

# Frontiers of inclusive innovation

Formulating technology and  
innovation policies that  
leave no one behind





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The ESCAP secretariat supports inclusive, resilient and sustainable development in the region by generating action-oriented knowledge, and by providing technical assistance and capacity-building services in support of national development objectives, regional agreements and the implementation of the 2030 Agenda for Sustainable Development.

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# Foreword

Science, technology and innovation (STI) are an essential investment for the future of people, planet and prosperity.

In the past two decades, the Asia-Pacific region has been transformed by an unprecedented level of economic growth. STI were often at the core of such transformations. However, economic prosperity has come with social and environmental costs. The benefits of economic growth have been unevenly distributed while industrialization has generated hazardous waste and intensified climate-related disasters. Even the opportunities of the digital economy have increased inequality, as computers and the Internet are still far from accessible and affordable to all. For those at the base of the economic pyramid, scientific progress and emerging technologies are meaningless unless the solutions they provide are also affordable and relevant to their context and needs.

In a world of increasing inequalities and dramatic health and environmental challenges, we must ensure that investments in STI translate into more inclusive growth, shared social advances and greater environmental sustainability while leaving no one behind.

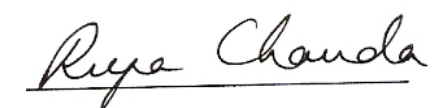
This report on *Frontiers of Inclusive Innovation* is a call to pay greater attention to why we promote STI, and, more importantly, to examine who is able to benefit from STI.

Public STI policies play a critical role in shaping the types of STI we can access and benefit from. We must ensure that STI policies seek social and environmental objectives, alongside economic ones. Inclusive STI policies recognize the innovative spirit of every individual and unleash the creative potential of the whole society. These policies encourage innovations that are directed towards – and developed by – underrepresented and marginalized groups. Inclusive STI policies also encourage broader participation in priority-setting and the regulation of innovation, fostering a fairer distribution of the risks and benefits of innovation.

Since 2018, the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) has been supporting governments across the region to formulate inclusive technology and innovation policies. The Commission has helped governments introduce an inclusive lens in the formulation of national STI policies and digital economy strategies, promoted inclusive business in the Association of Southeast Asian Nations and supported policies that promote grassroots innovations.

This report points to effective practices, lessons learned and remaining challenges to expand the frontiers of inclusive innovation. It is both a recognition of the contributions made by many actors as well as a source of inspiration for those seeking to harness STI for more inclusive and sustainable development.

It is my hope that this report will help raise inclusive considerations in national, regional and international debates on technology and innovation policy.



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# Acknowledgements

The report on *Frontiers of Inclusive Innovation: Formulating technology and innovation policies that leave no one behind* was prepared by the Trade, Investment and Innovation Division of the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) under the supervision of Ms. Rupa Chanda, Director of the Trade, Investment and Innovation Division. It provides a reflection on four years of ESCAP activities under the programme on promoting inclusive technology and innovation policies led by Ms. Marta Pérez Cusó, Economic Affairs Officer, Technology and Innovation Section, under the direction of Mr. Jonathan Tsuen Yip Wong, Chief of Technology and Innovation Section, and Ms. Mia Mikic, former Director of the Trade, Investment and Innovation Division.

The report was prepared by a team led by Ms. Marta Pérez Cusó. The team members included Mr. Rafael Torquato Cruz, Project Officer, Technology and Innovation Section, ESCAP (chapters 1, 2 and 6); Mr. Tebello Qhotsokoane, Research and Policy Officer, Digital Pathways at Oxford (chapter 3); Ms. Anamika Dey, Chief Executive Officer, Gujarat Grassroots Innovation Augmentation Network (chapter 4); and Ms. Grace Santos, Executive Director, Universities and Councils Network for Innovation for Inclusive Development, the Philippines (chapter 5). Mr. Rafael Torquato Cruz also supported the coordination of activities for producing the report.

In addition, a number of advisors provided substantive comments on the overall publication and specific chapters. These include Mr. Geert van der Veen, Leading Consultant and Managing Partner of Technopolis Group Amsterdam (chapter 2); Ms. Elizabeth Stuart, Executive Director, Digital Pathways at Oxford (chapter 3); Mr. Anil Gupta, Founder, Honey Bee Network, Mr. Anthony Sales, Regional Director, Department of Science and Technology XI, the Philippines, and Ms. Sharmila Mohamed, Chief Executive Officer at Yayasan Inovasi Malaysia (chapter 4); and Mr. Markus Dietrich, Director Policy, inclusive Business Action Network (iBAN) (chapter 5). Mr. Jae Moon, Institute for Future Government, Yonsei University, and Ms. Christina Schönleber, Senior Director (Policy and Programs), Association of Pacific Rim Universities also participated as members of the advisory team. Lastly, the report benefited from inputs from Ms. Alina Petrova, iBAN and Mr. Romain Pradier, Project Assistant, Technology and Innovation Section, ESCAP.

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# Executive summary

Science, technology and innovation (STI) can increase the efficiency, effectiveness and impact of efforts to meet the ambitions of the 2030 Agenda for Sustainable Development. The successful adoption of existing innovations has enabled many economies to sustain economic growth. Innovation can expand access to education and health-care services. Technologies, such as those supporting renewable energy, are also providing options for more environmentally sustainable development paths.

Nevertheless, STI have exacerbated inequalities and created new types of social divides and environmental hazards, establishing new and harder to cross frontiers between those that benefit and those that are excluded.

In the context of increasing inequalities and a major pandemic, Governments need to look more seriously at harnessing STI for the Sustainable Development Goals and to leave no one behind. This may require shifting the focus from chasing frontier technologies to expanding the frontiers of innovation. Many promising technologies have already arrived. Economic growth does not have to be the only bottom line of innovation activities. Innovative business models are offering pathways that benefit society and the environment as well as the bottom line.

To maximize STI for inclusive and sustainable development, Governments need to intentionally expand the frontiers of innovation. STI policies must seek not just to explore emerging technologies, but, most importantly, to ensure that more citizens, enterprises and countries can benefit from such technologies and innovations.

This report on Frontiers of Inclusive Innovation: Formulating technology and innovation policies that leave no one behind highlights the opportunities and challenges that policymakers and development partners have to expand the frontiers of inclusive innovation. When inclusion is the next frontier of technology, STI policies are designed differently.

They are designed with broader objectives than just economic growth, with social development and sustainable economies in mind; and they are inclusive in terms of aspiring to enable everyone to benefit from – and participate in – innovative activities.

Governments can add an inclusive lens to STI policies by considering the following questions:

1. Do the overall aims of innovation policy involve more than economic growth?
2. Whose needs are being met?
3. Who participates in innovation?
4. Who sets priorities, and how are the outcomes of innovation managed?



This report explores how these four dimensions of inclusivity are addressed in several innovation policies: national STI policies; digital economy strategies; initiatives supporting grassroots innovations; and policies promoting inclusive business. The analysis provided in this report is based on the experience of the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) and on the insights of stakeholders engaged in this work.

Chapter two discusses the opportunities and challenges to formulate inclusive national STI policies. It examines how the process to co-create the national STI policy of Myanmar in 2020 supported more inclusive outcomes by deliberately using an inclusive lens both in the design of the process and in the content of the policy. The policy formulation process was designed with inclusivity in mind. It combined training sessions with co-creation sessions and engaged a group of 16 policy champions to bring in a diversity of views, generate greater understanding and encourage collaboration among key stakeholders. In terms of content, the analysis and the discussions conducted to inform the policy formulation process focused on inclusion. This chapter also highlights the challenges of prioritizing limited resources and broadening participation in the policymaking process.

Chapter three explores the experience of Digital Pathways at Oxford and ESCAP in implementing a Digital Economy Kit to deliver digital transformation for inclusive growth in Bangladesh and Mongolia. The chapter emphasizes the importance of having data that explain inclusion gaps and of organizing multi-stakeholder conversations that incorporate the perspectives of marginalized communities into a national digital strategy that also responds to the needs of these communities. Introducing an inclusive lens in the objectives, analysis, dialogues and governance resulted in policies with greater focus and support for using digital platforms to connect those in the informal economy to financial and protection services for delivering last

Chapter five discusses the experience of members of the Association of Southeast Asian Nations (ASEAN) in promoting inclusive business models. There are market opportunities for inclusive businesses. That is, there are market opportunities for enterprises to provide goods and services to low-income and marginalized populations to address unmet social needs (such as access to affordable energy and housing or financial services). Members of ASEAN are promoting inclusive business models through the adoption of national strategies and regional guidelines. The development of enabling environments for inclusive businesses in South-East Asia is still in its early stages. To magnify inclusive growth, it will be critical to establish formal and funded support structures to promote inclusive business, to articulate these efforts with other development plans, to move into the implementation stage and to monitor and evaluate the impact of these measures.

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To leave no one behind and implement the 2030 Agenda for Sustainable Development, it is imperative to expand the frontiers of inclusive innovation. Investments in STI must focus on sustaining not only economic growth objectives but also social development and environmental sustainability.

Innovators, entrepreneurs and enterprises

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