By staff reporter Li Hujun 06.17.2010 14:49

With Cave-Ins, China Gets a Sinking Feeling

Rapid development, not true sinkholes, apparently led to a flurry of cave-ins in China in the weeks after a Guatemala City shocker

(Beijing) – The world gasped in May when a cylindrical hole 18 meters in diameter and 100 meters deep suddenly opened in the middle of a Guatemala City street.

But a month earlier in China, an even larger cave-in went almost unnoticed. Local media in Sichuan Province's Yibin prefecture reported that several sinkholes had appeared, the largest of which was more than 60 meters in diameter.

No one was injured in Yibin. But the report as well as news photos from Guatemala rekindled fears in China, where memories of recent earthquakes – a 2008 disaster in Sichuan and a deadly temblor this year in Qinghai Province – are still fresh.

Those fears apparently played into the series of sinkhole reports that popped up across the country in May and early June. Stories about yawning pits of varying sizes came from Dayi in Sichuan Province, Minhou in Fujian Province and other areas.

A pit five meters deep and four meters around appeared June 4 on a section of Changnan Boulevard in Nanchang, Jiangxi Province, trapping a black Honda that happened to be passing at exactly the wrong time. That same day, a hole six meters deep and eight meters in diameter ate a piece of an expressway in Quzhou, Zhejiang Province, flipping a truck.

The most disturbing incident occurred in the town of Liangjiang in Guangxi Autonomous Region, where what was reported as a sinkhole threatened a water reservoir.

Scientific Explanation

Although most reports dubbed the pits "sinkholes," experts say few if any actually fit the scientific definition of that phenomenon. They say many of the pits that the media has recently called "sinkholes" were actually cave-ins resulting from human activity.

For example, the city engineering administration in Nanchang determined that the earthen collapse on Changnan Boulevard occurred after sand eroded underground due to broken water pipes. And investigators in Yibin reached a preliminarily conclusion that the area's latest cave-in was the result of a sinking water table.

Indeed, China's breakneck pace of urban development has been blamed for an increase in cave-in risks. That pits of various sizes have appeared around the country in recent months underscores the emerging cost of rapid development on the environment.

The deadliest recent cave-in occurred less than two years ago, in November 2008, when a large section of earth collapsed at the Xianghu subway station in Hangzhou, killing 21 people.

A real sinkhole is specifically defined as a karst formation with special features: a sky-facing opening, precipitous round walls, a deep bottom, and tremendous volume. Each has a depth that's seldom less than 100 meters, and the usual cause is the collapse of an underground cave.

True sinkholes are entirely natural. Many were formed tens of thousands of years ago, so experts say there's no reason to fear a sudden outbreak of new sinkholes in China. Instead, a real sinkhole can be seen in a positive light as a potential tourist attraction.

China's best-known sinkholes were discovered in Yibin in the 1980s. Geologists found what they called the Big Rock Bay and Little Rock Bay pits in the Rock Forest Tourism District of Xingwen County.

That find led to the discoveries of multiple groups of sinkholes in areas such as Chongqing, Guangxi and Guizhou Province.

The most unique is in Guangxi, where the Leye area is home to more than 30 sinkholes called Dashiwei. They are spaced in an area of about 20 square kilometers, making it possible for observers to see sinkholes at varying stages of development.

Tourists, amateur geologists and scientists looking for genuine sinkholes would learn more from a trip to Leye than Guatemala City, where reports say the huge pit that opened after a tropical storm swept the area was not a sinkhole but a cave-in caused by leaking underground pipes.

http://english.caixin.cn/2010-06-17/100152935.html