

Beijing maps out construction of eco-environment

Beijing municipal leaders last Friday mapped out a task list scheduled for eco-environment construction in 2017 on air pollution and water environment treatment, landscaping and removing illegal construction.

This year Beijing will cut coal consumption by 3 million tons to 7 million tons or less, including replacing coal with clean energy in 700 villages, in efforts to control annual average concentration of PM2.5 at about 60 micrograms/cubic meters.

In water environment governance in urban and rural areas, the city will eliminate black and odorous water citywide and cover the areas that have been built in the sub-center with the sewage pipe network and disposal system by the end of 2017.

In landscaping sector, 600 hectares of greenbelt will be paved and 15 leisure parks will be built. The city sub-center will also see 1,800 hectares of greenery to be added and 3,000 hectares to be upgraded.

With respect to traffic management, Beijing will phase in 100 projects to tackle this issue including building 90 more bypasses in six urban districts and increasing the rail transit length by 30 kilometers. 40 kilometers of bus lanes are also planned, joined by a program for 600 kilometers of bikeways. Public sharing bicycle services will be promoted with regulations.

According to Vice Mayor Sui Zhenjiang, 30 million square meters of illegal construction have been torn down over 2016. This year a total removal of 40 million square meters has been targeted to see to it that there would be no more emerging violations.

Chinese archeologists discover underwater treasure



A gold seal of Zhang Xianzhong, peasant uprising leader in Ming Dynasty.
[File photo: China News Service]

More than 10,000 gold and silver items that sank to the bottom of a river in southwest China's Sichuan Province over 300 years ago have been recovered, archeologists said Monday.

The items included a large amount of gold, silver and bronze coins and jewelry as well as iron weapons such as swords, knives and spears, said Gao Dalun, director of Sichuan Provincial Cultural Relics and Archeology Research Institute.

The characters carved in the gold and silver utensils are still clear and the embossed patterns on the jewelry show exquisite craftsmanship, archeologists said.

The treasure site, located in the intersection of Minjiang River and its branch Jinjiang River, is 50 kilometers away south of Chengdu, capital of Sichuan Province.

It is said that in 1646, peasant uprising leader Zhang Xianzhong was defeated in the area by Ming Dynasty (1368-1644) soldiers while attempting to transfer his treasure to the south. About 1,000 boats loaded with money and valuables sank during the skirmish.

"The objects have helped identify the area where the battle was fought and are direct evidence of this historical event," said Wang Wei, a Chinese archaeologist.

Sichuan launched the exploration project in January when the dry season arrived. Several water pumps were used to drain water away day and night.

Hundreds of meters of the river bed appeared after archaeologists dug five meters down, where they found the relics.

"The items are extremely valuable to science, history and art. They are of great significance for research into the political, economic, military and social lives of the Ming Dynasty," said Li Boqian, an archaeologist from Peking University.

Archaeologists said the excavation will last until April and the team expects to unearth more items.

Face detector rations toilet paper in Beijing park



The automatic paper dispensers are set up considering male and female height difference in every toilet within the park. [Photo: Beijing Evening News and The Beijing News]

Automatic toilet paper dispensers using face detection technique are being trialed in Beijing's Temple of Heaven Park with the aim of reducing paper use.

The park is one of the most popular tourism sites in Beijing, and has provided free paper in its public toilets for ten years but has reported seriously excessive use.

Six face detector paper dispensers have been installed in the hope of stopping the overuse.

To receive paper, you have to stand in the facial detection area and be scanned for a few seconds. The machine dispenses paper of a certain length but to get more, users have to wait for nine minutes to use the scanner again.

Personnel have been stationed to show people how to use the new system, however it still takes about half minute for each person to receive paper, way longer than using a normal dispenser.

It's reported the machines in one of the busiest toilets are no longer in operation after people kept complaining about how long they had to wait to get paper. One staff member said the dispensers need to be adjusted to provide a better service.

It's understood the machines will be trialed for about two weeks before going into official service depending on how they perform.

Toilet paper overuse

Paper use at the Temple of Heaven had already been decreased by 8% and 14% relatively in the last two years despite growing numbers of tourists over the same period.

However, it's claimed, some people still lack paper use manners. According to a toilet cleaner at the Temple of Heaven, some people take much more paper than needed and sometimes even take a whole roll away with them; sometimes paper is used up in only twenty minutes.

The manager of the Temple of Heaven Park said the paper has been overused mainly by residents who live around the neighborhood instead of tourists; some people intentionally take paper here for their daily use because it's free of charge.

Face detection dispensers are being used in the hope of preventing such a phenomenon.

Some other parks in Beijing have installed automatic toilet paper dispensers and held promotional campaigns in an effort to save paper. Taoranting Park, for example has seen paper use drop from approximately 30,000 rolls per year in 2011 to around 20,000 rolls per year today.

Experts in TCM help battle drug resistance

China has recruited a team of specialists in traditional Chinese medicine, including China's first Nobel laureate in medicine, Tu Youyou, to help find

solutions to the rising threat of antimicrobial resistance.

AMR happens when microbes evolve to become resistant to previously effective medicines. Studies show the growth in resistance could be responsible for 10 million deaths a year worldwide by 2050, according to the Review on AMR, a global report commissioned by the British government.

Antimicrobials are medicines active against a range of infections, such as those caused by bacteria (antibiotics), viruses (antivirals), fungi (antifungals) and parasites (including antimalarials), the report explains.

Western medicine is struggling to combat the problem, while the overuse of antibiotics and other antimicrobials is worsening the situation, said Cao Hongxin, head of science and technology at the State Administration of Traditional Chinese Medicine.

He said the Chinese team, led by Wang Guoqiang, vice-minister of the National Health and Family Planning Commission, will look into how TCM can be used as part of a comprehensive and dynamic approach to halt the progress of AMR.

"Traditional Chinese remedies are free from drug resistance and could provide alternative solutions," Cao said, adding that TCM works to kill harmful microbes, reduce their replication, as well as to enhance immunity.

Tu Youyou, the pharmacologist who won the Nobel Prize in 2015, discovered artemisinin, an antimalarial drug derived from sweet wormwood, which has been used in TCM since ancient times. She has worked with China's top TCM research institute for decades.

Huang Liuyu, director of the People's Liberation Army's Institute for Disease Prevention and Control, praised the efforts to develop more TCM remedies that work on infections. "TCM substitutes can lower the use of antibiotics and thereby delay the development of antibiotic-resistant microorganisms," he said.

Traditional treatments are more complicated in terms of ingredients and are less likely to develop drug resistance, he said, although he added, "It's usually antibiotics from Western medicine that work stronger and faster in curbing bacteria without drug resistance."

Huang said AMR occurs naturally over the time through genetic mutations but overuse of antimicrobials speeds up the process.

Half of the antibiotics used worldwide each year are used in China, with 52 percent of that used to treat livestock, according to the Review on AMR.

Diabetes drug may help treat breast cancer

Researchers in China have discovered that a drug used to treat diabetes could be effective against a form of deadly breast cancer.

More than 70,000 people die from breast cancer in China every year, according to the national cancer center.

Triple-negative breast cancer is particularly aggressive among the four clinical subtypes of breast cancer, said Dong Chenfang, a professor at Zhejiang University School of Medicine. It has a tendency to quickly spread or metastasize to the brain and lungs. There are currently no effective targeted therapies for this form of breast cancer, which is therefore often fatal, according to Dong.⁸ Dong and his colleagues found that the levels of a metabolic enzyme called AKR1B1 were significantly elevated in triple-negative breast cancer cells and that this was associated with increased rates of metastasis and shorter survival times.

The researchers also found epalrestat, a drug that inhibits AKR1B1 and is approved in Japan to treat diabetic complications, was able to block the growth and metastasis of the cancer cells.

Dong said the finding is still in the experimental stage. Whether epalrestat can be applied to the clinical treatment still needs further tests.

A detailed research article was published on March 7 in the Journal of Experimental Medicine.