth largest desert in China. It is the last frontier in China’s scientific expeditions of deserts, due to its extremely arid climate and exceptionally harsh natural environment that made field investigations particularly difficult. In May 2023, my team followed the scientific expedition routes in the Kumtag Desert, starting from the Haloxylon Groove and heading from south to north. We paid tribute to the older generation of desert researchers, in the hope that we would inspire people’s understanding about desert and aspiration of a harmonious coexistence with desert.

Pisha Sandstone Area in the Old Cow Bay of the Yellow River: Wonder and Ails

The exposed landform of Pisha sandstone area creates a spectacular view, while remaining as a main factor to the soil erosion and the influx of coarse sediment into the Yellow River. It is therefore labeled as “a skin cancer of the earth.” In China, Pisha sandstone area is concentrated in the eastern part of the Ordos Plateau, also known as the Old Cow Bay (the “S-shaped bend” of the Yellow River), at the junction of Shanxi, Shaanxi and Inner Mongolia. Spanning over 16,700 square kilometers, this area suffers wind erosion and soil and water loss, the two menaces threatening local ecological security and causing riverbed to rise. The implementation of rehabilitation project in the Old Cow Bay, which is a part of the “Three-North Shelterbelt Forest Program”, and the advancement of key technologies will be bound to tame this persistent ails.

Natural Aesthetics Evolved from the Ecological Civilization Development in the Yellow River Basin

Ecological civilization is the core of the natural landscape aesthetics in the Yellow River basin, and high-quality ecological development provides a more effective basis for determining natural aesthetics. When ecological development integrates with natural aesthetics, the latter, guided by objective scientific cognition, leads to harmony of truth and beauty, which evolves with aesthetic perceptions. Furthermore, the theories of holistic beauty in nature and ecological integrity further enrich the connotation of the life support theory, filling the philosophical gap within utilitarian principles of the ethics.

Mongolian Scots Pines Forest in Duolun County: A Green Eco-barrier Against the Otindag Sandy Land

Duolun County is located at the southern edge of the Otindag Sandy land and adjacent to the Saihenba Forest Farm. It is one of the counties in Inner Mongolia Autonomous Region with the shortest distance to Beijing. Over the past 20 years, the county has undergone a difficult and long-standing period of ecological restoration on a large scale, going through stages from desertification prevention and control through accelerated quality improvement and efficiency enhancement to the establishment of a green and strong county. It has transitioned from green space establishment in sandy land to the replacement of sandy land by green land, from sand control to using sand for economic development. Desertification control was started initially for holding ecological redline but eventually for realizing the ecological, economic, and social benefits of forest establishment. Duolun County has built a green ecological barrier in the northern border of China, contributing to the solidarity, progress and happiness of the Xilinguole Grassland.

A Trip to the North of Madagascar: A Paradise of Biodiversity on Earth

Madagascar is a high-profile country of biodiversity and one of the first African countries to sign a BRI cooperation agreement with China. In June 2023, the Plant Diversity Expedition Team of the China-Africa Joint Research Center, which is affiliated to the Chinese Academy of Sciences, launched a joint investigation of biodiversity in northern Madagascar. While enjoying its enchanting natural scenery, the Chinese scientists were also deeply impressed by the local traditional culture’s influences on biodiversity as well as the immense wellbeing that the local people benefit from biodiversity.

Bamboo Industry of Ethiopia in Cooperation with China: Broad Prospect of Green Development

Ethiopia, located in the Horn of Africa, is the country of the highest altitude in Africa. With over 3,000 years’ history of civilization, it is often referred to as the “Roof of Africa.” Ethiopia has abundant bamboo resources, which means tremendous potential in bamboo industry development, but it lacks the know-hows and enabling environment for developing bamboo industry. China-Africa Bamboo Center in Ethiopia, a development aid project of China, will serve as a new bond for China-Africa cooperation. It will contribute Chinese wisdom and solutions to the rational utilization of bamboo resources as well as green and sustainable development in Africa.

72 理论观点 | Theoretical Point

Monitoring and Early Warning on Sand and Dust Storm to Tackling Climate Change

Since the 1960s, the sandstorms in northern China have occurred with less frequency and intensity. On the one hand, the circulation of cold air in the Eurasian mid-high latitudes has weakened, resulting in weaker sand dynamics. On the other hand, China has made remarkable progress in desertification control, effectively reducing sandstorm formation at sand sources. Sandstorm days in northern China is expected to decrease, but sand and dust from Mongolia is projected to increase in the future. Therefore, China still has to undertake daunting tasks in sand control and prevention. It is suggested that the north China could improve the monitoring station network in sand source areas to enhance the capability of sandstorm forecasting and early-warning, consolidate the achievements in desertification control and prevention by promoting clean energy use, and jointly build an international cooperation and governance system for desertification control under the Belt and Road Initiative.

82 美丽乡村 | Beautiful Countryside

Enhe Russian Ethnic Township in Eerguna: The Only Russian Ethnic Township in China

Enhe Russian Ethnic Township, the only Russian ethnic township in China, is located on the China-Russia border at the northern end of the Hulunbuir Grassland, on the eastern bank of the Eerguna River and in the west of the Greater Khingan Range. Facing Russia across a strip of river, it boasts unique nature eco-environment and climate, a long history, rich culture, and far-reaching international influence. Its picturesque scenery, distinctive ethnic traditions, and profound cultural heritage, all of which radiate charm, has earned it many honorary titles, such as “Chinese Traditional Village” and “Chinese Village of Ethnic Characteristics”.

90 文化采撷 | Cultural Highlights

Chenbaerhuqi Ethnic Primary School: A Cradle of Education in Hulunbuir Grassland

Chenbaerhuqi Ethnic Primary School, situated in the heartland of Hulunbuir Grassland, was established in 1911. Over the past century, it has transformed from a makeshift private school without a permanent campus in its infancy to a modern bilingual school. Now it has students and teachers of diversified ethnicities such as Han, Mongolian, Ewenki, Daur, and Tu. The school has a rich cultural heritage and remarkable educational accomplishments, nurturing numerous ethnic talents. Featured with rich and distinctive teaching, the school blazed a trail of research-oriented and interest-focused education, creating a breeding ground of solidarity and progress for all ethnic groups.