

## China's new era of ecological civilization

Liangang Xiao, Rongqin Zhao\*

School of Resources and Environment, North China University of Water Resources and Electric Power, Zhengzhou, 450045, China.

\* Corresponding author. Email: [zhaorq234@163.com](mailto:zhaorq234@163.com)

*Science* 24 Nov 2017:

Vol. 358, Issue 6366, pp. 1008-1009

DOI: 10.1126/science.aar3760

### eLetters

## China's Xiongan: Symbiotic City of the Future

Zhiwen Hu<sup>1\*</sup>, Yiping Cui<sup>2</sup>, Yong Wei<sup>3</sup>

<sup>1</sup>Institute of Intelligent Media Technology, Communication University of Zhejiang, Hangzhou 310018, China

<sup>2</sup>School of Foreign Languages, Hangzhou Normal University, Hangzhou 311121, China

<sup>3</sup>China Xiongan Group Digital City Technology Co., Ltd., Xiongan New Area 222000, China

\*Correspondence to: [huzhiw@czu.edu.cn](mailto:huzhiw@czu.edu.cn)

### Abstract:

Chinese President Xi Jinping conceives Xiongan New Area as a millennium engine of China's ecological civilization, following Shenzhen and Pudong mapped out by Deng Xiaoping. The brain child is reliably correlated with sociotechnical standards of Internet of City Things (IoCT) and Chinese philosophy.

### One Sentence Summary:

President Xi Jinping ushered China's Xiongan New Area into a new era of symbiotic city beyond digital twin model.

### Main Text:

On December 25, 2018, following the official announcement of Xiongan New Area on April 1, 2017, China's State Council released its 2018-2035 master plan (1). On April 14, 2018, the State Council unveiled its outline plan and kicked off the initiative of the symbiotic city of the future. Driven by the momentum of relocating non-capital functions, Xiongan is being orchestrated into the Beijing-Tianjin-Hebei region and the Bohai Economic Rim, and percolating into the ecological civilization of China with calculated pace (*Science* **358**, 1008).

President Xi Jinping, the chief architect, termed the new area as a "millennium plan", a relay effort of Deng Xiaoping's blueprints of Shenzhen and Pudong. His Anxin landmark speech on February 23, 2017 anchored the fledgling county of "national significance" to celebrate the 40<sup>th</sup> anniversary of the country's reform and opening-up. Xu Kuangdi, the key implementer of Pudong, accompanied Xi's seminal visit and is the principal investigator of the Beijing-Tianjin-Hebei region. "Xiongan is a move to adjust China's economic and spatial structure," Xu said (2).

The historic project has aroused sustained attention, including misgivings. Winston Mok, independent public policy commentator, doubted Chinese government could replicate another economic miracle on the "virgin land" (3). Surpassing the discussion of national will and digital twin model, Xiongan symbiotic model formulates governmental delayering, Hukou system recall

(4), regional coordination, urban-rural equilibrium, educational balance (5), green city (70%), clean power (100%) (6,7), and sociotechnical standards of Internet of City Things (8). Oleg Logvinov, Chair of the IEEE P2413 Architectural Framework for the Internet of Things Working Group, said, “Xiongan contribution into the P2413.1 Project marks a cornerstone reflecting real-world smart city implementers via fusing physical embodiment and digital representation.”

Xiongan is expected to provide hallmark references to other smart cities with philosophical consideration rather than technical cloning. Any tried-and-tested model should underpin the thought of “all things are one” advocated by Chinese philosopher Wang Yang-ming (9) and that of utilizing global wisdom.

### References and Notes:

1. “State Council on the Apporval of the 2018 – 2035 Master Plan for Xiongan New Area,” (2019); [http://www.gov.cn/zhengce/content/2019-01/02/content\\_5354222.htm](http://www.gov.cn/zhengce/content/2019-01/02/content_5354222.htm) [in Chinese].
2. “Xiongan New Area: Land of opportunities,” *Xinhua* (2017); [http://www.xinhuanet.com/english/2017-04/12/c\\_136203128.htm](http://www.xinhuanet.com/english/2017-04/12/c_136203128.htm).
3. “Grand intent alone cannot make a success of Xiongan,” *South China Morning Post* (April 20, 2017), p. A11.
4. L. Cameron, N. Erkal, L. Gangadharan, X. Meng, *Science* **339**, 953 (2013).
5. D. Normile, *Science* **357**, 1226 (2017).
6. D. M. Kammen, D. A. Sunter, *Science* **352**, 922 (2016).
7. “Xiongan to run on 100% clean power,” *State Council of the People’s Republic of China* (2018); [http://english.gov.cn/news/top\\_news/2018/08/28/content\\_281476279168290.htm](http://english.gov.cn/news/top_news/2018/08/28/content_281476279168290.htm).
8. On September 5-6, 2018, the P2413.1 Draft (“Standard for a Reference Architecture for Smart City”) was approved with the first accepted contribution by China Xiongan Group of Digital City Technology Co., Ltd. at the IEEE P2413 Working Group of IEEE-SA Board of Governors/Corporate Advisory Group (BOG/CAG), Vienna, Austria. In December 2018, the Group proposed two draft ITU-T Recommendations on Internet of Things (IoT) and its applications including smart cities and communities (SC&C) to the ITU’s Telecommunication Standardization Sector.
9. Y. Wang, F. G. Henke, Tran. *The Philosophy of Wang Yang-ming* (The Open Court Publishing Company, Chicago, Illinois, 1916). see *Science* **67**, ix (1928).



Supplementary Materials for  
**China's Xiongan: Symbiotic City of the Future**

Zhiwen Hu<sup>1\*</sup>, Yiping Cui<sup>2</sup>, Yong Wei<sup>3</sup>

Correspondence to: [huzhiw@cuz.edu.cn](mailto:huzhiw@cuz.edu.cn)

**This PDF file includes:**

Figs. S1



**Fig. S1.** An aerial view of Xiongan Citizen Service Center on 28 April, 2018. MA MENGDI PHOTO