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The Changing Face of Diplomacy and the Enhanced Role of Science Diplomacy in the Post-2015 World

By Nikhil Seth

When I started my work representing India as a diplomat in 1980, the Cold War was still on, with the predictability of superpower rivalry, political and economic blocs, and the era’s proxy wars. The core functions of diplomats and diplomacy were conventional, coming down from the ages—application of force, unilateral action, enhancement of trade opportunities, and the various uses of international relations to further national security and domestic prosperity. Science in diplomacy was not at the forefront, even as nuclear and conventional disarmament, peaceful uses for outer space, the work of the International Atomic Energy Agency, and technology transfer were slowly permeating diplomatic discourse.

Forty years ago, that was the world diplomats of my generation inherited. For any given country, diplomacy was defined by how these conventional tools could advance national interests in terms of security and prosperity for their people. The country’s relative position on the spectrum of political, economic, and military strength was a factor in the equation.

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Fast-forward to 1990, when I joined the arena of multilateral diplomacy at the United Nations (UN) in New York. Now the Cold War was ending and there was renewed hope, especially in the developing world, for a peace dividend in the form of an unprecedented era of prosperity, and security for our fragile planet. It was the start of a decade of large UN summits and conferences, with topics that included the environment, human rights, women's issues, social development, children, and indigenous peoples. These summits, typically with their lens on a specific theme, sought to establish collective steps for the world's actors to take.

The period saw intensified efforts to address emerging issues through new conventions and treaties, aimed at both expanding and deepening a rules-based order. Platforms for action on issues such as the environment, therefore, were meant to fortify the world in the interest of creating future stability and sustainability.

But even as global actors grew more conscious of issues like climate change and devastating environmental degradation, new problems arose. Globalization failed to lift all boats, and inequality widened, while a fall in interstate violence was offset by intrastate conflict, along with a rise in terrorism, religious violence, and ethnic discord. At the same time, information communication technologies created new threats as well as opportunities.

Today we are in what might be called the post-2015 era. During that year, three remarkable transnational arrangements took shape: the Sustainable Development Goals (SDGs), the Paris Agreement on climate change, and the Sendai Framework for Disaster Risk Reduction. I had a ringside seat during the SDG process at the UN, which resulted in a global plan based concomitantly on stirring people's aspirations and drawing upon collective fears to spark action. In April 2016, the signing of the climate accord in Paris marked the end of a lengthy period of inaction on

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Equality, prosperity, and sustainability are all woven into the UN's 2030 Agenda¹, the framework for the SDGs. It is an agenda that brings together economic and social aspirations, addresses the challenge of environmental degradation, and embraces the quest for fair, peaceful, and just societies. The agenda focuses on the poorest members of our economies and communities, prioritizing those farthest behind, most disenfranchised, marginalized, and vulnerable. It brings political attention to the severity of climate change, our disrupted marine ecosystem and degraded lands, along with biodiversity loss and the pollution of our air, land, and water. It seeks to focus attention on the importance of multilateralism for national security as well as domestic prosperity.

After four decades in diplomacy, I have realized that the same convictions I held at the start of my career—promoting security and prosperity for our respective countries and peoples—have entirely new resonance in the post-2015 world,

and that our existential challenges cannot be resolved using the conventional tools of diplomacy, including force and unilateral action. Moreover, countries cannot pursue their national interests, security, and people's aspirations by working only within their nationally defined territory. To a large extent, the way countries define their national interests will impact how they address challenges like pandemics, migrant flows, and management of the global commons.

The impact from these issues on security and prosperity calls for a stronger understanding than ever of the interface between science, policy, and diplomacy. Science, with its potential to exist outside the realm of political rhetoric, offers the policy maker and the diplomat better insight into data, trends, and patterns, and therefore new paths to informed decision-making and sensible policy.

Five Transformations for Achieving the 2030 Agenda

What role, then, does science have in diplomacy? At its core, science brings greater understanding and awareness through evidence-based inquiry. National aspirations cannot be met without fuller engagement on global issues, and these global issues cannot be understood by diplomats or policy makers without a fuller engagement of the scientific community.

Science can be a very powerful tool for diplomacy. The transparency and the language of science have long fostered multilateral cooperation and facilitated bridge-building between cultures in areas ranging from health, to environmental management, to space exploration. Science cooperation, even in instances of strained political ties, can play an important role in establishing trust and common purpose.

Many of our contemporary global challenges require scientific analysis, expertise, and solutions that transcend borders. Diplomacy for science and science for diplomacy are essential for evidence-based policy making in areas like climate change, disaster-risk reduction, and natural resources management.

The rapidity with which scientific and technological developments are driving societal transformation has given rise to what some have called the "Fourth Industrial Revolution," reframing virtually all terms for UN diplomatic discourse.² Recent trends are changing how the world thinks about large topics such as peace and security, human rights, and sustainable development. This is especially true for topics like artificial intelligence, the restricted internet material that exists on the dark web, automation, and cybersecurity, where regulation is lagging behind technology advances. On many complex issues like the human rights dimensions of cybersecurity or the permissibility of certain autonomous weapons systems, stakeholders have no recourse in the form of international legislation. Unsurpris-

ingly, many big powers with a comparative edge in these technologies do not want to engage in the cooperative creation of regulatory systems or international laws. But these agreements will likely be the ones to emerge in the future.

The 2030 Agenda contains organizing principles for harnessing science, technology, and innovation (STI) to meet global challenges. With these five necessary transformations in particular, science diplomacy can help get us to the world we want.

- **Food systems.** Current farm systems, which are several thousand, are all contributing to climate change. Forty percent of the world's fresh water is used for food cultivation, and 40 percent of the world's greenhouse gas emissions come from our farm systems. How can farming systems be changed so that they mitigate rather than worsen climate change? This is where science comes in—to provide usable knowledge for diplomats, allowing them to offer solutions for troubling trends affecting the planet. How can we work together to break the death embrace among water, energy, and agriculture, and how will science guide us?
- **Energy systems.** Falling prices have made solar energy more competitive. But will this lead to the deep decarbonization the world needs to keep temperatures from rising 2 degrees Celsius above preindustrial levels, as the Paris Agreement dictates?³ Not according to the assessment of the Intergovernmental Panel on Climate Change, and its consensus report produced by 3,500 scientists. Yet, still we have political leaders who call this “fake news.” These climate skeptics need to be challenged. Tinkering around the edges will not work. The necessary deep decarbonization requires keeping all coal and hydrocarbons underground, even if alternative ways of sequestering carbon ultimately emerge. Members of the global community will need to adopt dramatically different lifestyles, focusing on circular-economy principles wherein resources are preserved. A time may come when new commercially applicable technologies can pull carbon dioxide from the atmosphere. Until then, we will have to explore ways to provide sustainable energy for all. Without this, we cannot solve the other problems set forth in the SDG agenda, including ending poverty and promoting equality and education. Additionally, we must pursue greenhouse gas reduction through improved energy efficiency, renewables, and sustainable lifestyles. Strong measures meeting the goal on affordable and clean energy (SDG 7) can move us in the right direction.
- **Sustainable cities.** Within the next twenty years, 70 percent of the world's population will live in cities, which will generate many global problems.

Greenhouse gas emissions, food consumption linked to rural areas, water consumption, and sustainable waste management will be strongly influenced by urban activity. Until we engage in smart urban and land-use planning, and vigorously implement the various strategies associated with sustainable cities, the SDGs and the world they envision will elude us.

- **Health.** A future world that prioritizes the health and well-being of all people will be driven by STI. Digital health promises to compensate for inadequate doctor-patient ratios, especially for residents of the remotest corners of our nations. Diagnostics, monitoring, and care for both communicable and noncommunicable diseases will also be facilitated by what we call e-health. Affordable medicines, including generics, will be powered by innovative research and systemic transformation. Immunization, research and development, and the promotion of universal health coverage all fit within SDG 3, and the massive associated efforts will need to be propelled by STI.
- **Sustainable consumption and production.** This catchall category covers each of the other transformations mentioned here. The circular economy extends to what we eat, what we buy, and how we commute and travel. It also includes how we manage waste and related means of ending pollution of our land, soil, water, and sea. The global community has placed a focus on plastics over the last year. For example, the UN Environment Program has placed a major emphasis on plastics.⁴ The equivalent of a plastic island the size of Australia is floating in the Pacific. In the Swiss Alps, bottled water has lately been found containing microplastics, a common pollutant. What we're doing to our world through this negligence is nothing short of collective suicide. A tsunami of "e-waste" is also cresting, and our response has been pathetically slow. Science, and the larger STI community, must be at the center of aggressively managing all these transitions. How can we reconcile changed lifestyles with better quality of life? How can we limit resource use to meet today's needs while preparing for the needs of the 9 billion people who will inhabit our world by 2100? These are questions that need urgent answers.

These five transitional categories are illustrative, not exhaustive. Many social issues covered in the Agenda 2030, including gender equality, empowerment, and ending poverty, also have a prominent place among the SDGs, and can also contribute meaningfully to STI.

The Road Ahead for Diplomacy

Most countries are not yet aligning their diplomatic interests with the five

big transitions outlined here: food, energy, sustainable cities, health, and sustainable consumption and production. This only steepens the task for bilateral and multilateral diplomacy, which has changed so dramatically in the last generation. Strengthening the “science to policy to diplomacy” nexus will be crucial in achieving these five transformations, and in helping policymakers make intelligent choices. An overarching necessity is cooperation between those who possess the know-how and access to technology, and those who do not. For example, the 1960s “green revolution” in India was spurred by scientific advances in seed, water, and pesticide and fertilizer use, with assistance from the U.S.-based Borlaug Institute. It’s unfortunate, not enough international success stories at this scale are visible today.

Science diplomacy can foster such partnerships, including those between academia and the private sector. These types of partnerships often exist in the military and defense sectors but are less prominent in primary or applied research aimed at solving the many problems of all people. The SDGs will remain the central framework around which human hopes, aspirations, and fears can be understood, and STI must be put to work addressing them.

Modern diplomacy is no longer constrained by the “chessboard” and the walls prevalent in the twentieth century. In the twenty-first century, diplomats must work with multiple actors across multiple networks. Not only statecraft will win the day; instead, intellectual knowledge and skills will be needed to anticipate and understand a world of constant change.

It would be an omission to exclude the uncertainties and potential negative impacts of change. The current pace of technological change is essentially driven by a few large private companies (e.g., Google, Apple), each valued at nearly a trillion dollars. At the national and global levels, policy formulation lags far behind this private-sector activity. Change will have an impact on the economy, especially jobs, on society, and on the environment. Human rights, including issues of privacy, social cohesion, recourse to justice, defamation, and hate speech, will continue to be affected — often negatively — unless appropriate controls are enacted. The conduct of war, including in its hybrid and psychological varieties and using autonomous and space-based weapons, will differ dramatically from what preceded it. Drugs and crime will be increasingly enmeshed with the dark web. Those trillion-dollar companies will guide the future, with all its promise and uncertainty, by pioneering inventions with untold benefits and consequences alike.

In future years, the pillars of the UN will need revamped analysis, policy recommendations, and country-level implementation. New multilateral approaches and agreements will issue from these updates. And the organization will need to take on rising risks, such as that posed by the malicious use and unintended

consequences of new technologies. To be sure, the inherent forces in technology diffusion are widening inequalities between and within countries. The global community will need to devote attention to building national capacity and leveling the playing field through education and training simultaneously. Gaps in gender access and opportunity must also be narrowed, ultimately to nothing. Technology must work for all.

Are we, at the national and international levels, preparing for this world? At the UN, we are fortunate to have the thought leadership of the current secretary-general, António Guterres, who is propelling action with signature initiatives to grow the potential of technology, while protecting humanity from its disruptive power. But as this discussion has shown, not all actors have demonstrated the same foresight.

Out of my four decades in the diplomacy arena, the last five years have probably seen the most accelerated change. Those who adapt, who anticipate, and who absorb will be effective. Those who misread, refuse to adjust their mind-sets, and do not modify their habits will fail. Individuals, institutions, and nations that are nimble and accept change will prosper. Those that resist will flounder. Everything today is different, and tomorrow will change even more disruptively. But the rewards of diligent and collective action — from international bodies to individuals — will be great, for our planet and its people. **SD**

The following text has been adapted from the author's keynote address at the 2018 AAAS-TWAS Course on Science Diplomacy in Trieste, Italy.

Endnotes

1. “Transforming Our World: The 2030 Agenda for Sustainable Development,” <https://sustainabledevelopment.un.org/post2015/transformingourworld>.
2. Klaus Schwab, *The Fourth Industrial Revolution* (New York: Crown, 2016)..
3. See, e.g., Jason Lederman, “What Happens if Earth Gets 2°C Warmer?” *Popular Science*, February 22, 2018, <https://www.popsoci.com/what-happens-if-earth-gets-2-degrees-warmer>.
4. <https://www.unenvironment.org/interactive/beat-plastic-pollution/>.