

Global health efforts and opportunities related to the Belt and Road Initiative



The Belt and Road Initiative (also known as the Silk Road Economic Belt and the 21st century Maritime Silk Road), proposed by China in 2013 with the aim of connecting Asia–Pacific and the European Economic Areas, was implemented in 2017.^{1,2} A meeting held in Beijing on Aug 18, 2017,³ released a key message on establishing collaborative platforms and sharing human wellbeing to delegates from about 20 Belt and Road countries (figure and appendix).

To respond to the initiative and promote international collaboration for global health, efforts have been made in Xi’an, China (the starting point of the Silk Road Economic Belt) and in Rotterdam, Netherlands (the endpoint of the Belt). Xi’an Jiaotong University led the establishment of the University Alliance of the Silk

Road (UASR) in 2015, which includes 150 universities from 38 countries. The university’s Global Health Institute was established to help achieve key national development strategies including the Belt and Road Initiative and to promote international collaboration in health fields.

The university’s Global Health Institute has led and hosted two Belt and Road Initiative Global Health International Congresses. The first was held on Sept 24–27, 2017, co-hosted by the Chinese Preventive Medicine Association—Chinese Society on Global Health. Approximately 400 delegates from 26 countries attended the congress and about 100 invited speakers from 14 countries presented, including leaders and experts from WHO and UNICEF. At the conference, the

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See Online for appendix

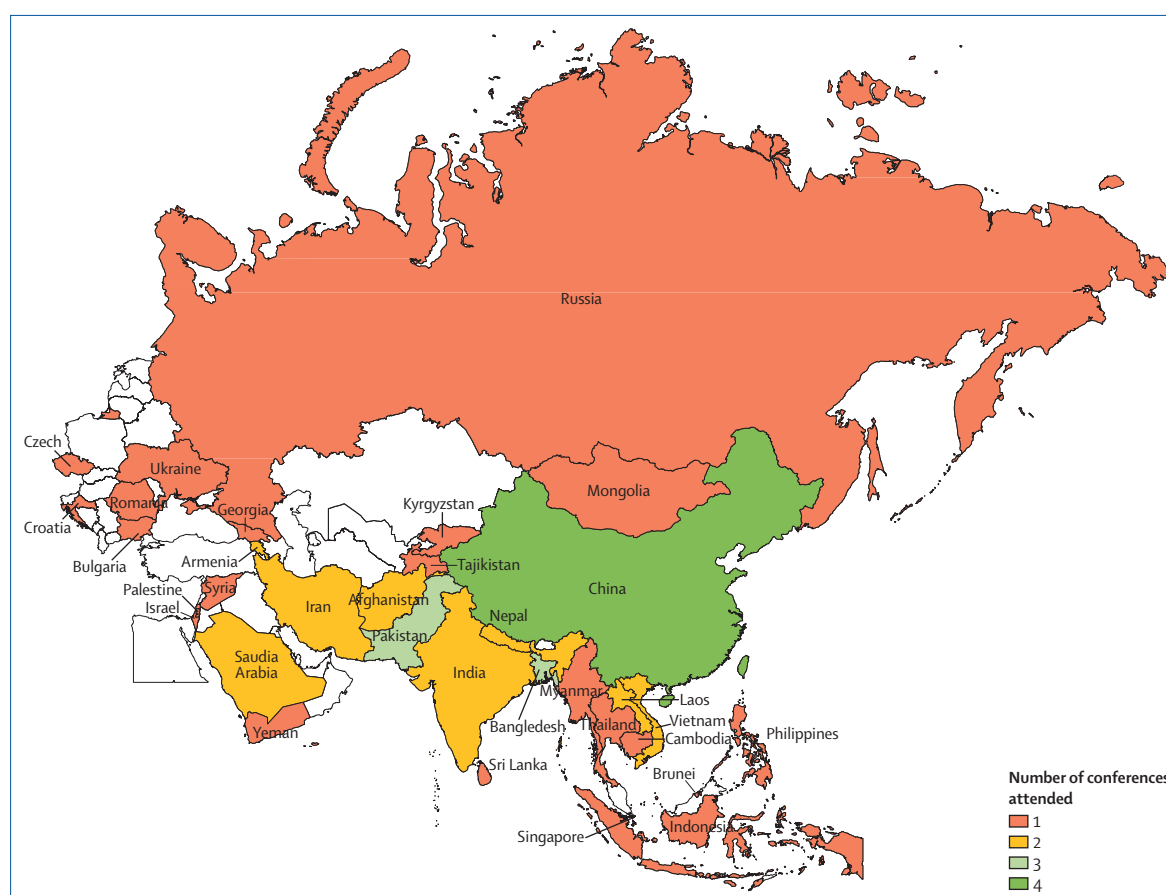


Figure: The participation of 65 Belt and Road countries in four Belt and Road health conferences*

*The Belt and Road High Level Meeting for Health Cooperation: towards a Health Silk Road, The 1st International Symposium on Lifecourse Epidemiology and Spatial Science, and The 1st and 2nd Belt and Road Initiative Global Health International Congress.

UASR Health Sub-Alliance was formally established as a cooperative platform to facilitate global health research, academic exchange, and training.⁴

The second congress was held on Nov 23–26, 2018, co-hosted by the university's Global Health Institute and the UASR Health Sub-Alliance. Approximately 500 delegates from 29 countries worldwide attended; about 100 invited leaders and experts from 17 countries, WHO, and UNICEF presented a wide range of health research such as non-communicable diseases (NCDs), childhood obesity, healthy life expectancy, health care accessibility, and environmental health issues in Belt and Road countries.

The 1st International Symposium on Lifecourse Epidemiology and Spatial Science (ISLES) was held on July 16–20, 2018, in Leiden, Netherlands. The directors of the Department of NCD Surveillance of the Chinese Center for Disease Control and Prevention and of the Department of NCD Determinants in the Netherlands Institute for Public Health and the Environment shared their work on NCD control and prevention in their countries, such as tobacco control and negotiations with the food industry for salt reduction in processed foods. A multidisciplinary expert panel, including leaders of 15 renowned global health programmes, identified emerging research opportunities and challenges brought by the Belt and Road Initiative, including emergence and re-emergence of infectious diseases caused by increasing international travels;⁵ cross-border health service delivery and hospitalisation, which will require physicians to understand the heterogeneity of health determinants across populations;⁶ current data bottlenecks when measuring exposome;^{7,8} complicated mechanisms between the environment and NCDs;⁹ and new risk factors for NCDs because of infrastructure, cultural, and technological exchange (eg, importation of foods and behaviours because individuals' exposure to food environments is not limited within neighbourhoods as a result of online ordering and fast delivery).¹⁰

Among the opportunities discussed during the 1st ISLES, two national-level endeavours, the Big Data Platform for Epidemiological Surveillance of NCDs (BPES) in China and Geoscience and the Health Cohort Consortium (GECCO) in the Netherlands, have the potential to collaborate through the International Initiative on Spatial Lifecourse Epidemiology (ISLE)¹¹ to form a Sino–Dutch NCD research consortium, on the basis of an open and pragmatic

partnership for comprehensive cooperation between the two countries. The partnership was initiated in 2014, after a state visit to Netherlands by the Chinese President and intensified in 2018, during a reciprocal visit to China by the Dutch King. BPES will link multiple sources of health data with dynamic environmental data across China, including health surveillance data, health insurance data, electronic hospital records, cancer registries, and death registries. GECCO will enrich more than 20 Dutch cohort studies countrywide with spatial data, enabling research on environmental determinants of lifestyle behaviours and NCDs. The collaboration between BPES and GECCO can shed light on NCD risk factors across the lifecourse and forecast NCD epidemic trends, with important public health implications not only in Belt and Road countries, but also worldwide.

Additionally, ISLE is taking advantage of advanced spatial technologies to establish a large spatiotemporal dataset of multiple dimensions of environmental exposures since 1980 to present over the Eurasian continent.¹² The Xi'an Jiaotong University Global Health Institute has been doing research in multiple countries, including projects funded by UNICEF, the US-based China Medical Board, and *National Institutes of Health*.^{3,13}

These efforts, which will be expended in the coming years as more partners join, will facilitate the study and solving of many serious and emerging public health concerns within and beyond country borders such as the complex relationships between policy and environmental factors, behaviours, and health outcomes across Belt and Road countries—all of which have diverse cultures, religions, lifestyles, economic development, physical environments, and disease burdens. These offer unprecedented promise for international collaboration to build a “community of human destiny”.¹⁴

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