

# Wuhan Virus: Facts, Government Reaction and Outlook

*By CHEN Gang and QIAN Jiwei*

**T**wo months after the Chinese Communist Party (CCP) convened its Fourth Plenum that emphasised modernisation of China's governance capacity, a novel coronavirus (2019-nCoV) in the likes of SARS (Severe Acute Respiratory Syndrome) broke out in the central Chinese city of Wuhan in December 2019, which quickly spread to other provinces and overseas in the beginning of 2020, causing deaths and panic across the country and the world. On 30 January 2020, the World Health Organisation (WHO) declared the coronavirus a global health emergency, a declaration for extremely dangerous pandemics such as Ebola and Swine flu (H1N1 virus).

The outbreak was reportedly associated with exposures at one seafood market in Wuhan city, Hubei province. The 2019-nCoV, or Wuhan virus, was detected in Wuhan in December 2019.<sup>1</sup> The human-to-human transmission of the virus was confirmed on 20 January 2020.<sup>2</sup> Chinese health authorities were the first to post the full genome of the 2019-nCoV in GenBank, the NIH genetic sequence database, and in the Global Initiative on Sharing All Influenza Data (GISAID) portal, an action which has facilitated detection of this virus. 2019-nCoV is a betacoronavirus, like MERS and SARs, all of which have their origins in bats. WHO estimated the preliminary index of transmissibility  $R_0$  to be between 1.4 and 2.5 for 2019-nCoV, (i.e. every person infected could infect between 1.4 and 2.5 people). SARS'  $R_0$  was between 2 to 5, larger than that of 2019-nCoV.

A cousin of the SARS virus, the animal-related 2019-nCoV has triggered another public health emergency that is testing the Chinese leadership's crisis management capacity. The CCP has drawn valuable lessons from the SARS outbreak: the then Hu Jintao-Wen Jiabao leadership, right in their first year in power, sacked incompetent senior officials for their covering up and mishandling of the SARS outbreak. Strict quarantines and travel restrictions, together with transparent reporting and communication systems, had helped the Hu-Wen administration pass the first stress test and consolidate power at home. China readopted the anti-SARS measures as the natural policy response to the H1N1 outbreak in 2009 and to the Wuhan coronavirus-affected areas in 2020.

<sup>1</sup> <https://www.ecdc.europa.eu/en/news-events/update-cluster-pneumonia-cases-associated-novel-coronavirus-wuhan-china-2019>, accessed 31 January 2020.

<sup>2</sup> <https://time.com/5768404/china-coronavirus-human-transmission/>, accessed 31 January 2020.

While the SARS epidemic started in southern China's Guangdong province, the coronavirus originated in central China's Wuhan city, a densely populated megacity with more than 11 million people and right at the centre of China's transportation webs. Wuhan has a nickname of "*jiu sheng tong qu*", which literally translates as 'the main thoroughfare of nine provinces'. In addition to conventional railway networks, Wuhan is one of the main stops on two of the main long-haul high-speed railway lines: Beijing-Guangzhou (from north to south) and Shanghai-Chengdu (from east to west). Wuhan Tianhe International Airport is also the only airport in central China to have direct flights to five different continents. Wuhan is also a bustling river port along the Yangtze River that connects the coastal area with the hinterland.

Wuhan's pivotal location in China's terrain and China's modernisation of transport and logistical networks in recent years have significantly increased the risks and difficulties in the government's responses to the lethal coronavirus. In 2003, there was no high-speed railway, and the number of people travelling by air and across borders represented only a fraction of today's scale. For example, about 68,000 railway passengers left Wuhan on the first day of the Spring Festival in 2003 while in 2020, the figure surged by about four times to 270,000! The spread of the virus this time has been extremely rapid: on 20 January 2020, there were only four provinces including Hubei that had reported of confirmed cases; by 24 January, the number increased to 30 out of 31 provinces. It took months for SARS to transmit to 26 provinces in 2002/2003.

On 31 January, China updated the total number of infected cases to 9,692. The total number of infected cases in and outside of China reached about 9,802, surpassing SARS' 8,098. The first death from the Wuhan virus was reported on 11 January 2020 in Wuhan. The total number of deaths reached 213 by 30 January. According to WHO data, most of the infected cases were found in China. Some 110 confirmed infection cases have been reported in 18 countries outside mainland China.<sup>3</sup> Most of these outside cases had a travel history to China. To date, no death has been reported outside China.

The Chinese government reported to WHO on 31 December 2019, less than one month of detecting the virus, which was much quicker than the case for SARS. On 12 January 2020, China shared the genetic sequence of the novel coronavirus with the international research community and in public databases such as GenBank, the NIH genetic sequence database.

On 26 January, a leading group on the prevention and control of the outbreak of new pneumonia caused by the novel coronavirus was established at the central government level, led by Premier Li Keqiang (the first leading group he is leading) and with Politburo standing committee member Wang Huning as the deputy leader. On the same day, the State Council announced that the Spring Festival will be extended to 2 February from 30 January.

Local governments also responded to the crisis with a number of draconian measures taken. An unprecedented lockdown was imposed on Wuhan city. Since 10 in the morning of 23 January (local time), all public transport including buses, trains, subways and ferries have been shut down in the city. Major roads linking Wuhan have also been blocked. More than a dozen cities (located mostly in Hubei province) have taken similar measures on public transport. By 25 January 2020, 30 out of 31 provinces in China had activated the highest-level emergency for public health (Grade 1). Tibet activated the second highest level emergency (Grade 2) on 27 January 2020.

The crisis raises several serious concerns: The first is the challenge it poses to policymakers in China. The information flow and coordination of government departments prove to be inadequate despite the enactment of a host of laws and regulations after the SARs crisis. The Regulation on Handling Public Health Emergencies in May 2003, the Law on the Prevention and Control of Infectious Diseases in 2004 to clarify the responsibility of local government and health authorities in infectious disease surveillance and reporting, and the regulations on contingency plans during a public crisis for central ministries and local governments in 2006 and 2011 apparently do not measure up.

Information disclosure is still not swift enough in the current case. The delay in information disclosure could be a result of an ineffective coordination between Wuhan municipal government and other government departments.

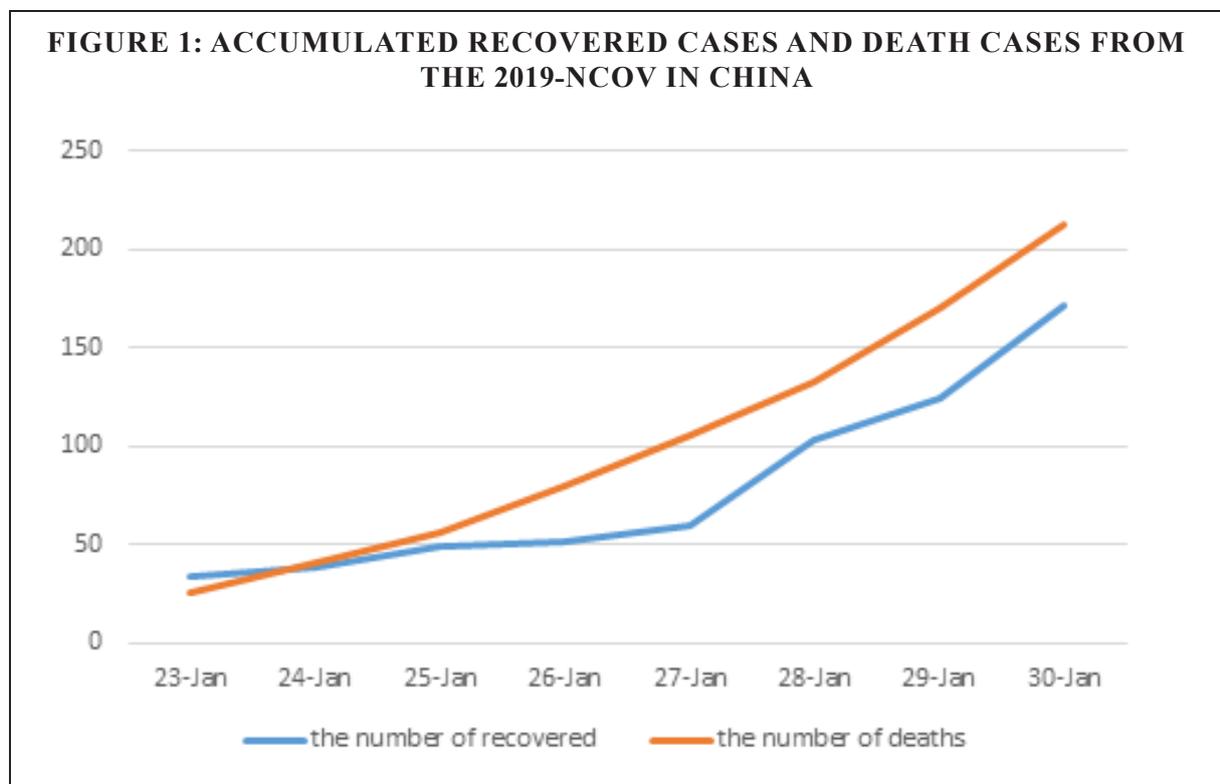
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<sup>3</sup> The number includes cases in Hong Kong, Macau and Taiwan.

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The second is the poorly equipped and mismanaged health-care system. Wuhan has to build two emergency hospitals, one of which is expected to have 1,000 beds by 3 February. Since 20 January, the 61 hospitals in Wuhan have been providing outpatient service for fever round the clock. Hospital visits were four times higher than before the outbreak of the crisis. On the other hand, resources from primary care clinics have been underutilised due to people's distrust of services provided. After 24 January 2020, the health authority in Wuhan implemented a referral system to take advantage of the capacity of 205 primary care providers. Rather than visit the hospitals directly, patients will be referred to hospitals from primary care clinics.

The third is the duration of the crisis. There is no sign that the crisis will abate anytime soon. For a public health crisis, it is crucial to respond by effective prevention and treatment. Scientists in Australian scientists have recreated the 2019-nCoV outside of China for vaccine development. Unfortunately, there is no vaccine to prevent the 2019-nCoV infection and there is no specific antiviral treatment for the infection. Figure 1 shows the accumulated recovered cases and deaths cases between 23 and 30 January. The number of deaths has surpassed the number of recovered since 24 January. Given the slow recovery speed, it is still uncertain when the crisis will end.



Sources: National Commission of the People's Republic of China, daily updates.

The fourth is the economic impact of the crisis, particularly on China's transportation, tourism and other services in the short run. Compared to last year, the number of commuters by public transportation in China had decreased by over 60% for the second day and third day of the Chinese New Year. Industrial production has been negatively impacted by the extension of the Spring Festival holiday; migrant workers in particular could not resume work with the restrictions on inter-province transportation. Nomura estimated the economic impact of SARS to be around 2% of GDP growth for the two quarters of 2003. For the Wuhan virus, Barclays put the figure at 0.1-0.2% for Quarter 1 or Quarter 2 of 2020, if the outbreak of the new pneumonia lasts for a similar duration as SARS. Nomura is however more pessimistic with a prediction that the Chinese economy could decelerate by 2% in Quarter 1 of 2020, a similar level to that of SARS.

Chinese President Xi Jinping and his team are facing a severe test with the Wuhan coronavirus. The year 2020 is crucial for China to achieve the first centenary goal of becoming a full Xiaokang

(moderately well-off) society before 2021, as denoted by the doubling of the 2010 per capita GDP. The contagious coronavirus is not only challenging the fulfilment of the government's ambitious economic blueprint, but also testing Xi's plan on governance capacity building, a highlight at the Fourth Plenum. In China's 4,000-year-long history and modern development, disaster politics has always been the ultimate test for the top leadership in power.

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