#### ASIA / PACIFIC

# Drought worsens China's long-term water crisis

By Jack Chang The Associated Press

EXINGTEN, China — The corn has grown to only half its normal height on Yan Shuqin's ranch in the hills of Inner Mongolia this year, as a swath of northern China suffers its worst drought in 60 years.

The ruddy-faced woman said that even before the rains stopped, the groundwater in her region had been sinking, from about 70 feet below the surface just a few years ago to as much as 260 feet this past summer. While she can still eat and sell the corn, lettuce, and other vegetables on her farm, the yield has shrunk.

"If the grass doesn't grow and the vegetables die off, who's going to be able to live here?" Yan asked outside her family's spotless two-room house. "My mother and her mother lived here. My family has always lived here. What are my children going to do?"

After a season of record-breaking drought across China, groundwater levels hit historic lows in northeast and central parts of China where hundreds of millions of people live. Reservoirs grew so dry in agricultural Henan province that the city of Pingdingshan closed car washes and bathhouses and extracted water from puddles.

But this is no one-time emergency. Farmers like Yan and water-hungry industries have been wrestling with a long-term water crisis that has dried up more than half the country's 50,000 significant rivers and left hundreds of cities facing what the government classifies as a "serious scarcity" of water.

Half a billion Chinese live in a handful of provinces, largely in the northeast, where coal-fired power plants, steel foundries, and other water-gulping industries already burden reservoirs and aquifers. Widespread chemical runoff and other pollution have contaminated 60 percent of the country's groundwater.

The country's climate is also warming, particularly in its populous northeast where rain levels have fallen, according to



a 2011 study by Chinese, French, and British researchers. Meanwhile, the country's south has seen its rainfall concentrated in shorter bursts, which has made it harder to predict water supplies.

As a result, per capita water availability in the megacities of Beijing and Shanghai as well as their surrounding provinces equals that of dry Middle Eastern countries such as Israel and Jordan, said Feng Hu, a water analyst with the Hong-Kong-based research group China Water Risk. By comparison, the average U.S. household has access to nearly five times more available water than Chinese households do.

"If we continue with our business-asusual model, the demand will exceed supply by 2030," Feng said at a lecture in Beijing. "The water crisis is a real risk."

Already, Chinese farmers have lost an estimated \$1.2 billion this year due to drought, while China has slowed plans to tap its vast deposits of shale gas, which sit in areas with the greatest scarcity. The water crisis is also hitting China's main energy source, coal, which requires large amounts of water to extract and convert into power.

Heavy rains in late September helped lift some of the immediate crisis in central China, flooding cities that just days earlier had been struggling to keep taps flowing. But fields remain bone-dry and parched in Inner Mongolia and other northern regions.

In response to the country's water woes, Chinese authorities have called for solutions that include relying more on imports for foods that require lots of water to produce, such as grains and vegetable oils.

They also are betting on more than 1,500 miles of canal that, when complete, will move trillions of gallons of water from the rivers of China's south to its dry north. One branch of the canal leading straight to Beijing is expected to be done this fall.

Many water experts remain skeptical about the project, however, with some warning it could wreak havoc on southern aquifers and watersheds.

But Fuqiang Yang, a senior adviser with the U.S.-based National Resources Defense Council, said the canal could relieve water shortages in some northern cities such as Beijing, if launched with conservation and water reuse measures. Without the canals, metropolitan Beijing only has enough water for 15 million people, not the 20 million who now live there, he said. **DRIED UP & TAPPED OUT.** Boats sit on a dried river bed in Xunxian county in central China's Henan province. After a season of record-breaking drought across China, groundwater levels hit historic lows in northeast and central parts of China where hundreds of millions of people live. Reservoirs grew so dry in agricultural Henan province that the city of Pingdingshan closed car washes and bathhouses and extracted water from puddles. (AP Photo)

problem," Yang said. "Groundwater is going down very quickly ... These areas will not be able to solve the problems themselves. So this canal will provide some important help there."

But Feng said Chinese authorities also need to encourage conservation by ending its subsidization of water consumption by all users, from households to farmers to industries. The average price of residential water in Beijing, for example, is a fifth of that in New York. And although China's per capita consumption rate still falls below the global average, it is rising steadily as the country's economy expands. Industry and agriculture make up 85

percent of China's water consumption.

"For something so scarce, water in China is not priced at the level it should be," Feng said.

The canals still won't help farmers in remote regions such as far western Xinjiang and Inner Mongolia where the drought has hit the hardest. Despite the arid conditions there, China's government actually hopes to stimulate more waterdependent industries such as coal-fired energy production that will compete with farmers for meager resources.

In Hexingten county in Inner Mongolia, people say they've already seen radical climate shifts. Last winter went by without any significant snows to replenish streams and groundwater, followed by a drought-plagued spring and summer.

A 40-year-old farmer in Hexingten who would only identify himself by his family name of Bao said everyone there is wondering how long they can survive in these grasslands.

"The environment was good before," Bao said. "The grasses grew so tall. Now, it doesn't even rain anymore."

in central "This has always been a regional

### Taiwan throws support behind Hong Kong democracy demands

By Didi Tang

The Associated Press

**B** EIJING — Taiwan, an island that China's ruling Communist Party has long sought to bring into its fold under the same "one country, two systems" arrangement it has for Hong Kong, has thrown its support behind Hong Kong's pro-democracy movement.

Taiwanese leaders have also urged Beijing to live up to its pledges of autonomy in the former British colony or risk further alienating the Taiwanese public.

"If Hong Kong can soon achieve universal suffrage, it

it can greatly help narrow the mental gap between residents on both sides of (the Taiwan Strait) and allow for the relations to develop positively," Taiwanese President Ma Ying-jeou said.

"Otherwise, it may deepen the antipathy of Taiwan's public and hurt the future of relations between the two sides," Ma said in the statement.

In August, Beijing rejected a proposal for open nominations of candidates for Hong Kong's first-ever leadership election in 2017. Instead, all candidates must continue to be picked by a panel that is mostly aligned with Beijing.

Hong Kong's streets since September 22 to press demands for genuine democratic reforms that are in line with "one country, two systems," the arrangement negotiated for the 1997 return of the city from British to Chinese rule.

That constitutional arrangement initially was formulated by China's late Communist leader, Deng Xiaoping, in an attempt to peacefully reunify with Taiwan, where the nationalist government of the Republic of China settled in 1949 as its last stronghold after losing a civil war to the Communists on the mainland.

The nationalist government's ambitions to reclaim the

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In response, tens of thousands of people have rallied in

### Texting apps required gear for Hong Kong protests

By Wendy Tang The Associated Press

ONG KONG — Just as protesters in Egypt depended on Twitter three years ago, the latest digital tools have become required gear for tens of thousands of people demanding democratic reforms on the streets of Hong Kong.

Many of the demonstrators are glued to the smartphone app FireChat, which lets them communicate even if cellphone networks jam or go down. The protesters just have to turn on their Bluetooth connections within 230 feet from anyone else using the app to see the messages sent by the entire chat group, creating a daisychain effect.

Cellphone networks and websites continue to work normally in Hong Kong, although protesters ran into slow network connections last week when trying to use their devices at the same time.

FireChat was reportedly downloaded 100,000 times by users in Hong Kong in just 24 hours.

Frances Siu said she Continued on page 16 mainland later fizzled, and the island became a self-governing democracy, although there has never been a formal declaration of independence.

In late September, Chinese President Xi Jinping put forward the "one country, two systems" arrangement for Taiwan again, only to see it openly rejected by both Ma and Taiwan's opposition party.

Speaking about the Hong Kong pro-democracy protests, Huang Di-ying, spokesman for Taiwan's opposition Democratic Progressive Party, said the city's residents had received "a birdcage election law that made a mockery of what the people of Hong Kong had come to expect."

Taiwan's governmental Mainland Affairs Council also issued a statement declaring its support for the pro-democracy movement in Hong Kong and invoking its significance for all Chinese people.

"People of Hong Kong have long had high hopes for the implementation of universal suffrage, using it to test if the mainland has truly fulfilled its promises under 'one country, two systems," the statement said.

Should Hong Kong's democracy move forward, the council said, "it will not only ensure the long-term stability of Hong Kong, but also be of profound significance to the long-term development" of relations between China and Taiwan and "for the development of democracy and rule of law for the entire Chinese people."



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