# Lifetime Passion for Planting Trees

By Staff Reporters

In the summer of 1998, China experienced a serious flood, when some of its major rivers were thrown into turmoil by months of heavy rain. Damage to life and property were significant. The issue on how to harmonize environmental protection with economic development triggered widespread concern among the population, as well as an elderly Japanese man Shoichiro Kawate, who was then the chairman of a Japanese corporation and conceived the idea of working on an environmental protection plan in China.

***Protect Mother River Action***

As China's State Council formally rolled out the National Ecological Environment Construction Plan, an increasing number of people came to realize that improving the ecological environment was of great importance and could no longer be delayed. Against this backdrop, All-China Youth Federation, the Central Committee of the Communist Youth League and other relevant departments jointly launched a large scale ecological and environmental protection activity called "Protect Mother River Action."

In 1999, when Kawate learned about the initiative, he immediately contacted the relevant Chinese authorities and applied for the Sino-Japanese Green Exchange Fund, an environmental aid grant from the Japanese government to China, in the name of Japan Friendship Association and the All-China Youth Federation.

Meanwhile, Kawate came to China in person despite being in his late 60s, to participate in tree planting and sand control activities. Since 2001 when he was 71 years old, Kawate has led hundreds of young people from Japan to China to plant trees in Liuzhou, Wuxue, Xiaogan, Xiamen, Jinzhou and Linfen.


Mr. Shoichiro Kawate. (PHOTO: Beijing Language and Culture University)

***Mother River Award***

On February 14, 2006, Kawate was honored with the Mother River Award, the highest honor in the field of environmental protection, for his outstanding contribution to the cause of ecological protection in China. At the award ceremony, as the oldest recipient, he said, "I am in my 70s, still young, and I will bring more young people from Japan here to plant trees."

In the spring of 2006, at the "Sino-Japanese Youth Friendship Tree Planting" event held in Liuzhou, Guangxi Zhuang Autonomous Region, a group of Japanese youths led by Kawate planted trees together. Although having had a bad cold before coming to China and being fatigued by the journey, when he saw the trees planted two years previously flourishing, he was immediately energized. "Seeing these trees is like seeing my long-lost lover, every tree excites me and makes my heart flutter," he said.

During his stay in Liuzhou, Kawate also visited the local Luzhai Elementary School, where he conducted educational exchange activities concerning environmental protection and planted trees together with the teachers and students. The following year, he returned with books, computers and other equipment worth tens of thousands of RMB, and helped build a library, aiming to broaden the information channels for the Chinese youth to understand ecological protection.

Since 2001, Kawate has led delegations to China almost every year to carry out tree-planting activities. And in April 2014, aged over 80, he and a Japanese tree-planting delegation arrived in Jinzhou, Liaoning province, to again participate in "Protect Mother River: Sino-Japanese Youth Ecological Greening."

He said at the time, "I was diagnosed with cancer in May last year, and the doctor said that I could only live for one more year, or at most three years, with only a one percent chance of recovery. But as long as I can plant trees with you today, even if my life ends tomorrow, I will have no regrets. Many years later, if the trees I planted are flourishing and lush, that will be a continuation of my life and a transmission of my spirit. The friendship between Japan and China will also last forever! In 10 years, if I am still alive, I will come back again."

***Recognized by Chinese people***

In September 2017, Kawate again returned to China. This time, he was presented with Chinese Government Friendship Award in the Great Hall of the People in Beijing. He said that he had been planting trees for nearly 30 years in China, and was honored to receive the highest award in recognition of contributions by foreigners. Nations have borders, but people have no borders. For Kawate, it is meaningful to benefit humankind by planting trees, and narrow the distance between people at the same time.

*Source: Japan Science and Technology Agency (JST)*

## Letter to the Editor

# High-speed Rail, An Epitome of China's High-tech Power

By Ershad Shikdar

Prior to coming to Beijing in 2019, my first experience of a high-speed train, better known as bullet train in Bangladesh, came during a week-long trip to Hainan, China.

It was such a comfortable ride, combined with delicious food and glimpses of amazing scenery flashing past the windows, that it is indelibly imprinted in my memory.

Later on, along with my foreign journalist colleagues, I traveled on high-speed trains to many parts of China. Many of our group have been heard saying that they preferred high-speed rail to air travel. They were also of the view that the high-speed trains are one of the high-tech miracles they had witnessed in China.

Looking back at the history of the development of these trains in China, it becomes apparent that a huge leap forward was made in the country, as before 2007 there was no such thing as high-speed rail in China.

In the short span of just over 15 years, the country has developed the world's longest and most extensively used rail network, with a total length of 40,000 km by the end of 2021, set to reach 70,000 km in 2035. With a design speed of 200-350 km/h, it accounts for two-thirds of the world's total high-speed railway network.

The high-speed rail was introduced in April 2007, and the Beijing-Tianjin intercity rail, which opened in August 2008, was the first passenger dedicated line.

Based on electric multiple units (EMU), China's high-speed trains are categorized into three types: Hexie Hao, Fuxing Hao, and Vibrant Express. However, according to their speed and track design, they have been named G train, D train, and C train.

The G train is the fastest and latest series of trains that run on ballast-free tracks at a speed of 250-400km/h. The G-series trains run during the day and finish their last trip before midnight.

D Trains are the second-fastest high-speed trains usually running at a speed from 200-250 km/h, with the highest speed of 250 km/h. It is the series of earlier generation trains that run by day and at night.

C Trains are high-speed trains running between two neighboring cities, or only cities within a province, operating service on high-speed tracks at designed speeds at and below 200km/h.

China has proven its mettle in developing the signaling, track and support structures, and control software of the trains. The country has also designed the stations. China currently holds many new patents related to the internal components of these trains, which run at higher speeds than their foreign counterparts.

China's breakthroughs have not stopped with the development of high-speed trains, as the country has long been working on magnetic trains. They have already acquired some major feats in this field as well. As a result, the Shanghai maglev, which became operational at the end of 2002, is the world's first high-speed commercial magnetic levitation (maglev) line, with trains reaching a top speed of 430 km/h.

In October 2016, China announced that it was beginning research and development on a 600 km/h maglev train and would build a five km test track. In June 2020, a trial run was conducted at Tongji University. A planned launch of this maglev train is set for 2025.

China has proven its capacity in science and technologies by developing the world's largest high-speed rail network in only one and a half decades. The lines have greatly reduced travel time and transformed Chinese society and economy during this time. The network stands as the epitome of the high-tech power.

*Ershad Shikdar is a journalist working for a Bangladeshi media outlet in China.*

## Traditional Eastern Wisdom

# Karez System: Lifeblood of Arid Turpan Basin

By BI Weizi

The famous karez system, a vertical tunnel irrigation system in desert areas, is known as one of the three great projects of ancient China, along with the Great Wall and the Beijing - Hangzhou Grand Canal. It is commonly found in Turpan Basin, Xinjiang Uygur Autonomous Region.

The word karez means "well" in local Uygur language. Turpan karez system was essential to development of Turpan as a significant oasis transit point on the ancient Silk Road around the barren and harsh Taklamakan Desert.

The large number of karez in the Turpan Basin have long become part of the natural geography. Turpan is one of the most arid regions in China, with as little as 16 mm of annual precipitation and as much as 3,000 mm of evaporation, making it the "dry pole" of China. However, with Turpan karez system, water can be delivered through underground canals without being affected by the seasons or sand, making all-year-round irrigation possible.

A complete Turpan karez system consists of four parts: vertical wells, underground water canals, surface channels and dams. First, a number of wells are drilled vertically to collect rainwater, glacier and snow melted water that seeps into the ground during spring and summer time; then, the water is diverted through underground canals to its destination before being brought to surface channels for production and irrigation, which ensures that it will not evaporate or be polluted by the heat and gusty winds; finally, a dam pools water for human use and controls the amount of water flow.

Karez system has witnessed the prosperity and development of Turpan Basin and is a milestone in the history of oasis agriculture development in arid zones.

The karez system in Turpan Basin. (PHOTO: VCG)

## My China Story

# Series A: Tianjin Through My Eyes

By Staff Reporters

As a distinguished professor at Tianjin University's School of Architecture, Nobuo Aoki has lived in Tianjin for 22 years. He recently told *Science and Technology Daily* that despite being a Japanese scholar, his fate is intertwined with Tianjin. He shared his three main impressions of this coastal city.

***"Diverse"***

When archaeologists view Tianjin from professional perspectives, they would identify it as a city with a profound history. It was renowned well before the 19th century. Since the Yuan Dynasty, Tianjin has been a major transportation and trade hub. Its rich history extends all the way back to the Neolithic era, which makes the city more diverse.

***"Cosmopolitan"***

According to French experts from the University of Paris 1 Panthéon-Sorbonne, Tianjin is a place with distinctive features, different from Beijing and Shanghai. As you can see, Tianjin perfectly combines Western-style architecture and cultural heritages with Chinese characteristics.

***"Premier Zhou Enlai"***

It is not only late Premier Zhou En lai's connections to Tianjin that are remembered, but he was also a key figure in promoting the normalization of Sino-Japanese diplomatic relations. This historic achievement is of tremendous importance to both China and Japan, as well as the people from the two countries.

The Tianjin Municipal Science and Technology Bureau organized a themed tour of the city's cultural landmarks on June 24. Foreign experts were invited to explore Tianjin's folk culture at cultural scenic spots like the Ancient Cultural Street and Drum Tower. (PHOTO: Tianjin Municipal Science and Technology Bureau)

## Photo News

The lotus flowers in full bloom across China during the peak of heatwaves. (PHOTO: VCG)

# Fun Facts About Minor Heat

As mid-summer arrives and temperatures climb, Chinese people are welcoming the 11th solar term in their traditional calendar — Xiaoshu, also known as "Minor Heat." This year, the solar term falls on July 7.

Just as its name indicates, Minor Heat signifies the hottest period of a year is approaching, but the extreme hot point has yet to arrive. Chinese people call the hottest and dampest period of the year "San Fu," which usually lasts more than one and half months and begins from the Minor Heat. Heat is not the only character this solar term has. After Minor Heat, rainfall and thunderstorms become intensive and the amount of precipitation will rise across the whole country.

The rising temperature often imposes negative impacts on the human body, causing fatigue and poor appetite. Chinese have come up with some smart solutions. One is to take advantage of seasonal heat-dispelling foods, like juicy watermelons. But the most popular dish is Green Bean Soup. Green beans, according to Chinese medicine, are considered to be able to get rid of heat and toxic substances. Minor Heat is also an excellent time to get close to nature. The elegant lotus flowers only reach full bloom during the peak of heatwaves.

# Hong Kong: Innovation Hub in the Making

*From page 1*

As early as 2018, the first batch of funding was given directly from the central government and distributed to research institutes in Hong Kong. K. F. Chung, director of the Chinese National Engineering Research Centre for Steel Construction (Hong Kong Branch), said that previously he had to visit the mainland for research as the funding could not be used in Hong Kong, but now he can focus on his research without excessive commuting.

***Greater Bay Area integration***

On the 20th anniversary of Hong Kong's return to the motherland, the Framework Agreement on Deepening Guangdong-Hong Kong-Macao Cooperation in the Development of the Greater-Bay Area was initially signed.

In February 2019, the Outline Development Plan for the Guangdong-Hong Kong-Macao Greater Bay Area was released, in which innovation cooperation in the area was emphasized.

Since then, innovation in the Greater Bay Area has been accelerated. As an indispensable part of the area, Hong Kong also quickened its pace to become an innovation hub. According to the annual Global Innovation Index report, the Shenzhen-Hong Kong-Guangzhou area ranked second for two consecutive years on the list of science and technology clusters.

At a press conference in February 2021, Wang said that sci-tech plans funded by the central government will be further open to Hong Kong and Macao during the 14th Five-Year Plan period, supporting capable research institutes and scientists from Hong Kong to lead or jointly undertake national basic research tasks with institutes from the mainland. Scholars from Hong Kong and Macao will also be supported to participate in major international science plans and projects, and play a greater role in international sci-tech organizations.

The 14th Five-Year Plan supports Hong Kong to develop itself into an international center for innovation and technology, and proposed to strengthen collaborative development among enterprises, universities, and research institutions in the Greater Bay Area.

Great opportunities lie ahead for Hong Kong's journey towards an international innovation hub, with ongoing support from the motherland.