EDITORIAL

Global science engagement

In rural Laos, more than 50% of newborns will be stunted by age 2 due to chronic malnourishment. Worldwide, 161 million children under the age of 5, many of them in Africa and Asia, suffered irreversible stunting as of 2013. The developed world is not immune. As recently as 2010, stunting affected 8 to 9% of babies enrolled in U.S. federal food-subsidy programs. Next week in Washington, DC, the American Association for the Advancement of Science (AAAS is the publisher of *Science*) will convene its annual meeting (11 to 15 February), where world leaders will discuss food security and other major challenges that lie ahead in both the science and international policy arenas.

Ensuring a sustainable world in the face of climate change and a world population of 9 billion demands a major shift in how nations seek ingenious ways to coexist with ever-expanding needs for energy, food, water, and a healthy environment—situations that are complex and interconnected. Solutions demand innovative international research partnerships and policies that include talents and perspectives from both the developed and developing worlds. This collaboration will be the focus of the AAAS meeting, under the theme "Global Science Engagement." The meeting will provide an opportunity to hear about the latest new approaches and creative thinking from around the world.

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Amid budget constraints and current isolationist views, many policy-makers, including those in the United States, may understandably see international initiatives as less important than domestic ones. Such research isolation is unwise. Water security is a good example. The United States spends billions of dollars making water potable and then flushes an estimated 90% of that water down the toilet or drain. There is much to learn from countries such as Namibia, the most arid country in southern Africa, where people have been drinking recycled water since 1969 with no health consequences, or Singapore, which has no natural aquifers and a small landmass. International research collaborations can save money in the long run.

To solve complex global problems, the world's technical workforce must include countries at all economic levels. No segment can be ignored or overlooked in the talent search, because diversity in opinions, ideas, and experiences fuels creativity and innovation. We can no longer afford to lose talented young women around the globe who were science stars in their early schooling and career preparation, yet later were lost from the technical talent pool—lost to factors that are not beyond control but require a strong global commitment to resolve.

In my work with developing countries in Africa, Asia, and Latin America, I continue to be impressed by the talent and creativity of scientists there: male and female, abled and disabled, young and old. We need their ideas and perspectives as much as those from countries with advanced science and technology infrastructures. But their ability to connect with scientists in the more developed research mainstream is fraught with difficulties, including international cultural biases that also make it difficult for them to get access to, or publish in, respected journals. Equally, I see scientists and engineers, especially the younger generation in the United States, who are passionate about global research engagement but do not know how to connect with potential partners in the developing world. I applaud organizations that have a history of success in facilitating such connections.

AAAS has a long history of international engagement activities, as have other scientific societies, but we all can do more to facilitate international research networking, collaborations, and journal access. Through the upcoming AAAS Annual Meeting and beyond, I hope that countries can commit to strengthening these connections. It is imperative for the sustainability of the planet and those malnourished babies in Laos and around the world, whose lives we cannot afford to waste or lose.

– Geraldine Richmond

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