

## U.S.–China Collaboration is Vital to Global Plans for a Healthy Environment and Sustainable Development

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The United Nations (UN) Sustainable Development Goals (SDGs) are a framework for national and international efforts to further economic development, end poverty, protect the planet, and ensure peace and prosperity for all people by 2030. In the first four years since the SDGs came into force (2016–2019), little to no progress has been made on 107 of the 169 SDG targets, and the world is even moving away from 39 of the targets.<sup>1</sup> In 2020, COVID-19 has created additional setbacks for SDGs.<sup>2</sup> With the year 2030 less than a decade away, an urgent and more ambitious response is crucial to enable SDGs to be realized globally. We need strong leadership to create secure and cooperative partnerships between governments, the private

sector, and civil societies around the globe to move these goals forward at pace.

As leading economic powers, the U.S. and China are well positioned to take a leadership role in this action. By building

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**Table 1. Key Stakeholders, Benefits, Barriers, And Solutions of Continuing and Expanding U.S.–China Collaboration in SDG Areas**

stakeholder	benefit to	barrier	solution
academia	U.S.	● concerns on data sharing	● more data openness from publishers and funding agencies
	China		
	both		
private Sector	U.S.	● concerns on IP protectionism	● joint funding on priority areas with mutual benefits ● strengthening bilateral exchanges
	China		
	both		
government	both	● limited mechanism for joint effort with global impact	● new mechanisms for joint, global effort
	public		

closer collaborations at both governmental and nongovernmental levels and sustained collaborations on science and technology, the U.S. and China can act together to help achieve the SDGs by utilizing complementary expertise and resources. Moreover, the two countries can champion sustainable development through their global reach in trade, investment, aid, technology diffusion, and programs of talent exchange.<sup>3</sup>

U.S.–China collaborations have a long history. Since the 1979 U.S.–China Agreement on Cooperation in Science and Technology, joint collaborations between the countries have created many synergies and facilitated innovation for many key technologies. Such innovations in both technology and policy from the U.S. have been developed and deployed rapidly at scale in China, offering lower production costs, a market at scale, and a strong desire for implementation.<sup>4</sup> This in turn helps adoption of new technologies in the U.S. as well as globally, through demonstrated benefits and low costs as a result of large-scale production and use in China.<sup>5</sup>

Despite a solid foundation, the prospect of an enhanced and sustained U.S.–China collaboration on SDGs remains threatened by increasing competition between the two countries. The new U.S. Administration is, however, resetting the U.S.–China relationship, and both countries have clearly made mitigating climate change a top priority. The U.S. and China must continue cooperative leadership for fast action and new policy. This leadership role also demands effective engagement with other countries and stakeholders to accelerate the transition to a more sustainable planet. A sustainable planet is simply not achievable without the cooperation and leadership of the U.S. and China.

Despite the many mutual and global benefits toward a sustainable planet, barriers exist to prevent a continuous and expanding collaboration between the U.S. and China to develop and implement SDGs. Here we identify some of the key barriers and suggest solutions (Table 1):

- **Concerns on data sharing.** Many collaborations are delayed or prevented due to data-sharing sensitivities and risks to intellectual property (IP) or national security. However, a large portion of research in SDG areas does not involve sensitive data. In many cases, a lack of clear guidelines leads to risk-averse decisions to not share data, thus stymying collaboration and limiting progress. We suggest that funding agencies from the U.S. and China should update and develop new bilateral guidelines and agreements on data sharing that apply to the SDG-related research they fund.
- **Concerns on IP protectionism.** The U.S. and China should consider developing bilateral agreements and guidelines for IP rights on research and commercialization in SDG areas which are mutually beneficial. Such documents could include a list of jointly identified basic research areas that do not normally generate sensitive IP, such as understanding emissions and transport of air pollutants.
- **Mistrust due to misunderstanding.** Increasing geopolitical competition has generated greater mistrust between the U.S. and China, but a great deal of this mistrust results from misunderstanding. To improve and enhance mutual understanding and trust in SDG areas, the U.S. and China should establish regular, high-level dialogue on sustainable development. For example, the U.S.–China Strategic

and Economic Dialogue has played a critical role in strong collaborations between the two countries on a wide range of regional and global strategic and economic issues over the past decade. A U.S.–China Environment and Sustainability Dialogue could similarly function as a solid platform to build and enhance trust, engage a wide range of stakeholders working toward SDGs, and coordinate global efforts. Funding agencies should also seek opportunities to fund joint global research projects in SDG areas for the common good.

- **Limited mechanisms for joint effort with global impact.** Existing programs between the U.S. and China to support efforts toward SDGs have already been successful. For example, the joint funding mechanisms between the U.S. Department of Energy and China Ministry of Science and Technology on Clean Energy Research Centers (CERC), U.S. National Institutes of Health and Natural Science Foundation of China (NSFC) on health sciences, and U.S. National Science Foundation (NSF) and NSFC on environmental sustainability have supported U.S.–China teams for collaborative research. However, many of these programs rely on government funding, and may not be financially sustainable in the long term. In addition, these existing mechanisms support joint efforts that primarily benefit the two countries, and focus less on global impacts. New mechanisms are urgently needed to support new joint efforts with both mutual and global benefits in SDG areas. A new and exciting trend is that many philanthropic organizations and individuals have become greater financial contributors. Many governmental development agencies such as USAID now seek a convener role to coordinate and leverage nongovernmental support to maximize impact. Joining up development agencies from the U.S. and China to work together in this convener capacity would have even greater impact than each country working alone.

The opportunities for the planet's two largest economies to generate greater global good in the area of sustainable development are many, and much of the world is desperate for more assistance in meeting SDGs. There are many examples of effective collaboration between the U.S. and China, but further progress has become increasingly hampered by misunderstanding and mistrust. Scientific collaboration has traditionally been an effective means for increasing trust and collaboration, as well as for generating knowledge that benefits not only the U.S. and China, but the rest of the world as well. Climate change, public health crises, population growth, biodiversity loss, increasing water insecurity, and other challenges grow rapidly around the planet; the prospect of achieving the SDGs is further undermined by COVID-19. Nevertheless, the U.S. and China have an opportunity to work in tandem to benefit not only their own people, but the people of the entire world, toward more sustainable development. A sustainable future will simply not be possible without the engagement and leadership of the U.S. and China. Proactive efforts are urgently needed to seize this opportunity.

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## Notes

The authors declare no competing financial interest.

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