Science for Sustainable Societies

Isabel B. Franco
Tathagata Chatterji
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James Tracey *Editors*

Actioning the Global Goals for Local Impact

Towards Sustainability Science, Policy, Education and Practice

Springer

Science for Sustainable Societies

Scope of the Series

This series aims to provide timely coverage of results of research conducted in accordance with the principles of sustainability science to address impediments to achieving sustainable societies – that is, societies that are low carbon emitters, that live in harmony with nature, and that promote the recycling and re-use of natural resources. Books in the series also address innovative means of advancing sustainability science itself in the development of both research and education models.

The overall goal of the series is to contribute to the development of sustainability science and to its promotion at research institutions worldwide, with a view to furthering knowledge and overcoming the limitations of traditional discipline-based research to address complex problems that afflict humanity and now seem intractable.

Books published in this series will be solicited from scholars working across academic disciplines to address challenges to sustainable development in all areas of human endeavors.

This is an official book series of the Integrated Research System for Sustainability Science (IR3S) of the University of Tokyo.

More information about this series at http://www.springer.com/series/11884

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Preface

This book explores implementation challenges of the 2030 Sustainable Development Agenda, by specifically focusing on unique operational issues associated with each of the 17 Sustainable Development Goals (SDGs). In doing so, the book draws attention toward sustainability science, education, and community capacity-building needs related to the specific SDG targets and indicators. The target audience of the book are sustainability leaders, namely, policy-makers, sustainable development planning practitioners, academicians, and graduate students in various disciplinary domains associated with sustainability science, education, policy, management, and impact.

The Sustainable Development Agenda, which was adopted by the United Nations (UN) in 2015, is a universal, integrated, and human rights-based program. It underscores links between peace, social justice, and development. Consequently, its associated 17 SDGs are wider and much more multidimensional in scope, compared to its predecessor program, the Millennium Development Goals (MDG) (2000–2015).

The MDG program was the first concerted effort at a global scale to address extreme poverty and basic health-care needs. The eight identified goals were manageable and measurable and, most importantly, could be easily identified by a wide range of stakeholders, across the globe. During the 15-year period, the MDG program was able to achieve certain remarkable outcome – although the progress was uneven. Therefore, there is a need to create a new framework to achieve inclusive sustainable development.

The Sustainable Development Goals encompass the Millennium Development Goals and at the same time incorporate several newer goals, such as building resilient infrastructure, promotion of inclusive and sustainable industrialization, and fostering innovation (SDG 9); reduction of inequality within and among countries (SDG 10); making cities and human settlements inclusive, safe, resilient, and sustainable (SDG 11); ensuring sustainable consumption and production patterns (SDG 12); etc. Table 1 shows a comparison of MDG and SDG targets.

The millennium goals expressed solidarity with the poorest and the most vulnerable. It galvanized the global community to fight poverty and its multiple dimensions.

Table 1 The Millennium Development Goals and the Sustainable Development Goals

Millennium Development Goals	Sustainable Development Goals
MDG1: Eradicate extreme poverty and hunger	SDG 1. End poverty in all its forms everywhere
MDG 2: Achieve universal primary education	SDG 2. End hunger achieve food security and improved nutrition
MDG 3: Promote gender equality and empower women	SDG 3. Ensure healthy lives and promote well-being for all at all ages
MDG 4: Reduce child mortality	SDG 4. Ensure inclusive and equitable quality education
MDG 5: Improve maternal health	SDG 5. Achieve gender equality and empower all women and girls
MDG 6: Combat HIV/AIDS and other diseases	SDG 6. Ensure availability and sustainable management of water and sanitation for all
MDG 7: Ensure environmental sustainability	SDG 7. Ensure access to affordable, reliable, sustainable, and modern energy for all
MDG 8: Develop a global partnership for development	SDG 8. Promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work
	SDG 9. Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation
	SDG 10. Reduce inequality within and among countries
	SDG 11. Make cities and human settlements inclusive, safe, resilient, and sustainable
	SDG 12. Ensure sustainable consumption and production patterns
	SDG 13. Take urgent action to combat climate change and its impacts
	SDG 14. Conserve and sustainably use the oceans, seas, and marine resources for sustainable development
	SDG 15. Protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt biodiversity loss
	SDG 16. Peace, justice, and strong institutions promote peaceful and inclusive societies for sustainable development
	SDG 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development

Source: prepared by authors based on open-source data available under UN

The 2030 agenda moves on from their targeted action bound programs on a wide array of interlinked developmental concerns.

The 2030 development agenda revolves around the concept of sustainability and also takes a comprehensive system view about the developmental paradigms. Embedded in the concept of sustainability is the idea of striking a balance between meaningful economic growth, environmental well-being, and social justice. Thus, the 17 SDGs are not directed to arrive at a trade-off between competing claims related to progress from multiple ideological standpoints. Rather, they are cross-

cutting, are inter-sectoral, and complement each other in many ways (Babier and Burgess 2017). Thus, for example, provision of quality education (SDG 4) and safe drinking water (SDG 6) to deprived areas and slum settlements helps the communities and cities become more sustainable (SDG 11), improves health conditions of the people (SDG 3), and is also simultaneously an antipoverty (SDG 1) measure, as it reduces livelihood vulnerabilities by building community capacity-building. Thus, each of the SDG and targets are multidimensional in scope but also tied with each other.

As the Sustainable Development Agenda now sets the vision for 2030 for global action, its success depends on how far they are localized and integrated with national, subnational, and local plans of various countries. Policy-makers, academics, educators, and practitioners have embarked in activities aimed to integrate SDGs in policy documents, research agenda, and academic course curriculum. Yet, a major problem confronting these actors is a lack of knowledge about the operationalization of SDGs, which compromises their ability to disseminate knowledge in an impactful and contextualized manner. Some researchers and educators have proactively become active participants in the implementation of the SDGs across the world, representing a potential for global change.

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